

**Attachment A:**

## Enrollment Plan

Grade Level	Number of Students											
	Year 1		Year 2		Year 3		Year 4		Year 5		Capacity	
	2017		2018		2019		2020		2021		20__	
Brick & Mortar/ Blended vs. Virtual	B&M/ Blended	Virtual	B&M/ Blended	Virtual	B&M/ Blended	Virtual	B&M/ Blended	Virtual	B&M/ Blended	Virtual	B&M/ Blended	Virtual
K	25		25		25		25		25		25	
1	25		25		25		25		25		25	
2	25		25		25		25		25		25	
3	25		25		25		25		25		25	
4	25		25		25		25		25		25	
5	25		25		25		25		25		25	
6	52		52		52		52		52		52	
7			52		52		52		52		52	
8							52		52		52	
9												
10												
11												
12												
<b>Subtotals</b>												
<b>Totals</b>	202		254		306		306		306		306	



## Attachment B

Site	Proximity	Level	Enrollment
Hale Kula Elementary	2.75 mi.	K-5	722
Helemano Elementary	0.9 mi.	K-5	601
Iliahi Elementary	1.15 mi.	K-5	428
Ka`ala Elementary	1.45 mi.	K-5	429
Solomon Elementary	2.2 mi.	K-5	948
Wahiawa Elementary	0.2 mi.	K-5	490
Wheeler Elementary	1.85 mi.	K-5	770
Total			4388
Site	Proximity	Level	Enrollment
Wahiawa Middle	0.6 mi.	6-8	838
Wheeler Middle	1.8 mi.	6-8	842
Total			1680

Source: Trend Report: Educational and Fiscal Accountability-School Report for School Year 2014-2015 (updated 12/07/2015) and the School Status and Improvement Report published on 11/24/2015



Site	Level	Enrollment
Abundant Life	Pre K – 6	68
Ho`ala School	K-12	95
Leeward Adventist	K-8	32
Marantha	Pre K -12	14
Trinity Lutheran	Pre K – 8	213
Total		422

Source: [privateschoolreview.com](http://privateschoolreview.com)



## **Attachment C**

Kamalani Academy expects to draw its student population primarily from the Central Complex Area in the Honolulu District. The public schools from which Kamalani may draw its population include:

### **Public Schools, Grades K-5**

Kaala Elementary

Kipapa Elementary

Hale Kula Elementary

Haleiwa Elementary

Helemano Elementary

Iliahi Elementary

Mililani Ike Elementary

Mililani Mauka Elementary

Mililani Uka Elementary

Mililani Waena Elementary

Solomon Elementary

Waialua Elementary

Wahiawa Elementary

Wheeler Elementary

### **Public Schools, Grades 6-8**

Mililani Middle

Wahiawa Middle

Waialua Intermediate

Wheeler Middle

### **Private School, Grades K-12**

Ho‘ala

Island Pacific Academy







## **Attachment D**

### **NATIONAL CORE ARTS STANDARDS**

## **Dance**

The National Core Arts Standards in Dance are designed to enable students to achieve dance literacy. To be literate in the arts, students need specific knowledge and skills in a particular arts discipline to a degree that allows for fluency and deep understanding. In dance, this means discovering the expressive elements of dance; knowing the terminology that is used to comprehend dance; having a clear sense of embodying dance; and being able to reflect, critique, and connect personal experience to dance.

Four artistic processes organize the standards across the arts disciplines: Creating, Performing, Responding, and Connecting. Each artistic process includes a set of overarching anchor standards. The anchor standards are consistent among the arts disciplines represented in the National Core Arts Standards and demonstrate the breadth of the work. They are held constant for student learning over time.

Each anchor standard in dance is supported by a process component, an enduring understanding, and an essential question. These additional features will benefit educational leaders and teachers as they consider curricular models and structure lessons aligned to the dance standards. Performance standards describe more specifically what students should know and be able to do in dance and are expressed as measurable outcomes across the grades pre-kindergarten to eighth grade and into high school at three levels of proficiency. The performance standards are the substantive portion of the work and represent the depth of study in dance.

Of significance is that the four artistic processes are addressed linearly in written standards, but are envisioned to occur simultaneously in the actual practice of dance. The dancer imagines, envisions, or improvises movements (creating), executes the movements (performing), reflects on them (responding), and connects the experience to all other contexts of meaning or knowledge (connecting). As a result, one lesson can address many standards at the same time. In a single class, students can learn by solving movement problems, showing their ideas through movement, thinking critically about them, and relating them to other ideas, experiences, contexts, and meanings.

The National Core Arts Standards in Dance are rooted in a creative approach to teaching and learning. They describe expectations for learning in dance regardless of culture, style or genre and impart the breadth and depth of the dance experience through the art-making processes. The goal of the standards is to inspire dance educators and their students to explore dance and prepare them for a lifetime of engagement with the art form.



# Dance/Connecting

#DA:Cn10.1

**Process Component:** Synthesize

**Anchor Standard:** Synthesize and relate knowledge and personal experiences to make art.

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## Grade K

DA:Cn10.1.K

- a. Recognize and name an emotion that is experienced when watching, improvising, or performing dance and relate it to a personal experience.
  - b. Observe a work of visual art. Describe and then express through movement something of interest about the artwork, and ask questions for discussion concerning the artwork.
- 

## Grade 1

DA:Cn10.1.1

- a. Find an experience expressed or portrayed in a dance that relates to a familiar experience. Identify the movements that communicate this experience.
  - b. Observe illustrations from a story. Discuss observations and identify ideas for dance movement and demonstrate the big ideas of the story.
- 

## Grade 2

DA:Cn10.1.2

- a. Describe, create, and/or perform a dance that expresses personal meaning and explain how certain movements express this personal meaning.
  - b. Respond to a dance work using an inquiry-based set of questions (for example, See, Think, Wonder). Create movement using ideas from responses and explain how certain movements express a specific idea.
- 

## Grade 3

DA:Cn10.1.3

- a. Compare the relationships expressed in a dance to relationships with others. Explain how they are the same or different.
  - b. Ask and research a question about a key aspect of a dance that communicates a perspective about an issue or event. Explore the key aspect through movement. Share movements and describe how the movements help to remember or discover new qualities in these key aspects. Communicate the new learning in oral, written, or movement form.
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## Grade 4

DA:Cn10.1.4

- a. Relate the main idea or content in a dance to other experiences. Explain how the main idea of a dance is similar to or different from one's own experiences, relationships, ideas or perspectives.
- b. Develop and research a question relating to a topic of study in school using multiple sources of references. Select key aspects about the topic and choreograph movements that



communicate the information. Discuss what was learned from creating the dance and describe how the topic might be communicated using another form of expression.

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## **Grade 5**

### **DA:Cn10.1.5**

- a. Compare two dances with contrasting themes. Discuss feelings and ideas evoked by each. Describe how the themes and movements relate to points of view and experiences.
  - b. Choose a topic, concept, or content from another discipline of study and research how other art forms have expressed the topic. Create a dance study that expresses the idea. Explain how the dance study expressed the idea and discuss how this learning process is similar to, or different from, other learning situations.
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## **Grade 6**

### **DA:Cn10.1.6**

- a. Observe the movement characteristics or qualities observed in a specific dance genre. Describe differences and similarities about what was observed to one's attitudes and movement preferences.
  - b. Conduct research using a variety of resources to find information about a social issue of great interest. Use the information to create a dance study that expresses a specific point of view on the topic. Discuss whether the experience of creating and sharing the dance reinforces personal views or offers new knowledge and perspectives.
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## **Grade 7**

### **DA:Cn10.1.7**

- a. Compare and contrast the movement characteristics or qualities found in a variety of dance genres. Discuss how the movement characteristics or qualities differ from one's own movement characteristics or qualities and how different perspectives are communicated.
  - b. Research the historical development of a dance genre or style. Use knowledge gained from the research to create a dance study that evokes the essence of the style or genre. Share the study with peers as part of a lecture demonstration that tells the story of the historical journey of the chosen genre or style. Document the process of research and application.
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## **Grade 8**

### **DA:Cn10.1.8**

- a. Relate connections found between different dances and discuss the relevance of the connections to the development of one's personal perspectives.
- b. Investigate two contrasting topics using a variety of research methods. Identify and organize ideas to create representative movement phrases. Create a dance study exploring the contrasting ideas.

## **Dance/Connecting**

### **#DA:Cn11.1**

**Process Component:** Relate

**Anchor Standard:** Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.



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**Grade K**  
**DA:Cn11.1.K**

- a. Describe or demonstrate the movements in a dance that was watched or performed.
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**Grade 1**  
**DA:Cn11.1.1**

- a. Watch and/or perform a dance from a different culture and discuss or demonstrate the types of movement danced.
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**Grade 2**  
**DA:Cn11.1.2**

- a. Observe a dance and relate the movement to the people or environment in which the dance was created and performed.
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**Grade 3**  
**DA:Cn11.1.3**

- a. Find a relationship between movement in a dance from a culture, society, or community and the culture from which the dance is derived. Explain what the movements communicate about key aspects of the culture, society, or community.
- 

**Grade 4**  
**DA:Cn11.1.4**

- a. Select and describe movements in a specific genre or style and explain how the movements relate to the culture, society, historical period, or community from which the dance originated.
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**Grade 5**  
**DA:Cn11.1.5**

- a. Describe how the movement characteristics and qualities of a dance in a specific genre or style communicate the ideas and perspectives of the culture, historical period, or community from which the genre or style originated.
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**Grade 6**  
**DA:Cn11.1.6**

- a. Interpret and show how the movement and qualities of a dance communicate its cultural, historical, and/or community purpose or meaning.
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**Grade 7**  
**DA:Cn11.1.7**

- a. Compare, contrast, and discuss dances performed by people in various localities or communities. Formulate possible reasons why similarities and differences developed in relation to the ideas and perspectives important to each social group.



## **Grade 8**

### **DA:Cn11.1.8**

- a. Analyze and discuss, how dances from a variety of cultures, societies, historical periods, or communities reveal the ideas and perspectives of the people.

## **Dance/Creating**

### **#DA:Cr1.1**

**Process Component:** Explore

**Anchor Standard:** Generate and conceptualize artistic ideas and work.

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## **Grade K**

### **DA:Cr1.1.K**

- a. Respond in movement to a variety of stimuli (for example, music/sound, text, objects, images, symbols, observed dance).
  - b. Explore different ways to do basic locomotor and non-locomotor movements by changing at least one of the elements of dance.
- 

## **Grade 1**

### **DA:Cr1.1.1**

- a. Explore movement inspired by a variety of stimuli (for example, music/sound, text, objects, images, symbols, observed dance, experiences) and identify the source
  - b. Explore a variety of locomotor and non-locomotor movements by experimenting with and changing the elements of dance.
- 

## **Grade 2**

### **DA:Cr1.1.2**

- a. Explore movement inspired by a variety of stimuli (for example, music/sound, text, objects, images, symbols, observed dance, experiences) and suggest additional sources for movement ideas.
  - b. Combine a variety of movements while manipulating the elements of dance
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## **Grade 3**

### **DA:Cr1.1.3**

- a. Experiment with a variety of self-identified stimuli (for example, music/sound, text, objects, images, notation, observed dance, experiences) for movement.
  - b. Explore a given movement problem. Select and demonstrate a solution.
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## **Grade 4**

### **DA:Cr1.1.4**

- a. Identify ideas for choreography generated from a variety of stimuli (for example, music/sound, text, objects, images, notation, observed dance, experiences).
- b. Develop a movement problem and manipulate the elements of dance as tools to find a solution.



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## **Grade 5**

### **DA:Cr1.1.5**

- a. Build content for choreography using several stimuli (for example, music/sound, text, objects, images, notation, observed dance, experiences, literary forms, natural phenomena, current news, social events).
  - b. Construct and solve multiple movement problems to develop choreographic content.
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## **Grade 6**

### **DA:Cr1.1.6**

- a. Relate similar or contrasting ideas to develop choreography using a variety of stimuli (for example, music, observed dance, literary forms, notation, natural phenomena, personal experience/recall, current news or social events).
  - b. Explore various movement vocabularies to transfer ideas into choreography
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## **Grade 7**

### **DA:Cr1.1.7**

- a. Compare a variety of stimuli (for example, music, observed dance, literary forms, notation, natural phenomena, personal experience/recall, current news or social events) and make selections to expand movement vocabulary and artistic expression.
  - b. Explore various movement vocabularies to express an artistic intent in choreography. Explain and discuss the choices made using genre-specific dance terminology.
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## **Grade 8**

### **DA:Cr1.1.8**

- a. Implement movement from a variety of stimuli (for example, music, observed dance, literary forms, notation, natural phenomena, personal experience/recall, current news or social events) to develop dance content for an original dance study or dance.
  - b. Identify and select personal preferences to create an original dance study or dance. Use genre-specific dance terminology to articulate and justify choices made in movement development to communicate intent.
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## **Dance/Creating**

### **#DA:Cr2.1**

#### **Process Component: Plan**

**Anchor Standard:** Organize and develop artistic ideas and work.

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## **Grade K**

### **DA:Cr2.1.K**

- a. Improvise dance that has a beginning, middle, and end.



- b. Express an idea, feeling, or image, through improvised movement moving alone or with a partner
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### **Grade 1**

#### **DA:Cr2.1.1**

- a. Improvise a series of movements that have a beginning, middle, and end, and describe movement choices.
  - b. Choose movements that express an idea or emotion, or follow a musical phrase.
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### **Grade 2**

#### **DA:Cr2.1.2**

- a. Improvise a dance phrase with a beginning, a middle that has a main idea, and a clear end.
  - b. Choose movements that express a main idea or emotion, or follow a musical phrase. Explain reasons for movement choices.
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### **Grade 3**

#### **DA:Cr2.1.3**

- a. Identify and experiment with choreographic devices to create simple movement patterns and dance structures (for example, AB, ABA, theme and development).
  - b. Develop a dance phrase that expresses and communicates an idea or feeling. Discuss the effect of the movement choices.
- 

### **Grade 4**

#### **DA:Cr2.1.4**

- a. Manipulate or modify choreographic devices to expand movement possibilities and create a variety of movement patterns and structures. Discuss movement choices.
  - b. Develop a dance study that expresses and communicates a main idea. Discuss the reasons and effectiveness of the movement choices.
- 

### **Grade 5**

#### **DA:Cr2.1.5**

- a. Manipulate or modify a variety of choreographic devices to expand choreographic possibilities and develop a main idea. Explain reasons for movement choices.
  - b. Develop a dance study by selecting a specific movement vocabulary to communicate a main idea. Discuss how the dance communicates non-verbally.
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### **Grade 6**

#### **DA:Cr2.1.6**

- a. Explore choreographic devices and dance structures to develop a dance study that supports an artistic intent. Explain the goal or purpose of the dance.
- b. Determine artistic criteria to choreograph a dance study that communicates personal or cultural meaning. Based on the criteria, evaluate why some movements are more or less effective than others.



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**Grade 7****DA:Cr2.1.7**

- a. Use a variety of choreographic devices and dance structures to develop a dance study with a clear artistic intent. Articulate reasons for movement and structural choices.
  - b. Determine artistic criteria to choreograph a dance study that communicates personal or cultural meaning. Articulate how the artistic criteria serve to communicate the meaning of the dance.
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**Grade 8****DA:Cr2.1.8**

- a. Collaborate to select and apply a variety of choreographic devices and dance structures to choreograph an original dance study or dance with a clear artistic intent. Articulate the group process for making movement and structural choices.
- b. Define and apply artistic criteria to choreograph a dance that communicates personal or cultural meaning. Discuss how the criteria clarify or intensify the meaning of the dance.

## **Dance/Creating**

**#DA:Cr3.1****Process Component:** Revise**Anchor Standard:** Refine and complete artistic work.

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**Grade K****DA:Cr3.1.K**

- a. Apply suggestions for changing movement through guided improvisational experiences.
  - b. Depict a dance movement by drawing a picture or using a symbol.
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**Grade 1****DA:Cr3.1.1**

- a. Explore suggestions to change movement from guided improvisation and/or short remembered sequences
  - b. Depict several different types of movements of a dance by drawing a picture or using a symbol (for example, jump, turn, slide, bend, reach).
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**Grade 2****DA:Cr3.1.2**

- a. Explore suggestions and make choices to change movement from guided improvisation and/or short remembered sequences.
- b. Depict the levels of movements in a variety of dance movements by drawing a picture or using symbols (for example, high, middle, low).



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**Grade 3**  
**DA:Cr3.1.3**

- a. Revise movement choices in response to feedback to improve a short dance study. Describe the differences the changes made in the movements.
  - b. Depict directions or spatial pathways in a dance phrase by drawing a picture map or using a symbol
- 

**Grade 4**  
**DA:Cr3.1.4**

- a. Revise movement based on peer feedback and self-reflection to improve communication of artistic intent in a short dance study. Explain choices made in the process.
  - b. Depict the relationships between two or more dancers in a dance phrase by drawing a picture or using symbols (for example, next to, above, below, behind, in front .)
- 

**Grade 5**  
**DA:Cr3.1.5**

- a. Explore through movement the feedback from others to expand choreographic possibilities for a short dance study that communicates artistic intent. Explain the movement choices and refinements.
  - b. Record changes in a dance sequence through writing, symbols, or a form of media technology.
- 

**Grade 6**  
**DA:Cr3.1.6**

- a. Revise dance compositions using collaboratively developed artistic criteria. Explain reasons for revisions and how choices made relate to artistic intent.
  - b. Explore or invent a system to record a dance sequence through writing, symbols, or a form of media technology.
- 

**Grade 7**  
**DA:Cr3.1.7**

- a. Evaluate possible revisions of dance compositions and, if necessary, consider revisions of artistic criteria based on self-reflection and feedback of others. Explain reasons for choices and how they clarify artistic intent.
  - b. Investigate a recognized system to document a dance sequence by using words, symbols, or media technologies.
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**Grade 8**  
**DA:Cr3.1.8**

- a. Revise choreography collaboratively or independently based on artistic criteria, self-reflection, and the feedback of others. Articulate the reasons for choices and revisions and explain how they clarify and enhance the artistic intent.
- b. Experiment with aspects of a recognized system to document a section of a dance by using words, symbols, or media technologies.



# Dance/Performing

#DA:Pr4.1

**Process Component:** Express

**Anchor Standard:** Select, analyze, and interpret artistic work for presentation.

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## Grade K

DA:Pr4.1.K

- a. Make still and moving body shapes that show lines (for example, straight, bent, and curved), changes levels, and vary in size (large/small). Join with others to make a circle formation and work with others to change its dimensions.
  - b. Demonstrate tempo contrasts with movements that match to tempo of sound stimuli.
  - c. Identify and apply different characteristics to movements (for example, slow, smooth, or wavy).
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## Grade 1

DA:Pr4.1.1

- a. Demonstrate locomotor and non-locomotor movements that change body shapes, levels, and facings. Move in straight, curved, and zig-zagged pathways. Find and return to place in space. Move with others to form straight lines and circles.
  - b. Relate quick, moderate and slow movements to duration in time. Recognize steady beat and move to varying tempi of steady beat.
  - c. Demonstrate movement characteristics along with movement vocabulary (for example, use adverbs and adjectives that apply to movement such as a bouncy leap, a floppy fall, a jolly jump, and joyful spin).
- 

## Grade 2

DA:Pr4.1.2

- a. Demonstrate clear directionality and intent when performing locomotor and non-locomotor movements that change body shapes, facings, and pathways in space. Identify symmetrical and asymmetrical body shapes and examine relationships between body parts. Differentiate between circling and turning as two separate ways of continuous directional change.
  - b. Identify the length of time a move or phrase takes (for example, whether it is long or short). Identify and move on the downbeat in duple and triple meter. Correlate metric phrasing with movement phrasing.
  - c. Select and apply appropriate characteristics to movements (for example, selecting specific adverbs and adjectives and apply them to movements). Demonstrate kinesthetic awareness while dancing the movement characteristics.
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## Grade 3

DA:Pr4.1.3

- a. Judge spaces as distance traveled and use space three-dimensionally. Demonstrate shapes with positive and negative space. Perform movement sequences in and through space with intentionality and focus.

Fulfill specified duration of time with improvised locomotor and non-locomotor movements. Differentiate between “in time” and “out of time” to music. Perform movements that are the



same or of a different time orientation to accompaniment.

- b. Use metric and kinesthetic phrasing
  - c. Fulfill specified duration of time with improvised locomotor and non-locomotor movements. Differentiate between “in time” and “out of time” to music. Perform movements that are the same or of a different time orientation to accompaniment. Use metric and kinesthetic phrasing.
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## **Grade 4**

### **DA:Pr4.1.4**

- a. Make static and dynamic shapes with positive and negative space. Perform elevated shapes (jump shapes) with soft landings and movement sequences alone and with others, establishing relationships with other dancers through focus of eyes.
  - b. Accompany other dancers using a variety of percussive instruments and sounds. Respond in movement to even and uneven rhythms. Recognize and respond to tempo changes as they occur in dance and music.
  - c. Analyze movements and phrases for use of energy and dynamic changes and use adverbs and adjectives to describe them. Based on the analysis, refine the phrases by incorporating a range of movement characteristics.
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## **Grade 5**

### **DA:Pr4.1.5**

- a. Integrate static and dynamic shapes and floor and air pathways into dance sequences. Establish relationships with other dancers through focus of eyes and other body parts. Convert inward focus to outward focus for projecting out to far space.
  - b. Dance to a variety of rhythms generated from internal and external sources. Perform movement phrases that show the ability to respond to changes in time.
  - c. Contrast bound and free-flowing movements. Motivate movement from both central initiation (torso) and peripheral initiation (distal) and analyze the relationship between initiation and energy.
- 

## **Grade 6**

### **DA:Pr4.1.6**

- a. Refine partner and ensemble skills in the ability to judge distance and spatial design. Establish diverse pathways, levels, and patterns in space. Maintain focus with partner or group in near and far space.
  - b. Use combinations of sudden and sustained timing as it relates to both the time and the dynamics of a phrase or dance work. Accurately use accented and unaccented beats in 3/4 and 4/4 meter.
  - c. Use the internal body force created by varying tensions within one’s musculature for movement initiation and dynamic expression. Distinguish between bound and free-flowing movements and appropriately apply them to technique exercises and dance phrases.
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## **Grade 7**

### **DA:Pr4.1.7**

- a. Expand movement vocabulary of floor and air pattern designs. Incorporate and modify



body designs from different dance genres and styles for the purpose of expanding movement vocabulary to include differently designed shapes and movements for interest and contrast.

- b. Vary durational approach in dance phrasing by using timing accents and variations within a phrase to add interest kinesthetically, rhythmically, and visually.
  - c. Compare and contrast movement characteristics from a variety of dance genres or styles. Discuss specific characteristics and use adverbs and adjectives to describe them. Determine what dancers must do to perform them clearly.
- 

## **Grade 8**

### **DA:Pr4.1.8**

- a. Sculpt the body in space and design body shapes in relation to other dancers, objects, and environment. Use focus of eyes during complex floor and air patterns or direct and indirect pathways.
- b. Analyze and select metric, kinetic, and breath phrasing and apply appropriately to dance phrases. Perform dance phrases of different lengths that use various timings within the same section. Use different tempi in different body parts at the same time.
- c. Direct energy and dynamics in such a way that movement is textured. Incorporate energy and dynamics to technique exercises and dance performance. Use energy and dynamics to enhance and project movements.

## **Dance/Performing**

### **#DA:Pr5.1**

**Process Component:** Embody

**Anchor Standard:** Develop and refine artistic technique and work for presentation.

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## **Grade K**

### **DA:Pr5.1.K**

- a. Demonstrate same-side and cross-body locomotor and non-locomotor movements, body patterning movements, and body shapes.
  - b. Move safely in general space and start and stop on cue during activities, group formations, and creative explorations while maintaining personal space.
  - c. Move body parts in relation to other body parts and repeat and recall movements upon request.
- 

## **Grade 1**

### **DA:Pr5.1.1**

- a. Demonstrate a range of locomotor and non-locomotor movements, body patterning, body shapes, and directionality.
  - b. Move safely in general space through a range of activities and group formations while maintaining personal space.
  - c. Modify movements and spatial arrangements upon request
- 

## **Grade 2**

### **DA:Pr5.1.2**

- a. Demonstrate a range of locomotor and non-locomotor movements, body patterning,



and dance sequences that require moving through space using a variety of pathways.

- b. Move safely in a variety of spatial relationships and formations with other dancers, sharing and maintaining personal space.
  - c. Repeat movements, with an awareness of self and others in space. Self-adjust and modify movements or placement upon request.
- 

### **Grade 3**

#### **DA:Pr5.1.3**

- a. Replicate body shapes, movement characteristics, and movement patterns in a dance sequence with awareness of body alignment and core support.
  - b. Adjust body-use to coordinate with a partner or other dancers to safely change levels, directions, and pathway designs.
  - c. Recall movement sequences with a partner or in group dance activities. Apply constructive feedback from teacher and self-check to improve dance skills.
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### **Grade 4**

#### **DA:Pr5.1.4**

- a. Demonstrate fundamental dance skills (for example, alignment, coordination, balance, core support, kinesthetic awareness) and movement qualities when replicating and recalling patterns and sequences of locomotor and non-locomotor movements.
  - b. Execute techniques that extend movement range, build strength, and develop endurance. Explain the relationship between execution of technique, safe body-use, and healthful nutrition.
  - c. Coordinate phrases and timing with other dancers by cueing off each other and responding to stimuli cues (for example, music, text, or lighting). Reflect on feedback from others to inform personal dance performance goals
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### **Grade 5**

#### **DA:Pr5.1.5**

- a. Recall and execute a series of dance phrases using fundamental dance skills (for example, alignment, coordination, balance, core support, kinesthetic awareness, clarity of movement).
  - b. Demonstrate safe body-use practices during technical exercises and movement combinations. Discuss how these practices, along with healthful eating habits, promote strength, flexibility, endurance and injury prevention.
  - c. Collaborate with peer ensemble members to repeat sequences, synchronize actions, and refine spatial relationships to improve performance quality. Apply feedback from others to establish personal performance goals.
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### **Grade 6**

#### **DA:Pr5.1.6**

- a. Embody technical dance skills (for example, alignment, coordination, balance, core support, kinesthetic awareness, clarity of movement) to accurately execute changes of direction, levels, facings, pathways, elevations and landings, extensions of limbs, and movement transitions.

- b. Apply basic anatomical knowledge, proprioceptive feedback, spatial awareness, and nutrition to promote safe and healthful strategies when warming up and dancing.



- c. Collaborate as an ensemble to refine dances by identifying what works and does not work in executing complex patterns, sequences, and formations. Solve movement problems to dances by testing options and finding good results. Document self-improvements over time
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## **Grade 7**

### **DA:Pr5.1.7**

- a. Apply body-use strategies to accommodate physical maturational development to technical dance skills (for example, functional alignment, coordination, balance, core support, kinesthetic awareness, clarity of movement, weight shifts, flexibility/range of motion).
  - b. Utilize healthful practices and sound nutrition in dance activities and everyday life. Discuss benefits of practices and how choices enhance performance.
  - c. Collaborate with peers to practice and refine dances. Develop group performance expectations through observation and analyses (for example, view live or recorded professional dancers and collaboratively develop group performance expectations based on information gained from observations)
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## **Grade 8**

### **DA:Pr5.1.8**

- a. Embody technical dance skills (for example, functional alignment, coordination, balance, core support, clarity of movement, weight shifts, flexibility/range of motion) to replicate, recall, and execute spatial designs and musical or rhythmical dance phrases.
- b. Evaluate personal healthful practices in dance activities and everyday life including nutrition and injury prevention. Discuss choices made, the effects experienced, and methods for improvement.
- c. Collaborate with peers to discover strategies for achieving performance accuracy, clarity, and expressiveness. Articulate personal performance goals and practice to reach goals. Document personal improvement over time (for example, journaling, portfolio, or timeline).

## **Dance/Performing**

### **#DA:Pr6.1**

**Process Component:** Present

**Anchor Standard:** Convey meaning through the presentation of artistic work.

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## **Grade K**

### **DA:Pr6.1.K**

- a. Dance for and with others in a designated space.
  - b. Select a prop to use as part of a dance.
-



**Grade 1**  
**DA:Pr6.1.1**

- a. Dance for others in a space where audience and performers occupy different areas.
  - b. Explore the use of simple props to enhance performance.
- 

**Grade 2**  
**DA:Pr6.1.2**

- a. Dance for and with others in a space where audience and performers occupy different areas.
  - b. Use limited production elements (for example, hand props, simple scenery, or media projections).
- 

**Grade 3**  
**DA:Pr6.1.3**

- a. Identify the main areas of a performance space using production terminology (for example, stage right, stage left, center stage, upstage, and downstage).
  - b. Explore simple production elements (costumes, props, music, scenery, lighting, or media) for a dance performed for an audience in a designated specific performance space.
- 

**Grade 4**  
**DA:Pr6.1.4**

- a. Consider how to establish a formal performance space from an informal setting (for example, gymnasium or grassy area).
  - b. Identify, explore, and experiment with a variety of production elements to heighten the artistic intent and audience experience.
- 

**Grade 5**  
**DA:Pr6.1.5**

- a. Demonstrate the ability to adapt dance to alternative performance venues by modifying spacing and movements to the performance space.
  - b. Identify, explore, and select production elements that heighten and intensify the artistic intent of a dance and are adaptable for various performance spaces.
- 

**Grade 6**  
**DA:Pr6.1.6**

- a. Recognize needs and adapt movements to performance area. Use performance etiquette and performance practices during class, rehearsal and performance. Post-performance, accept notes from choreographer and make corrections as needed and apply to future performances.
- b. Compare and contrast a variety of possible production elements that would intensify and heighten the artistic intent of the work. Select choices and explain reasons for the decisions made using production terminology.



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## **Grade 7**

### **DA:Pr6.1.7**

- a. Recommend changes to and adapt movements to performance area. Use performance etiquette and performance practices during class, rehearsal and performance. Maintain journal documenting these efforts. Post-performance, accept notes from choreographer and apply corrections to future performances.
  - b. Explore possibilities of producing dance in a variety of venues or for different audiences and, using production terminology, explain how the production elements would be handled in different situations.
- 

## **Grade 8**

### **DA:Pr6.1.8**

- a. Demonstrate leadership qualities (for example commitment, dependability, responsibility, and cooperation) when preparing for performances. Use performance etiquette and performance practices during class, rehearsal and performance. Document efforts and create a plan for ongoing improvements. Post-performance, accept notes from choreographer and apply corrections to future performances.
- b. Collaborate to design and execute production elements that would intensify and heighten the artistic intent of a dance performed on a stage, in a different venue, or for different audiences. Explain reasons for choices using production terminology.

## **Dance/Responding**

### **#DA:Re7.1**

**Process Component:** Analyze

**Anchor Standard:** Perceive and analyze artistic work.

---

## **Grade K**

### **DA:Re7.1.K**

- a. Find a movement that repeats in a dance.
  - b. Demonstrate or describe observed or performed dance movement
- 

## **Grade 1**

### **DA:Re7.1.1**

- a. Find a movement that repeats in a dance to make a pattern.
  - b. Demonstrate and describe observed or performed dance movements from a specific genre
- 

## **Grade 2**

### **DA:Re7.1.2**

- a. Find movements in a dance that develop a pattern.
- b. Demonstrate and describe movements in dances from different genres or cultures.



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**Grade 3**  
**DA:Re7.1.3**

- a. Find a movement pattern that creates a movement phrase in a dance work
  - b. Demonstrate and explain how one dance genre is different from another, or how one cultural movement practice is different from another.
- 

**Grade 4**  
**DA:Re7.1.4**

- a. Find patterns of movement in dance works that create a style or theme.
  - b. Demonstrate and explain how dance styles differ within a genre or within a cultural movement practice.
- 

**Grade 5**  
**DA:Re7.1.5**

- a. Find meaning or artistic intent from the patterns of movement in a dance work.
  - b. Describe, using basic dance terminology, the qualities and characteristics of style used in a dance from one's own cultural movement practice. Compare them to the qualities and characteristics of style found in a different dance genre, style, or cultural movement practice, also using basic dance terminology.
- 

**Grade 6**  
**DA:Re7.1.6**

- a. Describe or demonstrate recurring patterns of movement and their relationships in dance.
  - b. Explain how the elements of dance are used in a variety of dance genres, styles, or cultural movement practices. Use genre-specific dance terminology.
- 

**Grade 7**  
**DA:Re7.1.7**

- a. Compare, contrast, and discuss patterns of movement and their relationships in dance.
  - b. Compare and contrast how the elements of dance are used in a variety of genres, styles, or cultural movement practices. Use genre-specific dance terminology.
- 

**Grade 8**  
**DA:Re7.1.8**

- a. Describe, demonstrate and discuss patterns of movement and their relationships in dance in context of artistic intent.
- b. Explain how the elements of dance are used in a variety of genres, styles, or cultural movement practices to communicate intent. Use genre-specific dance terminology.

## **Dance/Responding**

**#DA:Re8.1**

**Process Component:** Interpret

**Anchor Standard:** Interpret intent and meaning in artistic work.



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**Grade K****DA:Re8.1.K**

- a. Observe movement and describe it using simple dance terminology.
- 

**Grade 1****DA:Re8.1.1**

- a. Select movements from a dance that suggest ideas and explain how the movement captures the idea using simple dance terminology.
- 

**Grade 2****DA:Re8.1.2**

- a. Use context cues from movement to identify meaning and intent in a dance using simple dance terminology.
- 

**Grade 3****DA:Re8.1.3**

- a. Select specific context cues from movement. Explain how they relate to the main idea of the dance using basic dance terminology.
- 

**Grade 4****DA:Re8.1.4**

- a. Relate movements, ideas, and context to decipher meaning in a dance using basic dance terminology.
- 

**Grade 5****DA:Re8.1.5**

- a. Interpret meaning in a dance based on its movements. Explain how the movements communicate the main idea of the dance using basic dance terminology.
- 

**Grade 6****DA:Re8.1.6**

- a. Explain how the artistic expression of a dance is achieved through the elements of dance, use of body, dance technique, dance structure, and context. Explain how these communicate the intent of the dance using genre specific dance terminology.
- 

**Grade 7****DA:Re8.1.7**

- a. Compare the meaning of different dances. Explain how the artistic expression of each dance is achieved through the elements of dance, use of body, dance technique, and context. Use genre specific dance terminology.
- 

**Grade 8****DA:Re8.1.8**

- a. Select a dance and explain how artistic expression is achieved through relationships among



the elements of dance, use of body, dance technique and context. Cite evidence in the dance to support your interpretation using genre specific dance terminology.

## **Dance/Responding**

**#DA:Re9.1**

**Process Component:** Critique

**Anchor Standard:** Apply criteria to evaluate artistic work.

**Grade K**

**DA:Re9.1.K**

a. Find a movement that was noticed in a dance. Demonstrate the movement that was noticed and explain why it attracted attention.

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**Grade 1**

**DA:Re9.1.1**

a. Identify and demonstrate several movements in a dance that attracted attention. Describe the characteristics that make the movements interesting and talk about why they were chosen.

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**Grade 2**

**DA:Re9.1.2**

a. Observe or demonstrate dances from a genre or culture. Discuss movements and other aspects of the dances that make the dances work well, and explain why they work. Use simple dance terminology.

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**Grade 3**

**DA:Re9.1.3**

a. Select dance movements from specific genres, styles, or cultures. Identify characteristic movements from these dances and describe in basic dance terminology ways in which they are alike and different.

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**Grade 4**

**DA:Re9.1.4**

a. Discuss and demonstrate the characteristics that make a dance artistic and apply those characteristics to dances observed or performed in a specific genre, style, or cultural movement practice. Use basic dance terminology.

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**Grade 5**

**DA:Re9.1.5**

a. Define the characteristics of dance that make a dance artistic and meaningful. Relate them to the elements of dance in genres, styles, or cultural movement practices. Use basic dance terminology to describe characteristics that make a dance artistic and meaningful.



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**Grade 6****DA:Re9.1.6**

a. Discuss the characteristics and artistic intent of a dance from a genre, style, or cultural movement practice and develop artistic criteria to critique the dance using genre-specific dance terminology.

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**Grade 7****DA:Re9.1.7**

a. Compare artistic intent, content and context from dances to examine the characteristics of genre, style, or cultural movement practice. Based on the comparison, refine artistic criteria using genre-specific dance terminology.

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**Grade 8****DA:Re9.1.8**

a. Use artistic criteria to determine what makes an effective performance. Consider content, context, genre, style, or cultural movement practice to comprehend artistic expression. Use genre-specific dance terminology.



# Media Arts

Media arts standards are intended to address the diverse forms and categories of media arts, including: imaging, sound, moving image, virtual and interactive. Media arts standards do not dictate what or how to teach, but define age-appropriate outcomes for students, towards the achievement of Enduring Understandings and Artistic Literacy. They are therefore quite generalized, not specifying particular technologies or techniques, and containing very few examples of terminology and activities. The standards allow for a great diversity of instruction, methodology and circumstance. They are adaptive to the wide range of conditions that exist currently for the form across the country. State and district standards may offer greater specificity as they are developed, and Model Cornerstone Assessments will provide more specific examples of projects, lessons and activities.

The standards are normally presented in a linear, sequential format, which does provide a representation of the creative production process. But the standards are designed for access in a non-linear manner as well, whereby one can address any particular process, process component, or standard on an as needed basis. For example, lessons and units can easily begin within Connecting by considering a given context, move next into Responding to analyze particular examples of media arts, and then into Creating to begin production. Also, the standards represent portions of holistic creative process, and may be addressed in rapid-fire succession, as one is creating work. Therefore, a brainstorming session that is contained within Creating is also constantly accessing Responding and even Connecting. One well-structured class, lesson or unit can address many, if not all standards. This interactive web site offers versatility in accessing the standards for flexibility in lesson planning, instruction, and assessment. For example, process components may be selected as a primary organizational tool for some teachers.

Enduring Understandings and Essential Questions are written at one grade-level, and are to be adapted by the instructor to their specific grade-level. It is advisable to view standards at lower and higher grade levels in order to view a progression of proficiency. Nevertheless, it is assumed that students may have little or no formal media arts instruction at a particular grade level. Based on best practice, collaboration is assumed throughout the media arts standards.

## Media Arts/Connecting

**#MA:Cn10.1**

**Process Component:** Synthesize

**Anchor Standard:** Synthesize and relate knowledge and personal experiences to make art.

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### Grade K

**MA:Cn10.1.K**

- a. Use personal experiences and choices in making media artworks.
  - b. Share memorable experiences of media artworks.
- 

### Grade 1

**MA:Cn10.1.1**

- a. Use personal experiences, interests, and models in creating media artworks. b.
- b. Share meaningful experiences of media artworks.



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**Grade 2****MA:Cn10.1.2**

- a. Use personal experiences, interests, information, and models in creating media artworks.
  - b. Discuss experiences of media artworks, describing their meaning and purpose.
- 

**Grade 3****MA:Cn10.1.3**

- a. Use personal and external resources, such as interests, information, and models, to create media artworks.
  - b. Identify and show how media artworks form meanings, situations, and/or culture, such as popular media.
- 

**Grade 4****MA:Cn10.1.4**

- a. Examine and use personal and external resources, such as interests, research, and cultural understanding, to create media artworks.
  - b. Examine and show how media artworks form meanings, situations, and/or cultural experiences, such as online spaces.
- 

**Grade 5****MA:Cn10.1.5**

- a. Access and use internal and external resources to create media artworks, such as interests, knowledge, and experiences.
  - b. Examine and show how media artworks form meanings, situations, and cultural experiences, such as news and cultural events.
- 

**Grade 6****MA:Cn10.1.6**

- a. Access, evaluate, and use internal and external resources to create media artworks, such as knowledge, experiences, interests, and research.
  - b. Explain and show how media artworks form new meanings, situations, and cultural experiences, such as historical events.
- 

**Grade 7****MA:Cn10.1.7**

- a. Access, evaluate and use internal and external resources to inform the creation of media artworks, such as experiences, interests, research, and exemplary works.
- b. Explain and show how media artworks form new meanings and knowledge, situations, and cultural experiences, such as learning, and new information



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**Grade 8****MA:Cn10.1.8**

- a. Access, evaluate, and use internal and external resources to inform the creation of media artworks, such as cultural and societal knowledge, research, and exemplary works.
- b. Explain and demonstrate how media artworks expand meaning and knowledge, and create cultural experiences, such as local and global events.

**Media Arts/Connecting****#MA:Cn11.1****Process Component: Relate**

**Anchor Standard:** Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

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**Grade K****MA:Cn11.1.K**

- a. With guidance, share ideas in relating media artworks and everyday life, such as daily activities.
  - b. With guidance, interact safely and appropriately with media arts tools and environments.
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**Grade 1****MA:Cn11.1.1**

- a. Discuss and describe media artworks in everyday life, such as popular media, and connections with family and friends.
  - b. Interact appropriately with media arts tools and environments, considering safety, rules, and fairness.
- 

**Grade 2****MA:Cn11.1.2**

- a. Discuss how media artworks and ideas relate to everyday and cultural life, such as media messages and media environments.
  - b. Interact appropriately with media arts tools and environments, considering safety, rules, and fairness.
- 

**Grade 3****MA:Cn11.1.3**

- a. Identify how media artworks and ideas relate to everyday and cultural life and can influence values and online behavior.
- b. Examine and interact appropriately with media arts tools and environments, considering safety, rules, and fairness.



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**Grade 4****MA:Cn11.1.4**

- a. Explain verbally and/or in media artworks, how media artworks and ideas relate to everyday and cultural life, such as fantasy and reality, and technology use.
  - b. Examine and interact appropriately with media arts tools and environments, considering ethics, rules, and fairness.
- 

**Grade 5****MA:Cn11.1.5**

- a. Research and show how media artworks and ideas relate to personal, social and community life, such as exploring commercial and information purposes, history, and ethics.
  - b. Examine, discuss and interact appropriately with media arts tools and environments,
- 

**Grade 6****MA:Cn11.1.6**

- a. Research and show how media artworks and ideas relate to personal life, and social, community, and cultural situations, such as personal identity, history, and entertainment.
  - b. Analyze and interact appropriately with media arts tools and environments, considering fair use and copyright, ethics, and media literacy.
- 

**Grade 7****MA:Cn11.1.7**

- a. Research and demonstrate how media artworks and ideas relate to various situations, purposes and values, such as community, vocations, and social media.
  - b. Analyze and responsibly interact with media arts tools and environments, considering copyright, ethics, media literacy, and social media.
- 

**Grade 8****MA:Cn11.1.8**

- a. Demonstrate and explain how media artworks and ideas relate to various contexts, purposes, and values, such as democracy, environment, and connecting people and places
- b. Analyze and responsibly interact with media arts tools, environments, legal, and technological contexts, considering ethics, media literacy, social media, and virtual worlds

## **Media Arts/Creating**

**#MA:Cr1.1.1****Process Component:** Conceive**Anchor Standard:** Generate and conceptualize artistic ideas and work.**Grade K****MA:Cr1.1.1.K**

- a. Discover and share ideas for media artworks using play and experimentation.



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**Grade 1****MA:Cr1.1.1.1**

- a. Express and share ideas for media artworks through sketching and modeling.
- 

**Grade 2****MA:Cr1.1.1.2**

- a. Discover multiple ideas for media artworks through brainstorming and improvising.
- 

**Grade 3****MA:Cr1.1.1.3**

- a. Develop multiple ideas for media artworks using a variety of tools, methods and/or materials.
- 

**Grade 4****MA:Cr1.1.1.4**

- a. Conceive of original artistic goals for media artworks using a variety of creative methods, such as brainstorming and modeling.
- 

**Grade 5****MA:Cr1.1.1.5**

- a. Envision original ideas and innovations for media artworks using personal experiences and/or the work of others.
- 

**Grade 6****MA:Cr1.1.1.6**

- a. Formulate variations of goals and solutions for media artworks by practicing chosen creative processes, such as sketching, improvising and brainstorming.
- 

**Grade 7****MA:Cr1.1.1.7**

- a. Produce a variety of ideas and solutions for media artworks
  - b. Produce a variety of ideas and solutions for media artworks through application of chosen inventive processes, such as concept modeling and prototyping.
- 

**Grade 8****MA:Cr1.1.1.8**

- a. Generate ideas, goals, and solutions for original media artworks through application of focused creative processes, such as divergent thinking and experimenting.



# Media Arts/Creating

#MA:Cr2.1.1

**Process Component:** Develop

**Anchor Standard:** Organize and develop artistic ideas and work.

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## Grade K

MA:Cr2.1.1.K

a. With guidance, use ideas to form plans or models for media arts productions.

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## Grade 1

MA:Cr2.1.1.1

a. With guidance, use identified ideas to form plans and models for media arts productions.

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## Grade 2

MA:Cr2.1.1.2

a. Choose ideas to create plans and models for media arts productions.

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## Grade 3

MA:Cr2.1.1.3

a. Form, share, and test ideas, plans, and models to prepare for media arts productions.

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## Grade 4

MA:Cr2.1.1.4

a. Discuss, test, and assemble ideas, plans, and models for media arts productions, considering the artistic goals and the presentation.

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## Grade 5

MA:Cr2.1.1.5

a. Develop, present, and test ideas, plans, models, and proposals for media arts productions, considering the artistic goals and audience

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## Grade 6

MA:Cr2.1.1.6

a. Organize, propose, and evaluate artistic ideas, plans, prototypes, and production processes for media arts productions, considering purposeful intent.

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## Grade 7

MA:Cr2.1.1.7

a. Design, propose, and evaluate artistic ideas, plans, prototypes, and production processes for media arts productions, considering expressive intent and resources.



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**Grade 8****MA:Cr2.1.1.8**

- a. Structure and critique ideas, plans, prototypes, and production processes for media arts productions, considering intent, resources, and the presentation context.

**Media Arts/Creating****#MA:Cr3.1****Process Component:** Construct**Anchor Standard:** Refine and complete artistic work.

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**Grade K****MA:Cr3.1.K**

- a. Form and capture media arts content for expression and meaning in media arts productions.
- b. Make changes to the content, form, or presentation of media artworks and share results.

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**Grade 1****MA:Cr3.1.1**

- a. Create, capture, and assemble media arts content for media arts productions, identifying basic principles, such as pattern and repetition.
- b. Practice and identify the effects of making changes to the content, form, or presentation, in order to refine and finish media artworks.

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**Grade 2****MA:Cr3.1.2**

- a. Construct and assemble content for unified media arts productions, identifying and applying basic principles, such as positioning and attention.
- b. Test and describe expressive effects in altering, refining, and completing media artworks.

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**Grade 3****MA:Cr3.1.3**

- a. Construct and order various content into unified, purposeful media arts productions, describing and applying a defined set of principles, such as movement and force.
- b. Practice and analyze how the emphasis of elements alters effect and purpose in refining and completing media artworks.

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**Grade 4****MA:Cr3.1.4**

- a. Structure and arrange various content and components to convey purpose and meaning in different media arts productions, applying sets of associated principles, such as balance and contrast.
- b. Demonstrate intentional effect in refining media artworks, emphasizing elements for a purpose.



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## **Grade 5**

### **MA:Cr3.1.5**

- a. Create content and combine components to convey expression, purpose, and meaning in a variety of media arts productions, utilizing sets of associated principles, such as emphasis and exaggeration.
- b. Determine how elements and components can be altered for clear communication and intentional effects, and refine media artworks to improve clarity and purpose.

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## **Grade 6**

### **MA:Cr3.1.6**

- a. Experiment with multiple approaches to produce content and components for determined purpose and meaning in media arts productions, utilizing a range of associated principles, such as point of view and perspective.
- b. Appraise how elements and components can be altered for intentional effects and audience, and refine media artworks to reflect purpose and audience.

---

## **Grade 7**

### **MA:Cr3.1.7**

- a. Coordinate production processes to integrate content and components for determined purpose and meaning in media arts productions, demonstrating understanding of associated principles, such as narrative structures and composition.
- b. Improve and refine media artworks by intentionally emphasizing particular expressive elements to reflect an understanding of purpose, audience, or place.

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## **Grade 8**

### **MA:Cr3.1.8**

- a. Implement production processes to integrate content and stylistic conventions for determined meaning in media arts productions, demonstrating understanding of associated principles, such as theme and unity.
- b. Refine and modify media artworks, improving technical quality and intentionally accentuating selected expressive and stylistic elements, to reflect an understanding of purpose, audience, and place.

## **Media Arts/Producing**

### **#MA:Pr4.1**

**Process Component:** Integrate

**Anchor Standard:** Select, analyze, and interpret artistic work for presentation.

## **Grade K**

### **MA:Pr4.1.K**

- a. With guidance, combine arts forms and media content, such as dance and video, to form media artworks.



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**Grade 1****MA:Pr4.1.1**

a. Combine varied academic, arts, and media content in media artworks, such as an illustrated story,

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**Grade 2****MA:Pr4.1.2**

a. Practice combining varied academic, arts, and media content into unified media artworks, such as a narrated science animation.

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**Grade 3****MA:Pr4.1.3**

a. Practice combining varied academic, arts, and media forms and content into unified media artworks, such as animation, music, and dance.

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**Grade 4****MA:Pr4.1.4**

a. Demonstrate how a variety of academic, arts, and media forms and content may be mixed and coordinated into media artworks, such as narrative, dance, and media.

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**Grade 5****MA:Pr4.1.5**

a. Create media artworks through the integration of multiple contents and forms, such as a media broadcast.

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**Grade 6****MA:Pr4.1.6**

a. Validate how integrating multiple contents and forms can support a central idea in a media artwork, such as media, narratives, and performance.

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**Grade 7****MA:Pr4.1.7**

a. Integrate multiple contents and forms into unified media arts productions that convey consistent perspectives and narratives, such as an interactive video game.

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**Grade 8****MA:Pr4.1.8**

a. Integrate multiple contents and forms into unified media arts productions that convey specific themes or ideas, such as interdisciplinary projects, or multimedia theatre.



# Media Arts/Producing

#MA:Pr5.1

**Process Component:** Practice

**Anchor Standard:** Develop and refine artistic techniques and work for presentation.

---

## Grade K

MA:Pr5.1.K

- a. Identify and demonstrate basic skills, such as handling tools, making choices, and cooperating in creating media artworks.
  - b. Identify and demonstrate creative skills, such as performing, within media arts productions.
  - c. Practice, discover, and share how media arts creation tools work.
- 

## Grade 1

MA:Pr5.1.1

- a. Describe and demonstrate various artistic skills and roles, such as technical steps, planning, and collaborating in media arts productions.
  - b. Describe and demonstrate basic creative skills within media arts productions, such as varying techniques.
  - c. Experiment with and share different ways to use tools and techniques to construct media artworks.
- 

## Grade 2

MA:Pr5.1.2

- a. Enact roles to demonstrate basic ability in various identified artistic, design, technical, and soft skills, such as tool use and collaboration in media arts productions.
  - b. Demonstrate use of experimentation skills, such as playful practice, and trial and error, within and through media arts productions.
  - c. Demonstrate and explore identified methods to use tools to capture and form media artworks.
- 

## Grade 3

MA:Pr5.1.3

- a. Exhibit developing ability in a variety of artistic, design, technical, and organizational roles, such as making compositional decisions, manipulating tools, and group planning in media arts productions.
- b. Exhibit basic creative skills to invent new content and solutions within and through media arts productions.
- c. Exhibit standard use of tools and techniques while constructing media artworks.



## **Grade 4**

### **MA:Pr5.1.4**

- a. Enact identified roles to practice foundational artistic, design, technical, and soft skills, such as formal technique, equipment usage, production, and collaboration in media arts productions.
  - b. Practice foundational innovative abilities, such as design thinking, in addressing problems within and through media arts productions.
  - c. Demonstrate use of tools and techniques in standard and novel ways while constructing media artworks.
- 

## **Grade 5**

### **MA:Pr5.1.5**

- a. Enact various roles to practice fundamental ability in artistic, design, technical, and soft
  - b. Practice fundamental creative and innovative abilities, such as expanding conventions, in addressing problems within and through media arts productions.
  - c. Examine how tools and techniques could be used in standard and experimental ways in constructing media artworks.
- 

## **Grade 6**

### **MA:Pr5.1.6**

- a. Develop a variety of artistic, design, technical, and soft skills through performing various assigned roles in producing media artworks, such as invention, formal technique, production, self-initiative, and problem-solving.
  - b. Develop a variety of creative and adaptive innovation abilities, such as testing constraints, in developing solutions within and through media arts productions.
  - c. Demonstrate adaptability using tools and techniques in standard and experimental ways in constructing media artworks.
- 

## **Grade 7**

### **MA:Pr5.1.7**

- a. Exhibit an increasing set of artistic, design, technical, and soft skills through performing various roles in producing media artworks, such as creative problem-solving and organizing.
  - b. Exhibit an increasing set of creative and adaptive innovation abilities, such as exploratory processes, in developing solutions within and through media arts productions.
  - c. Demonstrate adaptability using tools and techniques in standard and experimental ways to achieve an assigned purpose in constructing media artworks.
- 

## **Grade 8**

### **MA:Pr5.1.8**

- a. Demonstrate a defined range of artistic, design, technical, and soft skills, through performing specified roles in producing media artworks, such as strategizing and collaborative communication.



- b. Demonstrate a defined range of creative and adaptive innovation abilities, such as divergent solutions and bending conventions, in developing new solutions for identified problems within and through media arts productions.
- c. Demonstrate adaptability using tools, techniques and content in standard and experimental ways to communicate intent in the production of media artworks.

## **Media Arts/Producing**

**#MA:Pr6.1**

**Process Component:** Present

**Anchor Standard:** Convey meaning through the presentation of artistic work.

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### **Grade K**

**MA:Pr6.1.K**

- a. With guidance, identify and share roles and the situation in presenting media artworks.
  - b. With guidance, identify and share reactions to the presentation of media artworks.
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### **Grade 1**

**MA:Pr6.1.1**

- a. With guidance, discuss presentation conditions and perform a task in presenting media artworks.
  - b. With guidance, discuss the experience of the presentation of media artworks.
- 

### **Grade 2**

**MA:Pr6.1.2**

- a. Identify and describe presentation conditions and perform task(s) in presenting media artworks.
  - b. Identify and describe the experience and share results of presenting media artworks.
- 

### **Grade 3**

**MA:Pr6.1.3**

- a. Identify and describe the presentation conditions, and take on roles and processes in presenting or distributing media artworks.
  - b. Identify and describe the experience, and share results of and improvements for presenting media artworks.
- 

### **Grade 4**

**MA:Pr6.1.4**

- a. Explain the presentation conditions, and fulfill a role and processes in presenting or distributing media artworks.
- b. Explain results of and improvements for presenting media artworks.



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**Grade 5****MA:Pr6.1.5**

- a. Compare qualities and purposes of presentation formats, and fulfill a role and associated processes in presentation and/or distribution of media artworks.
  - b. Compare results of and improvements for presenting media artworks.
- 

**Grade 6****MA:Pr6.1.6**

- a. Analyze various presentation formats and fulfill various tasks and defined processes in the presentation and/or distribution of media artworks.
  - b. Analyze results of and improvements for presenting media artworks.
- 

**Grade 7****MA:Pr6.1.7**

- a. Evaluate various presentation formats in order to fulfill various tasks and defined processes in the presentation and/or distribution of media artworks.
  - b. Evaluate the results of and improvements for presenting media artworks, considering impacts on personal growth.
- 

**Grade 8****MA:Pr6.1.8**

- a. Design the presentation and distribution of media artworks through multiple formats and/or contexts.
  - b. Evaluate the results of and implement improvements for presenting media artworks, considering impacts on personal growth and external effects.
- 

## **Media Arts/Responding**

**#MA:Re7.1****Process Component:** Perceive**Anchor Standard:** Perceive and analyze artistic work.

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**Grade K****MA:Re7.1.K**

- a. Recognize and share components and messages in media artworks.
  - b. Recognize and share how a variety of media artworks create different experiences.
- 

**Grade 1****MA:Re7.1.1**

- a. Identify components and messages in media artworks.
- b. With guidance, identify how a variety of media artworks create different experiences.



---

**Grade 2**  
**MA:Re7.1.2**

- a. Identify and describe the components and messages in media artworks.
  - b. Identify and describe how a variety of media artworks create different experiences.
- 

**Grade 3**  
**MA:Re7.1.3**

- a. Identify and describe how messages are created by components in media artworks.
  - b. Identify and describe how various forms, methods, and styles in media artworks manage audience experience.
- 

**Grade 4**  
**MA:Re7.1.4**

- a. Identify, describe, and explain how messages are created by components in media artworks.
  - b. Identify, describe, and explain how various forms, methods, and styles in media artworks manage audience experience.
- 

**Grade 5**  
**MA:Re7.1.5**

- a. Identify, describe, and differentiate how message and meaning are created by components in media artworks.
  - b. Identify, describe, and differentiate how various forms, methods, and styles in media artworks manage audience experience.
- 

**Grade 6**  
**MA:Re7.1.6**

- a. Identify, describe, and analyze how message and meaning are created by components in media artworks.
  - b. Identify, describe, and analyze how various forms, methods, and styles in media artworks manage audience experience.
- 

**Grade 7**  
**MA:Re7.1.7**

- a. Describe, compare, and analyze the qualities of and relationships between the components in media artworks.
  - b. Describe, compare, and analyze how various forms, methods, and styles in media artworks interact with personal preferences in influencing audience experience.
- 

**Grade 8**  
**MA:Re7.1.8**

- a. Compare, contrast, and analyze the qualities of and relationships between the components and style in media artworks.



- b. Compare, contrast, and analyze how various forms, methods, and styles in media artworks
- c. Manage audience experience and create intention.

## **Media Arts/Responding**

**#MA:Re8.1**

**Process Component:** Interpret

**Anchor Standard:** Interpret intent and meaning in artistic work.

---

**Grade K**

**MA:Re8.1.K**

- a. With guidance, share observations regarding a variety of media artworks.
- 

**Grade 1**

**MA:Re8.1.1**

- a. With guidance, identify the meanings of a variety of media artworks.
- 

**Grade 2**

**MA:Re8.1.2**

- a. Determine the purposes and meanings of media artworks, considering their context.
- 

**Grade 3**

**MA:Re8.1.3**

- a. Determine the purposes and meanings of media artworks while describing their context.
- 

**Grade 4**

**MA:Re8.1.4**

- a. Determine and explain reactions and interpretations to a variety of media artworks, considering their purpose and context
- 

**Grade 5**

**MA:Re8.1.5**

- a. Determine and compare personal and group interpretations of a variety of media artworks, considering their intention and context.
- 

**Grade 6**

**MA:Re8.1.6**

- a. Analyze the intent of a variety of media artworks, using given criteria.
- 

**Grade 7**

**MA:Re8.1.7**

- a. Analyze the intent and meaning of a variety of media artworks, using self-developed criteria.



**Grade 8**  
**MA:Re8.1.8**

- a. Analyze the intent and meanings of a variety of media artworks, focusing on intentions, forms, and various contexts.

## **Media Arts/Responding**

**#MA:Re9.1**

**Process Component:** Evaluate

**Anchor Standard:** Apply criteria to evaluate artistic work.

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**Grade K**  
**MA:Re9.1.K**

- a. Share appealing qualities and possible changes in media artworks.
- 

**Grade 1**  
**MA:Re9.1.1**

- a. Identify the effective parts of and possible changes to media artworks considering viewers.
- 

**Grade 2**  
**MA:Re9.1.2**

- a. Discuss the effectiveness of and improvements for media artworks, considering their context.
- 

**Grade 3**  
**MA:Re9.1.3**

- a. Identify basic criteria for and evaluate media artworks, considering possible improvements and context.
- 

**Grade 4**  
**MA:Re9.1.4**

- a. Identify and apply basic criteria for evaluating and improving media artworks and production processes, considering context
- 

**Grade 5**  
**MA:Re9.1.5**

- a. Determine and apply criteria for evaluating media artworks and production processes, considering context, and practicing constructive feedback.
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**Grade 6**  
**MA:Re9.1.6**

- a. Determine and apply specific criteria to evaluate various media artworks and production processes, considering context and practicing constructive feedback.



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**Grade 7****MA:Re9.1.7**

- a. Develop and apply criteria to evaluate various media artworks and production processes, considering context, and practicing constructive feedback.

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**Grade 8****MA:Re9.1.8**

- a. Evaluate media art works and production processes with developed criteria, considering context and artistic goals.







# Music

The National Core Music Standards are designed to guide music educators as they help their students achieve the goal of independent music literacy. The structure of the standards organizes outcomes by Artistic Process, thereby facilitating sequential instruction while also authentically reflecting the way musicians think and work.

**The music standards are organized and presented as follows:**

- All music performance standards are grouped under the Artistic Processes of Creating, Performing, or Responding.
- Because music connections are an essential part of each Artistic Process, open-ended Connecting outcomes cross-reference users to Creating, Performing, and Responding performance standards.
- Music performance standards are organized and coded according to the process components or “steps” of the Artistic Processes. The process components for each Process are as follows:
  - Creating: Imagine; Plan and Make; Evaluate and Refine, and Present
  - Performing: Select; Analyze; Interpret; Rehearse, Evaluate, and Refine; and Present
  - Responding: Select; Analyze; Interpret; and Evaluate
- Performance standards are provided for each grade level from Prekindergarten through grade eight.
- Four distinct “strands” of high school performance standards are provided, reflecting the increasing variety of music courses offered in American secondary schools.
  - Ensemble, Harmonizing Instrument (guitar, keyboard, etc.), Composition/Theory, and Music Technology performance standards are provided for three levels: Proficient, Accomplished, and Advanced.
  - Because many students become involved in Ensemble and Harmonizing Instrument classes before they enter high school, performance standards for these strands also include two preparatory levels: Novice (nominally assigned to the fifth grade level) and Intermediate (nominally the eighth grade level).
- To clarify the progression of performance standards across grade and high school levels, italic type is used to indicate changes from one grade level to the next.
- Similarities across the arts disciplines are highlighted in the eleven Common Anchors, which are shared by all five sets of discipline-specific standards. Each Anchor includes one or more process components.
- The standards are based on the assumption of quality resources, including instructional time, spanning PreK-8 and continuing at the high school level.

## General Music/Connecting

**#MU:Cn10.0**

**Process Component:** GMS-Connect #10- Synthesize and relate knowledge and personal experiences to make music.

**Anchor Standard:** Synthesize and relate knowledge and personal experiences to make art.



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**Grade K**  
**MU:Cn10.0.K**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music

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**Grade 1**  
**MU:Cn10.0.1**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music

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**Grade 2**  
**MU:Cn10.0.2**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music.

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**Grade 3**  
**MU:Cn10.0.3**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music.

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**Grade 4**  
**MU:Cn10.0.4**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music.

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**Grade 5**  
**MU:Cn10.0.5**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music.

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**Grade**  
**MU:Cn10.0.6**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music.

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**Grade 7**  
**MU:Cn10.0.7**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music

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**Grade 8**  
**MU:Cn10.0.8**

Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music.



# General Music/Connecting

#MU:Cn11.0

**Process Component:** GMS-Connect #11 - Relate musical ideas and works with varied context to deepen understanding.

**Anchor Standard:** Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.

---

## Grade K

MU:Cn11.0.K

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

---

## Grade 1

MU:Cn11.0.1

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

---

## Grade 2

MU:Cn11.0.2

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

---

## Grade 3

MU:Cn11.0.3

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

---

## Grade 4

MU:Cn11.0.4

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

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## Grade 5

MU:Cn11.0.5

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

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## Grade 6

MU:Cn11.0.6

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.



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**Grade 7**  
**MU:Cn11.0.7**

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.

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**Grade 8**  
**MU:Cn11.0.8**

Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life

## **General Music/Creating**

**#MU:Cr1.1**

**Process Component:** GMS-Imagine - Generate musical ideas for various purposes and contexts.

**Anchor Standard:** Generate and conceptualize artistic ideas and work.

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**Grade K**  
**MU:Cr1.1.K**

- a. With guidance, explore and experience music concepts (such as beat and melodic contour).
  - b. With guidance, generate musical ideas (such as movements or motives).
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**Grade 1**  
**MU:Cr1.1.1**

- a. With limited guidance, create musical ideas (such as answering a musical question) for a specific purpose.
  - b. With limited guidance, generate musical ideas in multiple tonalities (such as major and minor) and meters (such as duple and triple).
- 

**Grade 2**  
**MU:Cr1.1.2**

- a. Improvise rhythmic and melodic patterns and musical ideas for a specific purpose.
  - b. Generate musical patterns and ideas within the context of a given tonality (such as major and minor) and meter (such as duple and triple).
- 

**Grade 3**  
**MU:Cr1.1.3**

- a. Improvise rhythmic and melodic ideas, and describe connection to specific purpose and context (such as personal and social).
- b. Generate musical ideas (such as rhythms and melodies) within a given tonality and/or meter.



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**Grade 4****MU:Cr1.1.4**

- a. Improvise rhythmic, melodic, and harmonic ideas, and explain connection to specific purpose and context (such as social and cultural).
  - b. Generate musical ideas (such as rhythms, melodies, and simple accompaniment patterns) within related tonalities (such as major and minor) and meters.
- 

**Grade 5****MU:Cr1.1.5**

- a. Improvise rhythmic, melodic, and harmonic ideas, and explain connection to specific purpose and context (such as social, cultural, and historical).
  - b. Generate musical ideas (such as rhythms, melodies, and accompaniment patterns) within specific related tonalities, meters, and simple chord changes.
- 

**Grade 6****MU:Cr1.1.6**

Generate simple rhythmic, melodic, and harmonic phrases within AB and ABA forms that convey expressive intent.

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**Grade 7****MU:Cr1.1.7**

Generate rhythmic, melodic, and harmonic phrases and variations over harmonic accompaniments within AB, ABA, or theme and variation forms that convey expressive intent.

---

**Grade 8****MU:Cr1.1.8**

Generate rhythmic, melodic and harmonic phrases and harmonic accompaniments within expanded forms (including introductions, transitions, and codas) that convey expressive intent

## **General Music/Creating**

**#MU:Cr2.1**

**Process Component:** GMS-Plan and Make - Select and develop musical ideas for defined purposes and contexts.

**Anchor Standard:** Organize and develop artistic ideas and work.

---

**Grade K****MU:Cr2.1.K**

- a. With guidance, demonstrate and choose favorite musical ideas.
  - b. With guidance, organize personal musical ideas using iconic notation and/or recording technology.
- 

**Grade 1****MU:Cr2.1.1**

- a. With limited guidance, demonstrate and discuss personal reasons for selecting musical ideas that represent expressive intent.



- b. With limited guidance, use iconic or standard notation and/or recording technology to document and organize personal musical ideas.
- 

## **Grade 2**

### **MU:Cr2.1.2**

- a. Demonstrate and explain personal reasons for selecting patterns and ideas for music that represent expressive intent.
- b. Use iconic or standard notation and/or recording technology to combine, sequence, and document personal musical ideas.
- 

## **Grade 3**

### **MU:Cr2.1.3**

- a. Demonstrate selected musical ideas for a simple improvisation or composition to express intent, and describe connection to a specific purpose and context.
- b. Use standard and/or iconic notation and/or recording technology to document personal rhythmic and melodic musical ideas.
- 

## **Grade 4**

### **MU:Cr2.1.4**

- a. Demonstrate selected and organized musical ideas for an improvisation, arrangement, or composition to express intent, and explain connection to purpose and context.
- b. Use standard and/or iconic notation and/or recording technology to document personal rhythmic, melodic, and simple harmonic musical ideas.
- 

## **Grade 5**

### **MU:Cr2.1.5**

- a. Demonstrate selected and developed musical ideas for improvisations, arrangements, or compositions to express intent, and explain connection to purpose and context.
- b. Use standard and/or iconic notation and/or recording technology to document personal rhythmic, melodic, and two-chord harmonic musical ideas.
- 

## **Grade 6**

### **MU:Cr2.1.6**

- a. Select, organize, construct, and document personal musical ideas for arrangements and compositions within AB or ABA form that demonstrate an effective beginning, middle, and ending, and convey expressive intent.
- b. Use standard and/or iconic notation and/or audio/ video recording to document personal simple rhythmic phrases, melodic phrases, and two-chord harmonic musical ideas.
- 

## **Grade 7**

### **MU:Cr2.1.7**

- a. Select, organize, develop and document personal musical ideas for arrangements, songs, and compositions within AB, ABA, or theme and variation forms that demonstrate unity and variety and convey expressive intent.
- b. Use standard and/or iconic notation and/or audio/ video recording to document personal simple rhythmic phrases, melodic phrases, and harmonic sequences.



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## **Grade 8**

### **MU:Cr2.1.8**

- a. Select, organize, and document musical ideas for arrangements, songs, and compositions within expanded forms that demonstrate tension and release, unity and variety, balance, and convey expressive intent.
- b. Use standard and/or iconic notation and/or audio/ video recording to document personal rhythmic phrases, melodic phrases, and harmonic sequences.

## **General Music/Creating**

### **#MU:Cr3.1**

**Process Component:** GMS-Evaluate and Refine -Evaluate and refine selected musical ideas to create musical work that meets appropriate criteria.

**Anchor Standard:** Refine and complete artistic work.

---

## **Grade K**

### **MU:Cr3.1.K**

- a. With guidance, apply personal, peer, and teacher feedback in refining personal musical ideas.
- 

## **Grade 1**

### **MU:Cr3.1.1**

- a. With limited guidance, discuss and apply personal, peer, and teacher feedback to refine personal musical ideas.
- 

## **Grade 2**

### **MU:Cr3.1.2**

- a. Interpret and apply personal, peer, and teacher feedback to revise personal music.
- 

## **Grade 3**

### **MU:Cr3.1.3**

- a. Evaluate, refine, and document revisions to personal musical ideas, applying teacher-provided and collaboratively-developed criteria and feedback.
- 

## **Grade 4**

### **MU:Cr3.1.4**

- a. Evaluate, refine, and document revisions to personal music, applying teacher-provided and collaboratively-developed criteria and feedback to show improvement over time.
- 

## **Grade 5**

### **MU:Cr3.1.5**

- a. Evaluate, refine, and document revisions to personal music, applying teacher-provided and collaboratively-developed criteria and feedback, and explain rationale for changes



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**Grade 6****MU:Cr3.1.6**

- a. Evaluate their own work, applying teacher-provided criteria such as application of selected elements of music, and use of sound sources.
  - b. Describe the rationale for making revisions to the music based on evaluation criteria and feedback from their teacher.
- 

**Grade 7****MU:Cr3.1.7**

- a. Evaluate their own work, applying selected criteria such as appropriate application of elements of music including style, form, and use of sound sources.
  - b. Describe the rationale for making revisions to the music based on evaluation criteria and feedback from others (teacher and peers).
- 

**Grade 8****MU:Cr3.1.8**

- a. Evaluate their own work by selecting and applying criteria including appropriate application of compositional techniques, style, form, and use of sound sources.
  - b. Describe the rationale for refining works by explaining the choices, based on evaluation criteria.
- 

## **General Music/Creating**

**#MU:Cr3.2**

**Process Component:** GMS-Present - Share creative musical work that conveys intent, demonstrates craftsmanship, and exhibits originality.

**Anchor Standard:** Refine and complete artistic work.

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**Grade K****MU:Cr3.2.K**

With guidance, demonstrate a final version of personal musical ideas to peers.

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**Grade 1****MU:Cr3.2.1**

With limited guidance, convey expressive intent for a specific purpose by presenting a final version of personal musical ideas to peers or informal audience.

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**Grade 2****MU:Cr3.2.2**

Convey expressive intent for a specific purpose by presenting a final version of personal musical ideas to peers or informal audience.



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**Grade 3**  
**MU:Cr3.2.3**

Present the final version of personal created music to others, and describe connection to expressive intent.

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**Grade 4**  
**MU:Cr3.2.4**

Present the final version of personal created music to others, and explain connection to expressive intent.

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**Grade 5**  
**MU:Cr3.2.5**

Present the final version of personal created music to others that demonstrates craftsmanship, and explain connection to expressive intent.

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**Grade 6**  
**MU:Cr3.2.6**

Present the final version of their documented personal composition or arrangement, using craftsmanship and originality to demonstrate an effective beginning, middle, and ending, and convey expressive intent.

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**Grade 7**  
**MU:Cr3.2.7**

Present the final version of their personal documented personal composition, song, or arrangement, using craftsmanship and originality to demonstrate unity and variety, and convey expressive intent.

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**Grade 8**  
**MU:Cr3.2.8**

Present the final version of their documented composition, song, or arrangement, using craftsmanship and originality to demonstrate the application of compositional techniques for creating unity and variety, tension and release, and balance to convey expressive intent.

## **General Music/Performing**

### **#MU:Pr4.1**

**Process Component:** GMS-Select - Select varied musical works to present based on interest, knowledge, technical skill, and context.

**Anchor Standard:** Select, analyze and interpret artistic work for presentation.

---

**Grade K**  
**MU:Pr4.1.K**

With guidance, demonstrate and state personal interest in varied musical selections.



**Grade 1**  
**MU:Pr4.1.1**

With limited guidance, demonstrate and discuss personal interest in, knowledge about, and purpose of varied musical selections.

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**Grade 2**  
**MU:Pr4.1.2**

Demonstrate and explain personal interest in, knowledge about, and purpose of varied musical selections.

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**Grade 3**  
**MU:Pr4.1.3**

Demonstrate and explain how the selection of music to perform is influenced by personal interest, knowledge, purpose, and context.

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**Grade 4**  
**MU:Pr4.1.4**

Demonstrate and explain how the selection of music to perform is influenced by personal interest, knowledge, context, and technical skill.

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**Grade 5**  
**MU:Pr4.1.5**

Demonstrate and explain how the selection of music to perform is influenced by personal interest, knowledge, and context, as well as their personal and others' technical skill.

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**Grade 6**  
**MU:Pr4.1.6**

Apply teacher-provided criteria for selecting music to perform for a specific purpose and/or context, and explain why each was chose

**Grade 7**  
**MU:Pr4.1.7**

Apply collaboratively-developed criteria for selecting music of contrasting styles for a program with a specific purpose and/or context and, after discussion, identify expressive qualities, technical challenges, and reasons for choices.

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**Grade 8**  
**MU:Pr4.1.8**

Apply personally-developed criteria for selecting music of contrasting styles for a program with a specific purpose and/or context, and explain expressive qualities, technical challenges, and reasons for choices.

**General Music/Performing**  
**#MU:Pr4.2**



**Process Component:** GMS-Analyze - Analyze the structure and context of varied musical works and their implications for performance

**Anchor Standard:** Select, analyze and interpret artistic work for presentation.

---

## **Grade K**

### **MU:Pr4.2.K**

- a. With guidance, explore and demonstrate awareness of music contrasts (such as high/low, loud/soft, same/different) in a variety of music selected for performance.
- 

## **Grade 1**

### **MU:Pr4.2.1**

- a. With limited guidance, demonstrate knowledge of music concepts (such as beat and melodic contour) in music from a variety of cultures selected for performance.
  - b. When analyzing selected music, read and perform rhythmic patterns using iconic or standard notation. Grade2 MU:Pr4.2.2
  - a. Demonstrate knowledge of music concepts (such as tonality and meter) in music from a variety of cultures selected for performance.
  - b. When analyzing selected music, read and perform rhythmic and melodic patterns using iconic or standard notation.
- 

## **Grade 3**

### **MU:Pr4.2.3**

- a. Demonstrate understanding of the structure in music selected for performance.
  - b. When analyzing selected music, read and perform rhythmic patterns and melodic phrases using iconic and standard notation.
  - c. Describe how context (such as personal and social) can inform a performance.
- 

## **Grade 4**

### **MU:Pr4.2.4**

- a. Demonstrate understanding of the structure and the elements of music (such as rhythm, pitch, and form) in music selected for performance.
  - b. When analyzing selected music, read and perform using iconic and/or standard notation.
  - c. Explain how context (such as social and cultural) informs a performance.
- 

## **Grade 5**

### **MU:Pr4.2.5**

- a. Demonstrate understanding of the structure and the elements of music (such as rhythm, pitch, form, and harmony) in music selected for performance.
  - b. When analyzing selected music, read and perform using standard notation.
  - c. Explain how context (such as social, cultural, and historical) informs performances
- 

## **Grade 6**

### **MU:Pr4.2.6**

- a. Explain how understanding the structure and the elements of music are used in



music selected for performance.

- b. When analyzing selected music, read and identify by name or function standard symbols for rhythm, pitch, articulation, and dynamics.
  - c. Identify how cultural and historical context inform performances.
- 

## **Grade 7**

### **MU:Pr4.2.7**

- a. Explain and demonstrate the structure of contrasting pieces of music selected for performance and how elements of music are used.
  - b. When analyzing selected music, read and identify by name or function standard symbols for rhythm, pitch articulation, dynamics, tempo, and form.
  - c. Identify how cultural and historical context inform performances and result in different music interpretations.
- 

## **Grade 8**

### **MU:Pr4.2.8**

- a. Compare the structure of contrasting pieces of music selected for performance, explaining how the elements of music are used in each.
- b. When analyzing selected music, sight-read in treble or bass clef simple rhythmic, melodic, and/or harmonic notation.
- c. Identify how cultural and historical context inform performances and result in different musical effects.

# **General Music/Performing**

## **#MU:Pr4.3**

**Process Component:** GMS-Interpret - Develop personal interpretations that consider creators' intent.

**Anchor Standard:** Select, analyze and interpret artistic work for presentation.

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## **Grade K**

### **MU:Pr4.3.K**

With guidance, demonstrate awareness of expressive qualities (such as voice quality, dynamics, and tempo) that support the creators' expressive intent.

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## **Grade 1**

### **MU:Pr4.3.1**

Demonstrate and describe music's expressive qualities (such as dynamics and tempo).

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## **Grade 2**

### **MU:Pr4.3.2**

Demonstrate understanding of expressive qualities (such as dynamics and tempo) and how



creators use them to convey expressive intent.

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### **Grade 3**

#### **MU:Pr4.3.3**

Demonstrate and describe how intent is conveyed through expressive qualities (such as dynamics and tempo).

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### **Grade 4**

#### **MU:Pr4.3.4**

Demonstrate and explain how intent is conveyed through interpretive decisions and expressive qualities (such as dynamics, tempo, and timbre).

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### **Grade 5**

#### **MU:Pr4.3.5**

Demonstrate and explain how intent is conveyed through interpretive decisions and expressive qualities (such as dynamics, tempo, timbre, and articulation/style).

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### **Grade 6**

#### **MU:Pr4.3.6**

Perform a selected piece of music demonstrating how their interpretations of the elements of music and the expressive qualities (such as dynamics, tempo, timbre, articulation/style, and phrasing) convey intent.

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### **Grade 7**

#### **MU:Pr4.3.7**

Perform contrasting pieces of music demonstrating their interpretations of the elements of music and expressive qualities (such as dynamics, tempo, timbre, articulation/style, and phrasing) convey intent.

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### **Grade 8**

#### **MU:Pr4.3.8**

Perform contrasting pieces of music, demonstrating as well as explaining how the music's intent is conveyed by their interpretations of the elements of music and expressive qualities (such as dynamics, tempo, timbre, articulation/style, and phrasing).

## **General Music/Performing**

### **#MU:Pr5.1**

**Process Component:** GMS-Rehearse, Evaluate and Refine - Evaluate and refine personal and ensemble performances, individually or in collaboration with others.

**Anchor Standard:** Develop and refine artistic techniques and work for presentation.

---

### **Grade K**

#### **MU:Pr5.1.K**



- a. With guidance, apply personal, teacher, and peer feedback to refine performances.
  - b. With guidance, use suggested strategies in rehearsal to improve the expressive qualities of music.
- 

**Grade 1**  
**MU:Pr5.1.**

- a. With limited guidance, apply personal, teacher, and peer feedback to refine performances.
  - b. With limited guidance, use suggested strategies in rehearsal to address interpretive challenges of music.
- 

**Grade 2**  
**MU:Pr5.1.2**

- a. Apply established criteria to judge the accuracy, expressiveness, and effectiveness of performances.
  - b. Rehearse, identify and apply strategies to address interpretive, performance, and technical challenges of music.
- 

**Grade 3**  
**MU:Pr5.1.3**

- a. Apply teacher-provided and collaboratively-developed criteria and feedback to evaluate accuracy of ensemble performances.
  - b. Rehearse to refine technical accuracy, expressive qualities, and identified performance challenges.
- 

**Grade 4**  
**MU:Pr5.1.4**

- a. Apply teacher-provided and collaboratively-developed criteria and feedback to evaluate accuracy and expressiveness of ensemble and personal performances.
  - b. Rehearse to refine technical accuracy and expressive qualities, and address performance challenges.
- 

**Grade 5**  
**MU:Pr5.1.5**

- a. Apply teacher-provided and established criteria and feedback to evaluate the accuracy and expressiveness of ensemble and personal performances.
  - b. Rehearse to refine technical accuracy and expressive qualities to address challenges, and show improvement over time.
- 

**Grade 6**  
**MU:Pr5.1.6**

- a. Identify and apply teacher-provided criteria (such as correct interpretation of notation, technical accuracy, originality, and interest) to rehearse, refine, and determine when a piece is ready to perform.



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**Grade 7**  
**MU:Pr5.1.7**

a. Identify and apply collaboratively-developed criteria (such as demonstrating correct interpretation of notation, technical skill of performer, originality, emotional impact, and interest) to rehearse, refine, and determine when the music is ready to perform.

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**Grade 8**  
**MU:Pr5.1.8**

a. Identify and apply personally-developed criteria (such as demonstrating correct interpretation of notation, technical skill of performer, originality, emotional impact.

## **General Music/Performing**

**#MU:Pr6.1**

**Process Component:** GMS-Present - Perform expressively, with appropriate interpretation and technical accuracy, and in a manner appropriate to the audience and context.

**Anchor Standard:** Convey meaning through the presentation of artistic work.

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**Grade K**  
**MU:Pr6.1.K**

a. With guidance, perform music with expression. b.  
Perform appropriately for the audience.

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**Grade 1**  
**MU:Pr6.1.1**

a. With limited guidance, perform music for a specific purpose with expression.  
b. Perform appropriately for the audience and purpose.

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**Grade 2**  
**MU:Pr6.1.2**

a. Perform music for a specific purpose with expression and technical accuracy. b.  
Perform appropriately for the audience and purpose.

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**Grade 3**  
**MU:Pr6.1.3**

a. Perform music with expression and technical accuracy.  
b. Demonstrate performance decorum and audience etiquette appropriate for the context and venue.

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**Grade 4**  
**MU:Pr6.1.4**

a. Perform music, alone or with others, with expression and technical accuracy, and appropriate interpretation.  
b. Demonstrate performance decorum and audience etiquette appropriate for the context, venue, and genre.



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## **Grade 5**

### **MU:Pr6.1.5**

- a. Perform music, alone or with others, with expression, technical accuracy, and appropriate interpretation.
  - b. Demonstrate performance decorum and audience etiquette appropriate for the context, venue, genre, and style.
- 

## **Grade 6**

### **MU:Pr6.1.6**

- a. Perform the music with technical accuracy to convey the creator's intent.
  - b. Demonstrate performance decorum (such as stage presence, attire, and behavior) and audience etiquette appropriate for venue and purpose.
- 

## **Grade 7**

### **MU:Pr6.1.7**

- a. Perform the music with technical accuracy and stylistic expression to convey the creator's intent.
- b. Demonstrate performance decorum (such as stage presence, attire, and behavior) and audience etiquette appropriate for venue, purpose, and context. Grade 8 MU:Pr6.1.8
- c. Perform the music with technical accuracy, stylistic expression, and culturally authentic practices in music to convey the creator's intent.
- d. Demonstrate performance decorum (such as stage presence, attire, and behavior) and audience etiquette appropriate for venue, purpose, context, and style.

## **General Music/Responding**

### **#MU:Re7.1**

**Process Component:** GMS-Select - Choose music appropriate for a specific purpose or context.

**Anchor Standard:** Perceive and analyze artistic work.

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## **Grade K**

### **MU:Re7.1.K**

With guidance, list personal interests and experiences and demonstrate why they prefer some music selections over others.

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## **Grade 1**

### **MU:Re7.1.1**

With limited guidance, identify and demonstrate how personal interests and experiences influence musical selection for specific purposes.

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## **Grade 2**

### **MU:Re7.1.2**

Explain and demonstrate how personal interests and experiences influence musical selection for specific purposes.



**Grade 3****MU:Re7.1.3**

Demonstrate and describe how selected music connects to and is influenced by specific interests, experiences, or purposes.

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**Grade 4****MU:Re7.1.4**

Demonstrate and explain how selected music connects to and is influenced by specific interests, experiences, purposes, or contexts.

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**Grade 5****MU:Re7.1.5**

Demonstrate and explain, citing evidence, how selected music connects to and is influenced by specific interests, experiences, purposes, or contexts.

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**Grade 6****MU:Re7.1.6**

Select or choose music to listen to and explain the connections to specific interests or experiences for a specific purpose.

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**Grade 7****MU:Re7.1.7**

Select or choose contrasting music to listen to and compare the connections to specific interests or experiences for a specific purpose.

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**Grade 8****MU:Re7.1.8**

Select programs of music (such as a CD mix or live performances) and demonstrate the connections to an interest or experience for a specific purpose.

## **General Music/Responding**

**#MU:Re7.2**

**Process Component:** GMS-Analyze - Analyze how the structure and context of varied musical works inform the response.

**Anchor Standard:** Perceive and analyze artistic work.

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**Grade K****MU:Re7.2.K**

With guidance, demonstrate how a specific music concept (such as beat or melodic direction) is used in music.



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**Grade 1**  
**MU:Re7.2.1**

With limited guidance, demonstrate and identify how specific music concepts (such as beat or pitch) are used in various styles of music for a purpose.

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**Grade 2**  
**MU:Re7.2.2**

Describe how specific music concepts are used to support a specific purpose in music.

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**Grade 3**  
**MU:Re7.2.3**

Demonstrate and describe how a response to music can be informed by the structure, the use of the elements of music, and context (such as personal and social).

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**Grade 4**  
**MU:Re7.2.4**

Demonstrate and explain how responses to music are informed by the structure, the use of the elements of music, and context (such as social and cultural).

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**Grade 5**  
**MU:Re7.2.5**

Demonstrate and explain, citing evidence, how responses to music are informed by the structure, the use of the elements of music, and context (such as social, cultural, and historical).

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**Grade 6**  
**MU:Re7.2.6**

- a. Describe how the elements of music and expressive qualities relate to the structure of the pieces
  - b. Identify the context of music from a variety of genres, cultures, and historical periods.
- 

**Grade 7**  
**MU:Re7.2.7**

- a. Classify and explain how the elements of music and expressive qualities relate to the structure of contrasting pieces.
  - b. Identify and compare the context of music from a variety of genres, cultures, and historical periods.
- 

**Grade 8**  
**MU:Re7.2.8**

- a. Compare how the elements of music and expressive qualities relate to the structure within programs of music.
- b. Identify and compare the context of programs of music from a variety of genres, cultures, and historical periods.



# General Music/Responding

## #MU:Re8.1

**Process Component:** GMS-Interpret - Support interpretations of musical works that reflect creators'/performers' expressive intent.

**Anchor Standard:** Interpret intent and meaning in artistic work.

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### Grade K

#### MU:Re8.1.K

With guidance, demonstrate awareness of expressive qualities (such as dynamics and tempo) that reflect creators'/performers' expressive intent.

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### Grade 1

#### MU:Re8.1.1

With limited guidance, demonstrate and identify expressive qualities (such as dynamics and tempo) that reflect creators'/performers' expressive intent.

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### Grade 2

#### MU:Re8.1.2

Demonstrate knowledge of music concepts and how they support creators'/performers' expressive intent.

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### Grade 3

#### MU:Re8.1.3

Demonstrate and describe how the expressive qualities (such as dynamics and tempo) are used in performers' interpretations to reflect expressive intent.

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### Grade 4

#### MU:Re8.1.4

Demonstrate and explain how the expressive qualities (such as dynamics, tempo, and timbre) are used in performers' and personal interpretations to reflect expressive intent

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### Grade 5

#### MU:Re8.1.5

Demonstrate and explain how the expressive qualities (such as dynamics, tempo, timbre, and articulation) are used in performers' and personal interpretations to reflect expressive intent

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### Grade 6

#### MU:Re8.1.6

Describe a personal interpretation of how creators' and performers' application of the elements of music and expressive qualities, within genres and cultural and historical context, convey expressive intent.



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**Grade 7****MU:Re8.1.7**

Describe a personal interpretation of contrasting works and explain how creators' and performers' application of the elements of music and expressive qualities, within genres, cultures, and historical periods, convey expressive intent

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**Grade 8****MU:Re8.1.8**

Support personal interpretation of contrasting programs of music and explain how creators' or performers' apply the elements of music and expressive qualities, within genres, cultures, and historical periods to convey expressive intent

## **General Music/Responding**

**#MU:Re9.1**

**Process Component:** GMS-Evaluate - Support evaluations of musical works and performances based on analysis, interpretation, and established criteria.

**Anchor Standard:** Apply criteria to evaluate artistic work.

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**Grade K****MU:Re9.1.K**

With guidance, apply personal and expressive preferences in the evaluation of music.

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**Grade 1****MU:Re9.1.1**

With limited guidance, apply personal and expressive preferences in the evaluation of music for specific purposes.

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**Grade 2****MU:Re9.1.2**

Apply personal and expressive preferences in the evaluation of music for specific purposes.

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**Grade 3****MU:Re9.1.3**

Evaluate musical works and performances, applying established criteria, and describe appropriateness to the context.

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**Grade 4****MU:Re9.1.4**

Evaluate musical works and performances, applying established criteria, and explain appropriateness to the context.



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**Grade 5****MU:Re9.1.5**

Evaluate musical works and performances, applying established criteria, and explain appropriateness to the context, citing evidence from the elements of music.

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**Grade 6****MU:Re9.1.6**

Apply teacher-provided criteria to evaluate musical works or performances.

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**Grade 7****MU:Re9.1.7**

Select from teacher-provided criteria to evaluate musical works or performances.

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**Grade 8****MU:Re9.1.8**

Apply appropriate personally-developed criteria to evaluate musical works or performances.



# Theatre

Welcome to the 2014 Theatre Standards. These grade-by-grade standards are an effort to articulate the most fundamental elements of theatre, in the hope that by doing so there will be recognition that every student can and should achieve a level of proficiency or beyond in this ancient and honorable craft. The most widespread theatre education opportunities in the United States have traditionally been in high schools, and the standards included here can readily be employed as a springboard for curriculum design and assessment at that level. The standards in the earlier grades suggest the same rigor and understanding but it's understood that at each successively earlier grade, there are fewer and fewer theatre programs and trained educators to teach in them. Thus, the PreK through middle grade standards are largely aspirational—what should be in our schools and arts programs.

The 2014 Theatre Standards are written with both drama processes and theatre products in mind. While many secondary theatre programs focus on performance and design in staged productions as evidence of a student's understanding and achievement in the art, ongoing student engagement in theatre without an end product in mind has not always been defined and valued. These standards address those drama processes as well as traditional theatre. Drama processes encompass envisioned worlds and unscripted activities designed to engage students in a wide range of real and imagined issues; theatre includes the broader and more traditional conventions of the craft that have been developed over the centuries—scripted plays, acting, public performance, and stagecraft.

To address both process and product in theatre, the grade 3 through high school standards of Proficient, Advanced, and Accomplished often include the term “drama/theatre” to clarify the distinct but companion parts of theatre education. The PreK through grade 2 standards, acknowledging the early childhood need for supervision and unfettered play, employ the phraseology “dramatic play” and/or “guided drama experience.”

You will also find Model Cornerstone Assessments (MCAs) intended to show the ways in which standards serve as a foundation for the creation of reliable and authentic measurements of student learning in theatre. These MCAs are not put forth as a definitive assessment of a particular set of skills; rather they are presented to inspire teachers to create their own assessments that serve both their pedagogy and the learning needs of their students.



# Theatre/Connecting

#TH:Cn10.1

**Process Component:** Empathize

**Anchor Standard:** Synthesize and relate knowledge and personal experiences to make art.

---

## Grade K

TH:Cn10.1.K

- a. With prompting and support, identify similarities between characters and oneself in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
- 

## Grade 1

TH:Cn10.1.1

- a. Identify character emotions in a guided drama experience (e.g., process drama, story drama, creative drama) and relate it to personal experience.
- 

## Grade 2

TH:Cn10.1.2

- a. Relate character experiences to personal experiences in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

## Grade 3

TH:Cn10.1.3

- a. Use personal experiences and knowledge to make connections to community and culture in a drama/theatre work.
- 

## Grade 4

TH:Cn10.1.4

- a. Identify the ways drama/theatre work reflects the perspectives of a community or culture.
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## Grade 5

TH:Cn10.1.5

- a. Explain how drama/theatre connects oneself to a community or culture.
- 

## Grade 6

TH:Cn10.1.6

- a. Explain how the actions and motivations of characters in a drama/theatre work impact perspectives of a community or culture.
- 

## Grade 7

TH:Cn10.1.7

- a. Incorporate multiple perspectives and diverse community ideas in a drama/theatre work.



**Grade 8**  
**TH:Cn10.1.8**

- a. Examine a community issue through multiple perspectives in a drama/theatre work

## **Theatre/Connecting**

**#TH:Cn11.1**

**Process Component:** Interrelate

**Anchor Standard:** Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

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**Grade K**  
**TH:Cn11.1.K**

- a. With prompting and support, identify skills and knowledge from other areas in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
  - a. Apply skills and knowledge from different art forms and content areas in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 2**  
**TH:Cn11.1.2**

- a. Determine appropriate skills and knowledge from different art forms and content areas to apply in a guided drama experience (e.g., process drama, story drama, creative drama).
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**Grade 3**  
**TH:Cn11.1.3**

- a. Identify connections to community, social issues and other content areas in drama/theatre work.
- 

**Grade 4**  
**TH:Cn11.1.4**

- a. Respond to community and social issues and incorporate other content areas in drama/theatre work.
- 

**Grade 5**  
**TH:Cn11.1.5**

- a. Investigate historical, global and social issues expressed in drama/theatre work.
  - a. Identify universal themes or common social issues and express them through a drama/theatre work.
- 

**Grade 7**  
**TH:Cn11.1.7**

- a. Incorporate music, dance, art, and/or media to strengthen the meaning and conflict in a drama/theatre work with a particular cultural, global, or historic context.



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**Grade 8****TH:Cn11.1.8**

- a. Use different forms of drama/theatre work to examine contemporary social, cultural, or global issues.

**Theatre/Connecting****#TH:Cn11.2****Process Component:** Research

**Anchor Standard:** Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

---

**Grade K****TH:Cn11.2.K**

- a. With prompting and support, identify stories that are different from one another in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
- b. With prompting and support, tell a short story in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 1****TH:Cn11.2.1**

- a. Identify similarities and differences in stories from one's own community in a guided drama experience (e.g., process drama, story drama, creative drama).
- b. Collaborate on the creation of a short scene based on a fictional literary source in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 2****TH:Cn11.2.2**

- a. Identify similarities and differences in stories from multiple cultures in a guided drama experience (e.g., process drama, story drama, creative drama).
- b. Collaborate on the creation of a short scene based on a non-fiction literary source in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 3****TH:Cn11.2.3**

- a. Explore how stories are adapted from literature to drama/theatre work.
- b. Examine how artists have historically presented the same stories using different art forms genres, or drama/theatre conventions.
- 

**Grade 4****TH:Cn11.2.4**

- a. Investigate cross-cultural approaches to storytelling in drama/theatre work.
- b. Compare the drama/theatre conventions of a given time period with those of the present.
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**Grade 5****TH:Cn11.2.5**

- a. Analyze commonalities and differences between stories set in different cultures in preparation for a drama/theatre work.
  - b. Identify historical sources that explain drama/theatre terminology and conventions.
- 

**Grade 6****TH:Cn11.2.6**

- a. Research and analyze two different versions of the same drama/theatre story to determine differences and similarities in the visual and aural world of each story.
  - b. Investigate the time period and place of a drama/theatre work to better understand performance and design choices.
- 

**Grade 7****TH:Cn11.2.7**

- a. Research and discuss how a playwright might have intended a drama/theatre work to be produced.
  - b. Examine artifacts from a time period and geographic location to better understand performance and design choices in a drama/theatre work.
- 

**Grade 8****TH:Cn11.2.8**

- a. Research the story elements of a staged drama/theatre work and compare them to another production of the same work.
  - b. Identify and use artifacts from a time period and place to develop performance and design choices in a drama/theatre work.
- 

## **Theatre/Creating**

**#TH:Cr1.1**

**Process Component:** Envision, Conceptualize

**Anchor Standard:** Generate and conceptualize artistic ideas and work.

---

**Grade K****TH:Cr1.1.K**

- a. With prompting and support, invent and inhabit an imaginary elsewhere in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
  - b. With prompting and support, use non-representational materials to create props, puppets, and costume pieces for dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 1****TH:Cr1.1.1**



- a. Propose potential choices characters could make in a guided drama experience (e.g., process drama, story drama, creative drama).
  - b. Collaborate with peers to conceptualize costumes and props in a guided drama experience (e.g., process drama, story drama, creative drama).
  - c. Identify ways in which gestures and movement may be used to create or retell a story in guided drama experiences (e.g., process drama, story drama, creative drama).
- 

## **Grade 2**

### **TH:Cr1.1.2**

- a. Propose potential new details to plot and story in a guided drama experience (e.g., process drama, story drama, creative drama).
  - b. Collaborate with peers to conceptualize scenery in a guided drama experience (e.g., process drama, story drama, creative drama).
  - c. Identify ways in which voice and sounds may be used to create or retell a story in guided drama experiences (e.g., process drama, story drama, creative drama).
- 

## **Grade 3**

### **TH:Cr1.1.3**

- a. Create roles, imagined worlds, and improvised stories in a drama/theatre work.
  - b. Imagine and articulate ideas for costumes, props and sets for the environment and characters in a drama/theatre work.
  - c. Collaborate to determine how characters might move and speak to support the story and given circumstances in drama/theatre work.
- 

## **Grade 4**

### **TH:Cr1.1.4**

- a. Articulate the visual details of imagined worlds, and improvised stories that support the given circumstances in a drama/theatre work.
  - b. Visualize and design technical elements that support the story and given circumstances in a drama/theatre work.
  - c. Imagine how a character might move to support the story and given circumstances in a drama/theatre work.
- 

## **Grade 5**

### **TH:Cr1.1.5**

- a. Identify physical qualities that might reveal a character's inner traits in the imagined world of a drama/theatre work.
- b. Propose design ideas that support the story and given circumstances in a drama/theatre work.
- c. Imagine how a character's inner thoughts impact the story and given circumstances in a drama/ theatre work



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**Grade 6****TH:Cr1.1.6**

- a. Identify possible solutions to staging challenges in a drama/theatre work.
  - b. Identify solutions to design challenges in a drama/theatre work.
  - c. Explore a scripted or improvised character by imagining the given circumstances in a drama/theatre work.
- 

**Grade 7****TH:Cr1.1.7**

- a. Investigate multiple perspectives and solutions to staging challenges in a drama/theatre work.
  - b. Explain and present solutions to design challenges in a drama/ theatre work.
  - c. Envision and describe a scripted or improvised character's inner thoughts and objectives in a drama/theatre work.
- 

**Grade 8****TH:Cr1.1.8**

- a. Imagine and explore multiple perspectives and solutions to staging problems in a drama/theatre work.
- b. Imagine and explore solutions to design challenges of a performance space in a drama/theatre work.
- c. Develop a scripted or improvised character by articulating the character's inner thoughts, objectives, and motivations in a drama/theatre work

## **Theatre/Creating**

**#TH:Cr2.1**

**Process Component:** Develop

**Anchor Standard:** Organize and develop artistic ideas and work.

---

**Grade K****TH:Cr2.1.K**

- a. With prompting and support, interact with peers and contribute to dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
  - b. With prompting and support, express original ideas in dramatic play or a guided drama experience (e.g., creative drama, process drama, story drama).
- 

**Grade 1****TH:Cr2.1.1**

- a. Contribute to the development of a sequential plot in a guided drama experience (e.g., process drama, story drama, creative drama).



b. With prompting and support, participate in group decision making in a guided drama experience (e.g., process drama, story drama, creative drama).

---

## **Grade 2**

### **TH:Cr2.1.2**

a. Collaborate with peers to devise meaningful dialogue in a guided drama experience (e.g., process drama, story drama, creative drama).

b. Contribute ideas and make decisions as a group to advance a story in a guided drama experience (e.g., process drama, story drama, creative drama).

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## **Grade 3**

### **TH:Cr2.1.3**

a. Participate in methods of investigation to devise original ideas for a drama/theatre work.

b. Compare ideas with peers and make selections that will enhance and deepen group drama/theatre work.

---

## **Grade 4**

### **TH:Cr2.1.4**

a. Collaborate to devise original ideas for a drama/theatre work by asking questions about characters and plots.

b. Make and discuss group decisions and identify responsibilities required to present a drama/theatre work to peers.

---

## **Grade 5**

### **TH:Cr2.1.5**

a. Devise original ideas for a drama/theatre work that reflect collective inquiry about characters and their given circumstances.

b. Participate in defined responsibilities required to present a drama/theatre work informally to an audience.

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## **Grade 6**

### **TH:Cr2.1.6**

a. Use critical analysis to improve, refine, and evolve original ideas and artistic choices in a devised or scripted drama/theatre work.

b. Contribute ideas and accept and incorporate the ideas of others in preparing or devising drama/theatre work.

---

## **Grade 7**

### **TH:Cr2.1.7**

a. Examine and justify original ideas and artistic choices in a drama/theatre work based on critical analysis, background knowledge, and historical and cultural context.

b. Demonstrate mutual respect for self and others and their roles in preparing or devising drama/theatre work.



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**Grade 8****TH:Cr2.1.8**

- a. Articulate and apply critical analysis, background knowledge, research, and historical and cultural context to the development of original ideas for a drama/theatre work.
- b. Share leadership and responsibilities to develop collaborative goals when preparing or devising drama/theatre work.

## **Theatre/Creating**

**#TH:Cr3.**

Process Component: **Rehearse**

**Anchor Standard:** Refine new work through play, drama processes and theatre experiences using critical analysis and experimentation.

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**Grade K****TH:Cr3.1.K**

- a. With prompting and support, ask and answer questions in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 1****TH:Cr3.1.1**

- a. Contribute to the adaptation of the plot in a guided drama experience (e.g., process drama, story drama, creative drama).
  - b. Identify similarities and differences in sounds and movements in a guided drama experience (e.g., process drama, story drama, creative drama)
  - c. Collaborate to imagine multiple representations of a single object in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 2****TH:Cr3.1.2**

- a. Contribute to the adaptation of dialogue in a guided drama experience (e.g., process drama, story drama, creative drama).
  - b. Use and adapt sounds and movements in a guided drama experience (e.g., process drama, story drama, creative drama).
  - c. Generate independently multiple representations of a single object in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 3****TH:Cr3.1.3**

- a. Collaborate with peers to revise, refine, and adapt ideas to fit the given parameters of a drama theatre work.



- b. Participate and contribute to physical and vocal exploration in an improvised or scripted drama/theatre work.
  - c. Practice and refine design and technical choices to support a devised or scripted drama/theatre work.
- 

**Grade 4**  
**TH:Cr3.1.4**

- a. Revise and improve an improvised or scripted drama/theatre work through repetition and collaborative review.
  - b. Develop physical and vocal exercise techniques for an improvised or scripted drama/theatre work.
  - c. Collaborate on solutions to design and technical problems that arise in rehearsal for a drama/theatre work.
- 

**Grade 5**  
**TH:Cr3.1.5**

- a. Revise and improve an improvised or scripted drama/theatre work through repetition and self-review.
  - b. Use physical and vocal exploration for character development in an improvised or scripted drama/theatre work.
  - c. Create innovative solutions to design and technical problems that arise in rehearsal for a drama/theatre work.
- 

**Grade 6**  
**TH:Cr3.1.6**

- a. Articulate and examine choices to refine a devised or scripted drama/theatre work.
  - b. Identify effective physical and vocal traits of characters in an improvised or scripted drama/theatre work.
  - c. Explore a planned technical design during the rehearsal process for a devised or scripted drama/theatre work.
- 

**Grade 7**  
**TH:Cr3.1.7**

- a. Demonstrate focus and concentration in the rehearsal process to analyze and refine choices in a devised or scripted drama/theatre work.
  - b. Develop effective physical and vocal traits of characters in an improvised or scripted drama/theatre work.
  - c. Consider multiple planned technical design elements during the rehearsal process for a devised or scripted drama/theatre work.
- 

**Grade 8**  
**TH:Cr3.1.8**

- a. Use repetition and analysis in order to revise devised or scripted drama/theatre work.
- b. Refine effective physical, vocal, and physiological traits of characters in an improvised or scripted drama/ theatre work.



c. Implement and refine a planned technical design using simple technology during the rehearsal process for devised or scripted drama/ theatre work.

## **Theatre/Performing**

**#TH:Pr4.1**

**Process Component:** Select

**Anchor Standard:** Select, analyze, and interpret artistic work for presentation.

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### **Grade K**

**TH:Pr4.1.K**

a. With prompting and support, identify characters and setting in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).

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### **Grade 1**

**TH:Pr4.1.1**

a. Describe a story's character actions and dialogue in a guided drama experience (e.g., process drama, story drama, creative drama).

b. Use body, face, gestures, and voice to communicate character traits and emotions in a guided drama experience (e.g., process drama, story drama, creative drama).

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### **Grade 2**

**TH:Pr4.1.2**

a. Interpret story elements in a guided drama experience (e.g., process drama, story drama, creative drama).

b. Alter voice and body to expand and articulate nuances of a character in a guided drama experience (e.g., process drama, story drama, creative drama).

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### **Grade 3**

**TH:Pr4.1.3**

a. Apply the elements of dramatic structure to a story and create a drama/theatre work.

b. Investigate how movement and voice are incorporated into drama/theatre work.

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### **Grade 4**

**TH:Pr4.1.4**

a. Modify the dialogue and action to change the story in a drama/theatre work.

b. Make physical choices to develop a character in a drama/theatre work.

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### **Grade 5**

**TH:Pr4.1.5**

a. Describe the underlying thoughts and emotions that create dialogue and action in a drama/theatre work.

b. Use physical choices to create meaning in a drama/theatre work.



**Grade 6**  
**TH:Pr4.1.6**

- a. Identify the essential events in a story or script that make up the dramatic structure in a drama/theatre work.
  - b. Experiment with various physical choices to communicate character in a drama/theatre work.
- 

**Grade 7**  
**TH:Pr4.1.7**

- a. Consider various staging choices to enhance the story in a drama/theatre work.
  - b. Use various character objectives in a drama/theatre work.
- 

**Grade 8**  
**TH:Pr4.1.8**

- a. Explore different pacing to better communicate the story in a drama/theatre work.
- b. Use various character objectives and tactics in a drama/theatre work to overcome an obstacle.

## **Theatre/Performing**

**#TH:Pr5.1**

**Process Component:** Prepare

**Anchor Standard:** Develop and refine artistic techniques and work for presentation.

**Grade K**  
**TH:Pr5.1.K**

- a. With prompting and support, understand that voice and sound are fundamental to dramatic play and guided drama experiences (e.g., process drama, story drama, creative drama).
  - b. With prompting and support, explore and experiment with various technical elements in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 1**  
**TH:Pr5.1.1**

- a. With prompting and support, identify and understand that physical movement is fundamental to guided drama experiences (e.g., process drama, story drama, creative drama).
  - b. With prompting and support, identify technical elements that can be used in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 2**  
**TH:Pr5.1.2**

- a. Demonstrate the relationship between and among body, voice, and mind in a guided drama experience (e.g., process drama, story drama, creative drama)
- b. Explore technical elements in a guided drama experience (e.g., process drama)



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**Grade 3****TH:Pr5.1.3**

- a. Participate in a variety of physical, vocal, and cognitive exercises that can be used in a group setting for drama/theatre work.
  - b. Identify the basic technical elements that can be used in drama/theatre work.
- 

**Grade 4****TH:Pr5.1.4**

- a. Practice selected exercises that can be used in a group setting for drama/theatre work.
  - b. Propose the use of technical elements in a drama/theatre work.
- 

**Grade 5****TH:Pr5.1.5**

- a. Choose acting exercises that can be applied to a drama/theatre work.
  - b. Demonstrate the use of technical elements in a drama/theatre work.
- 

**Grade 6****TH:Pr5.1.6**

- a. Recognize how acting exercises and techniques can be applied to a drama/theatre work.
  - b. Articulate how technical elements are integrated into a drama/theatre work.
- 

**Grade 7****TH:Pr5.1.7**

- a. Participate in a variety of acting exercises and techniques that can be applied in a rehearsal or drama/theatre performance.
  - b. Choose a variety of technical elements that can be applied to a design in a drama/theatre work.
- 

**Grade 8****TH:Pr5.1.8**

- a. Use a variety of acting techniques to increase skills in a rehearsal or drama/theatre performance.
  - b. Use a variety of technical elements to create a design for a rehearsal or drama/theatre production.
- 

## **Theatre/Performing**

**#TH:Pr6.1**

**Process Component:** Share, Present

**Anchor Standard:** Convey meaning through the presentation of artistic work.

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**Grade K****TH:Pr6.1.K**

- a. With prompting and support, use voice and sound in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).



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**Grade 1****TH:Pr6.1.1**

a. With prompting and support, use movement and gestures to communicate emotions in a guided drama experience (e.g., process drama, story drama, creative drama).

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**Grade 2****TH:Pr6.1.2**

a. Contribute to group guided drama experiences (e.g., process drama, story drama, creative drama) and informally share with peers.

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**Grade 3****TH:Pr6.1.3**

a. Practice drama/theatre work and share reflections individually and in small groups.

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**Grade 4****TH:Pr6.1.4**

a. Share small-group drama/theatre work, with peers as audience.

---

**Grade 5****TH:Pr6.1.5**

a. Present drama/theatre work informally to an audience.

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**Grade 6****TH:Pr6.1.6**

a. Adapt a drama/theatre work and present it informally for an audience.

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**Grade 7****TH:Pr6.1.7**

a. Participate in rehearsals for a drama/theatre work that will be shared with an audience.

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**Grade 8****TH:Pr6.1.8**

a. Perform a rehearsed drama/theatre work for an audience.

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## **Theatre/Responding**

**#TH:Re7.1**

**Process Component:** Reflect

**Anchor Standard:** Perceive and analyze artistic work.

---

**Grade K****TH:Re7.1.K**

a. With prompting and support, express an emotional response to characters in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama).



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**Grade 1****TH:Re7.1.1**

- a. Recall choices made in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 2****TH:Re7.1.2**

- a. Recognize when artistic choices are made in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 3****TH:Re7.1.3**

- a. Understand why artistic choices are made in a drama/theatre work.
- 

**Grade 4****TH:Re7.1.4**

- a. Identify artistic choices made in a drama/theatre work through participation and observation.
- 

**Grade 5****TH:Re7.1.5**

- a. Explain personal reactions to artistic choices made in a drama/theatre work through participation and observation.
- 

**Grade 6****TH:Re7.1.6**

- a. Describe and record personal reactions to artistic choices in a drama/theatre work.
- 

**Grade 7****TH:Re7.1.7**

- a. Compare recorded personal and peer reactions to artistic choices in a drama/ theatre work.
- 

**Grade 8****TH:Re7.1.8**

- a. Apply criteria to the evaluation of artistic choices in a drama/theatre work.
- 

## **Theatre/Responding**

**#TH:Re8.1**

**Process Component:** Interpret

**Anchor Standard:** Interpret intent and meaning in artistic work.



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**Grade K****TH:Re8.1.K**

- a. With prompting and support, identify preferences in dramatic play, a guided drama experience (e.g., process drama, story drama, creative drama), or age-appropriate theatre performance.
  - b. With prompting and support, name and describe settings in dramatic play or a guided drama experience (e.g., process drama, story drama, creative drama)
- 

**Grade 1****TH:Re8.1.1**

- a. Explain preferences and emotions in a guided drama experience (e.g., process drama, story drama, creative drama), or age-appropriate theatre performance.
  - b. Identify causes of character actions in a guided drama experience (e.g., process drama, story drama, or creative drama).
  - c. Explain or use text and pictures to describe how personal emotions and choices compare to the emotions and choices of characters in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 2****TH:Re8.1.2**

- a. Explain how personal preferences and emotions affect an observer's response in a guided drama experience (e.g., process drama, story drama, creative drama), or age-appropriate theatre performance.
  - b. Identify causes and consequences of character actions in a guided drama experience (e.g., process drama, story drama, or creative drama).
  - c. Explain or use text and pictures to describe how others' emotions and choices may compare to the emotions and choices of characters in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

**Grade 3****TH:Re8.1.3**

- a. Consider multiple personal experiences when participating in or observing a drama/theatre work.
  - b. Consider multiple ways to develop a character using physical characteristics and prop or costume design choices that reflect cultural perspectives in drama/theatre work.
  - c. Examine how connections are made between oneself and a character's emotions in drama/theatre work.
- 

**Grade 4****TH:Re8.1.4**

- a. Compare and contrast multiple personal experiences when participating in or observing a drama/theatre work.
- b. Compare and contrast the qualities of characters in a drama/theatre work through physical



characteristics and prop or costume design choices that reflect cultural perspectives.

c. Identify and discuss physiological changes connected to emotions in drama/ theatre work.

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**Grade 5**  
**TH:Re8.1.5**

- a. Justify responses based on personal experiences when participating in or observing a drama/theatre work.
  - b. Explain responses to characters based on cultural perspectives when participating in or observing drama/theatre work.
  - c. Investigate the effects of emotions on posture, gesture, breathing, and vocal intonation in a drama/theatre work.
- 

**Grade 6**  
**TH:Re8.1.6**

- a. Explain how artists make choices based on personal experience in a drama/theatre work.
  - b. Identify cultural perspectives that may influence the evaluation of a drama/theatre work.
  - c. Identify personal aesthetics, preferences, and beliefs through participation in or observation of drama/ theatre work.
- 

**Grade 7**  
**TH:Re8.1.7**

- a. Identify the artistic choices made based on personal experience in a drama/theatre work.
  - b. Describe how cultural perspectives can influence the evaluation of drama/theatre work.
  - c. Interpret how the use of personal aesthetics, preferences, and beliefs can be used to discuss drama/theatre work.
- 

**Grade 8**  
**TH:Re8.1.8**

- a. Recognize and share artistic choices when participating in or observing a drama/theatre work.
- b. Analyze how cultural perspectives influence the evaluation of a drama/theatre work.
- c. Apply personal aesthetics, preferences, and beliefs to evaluate a drama/theatre work.

## **Theatre/Responding**

**#TH:Re9.1**

**Process Component:** Evaluate

**Anchor Standard:** Apply criteria to evaluate artistic work.

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**Grade K**  
**TH:Re9.1.K**

- a. With prompting and support, actively engage with others in dramatic play or a guided drama experience ((e.g., process drama, story drama, creative drama)



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## **Grade 1**

### **TH:Re9.1.1**

- a. Build on others' ideas in a guided drama experience (e.g., process drama, story drama, creativedrama).
  - b. Identify props and costumes that might be used in a guided drama experience (e.g., process drama, story drama, creative drama).
  - c. Compare and contrast the experiences of characters in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

## **Grade 2**

### **TH:Re9.1.2**

- a. Collaborate on a scene in a guided drama experience (e.g., process drama, story drama, creativedrama).
  - b. Use a prop or costume in a guided drama experience (e.g., process drama, story drama, creative drama) to describe characters, settings, or events.
  - c. Describe how characters respond to challenges in a guided drama experience (e.g., process drama, story drama, creative drama).
- 

## **Grade 3**

### **TH:Re9.1.3**

- a. Understand how and why groups evaluate drama/theatre work.
  - b. Consider and analyze technical elements from multiple drama/theatre works.
  - c. Evaluate and analyze problems and situations in a drama/theatre work from an audience perspective
- 

## **Grade 4**

### **TH:Re9.1.4**

- a. Propose a plan to evaluate drama/theatre work.
  - b. Investigate how technical elements may support a theme or idea in a drama/theatre work.
  - c. Observe how a character's choices impact an audience's perspective in a drama/theatre work.
- 

## **Grade 5**

### **TH:Re9.1.5**

- a. Develop and implement a plan to evaluate drama/theatre work.
  - b. Assess how technical elements represent the theme of a drama/theatre work.
  - c. Recognize how a character's circumstances impact an audience's perspective in a drama/theatre work.
- 

## **Grade 6**

### **TH:Re9.1.6**

- a. Use supporting evidence and criteria to evaluate
- b. Apply the production elements used in a drama/theatre work to assess aesthetic choices.



- c. Identify a specific audience or purpose for a drama/theatre work.
- 

**Grade 7**

**TH:Re9.1.7**

- a. Explain preferences, using supporting evidence and criteria to evaluate drama/theatre work.
  - b. Consider the aesthetics of the production elements in a drama/theatre work.
  - c. Identify how the intended purpose of a drama/theatre work appeals to a specific audience.
- 

**Grade 8**

**TH:Re9.1.8**

- a. Respond to a drama/ theatre work using supporting evidence, personal aesthetics, and artistic criteria.
- b. Apply the production elements used in a drama/theatre work to assess aesthetic choices.
- c. Assess the impact of a drama/theatre work on a specific audience.



# Visual Arts

Visual Arts include the traditional fine arts such as drawing, painting, printmaking, photography, and sculpture; media arts including film, graphic communications, animation, and emerging technologies; architectural, environmental, and industrial arts such as urban, interior, product, and landscape design; folk arts; and works of art such as ceramics, fibers, jewelry, works in wood, paper, and other materials. (National Art Education Association)

The Visual Arts Standards provide learning progressions from Pre k-12. Please read the conceptual framework narrative to learn more about the additional materials which provide a context for the grade level visual arts Performance Standards. These include:

- Philosophical Foundations and Lifelong Goals for Artistic Literacy;
- Definitions of the artistic processes of Creating, Presenting, Responding, and Connecting;
- Anchor Standards which are common across all five of the arts disciplines.

1. The standards provide the foundation for visual art education for all students. The standards support student-learning outcomes through big ideas – enduring understandings and essential questions. The concepts embedded in the standards reflect the scope of learning – the knowledge, skills, and understandings - taught through study of the visual arts. By including all aspects of creating, presenting, responding, and connecting in study of the visual arts, student learning through these standards explores the full scope of what it means to be an artistically literate citizen. While presented chronologically the processes are best designed and taught in a blended fashion to support rich artistic skills and behaviors.

2. The standards provide ways to address the content of visual art education within the school year. There are 15 Enduring Understandings with 15 correlated grade-by-grade (preK-8 and three levels for high school) Performance Standards. Art educators will be able to cluster group standards using more than one within a given instructional unit. The Performance Standards offer a practical system for teachers to use to inform their instruction.

3. The standards emphasize deep learning in the visual arts creating higher expectations and support college, career and citizenship readiness for all students. The performance standards offer learning progressions for students. Embedded in the standards are ideas about how arts learning can be broadened and deepened to support students in making meaning of their lives and their world. Essential questions are provided for teachers as thought starters promoting inquiry based teaching and learning. They support communicating and learning in art by providing language needed for students and stakeholders alike.

4. The standards provide opportunities for educators to reflect on their practice. The visual arts performance standards are fundamentally grounded in collective beliefs about what constitutes effective teaching and learning. Individual educators are encouraged to review and use the standards in achieving the goal of continuous improvement.

Whether it means updating curriculum or adapting an individual art lesson or curriculum unit, the new visual arts standards inspire and support the ways in which art educators keep their teaching fresh and dynamic.



# Visual Arts/Connecting

#VA:Cn10.1

**Process Component:** Interpret

**Anchor Standard:** Synthesize and relate knowledge and personal experiences to make art.

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**Grade K**

**VA:Cn10.1.K**

Create art that tells a story about a life experience.

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**Grade 1**

**VA:Cn10.1.1**

Identify times, places, and reasons by which students make art outside of school.

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**Grade 2**

**VA:Cn10.1.2**

Create works of art about events in home, school, or community life.

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**Grade 3**

**VA:Cn10.1.3**

Develop a work of art based on observations of surroundings.

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**Grade 4**

**VA:Cn10.1.4**

Create works of art that reflect community cultural traditions.

---

**Grade 5**

**VA:Cn10.1.5**

Apply formal and conceptual vocabularies of art and design to view surroundings in new ways through art-making.

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**Grade 6**

**VA:Cn10.1.6**

Generate a collection of ideas reflecting current interests and concerns that could be investigated in art-making.

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**Grade 7**

**VA:Cn10.1.7**

Individually or collaboratively create visual documentation of places and times in which people gather to make and experience art or design in the community.

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**Grade 8**

**VA:Cn10.1.8**

Make art collaboratively to reflect on and reinforce positive aspects of group identity.



# Visual Arts/Connecting

#VA:Cn11.1

**Process Component:** Synthesize

**Anchor Standard:** Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

---

**Grade K**

**VA:Cn11.1.K**

Identify a purpose of an artwork.

---

**Grade 1**

**VA:Cn11.1.1**

Understand that people from different places and times have made art for a variety of reasons.

---

**Grade 2**

**VA:Cn11.1.2**

Compare and contrast cultural uses of artwork from different times and places.

---

**Grade 3**

**VA:Cn11.1.3**

Recognize that responses to art change depending on knowledge of the time and place in which it was made.

---

**Grade 4**

**VA:Cn11.1.4**

Through observation, infer information about time, place, and culture in which a work of art was created.

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**Grade 5**

**VA:Cn11.1.5**

Identify how art is used to inform or change beliefs, values, or behaviors of an individual or society.

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**Grade 6**

**VA:Cn11.1.6**

Analyze how art reflects changing times, traditions, resources, and cultural uses.

---

**Grade 7**

**VA:Cn11.1.7**

Analyze how response to art is influenced by understanding the time and place in which it was created, the available resources, and cultural uses.

---

**Grade 8**

**VA:Cn11.1.8**



Distinguish different ways art is used to represent, establish, reinforce, and reflect group identity.

## **VisualArts/Creating**

**#VA:Cr1.1**

**Process Component:** Investigate, Plan, Make

**Anchor Standard:** Generate and conceptualize artistic ideas and work.

---

**Grade K**

**VA:Cr1.1.K**

Engage in exploration and imaginative play with materials.

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**Grade 1**

**VA:Cr1.1.1**

Engage collaboratively in exploration and imaginative play with materials.

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**Grade 2**

**VA:Cr1.1.2**

Brainstorm collaboratively multiple approaches to an art or design problem.

---

**Grade 3**

**VA:Cr1.1.3**

Elaborate on an imaginative idea.

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**Grade 4**

**VA:Cr1.1.4**

Brainstorm multiple approaches to a creative art or design problem.

---

**Grade 5**

**VA:Cr1.1.5**

Combine ideas to generate an innovative idea for art-making.

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**Grade 6**

**VA:Cr1.1.6**

Combine concepts collaboratively to generate innovative ideas for creating art.

---

**Grade 7**

**VA:Cr1.1.7**

Apply methods to overcome creative blocks.

---

**Grade 8**

**VA:Cr1.1.8**

Document early stages of the creative process visually and/or verbally in traditional or new media.



# VisualArts/Creating

#VA:Cr1.2

**Process Component:** Investigate, Plan, Make

**Anchor Standard:** Generate and conceptualize artistic ideas and work.

---

## Grade K

VA:Cr1.2.K

Engage collaboratively in creative art-making in response to an artistic problem.

---

## Grade 1

VA:Cr1.2.1

Use observation and investigation in preparation for making a work of art.

---

## Grade 2

VA:Cr1.2.2

Make art or design with various materials and tools to explore personal interests, questions, and curiosity.

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## Grade 3

VA:Cr1.2.3

Apply knowledge of available resources, tools, and technologies to investigate personal ideas through the art-making process.

---

## Grade 4

VA:Cr1.2.4

Collaboratively set goals and create artwork that is meaningful and has purpose to the makers.

---

## Grade 5

VA:Cr1.2.5

Identify and demonstrate diverse methods of artistic investigation to choose an approach for beginning a work of art.

---

## Grade 6

VA:Cr1.2.6

Formulate an artistic investigation of personally relevant content for creating art.

## Grade 7

VA:Cr1.2.7

Develop criteria to guide making a work of art or design to meet an identified goal.

---

## Grade 8

VA:Cr1.2.8



Collaboratively shape an artistic investigation of an aspect of present-day life using a contemporary practice of art and design.

## **VisualArts/Creating**

**#VA:Cr2.1**

**Process Component:** Investigate

**Anchor Standard:** Organize and develop artistic ideas and work.

---

**Grade K**

**VA:Cr2.1.K**

Through experimentation, build skills in various media and approaches to art-making.

---

**Grade 1**

**VA:Cr2.1.1**

Explore uses of materials and tools to create works of art or design

---

**Grade 2**

**VA:Cr2.1.2**

Experiment with various materials and tools to explore personal interests in a work of art or design.

---

**Grade 3**

**VA:Cr2.1.3**

Create personally satisfying artwork using a variety of artistic processes and materials.

---

**Grade 4**

**VA:Cr2.1.4**

Explore and invent art-making techniques and approaches.

---

**Grade 5**

**VA:Cr2.1.5**

Experiment and develop skills in multiple art-making techniques and approaches through practice.

---

**Grade 6**

**VA:Cr2.1.6**

Demonstrate openness in trying new ideas, materials, methods, and approaches in making works of art and design.

---

**Grade 7**

**VA:Cr2.1.7**

Demonstrate persistence in developing skills with various materials, methods, and approaches in creating works of art or design.



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**Grade 8**  
**VA:Cr2.1.8**

Demonstrate willingness to experiment, innovate, and take risks to pursue ideas, forms, and meanings that emerge in the process of art-making or designing.

## **VisualArts/Creating**

**#VA:Cr2.2**

**Process Component:** Investigate

**Anchor Standard:** Organize and develop artistic ideas and work.

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**Grade K**  
**VA:Cr2.2.K**

Identify safe and non-toxic art materials, tools, and equipment.

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**Grade 1**  
**VA:Cr2.2.1**

Demonstrate safe and proper procedures for using materials, tools, and equipment while making art.

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**Grade 2**  
**VA:Cr2.2.2**

Demonstrate safe procedures for using and cleaning art tools, equipment, and studio spaces.

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**Grade 3**  
**VA:Cr2.2.3**

Demonstrate an understanding of the safe and proficient use of materials, tools, and equipment for a variety of artistic processes.

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**Grade 4**  
**VA:Cr2.2.4**

When making works of art, utilize and care for materials, tools, and equipment in a manner that prevents danger to oneself and others.

---

**Grade 5**  
**VA:Cr2.2.5**

Demonstrate quality craftsmanship through care for and use of materials, tools, and equipment.

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**Grade 6**  
**VA:Cr2.2.6**

Explain environmental implications of conservation, care, and clean-up of art materials, tools, and equipment.



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**Grade 7****VA:Cr2.2.7**

Demonstrate awareness of ethical responsibility to oneself and others when posting and sharing images and other materials through the Internet, social media, and other communication formats.

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**Grade 8****VA:Cr2.2.8**

Demonstrate awareness of practices, issues, and ethics of appropriation, fair use, copyright, open source, and creative commons as they apply to creating works of art and design.

## **VisualArts/Creating**

**#VA:Cr2.3**

**Process Component:** Investigate

**Anchor Standard:** Organize and develop artistic ideas and work.

---

**Grade K****VA:Cr2.3.K**

Create art that represents natural and constructed environments.

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**Grade 1****VA:Cr2.3.1**

Identify and classify uses of everyday objects through drawings, diagrams, sculptures, or other visual means.

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**Grade 2****VA:Cr2.3.2**

Repurpose objects to make something new.

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**Grade 3****VA:Cr2.3.3**

Individually or collaboratively construct representations, diagrams, or maps of places that are part of everyday life.

---

**Grade 4****VA:Cr2.3.4**

Document, describe, and represent regional constructed environments.

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**Grade 5****VA:Cr2.3.5**

Identify, describe, and visually document places and/or objects of personal significance.



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**Grade 6**  
**VA:Cr2.3.6**

Design or redesign objects, places, or systems that meet the identified needs of diverse users.

---

**Grade 7**  
**VA:Cr2.3.7**

Apply visual organizational strategies to design and produce a work of art, design, or media that clearly communicates information or ideas.

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**Grade 8**  
**VA:Cr2.3.8**

Select, organize, and design images and words to make visually clear and compelling presentations.

## **VisualArts/Creating**

**#VA:Cr3.1**

**Process Component:** Reflect, Refine, Continue

**Anchor Standard:** Refine and complete artistic work.

---

**Grade K**  
**VA:Cr3.1.K**

Explain the process of making art while creating.

---

**Grade 1**  
**VA:Cr3.1.1**

Use art vocabulary to describe choices while creating art.

---

**Grade 2**  
**VA:Cr3.1.2**

Discuss and reflect with peers about choices made in creating artwork.

---

**Grade 3**  
**VA:Cr3.1.3**

Elaborate visual information by adding details in an artwork to enhance emerging meaning.

---

**Grade 4**  
**VA:Cr3.1.4**

Revise artwork in progress on the basis of insights gained through peer discussion.

---

**Grade 5**  
**VA:Cr3.1.5**

Create artist statements using art vocabulary to describe personal choices in art-making



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**Grade 6**  
**VA:Cr3.1.6**

Reflect on whether personal artwork conveys the intended meaning and revise accordingly.

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**Grade 7**  
**VA:Cr3.1.7**

Reflect on and explain important information about personal artwork in an artist statement or another format.

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**Grade 8**  
**VA:Cr3.1.8**

Apply relevant criteria to examine, reflect on, and plan revisions for a work of art or design in progress.

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## **Visual Arts/Presenting**

**#VA:Pr.4.1**

**Process Component:** Relate

**Anchor Standard:** Select, analyze and interpret artistic work for presentation.

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**Grade K**  
**VA:Pr.4.1.K**

Select art objects for personal portfolio and display, explaining why they were chosen.

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**Grade 1**  
**VA:Pr.4.1.1**

Explain why some objects, artifacts, and artwork are valued over others

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**Grade 2**  
**VA:Pr.4.1.2**

Categorize artwork based on a theme or concept for an exhibit.

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**Grade 3**  
**VA:Pr.4.1.3**

Investigate and discuss possibilities and limitations of spaces, including electronic, for exhibiting artwork.

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**Grade 4**  
**VA:Pr.4.1.4**

Analyze how past, present, and emerging technologies have impacted the preservation and presentation of artwork.

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**Grade 5**  
**VA:Pr.4.1.5**

Define the roles and responsibilities of a curator, explaining the skills and knowledge needed

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in preserving, maintaining, and presenting objects, artifacts, and artwork.

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**Grade 6**

**VA:Pr.4.1.6**

Analyze similarities and differences associated with preserving and presenting two-dimensional, three-dimensional, and digital artwork.

---

**Grade 7**

**VA:Pr.4.1.7**

Compare and contrast how technologies have changed the way artwork is preserved, presented, and experienced.

---

**Grade 8**

**VA:Pr.4.1.8**

Develop and apply criteria for evaluating a collection of artwork for presentation.

---

## **Visual Arts/Presenting**

**#VA:Pr5.1**

**Process Component:** Select

**Anchor Standard:** Develop and refine artistic techniques and work for presentation.

---

**Grade K**

**VA:Pr5.1.K**

Explain the purpose of a portfolio or collection.

---

**Grade 1**

**VA:Pr5.1.1**

Ask and answer questions such as where, when, why, and how artwork should be prepared for presentation or preservation.

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**Grade 2**

**VA:Pr5.1.2**

Distinguish between different materials or artistic techniques for preparing artwork for presentation.

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**Grade 3**

**VA:Pr5.1.3**

Identify exhibit space and prepare works of art including artists' statements, for presentation.

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**Grade 4**

**VA:Pr5.1.4**

Analyze the various considerations for presenting and protecting art in various locations, indoor or outdoor settings, in temporary or permanent forms, and in physical or digital.



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**Grade 5****VA:Pr5.1.5**

Develop a logical argument for safe and effective use of materials and techniques for preparing and presenting artwork.

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**Grade 6****VA:Pr5.1.6**

Individually or collaboratively, develop a visual plan for displaying works of art, analyzing exhibit space, the needs of the viewer, and the layout of the exhibit.

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**Grade 7****VA:Pr5.1.7**

Based on criteria, analyze and evaluate methods for preparing and presenting art.

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**Grade 8****VA:Pr5.1.8**

Collaboratively prepare and present selected theme-based artwork for display, and formulate exhibition narratives for the viewer.

---

## **Visual Arts/Presenting**

**#VA:Pr6.1**

**Process Component:** Analyze

**Anchor Standard:** Convey meaning through the presentation of artistic work.

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**Grade K****VA:Pr6.1.K**

Explain what an art museum is and distinguish how an art museum is different from other buildings.

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**Grade 1****VA:Pr6.1.1**

Identify the roles and responsibilities of people who work in and visit museums and other art venues.

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**Grade 2****VA:Pr6.1.2**

Analyze how art exhibited inside and outside of schools (such as in museums, galleries, virtual spaces, and other venues) contributes to communities.

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**Grade 3****VA:Pr6.1.3**

Identify and explain how and where different cultures record and illustrate stories and history of life through art.



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**Grade 4**  
**VA:Pr6.1.4**

Compare and contrast purposes of art museums, art galleries, and other venues, as well as the types of personal experiences they provide.

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**Grade 5**  
**VA:Pr6.1.5**

Cite evidence about how an exhibition in a museum or other venue presents ideas and provides information about a specific concept or topic.

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**Grade 6**  
**VA:Pr6.1.6**

Assess, explain, and provide evidence of how museums or other venues reflect history and values of a community.

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**Grade 7**  
**VA:Pr6.1.7**

Compare and contrast viewing and experiencing collections and exhibitions in different venues.

---

**Grade 8**  
**VA:Pr6.1.8**

Analyze why and how an exhibition or collection may influence ideas, beliefs, and experiences.

## **Visual Arts/Responding**

**#VA:Re7.1**

**Process Component:** Share

**Anchor Standard:** Perceive and analyze artistic work.

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**Grade K**  
**VA:Re7.1.K**

Identify uses of art within one's personal environment.

---

**Grade 1**  
**VA:Re7.1.1**

Select and describe works of art that illustrate daily life experiences of one's self and other.

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**Grade 2**  
**VA:Re7.1.2**

Perceive and describe aesthetic characteristics of one's natural world and constructed environments.



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**Grade 3**  
**VA:Re7.1.3**

Speculate about processes an artist uses to create a work of art.

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**Grade 4**  
**VA:Re7.1.4**

Compare responses to a work of art before and after working in similar media.

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**Grade 5**  
**VA:Re7.1.5**

Compare one's own interpretation of a work of art with the interpretation of others.

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**Grade 6**  
**VA:Re7.1.6**

Identify and interpret works of art or design that reveal how people live around the world and what they value.

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**Grade 7**  
**VA:Re7.1.7**

Explain how the method of display, the location, and the experience of an artwork influence how it is perceived and valued.

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**Grade 8**  
**VA:Re7.1.8**

Explain how a person's aesthetic choices are influenced by culture and environment and impact the visual image that one conveys to others.

## **Visual Arts/Responding**

**#VA:Re7.2**

**Process Component:** Perceive

**Anchor Standard:** Perceive and analyze artistic work

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**Grade K**  
**VA:Re7.2.K**

Describe what an image represents.

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**Grade 1**  
**VA:Re7.2.1**

Compare images that represent the same subject.

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**Grade 2**  
**VA:Re7.2.2**

Categorize images based on expressive properties.



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**Grade 3****VA:Re7.2.3**

Determine messages communicated by an image.

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**Grade 4****VA:Re7.2.4**

Analyze components in visual imagery that convey messages.

---

**Grade 5****VA:Re7.2.5**

Identify and analyze cultural associations suggested by visual imagery.

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**Grade 6****VA:Re7.2.6**

Analyze ways that visual components and cultural associations suggested by images influence ideas, emotions, and actions.

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**Grade 7****VA:Re7.2.7**

Analyze multiple ways that images influence specific audiences.

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**Grade 8****VA:Re7.2.8**

Compare and contrast contexts and media in which viewers encounter images that influence ideas, emotions, and actions.

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## **Visual Arts/Responding**

**#VA:Re8.1**

**Process Component:** Perceive

**Anchor Standard:** Interpret intent and meaning in artistic work.

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**Grade K****VA:Re8.1.K**

Interpret art by identifying subject matter and describing relevant details.

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**Grade 1****VA:Re8.1.1**

Interpret art by categorizing subject matter and identifying the characteristics of form.

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**Grade 2****VA:Re8.1.2**

Interpret art by identifying the mood suggested by a work of art and describing relevant subject matter and characteristics of form.



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**Grade 3**  
**VA:Re8.1.3**

Interpret art by analyzing use of media to create subject matter, characteristics of form, and mood.

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**Grade 4**  
**VA:Re8.1.4**

Interpret art by referring to contextual information and analyzing relevant subject matter, characteristics of form, and use of media.

---

**Grade 5**  
**VA:Re8.1.5**

Interpret art by analyzing characteristics of form and structure, contextual information, subject matter, visual elements, and use of media to identify ideas and mood conveyed.

---

**Grade 6**  
**VA:Re8.1.6**

Interpret art by distinguishing between relevant and non-relevant contextual information and analyzing subject matter, characteristics of form and structure, and use of media to identify ideas and mood conveyed.

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**Grade 7**  
**VA:Re8.1.7**

Interpret art by analyzing art-making approaches, the characteristics of form and structure, relevant contextual information, subject matter, and use of media to identify ideas and mood conveyed.

---

**Grade 8**  
**VA:Re8.1.8**

Interpret art by analyzing how the interaction of subject matter, characteristics of form and structure, use of media, art-making approaches, and relevant contextual information contributes to understanding messages or ideas and mood conveyed.

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## **Visual Arts/Responding**

**#VA:Re9.1**

**Process Component:** Analyze

**Anchor Standard:** Apply criteria to evaluate artistic work.

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**Grade K**  
**VA:Re9.1.K**

Explain reasons for selecting a preferred artwork.



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**Grade 1****VA:Re9.1.1**

Classify artwork based on different reasons for preferences.

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**Grade 2****VA:Re9.1.2**

Use learned art vocabulary to express preferences about artwork.

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**Grade 3****VA:Re9.1.3**

Evaluate an artwork based on given criteria.

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**Grade 4****VA:Re9.1.4**

Apply one set of criteria to evaluate more than one work of art.

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**Grade 5****VA:Re9.1.5**

Recognize differences in criteria used to evaluate works of art depending on styles, genres, and media as well as historical and cultural contexts.

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**Grade 6****VA:Re9.1.6**

Develop and apply relevant criteria to evaluate a work of art.

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**Grade 7****VA:Re9.1.7**

Compare and explain the difference between an evaluation of an artwork based on personal criteria and an evaluation of an artwork based on a set of established criteria.

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**Grade 8****VA:Re9.1.8**

Create a convincing and logical argument to support an evaluation of art.



# College and Career Readiness Anchor Standards for Reading

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

## Key Ideas and details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

## Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

## Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.\*
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

## Range of reading and Level of text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

## Note on range and content of student reading

*To build a foundation for college and career readiness, students must read widely and deeply from among a broad range of high-quality, increasingly challenging literary and informational texts. Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structures and elements. By reading texts in history/social studies, science, and other disciplines, students build a foundation of knowledge in these fields that will also give them the background to be better readers in all content areas. Students can only gain this foundation when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades. Students also acquire the habits of reading independently and closely, which are essential to their future success.*

\*Please see “Research to Build and Present Knowledge” in Writing and “Comprehension and Collaboration” in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.



# Reading Standards for Literature K–5

RL

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Kindergartners:			Grade 1 students:		Grade 2 students:	
Key Ideas and details						
1.	With prompting and support, ask and answer questions about key details in a text.	1.	Ask and answer questions about key details in a text.	1.	Ask and answer such questions as <i>who</i> , <i>what</i> , <i>where</i> , <i>when</i> , <i>why</i> , and <i>how</i> to demonstrate understanding of key details in a text.	
2.	With prompting and support, retell familiar stories, including key details.	2.	Retell stories, including key details, and demonstrate understanding of their central message or lesson.	2.	Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.	
3.	With prompting and support, identify characters, settings, and major events in a story.	3.	Describe characters, settings, and major events in a story, using key details.	3.	Describe how characters in a story respond to major events and challenges.	
Craft and Structure						
4.	Ask and answer questions about unknown words in a text.	4.	Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.	4.	Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.	
5.	Recognize common types of texts (e.g., storybooks, poems).	5.	Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of text types.	5.	Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.	
6.	With prompting and support, name the author and illustrator of a story and define the role of each in telling the story.	6.	Identify who is telling the story at various points in a text.	6.	Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.	
Integration of Knowledge and Ideas						
7.	With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).	7.	Use illustrations and details in a story to describe its characters, setting, or events.	7.	Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.	
8.	(Not applicable to literature)	8.	(Not applicable to literature)	8.	(Not applicable to literature)	
9.	With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.	9.	Compare and contrast the adventures and experiences of characters in stories.	9.	Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.	
range of reading and Level of text Complexity						
10.	Actively engage in group reading activities with purpose and understanding.	10.	With prompting and support, read prose and poetry of appropriate complexity for grade 1.	10.	By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	



# Reading Standards for Literature K–5

RL

## Grade 3 students:

### Key Ideas and details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.
3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

## Grade 4 students:

1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
2. Determine a theme of a story, drama, or poem from details in the text; summarize the text.

3. Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

## Grade 5 students:

1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
2. Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.

3. Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

### Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.

4. Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).

4. Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.

5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.

5. Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.

5. Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.

6. Distinguish their own point of view from that of the narrator or those of the characters.

6. Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.

6. Describe how a narrator's or speaker's point of view influences how events are described.

### Integration of Knowledge and Ideas

7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

7. Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

7. Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

8. (Not applicable to literature)

8. (Not applicable to literature)

8. (Not applicable to literature)

9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

9. Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

9. Compare and contrast stories in the same genre (e.g., mysteries and adventure stories) on their approaches to similar themes and topics.

### range of reading and Level of text Complexity

10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2–3 text complexity band independently and proficiently.

10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4–5 text complexity band independently and proficiently.



# Reading Standards for Informational Text K–5

RI

Kindergartners:			Grade 1 students:		Grade 2 students:	
Key Ideas and details						
1.	With prompting and support, ask and answer questions about key details in a text.	1.	Ask and answer questions about key details in a text.	1.	Ask and answer such questions as <i>who</i> , <i>what</i> , <i>where</i> , <i>when</i> , <i>why</i> , and <i>how</i> to demonstrate understanding of key details in a text.	
2.	With prompting and support, identify the main topic and retell key details of a text.	2.	Identify the main topic and retell key details of a text.	2.	Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.	
3.	With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.	3.	Describe the connection between two individuals, events, ideas, or pieces of information in a text.	3.	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.	
Craft and Structure						
4.	With prompting and support, ask and answer questions about unknown words in a text.	4.	Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.	4.	Determine the meaning of words and phrases in a text relevant to a <i>grade 2 topic or subject area</i> .	
5.	Identify the front cover, back cover, and title page of a book.	5.	Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.	5.	Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.	
6.	Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.	6.	Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.	6.	Identify the main purpose of a text, including what the author wants to answer, explain, or describe.	
Integration of Knowledge and Ideas						
7.	With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).	7.	Use the illustrations and details in a text to describe its key ideas.	7.	Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.	
8.	With prompting and support, identify the reasons an author gives to support points in a text.	8.	Identify the reasons an author gives to support points in a text.	8.	Describe how reasons support specific points the author makes in a text.	
9.	With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).	9.	Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).	9.	Compare and contrast the most important points presented by two texts on the same topic.	
range of reading and Level of text Complexity						
10.	Actively engage in group reading activities with purpose and understanding.	10.	With prompting and support, read informational texts appropriately complex for grade 1.	10.	By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	



# Reading Standards for Informational Text K–5

RI

## Grade 3 students:

### Key Ideas and details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Determine the main idea of a text; recount the key details and explain how they support the main idea.
3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

## Grade 4 students:

1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
2. Determine the main idea of a text and explain how it is supported by key details; summarize the text.
3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

## Grade 5 students:

1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
2. Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
3. Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

### Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 3 topic or subject area*.
5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
6. Distinguish their own point of view from that of the author of a text.

4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.
5. Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 5 topic or subject area*.
5. Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.

6. Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

6. Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

### Integration of Knowledge and Ideas

7. Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

7. Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

7. Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).

8. Explain how an author uses reasons and evidence to support particular points in a text.

8. Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).

9. Compare and contrast the most important points and key details presented in two texts on the same topic.

9. Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

9. Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

### Range of reading and Level of text Complexity

10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

10. By the end of year, read and comprehend informational texts, including history/social studies, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4–5 text complexity band independently and proficiently.



# Reading Standards: Foundational Skills (K–5)

These standards are directed toward fostering students’ understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. These foundational skills are not an end in and of themselves; rather, they are necessary and important components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: good readers will need much less practice with these concepts than struggling readers will. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

*Note: In kindergarten, children are expected to demonstrate increasing awareness and competence in the areas that follow.*

Kindergartners:		Grade 1 students:	
Print Concepts			
1.	Demonstrate understanding of the organization and basic features of print.	1.	Demonstrate understanding of the organization and basic features of print.
a.	Follow words from left to right, top to bottom, and page by page.	a.	Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation).
b.	Recognize that spoken words are represented in written language by specific sequences of letters.		
c.	Understand that words are separated by spaces in print.		
d.	Recognize and name all upper- and lowercase letters of the alphabet.		
Phonological awareness			
2.	Demonstrate understanding of spoken words, syllables, and sounds (phonemes).	2.	Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
a.	Recognize and produce rhyming words.	a.	Distinguish long from short vowel sounds in spoken single-syllable words.
b.	Count, pronounce, blend, and segment syllables in spoken words.	b.	Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.
c.	Blend and segment onsets and rimes of single-syllable spoken words.	c.	Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.
d.	Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words. * (This does not include CVCs ending with /l/, /r/, or /x/.)	d.	Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes).
e.	Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.		

\*Words, syllables, or phonemes written in /slashes/refer to their pronunciation or phonology. Thus, /CVC/ is a word with three phonemes regardless of the number of letters in the spelling of the word.



*Note: In kindergarten children are expected to demonstrate increasing awareness and competence in the areas that follow.*

Kindergarten:		Grade 1 students:		Grade 2 students:	
<b>Phonics and Word Recognition</b>					
3.	Know and apply grade-level phonics and word analysis skills in decoding words.	3.	Know and apply grade-level phonics and word analysis skills in decoding words.	3.	Know and apply grade-level phonics and word analysis skills in decoding words.
a.	Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sound or many of the most frequent sounds for each consonant.	a.	Know the spelling-sound correspondences for common consonant digraphs.	a.	Distinguish long and short vowels when reading regularly spelled one-syllable words.
b.	Associate the long and short sounds with common spellings (graphemes) for the five major vowels.	b.	Decode regularly spelled one-syllable words.	b.	Know spelling-sound correspondences for additional common vowel teams.
c.	Read common high-frequency words by sight (e.g., <i>the, of, to, you, she, my, is, are, do, does</i> ).	c.	Know final -e and common vowel team conventions for representing long vowel sounds.	c.	Decode regularly spelled two-syllable words with long vowels.
d.	Distinguish between similarly spelled words by identifying the sounds of the letters that differ.	d.	Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.	d.	Decode words with common prefixes and suffixes.
		e.	Decode two-syllable words following basic patterns by breaking the words into syllables.	e.	Identify words with inconsistent but common spelling-sound correspondences.
		f.	Read words with inflectional endings.	f.	Recognize and read grade-appropriate irregularly spelled words.
		g.	Recognize and read grade-appropriate irregularly spelled words.		
<b>Fluency</b>					
4.	Read emergent-reader texts with purpose and understanding.	4.	Read with sufficient accuracy and fluency to support comprehension.	4.	Read with sufficient accuracy and fluency to support comprehension.
		a.	Read grade-level text with purpose and understanding.	a.	Read grade-level text with purpose and understanding.
		b.	Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.	b.	Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.
		c.	Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	c.	Use context to confirm or self-correct word recognition and understanding, rereading as necessary.



# Reading Standards: Foundational Skills (K–5)

RF

## Grade 3 students:

## Grade 4 students:

## Grade 5 students:

### Phonics and Word Recognition

- |   |   |   |
|---|---|---|
| <p>3. Know and apply grade-level phonics and word analysis skills in decoding words.</p> <ul style="list-style-type: none"> <li>a. Identify and know the meaning of the most common prefixes and derivational suffixes.</li> <li>b. Decode words with common Latin suffixes.</li> <li>c. Decode multisyllable words.</li> <li>d. Read grade-appropriate irregularly spelled words.</li> </ul> | <p>3. Know and apply grade-level phonics and word analysis skills in decoding words.</p> <ul style="list-style-type: none"> <li>a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.</li> </ul> | <p>3. Know and apply grade-level phonics and word analysis skills in decoding words.</p> <ul style="list-style-type: none"> <li>a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.</li> </ul> |
|---|---|---|

### Fluency

- |   |  |  |
|---|--|--|
| <p>4. Read with sufficient accuracy and fluency to support comprehension.</p> <ul style="list-style-type: none"> <li>a. Read grade-level text with purpose and understanding.</li> <li>b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings</li> <li>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul> | <p>4. Read with sufficient accuracy and fluency to support comprehension.</p> <ul style="list-style-type: none"> <li>a. Read grade-level text with purpose and understanding.</li> <li>b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.</li> <li>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul> | <p>4. Read with sufficient accuracy and fluency to support comprehension.</p> <ul style="list-style-type: none"> <li>a. Read grade-level text with purpose and understanding.</li> <li>b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.</li> <li>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul> |
|---|--|--|



## College and Career Readiness anchor Standards for Writing

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

### text types and Purposes \*

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

### Production and distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

### Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

### Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

\*These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.

### Note on range and content of student writing

*To build a foundation for college and career readiness, students need to learn to use writing as a way of offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying real and imagined experiences and events. They learn to appreciate that a key purpose of writing is to communicate clearly to an external, sometimes unfamiliar audience, and they begin to adapt the form and content of their writing to accomplish a particular task and purpose. They develop the capacity to build knowledge on a subject through research projects and to respond analytically to literary and informational sources. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and extended time frames throughout the year.*



## Writing Standards K–5

W

The following standards for K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C.

### Kindergartners:

#### text types and Purposes

1. Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., *My favorite book is . . .*).

2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

3. Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.

### Grade 1 students:

1. Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.

2. Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

3. Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

### Grade 2 students:

1. Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., *because, and, also*) to connect opinion and reasons, and provide a concluding statement or section.

2. Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

3. Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

### Production and distribution of Writing

4. (Begins in grade 3)
5. With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.

4. (Begins in grade 3)
5. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.

6. With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.

6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

### Research to Build and Present Knowledge

7. Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).

7. Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions).

7. Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

9. (Begins in grade 4)

9. (Begins in grade 4)

9. (Begins in grade 4)

### Range of Writing

10. (Begins in grade 3)

10. (Begins in grade 3)

10. (Begins in grade 3)



# Writing Standards K–5

W

## Grade 3 students:

### text types and Purposes

1. Write opinion pieces on topics or texts, supporting a point of view with reasons.
  - a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
  - b. Provide reasons that support the opinion.
  - c. Use linking words and phrases (e.g., *because, therefore, since, for example*) to connect opinion and reasons.
  - d. Provide a concluding statement or section.

## Grade 4 students:

1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
  - a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.
  - b. Provide reasons that are supported by facts and details.
  - c. Link opinion and reasons using words and phrases (e.g., *for instance, in order to, in addition*).
  - d. Provide a concluding statement or section related to the opinion presented.

## Grade 5 students:

1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
  - a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose.
  - b. Provide logically ordered reasons that are supported by facts and details.
  - c. Link opinion and reasons using words, phrases, and clauses (e.g., *consequently, specifically*).
  - d. Provide a concluding statement or section related to the opinion presented.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- a. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
- b. Develop the topic with facts, definitions, and details.
- c. Use linking words and phrases (e.g., *also, another, and, more, but*) to connect ideas within categories of information.
- d. Provide a concluding statement or section.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.
- b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
- c. Link ideas within categories of information using words and phrases (e.g., *another, for example, also, because*).
- d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
- e. Provide a concluding statement or section related to the information or explanation presented.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- a. Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.
- b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
- c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., *in contrast, especially*).
- d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
- e. Provide a concluding statement or section related to the information or explanation presented.

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

- a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
- b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
- c. Use temporal words and phrases to signal event order.
- d. Provide a sense of closure.

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

- a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
- b. Use dialogue and description to develop experiences and events or show the responses of characters to situations.
- c. Use a variety of transitional words and phrases to manage the sequence of events.
- d. Use concrete words and phrases and sensory details to convey experiences and events precisely.
- e. Provide a conclusion that follows from the narrated experiences or events.

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

- a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
- b. Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.
- c. Use a variety of transitional words, phrases, and clauses to manage the sequence of events.
- d. Use concrete words and phrases and sensory details to convey experiences and events precisely.
- e. Provide a conclusion that follows from the narrated experiences or events.



# Writing Standards K–5

W

## Grade 3 students:

### Production and Distribution of Writing

4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 3 on page 29.)
6. With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.

## Grade 4 students:

4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 4 on page 29.)
6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

## Grade 5 students:

4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 5 on page 29.)
6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

## Research to Build and Present Knowledge

7. Conduct short research projects that build knowledge about a topic.
8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.
8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

7. Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
8. Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.

9. (Begins in grade 4)

9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
  - a. Apply *grade 4 Reading standards* to literature (e.g., “Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character’s thoughts, words, or actions].”).
  - b. Apply *grade 4 Reading standards* to informational texts (e.g., “Explain how an author uses reasons and evidence to support particular points in a text”).

9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
  - a. Apply *grade 5 Reading standards* to literature (e.g., “Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text [e.g., how characters interact].”).
  - b. Apply *grade 5 Reading standards* to informational texts (e.g., “Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point[s].”).

## Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.



# College and Career Readiness Anchor Standards for Speaking and Listening

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

## Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

## Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

## Note on range and content of student speaking and listening

*To build a foundation for college and career readiness, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner. Being productive members of these conversations requires that students contribute accurate, relevant information; respond to and develop what others have said; make comparisons and contrasts; and analyze and synthesize a multitude of ideas in various domains.*

*New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio.*



## Speaking and Listening Standards K–5

The following standards for K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Kindergartners:			Grade 1 students:			Grade 2 students:		
Comprehension and Collaboration								
1.	Participate in collaborative conversations with diverse partners about <i>kindergarten topics and texts</i> with peers and adults in small and larger groups.		1.	Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups.		1.	Participate in collaborative conversations with diverse partners about <i>grade 2 topics and texts</i> with peers and adults in small and larger groups.	
a.	Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).		a.	Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).		a.	Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).	
b.	Continue a conversation through multiple exchanges.		b.	Build on others' talk in conversations by responding to the comments of others through multiple exchanges.		b.	Build on others' talk in conversations by linking their comments to the remarks of others.	
			c.	Ask questions to clear up any confusion about the topics and texts under discussion.		c.	Ask for clarification and further explanation as needed about the topics and texts under discussion.	
2.	Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.		2.	Ask and answer questions about key details in a text read aloud or information presented orally or through other media.		2.	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.	
3.	Ask and answer questions in order to seek help, get information, or clarify something that is not understood.		3.	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.		3.	Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.	
Presentation of Knowledge and Ideas								
4.	Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.		4.	Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.		4.	Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.	
5.	Add drawings or other visual displays to descriptions as desired to provide additional detail.		5.	Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.		5.	Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.	
6.	Speak audibly and express thoughts, feelings, and ideas clearly.		6.	Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 on page 26 for specific expectations.)		6.	Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 2 Language standards 1 and 3 on page 26 for specific expectations.)	



# Speaking and Listening Standards K–5

SL

## Grade 3 students:

### Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
  - b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
  - c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
  - d. Explain their own ideas and understanding in light of the discussion.

## Grade 4 students:

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
  - b. Follow agreed-upon rules for discussions and carry out assigned roles.
  - c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
  - d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
  - b. Follow agreed-upon rules for discussions and carry out assigned roles.
  - c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
  - d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.

### Presentation of Knowledge and Ideas

2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

2. Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Identify the reasons and evidence a speaker provides to support particular points.

2. Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.

4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
5. Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

4. Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
5. Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

6. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 3 Language standards 1 and 3 on page 28 for specific expectations.)

6. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See grade 4 Language standards 1 on page 28 for specific expectations.)

6. Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation. (See grade 5 Language standards 1 and 3 on page 28 for specific expectations.)



## College and Career readiness anchor Standards for Language

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

### Conventions of Standard english

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

### Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

### Vocabulary acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

### Note on range and content of student language use

*To build a foundation for college and career readiness in language, students must gain control over many conventions of standard English grammar, usage, and mechanics as well as learn other ways to use language to convey meaning effectively. They must also be able to determine or clarify the meaning of grade-appropriate words encountered through listening, reading, and media use; come to appreciate that words have nonliteral meanings, shades of meaning, and relationships to other words; and expand their vocabulary in the course of studying content. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.*



# Language Standards K–5

1

The following standards for grades K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (\*). See the table on page 30 for a complete list and Appendix A for an example of how these skills develop in sophistication.

## Kindergartners:

### Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
  - a. Print many upper- and lowercase letters.
  - b. Use frequently occurring nouns and verbs.
  - c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., *dog, dogs; wish, wishes*).
  - d. Understand and use question words (interrogatives) (e.g., *who, what, where, when, why, how*).
  - e. Use the most frequently occurring prepositions (e.g., *to, from, in, out, on, off, for, of, by, with*).
  - f. Produce and expand complete sentences in shared language activities.

## Grade 1 students:

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
  - a. Print all upper- and lowercase letters.
  - b. Use common, proper, and possessive nouns.
  - c. Use singular and plural nouns with matching verbs in basic sentences (e.g., *He hops; We hop*).
  - d. Use personal, possessive, and indefinite pronouns (e.g., *I, me, my; they, them, their; anyone, everything*).
  - e. Use verbs to convey a sense of past, present, and future (e.g., *Yesterday I walked home; Today I walk home; Tomorrow I will walk home*).
  - f. Use frequently occurring adjectives.
  - g. Use frequently occurring conjunctions (e.g., *and, but, or, so, because*).
  - h. Use determiners (e.g., articles, demonstratives).
  - i. Use frequently occurring prepositions (e.g., *during, beyond, toward*).
  - j. Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts.

## Grade 2 students:

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
    - a. Use collective nouns (e.g., *group*).
    - b. Form and use frequently occurring irregular plural nouns (e.g., *feet, children, teeth, mice, fish*).
    - c. Use reflexive pronouns (e.g., *myself, ourselves*).
    - d. Form and use the past tense of frequently occurring irregular verbs (e.g., *sat, hid, told*).
    - e. Use adjectives and adverbs, and choose between them depending on what is to be modified.
    - f. Produce, expand, and rearrange complete simple and compound sentences (e.g., *The boy watched the movie; The little boy watched the movie; The action movie was watched by the little boy*).
  2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
    - a. Capitalize holidays, product names, and geographic names.
    - b. Use commas in greetings and closings of letters.
    - c. Use an apostrophe to form contractions and frequently occurring possessives.
    - d. Generalize learned spelling patterns when writing words (e.g., *cage* → *badge*; *boy* → *boil*).
    - e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
    - a. Capitalize the first word in a sentence and the pronoun *I*.
    - b. Recognize and name end punctuation.
    - c. Write a letter or letters for most consonant and short-vowel sounds (phonemes).
    - d. Spell simple words phonetically, drawing on knowledge of sound-letter relationships.



# Language Standards K–5

## Kindergartners:

## Grade 1 students:

## Grade 2 students:

### Knowledge of Language

3. (Begins in grade 2)

3. (Begins in grade 2)

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.  
a. Compare formal and informal uses of English.

### Vocabulary acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *kindergarten reading and content*.  
a. Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* is a bird and learning the verb *to duck*).  
b. Use the most frequently occurring inflections and affixes (e.g., *-ed*, *-s*, *re-*, *un-*, *pre-*, *-ful*, *-less*) as a clue to the meaning of an unknown word.

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 1 reading and content*, choosing flexibly from an array of strategies.  
a. Use sentence-level context as a clue to the meaning of a word or phrase.  
b. Use frequently occurring affixes as a clue to the meaning of a word.  
c. Identify frequently occurring root words (e.g., *look*) and their inflectional forms (e.g., *looks*, *looked*, *looking*).

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 2 reading and content*, choosing flexibly from an array of strategies.  
a. Use sentence-level context as a clue to the meaning of a word or phrase.  
b. Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., *happy/unhappy*, *tell/retell*).  
c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *addition*, *additional*).  
d. Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., *birdhouse*, *lighthouse*, *housefly*; *bookshelf*, *notebook*, *bookmark*).  
e. Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.

<p>5. With guidance and support from adults, explore word relationships and nuances in word meanings.</p> <p>a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.</p> <p>b. Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).</p> <p>c. Identify real-life connections between words and their use (e.g., note places at school that are <i>colorful</i>).</p> <p>d. Distinguish shades of meaning among verbs describing the same general action (e.g., <i>walk</i>, <i>march</i>, <i>strut</i>, <i>prance</i>) by acting out the meanings.</p>	<p>5. With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings.</p> <p>a. Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent.</p> <p>b. Define words by category and by one or more key attributes (e.g., a <i>duck</i> is a bird that swims; a <i>tiger</i> is a large cat with stripes).</p> <p>c. Identify real-life connections between words and their use (e.g., note places at home that are <i>cozy</i>).</p> <p>d. Distinguish shades of meaning among verbs differing in manner (e.g., <i>look</i>, <i>peek</i>, <i>glance</i>, <i>stare</i>, <i>glare</i>, <i>scow</i>) and adjectives differing in intensity (e.g., <i>large</i>, <i>large</i>, <i>gigantic</i>) by defining or choosing them or by acting out the meanings.</p>	<p>5. Demonstrate understanding of word relationships and nuances in word meanings.</p> <p>a. Identify real-life connections between words and their use (e.g., describe foods that are <i>spicy</i> or <i>juicy</i>).</p> <p>b. Distinguish shades of meaning among closely related verbs (e.g., <i>toss</i>, <i>throw</i>, <i>hur</i>) and closely related adjectives (e.g., <i>thin</i>, <i>slender</i>, <i>skinny</i>, <i>scrumpy</i>).</p>
<p>6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.</p>	<p>6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., <i>because</i>).</p>	<p>6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., <i>When other kids are happy that makes me happy</i>).</p>



# Language Standards K–5

## Grade 3 students:

## Grade 4 students:

## Grade 5 students:

### Conventions of Standard english

Conventions of Standard english		
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.	a. Use relative pronouns ( <i>who, whose, whom, which, that</i> ) and relative adverbs ( <i>where, when, why</i> ).	a. Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences.
b. Form and use regular and irregular plural nouns.	b. Form and use the progressive (e.g., <i>I was walking; I am walking; I will be walking</i> ) verb tenses.	b. Form and use the perfect (e.g., <i>I had walked; I have walked; I will have walked</i> ) verb tenses.
c. Use abstract nouns (e.g., <i>childhood</i> ).	c. Use modal auxiliaries (e.g., <i>can, may, must</i> ) to convey various conditions.	c. Use verb tense to convey various times, sequences, states, and conditions.
d. Form and use regular and irregular verbs.	d. Order adjectives within sentences according to conventional patterns (e.g., <i>a small red bag</i> rather than <i>a red small bag</i> ).	d. Recognize and correct inappropriate shifts in verb tense.*
e. Form and use the simple (e.g., <i>I walked; I walk; I will walk</i> ) verb tenses.	e. Form and use prepositional phrases.	e. Use correlative conjunctions (e.g., <i>either/or, neither/nor</i> ).
f. Ensure subject-verb and pronoun-antecedent agreement.*	f. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.*	
g. Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.	g. Correctly use frequently confused words (e.g., <i>to, too, two; there, their</i> ).*	
h. Use coordinating and subordinating conjunctions.		
i. Produce simple, compound, and complex sentences.		
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
a. Capitalize appropriate words in titles.	a. Use correct capitalization.	a. Use punctuation to separate items in a series.*
b. Use commas in addresses.	b. Use commas and quotation marks to mark direct speech and quotations from a text.	b. Use a comma to separate an introductory element from the rest of the sentence.
c. Use commas and quotation marks in dialogue.	c. Use a comma before a coordinating conjunction in a compound sentence.	c. Use a comma to set off the words <i>yes</i> and <i>no</i> (e.g., <i>Yes, thank you</i> ), to set off a tag question from the rest of the sentence (e.g., <i>It's true, isn't it?</i> ), and to indicate direct address (e.g., <i>Is that you, Steve?</i> ).
d. Form and use possessives.	d. Spell grade-appropriate words correctly, consulting references as needed.	d. Use underlining, quotation marks, or italics to indicate titles of works.
e. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., <i>sitting, smiled, cries, happiness</i> ).		e. Spell grade-appropriate words correctly, consulting references as needed.
f. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.		
g. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.		



# Language Standards K–5

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## Grade 3 students:

### Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
  - a. Choose words and phrases for effect.\*
  - b. Recognize and observe differences between the conventions of spoken and written standard English.

## Grade 4 students:

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
  - a. Choose words and phrases to convey ideas precisely.\*
  - b. Choose punctuation for effect.\*
  - c. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).

### Vocabulary acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on *grade 3 reading and content*, choosing flexibly from a range of strategies.
  - a. Use sentence-level context as a clue to the meaning of a word or phrase.
  - b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., *agreeable/disagreeable*, *comfortable/uncomfortable*, *care/careless*, *head/prehead*).
  - c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *company*, *companion*).
  - d. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 4 reading and content*, choosing flexibly from a range of strategies.
  - a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.
  - b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *telegraph*, *photograph*, *autograph*).
  - c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 5 reading and content*, choosing flexibly from a range of strategies.
  - a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.
  - b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *photograph*, *photosynthesis*).
  - c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

5. Demonstrate understanding of word relationships and nuances in word meanings.
  - a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., *take steps*).
  - b. Identify real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*).
  - c. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., *knew*, *believed*, *suspected*, *heard*, *wondered*).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
  - a. Explain the meaning of simple similes and metaphors (e.g., *as pretty as a picture*) in context.
  - b. Recognize and explain the meaning of common idioms, adages, and proverbs.
  - c. Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
  - a. Interpret figurative language, including similes and metaphors, in context.
  - b. Recognize and explain the meaning of common idioms, adages, and proverbs.
  - c. Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

6. Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., *After dinner that night we went looking for them*).

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., *guzzled*, *whined*, *stammered*) and that are basic to a particular topic (e.g., *wildlife*, *conservation*, and *endangered* when discussing animal preservation).

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., *however*, *although*, *nevertheless*, *similarly*, *moreover*, *in addition*).



# Language Progressive Skills, by Grade

The following skills, marked with an asterisk (\*) in Language standards 1–3, are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

Standard	3	4	5	6	7	8	9–10	11–12
L.3.1f. Ensure subject-verb and pronoun-antecedent agreement.								
L.3.3a. Choose words and phrases for effect.								
L.4.1f. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.								
L.4.1g. Correctly use frequently confused words (e.g., <i>to/too/two</i> ; <i>there/their</i> ).								
L.4.3a. Choose words and phrases to convey ideas precisely.*								
L.4.3b. Choose punctuation for effect.								
L.5.1d. Recognize and correct inappropriate shifts in verb tense.								
L.5.2a. Use punctuation to separate items in a series.*								
L.6.1c. Recognize and correct inappropriate shifts in pronoun number and person.								
L.6.1d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).								
L.6.1e. Recognize variations from standard English in their own and others’ writing and speaking, and identify and use strategies to improve expression in conventional language.								
L.6.2a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.								
L.6.3a. Vary sentence patterns for meaning, reader/listener interest, and style.*								
L.6.3b. Maintain consistency in style and tone.								
L.7.1c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.								
L.7.3a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.								
L.8.1d. Recognize and correct inappropriate shifts in verb voice and mood.								
L.9–10.1a. Use parallel structure.								

\*Subsumed by L.7.3a

\*Subsumed by L.9–10.1a

\*Subsumed by L.11–12.3a



## College and Career Readiness Anchor Standards for Reading, 6-8

The grades 6–8 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

### Key Ideas and details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

### Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

### Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.\*
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

### Range of reading and Level of text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

\*Please see “Research to Build Knowledge” in Writing and “Comprehension and Collaboration” in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

### Note on range and content of student reading

*To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Such works offer profound insights into the human condition and serve as models for students' own thinking and writing. Along with high-quality contemporary works, these texts should be chosen from among seminal U.S. documents, the classics of American literature, and the timeless dramas of Shakespeare. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references, and images; the ability to evaluate intricate arguments; and the capacity to surmount the challenges posed by complex texts.*



# Reading Standards for Literature 6–8

RL

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Grade 6 students:		Grade 7 students:		Grade 8 students:	
Key Ideas and details					
1.	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	1.	Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	1.	Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2.	Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.	2.	Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.	2.	Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
3.	Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.	3.	Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).	3.	Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.
Craft and Structure					
4.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.	4.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.	4.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
5.	Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.	5.	Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.	5.	Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.
6.	Explain how an author develops the point of view of the narrator or speaker in a text.	6.	Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.	6.	Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.



# Reading Standards for Literature 6–8

RL

Grade 6 students:			
Integration of Knowledge and Ideas			
7.	Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they “see” and “hear” when reading the text to what they perceive when they listen or watch.	7.	Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).
8.	(Not applicable to literature)	8.	(Not applicable to literature)
9.	Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.	9.	Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.
10.	By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	10.	By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
Range of Reading and Level of text Complexity			
		8.	(Not applicable to literature)
		9.	Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.
		10.	By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6–8 text complexity band independently and proficiently.



# Reading Standards for Informational Text 6–8

RI

## Grade 6 students:

### Key Ideas and Details

1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
3. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

## Grade 7 students:

1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.
3. Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

## Grade 8 students:

1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
3. Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).

### Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
5. Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.
5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
5. Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.

### Integration of Knowledge and Ideas

6. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

6. Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.
7. Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).

6. Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
7. Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.

8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
9. Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).

8. Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.
9. Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
9. Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

### Range of Reading and Level of Text Complexity

10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

10. By the end of the year, read and comprehend literary nonfiction at the high end of the grades 6–8 text complexity band independently and proficiently.



## College and Career readiness anchor Standards for Writing

The grades 6–8 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number.

The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

### Text types and Purposes\*

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

### Production and distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

### Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

### Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

\*These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.

### Note on range and content of student writing

*For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within argument and explanation within narrative—to produce complex and nuanced writing. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it.*



## Writing Standards 6–8

W

The following standards for grades 6–8 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C.

Grade 6 students:	Grade 7 students:	Grade 8 students:
text types and Purposes		

<ol style="list-style-type: none"> <li>Write arguments to support claims with clear reasons and relevant evidence.               <ol style="list-style-type: none"> <li>Introduce claim(s) and organize the reasons and evidence clearly.</li> <li>Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.</li> <li>Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.</li> <li>Establish and maintain a formal style.</li> <li>Provide a concluding statement or section that follows from the argument presented.</li> </ol> </li> <li>Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.               <ol style="list-style-type: none"> <li>Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.</li> <li>Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.</li> <li>Use appropriate transitions to clarify the relationships among ideas and concepts.</li> <li>Use precise language and domain-specific vocabulary to inform about or explain the topic.</li> <li>Establish and maintain a formal style.</li> <li>Provide a concluding statement or section that follows from the information or explanation presented.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Write arguments to support claims with clear reasons and relevant evidence.               <ol style="list-style-type: none"> <li>Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.</li> <li>Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.</li> <li>Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.</li> <li>Establish and maintain a formal style.</li> <li>Provide a concluding statement or section that follows from and supports the argument presented.</li> </ol> </li> <li>Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.               <ol style="list-style-type: none"> <li>Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.</li> <li>Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.</li> <li>Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.</li> <li>Use precise language and domain-specific vocabulary to inform about or explain the topic.</li> <li>Establish and maintain a formal style.</li> <li>Provide a concluding statement or section that follows from and supports the information or explanation presented.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Write arguments to support claims with clear reasons and relevant evidence.               <ol style="list-style-type: none"> <li>Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.</li> <li>Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.</li> <li>Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.</li> <li>Establish and maintain a formal style.</li> <li>Provide a concluding statement or section that follows from and supports the argument presented.</li> </ol> </li> <li>Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.               <ol style="list-style-type: none"> <li>Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.</li> <li>Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.</li> <li>Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.</li> <li>Use precise language and domain-specific vocabulary to inform about or explain the topic.</li> <li>Establish and maintain a formal style.</li> <li>Provide a concluding statement or section that follows from and supports the information or explanation presented.</li> </ol> </li> </ol>
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# Writing Standards 6–8

W

## Grade 6 students:

### Text Types and Purposes (continued)

3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
  - a. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
  - b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
  - c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.
  - d. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.
  - e. Provide a conclusion that follows from the narrated experiences or events.

## Grade 7 students:

3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
  - a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
  - b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
  - c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.
  - d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.
  - e. Provide a conclusion that follows from and reflects on the narrated experiences or events.

## Grade 8 students:

3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
  - a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
  - b. Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters.
  - c. Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events.
  - d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.
  - e. Provide a conclusion that follows from and reflects on the narrated experiences or events.

### Production and Distribution of Writing

- |   |  |  |
|---|--|--|
| 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)   | 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)  | 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)  |
| 5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 6 on page 53.) | 5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 7 on page 53.) | 5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 8 on page 53.) |
| 6. Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.  | 6. Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.  | 6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.  |



# Writing Standards 6–8

W

## Grade 6 students:

### research to Build and Present Knowledge

## Grade 7 students:

## Grade 8 students:

7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.	7. Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.	7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.	8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research. <ol style="list-style-type: none"> <li>Apply <i>grade 6 Reading standards</i> to literature (e.g., “Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics”).</li> <li>Apply <i>grade 6 Reading standards</i> to literary nonfiction (e.g., “Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not”).</li> </ol>	9. Draw evidence from literary or informational texts to support analysis, reflection, and research. <ol style="list-style-type: none"> <li>Apply <i>grade 7 Reading standards</i> to literature (e.g., “Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history”).</li> <li>Apply <i>grade 7 Reading standards</i> to literary nonfiction (e.g., “Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims”).</li> </ol>	9. Draw evidence from literary or informational texts to support analysis, reflection, and research. <ol style="list-style-type: none"> <li>Apply <i>grade 8 Reading standards</i> to literature (e.g., “Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new”).</li> <li>Apply <i>grade 8 Reading standards</i> to literary nonfiction (e.g., “Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced”).</li> </ol>
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

### Range of Writing



## College and Career readiness anchor Standards for Speaking and Listening, 6-8

The grades 6–8 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

### Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

### Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

### Note on range and content of student speaking and listening

*To become college and career ready, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner—built around important content in various domains. They must be able to contribute appropriately to these conversations, to make comparisons and contrasts, and to analyze and synthesize a multitude of ideas in accordance with the standards of evidence appropriate to a particular discipline. Whatever their intended major or profession, high school graduates will depend heavily on others so that they are able to build on others' meritorious ideas while expressing their own clearly and persuasively.*

*New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to change.*



# Speaking and Listening Standards 6–8

SL

The following standards for grades 6–8 offer a focus for instruction in each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

## Grade 6 students:

### Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
  - b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
  - c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
  - d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

2. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.

3. Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.

### Presentation of Knowledge and Ideas

4. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.

5. Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3 on page 53 for specific expectations.)

## Grade 7 students:

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 7 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
  - b. Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
  - c. Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
  - d. Acknowledge new information expressed by others and, when warranted, modify their own views.

2. Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

3. Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.

4. Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

5. Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 7 Language standards 1 and 3 on page 53 for specific expectations.)

## Grade 8 students:

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 8 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
  - b. Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
  - c. Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
  - d. Acknowledge new information expressed by others and, when warranted, qualify or justify their own views in light of the evidence presented.

2. Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.

3. Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.

4. Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.

5. Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 8 Language standards 1 and 3 on page 53 for specific expectations.)



## College and Career readiness anchor Standards for Language

The grades 6–8 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number.

The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

### Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

### Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

### Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

### Note on range and content of student language use

*To be college and career ready in language, students must have firm control over the conventions of standard English. At the same time, they must come to appreciate that language is as at least as much a matter of craft as of rules and be able to choose words, syntax, and punctuation to express themselves and achieve particular functions and rhetorical effects. They must also have extensive vocabularies, built through reading and study, enabling them to comprehend complex texts and engage in purposeful writing about and conversations around content. They need to become skilled in determining or clarifying the meaning of words and phrases they encounter, choosing flexibly from an array of strategies to aid them. They must learn to see an individual word as part of a network of other words—words, for example, that have similar denotations but different connotations. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.*



# Language Standards 6–8

L

The following standards for grades 6–8 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (\*). See the table on page 56 for a complete listing and Appendix A for an example of how these skills develop in sophistication.

Grade 6 students:		Grade 7 students:		Grade 8 students:	
Conventions of Standard English					
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.			
a. Ensure that pronouns are in the proper case (subjective, objective, possessive).	a. Explain the function of phrases and clauses in general and their function in specific sentences.	a. Explain the function of verbals (gerunds, participles, infinitives) in general and their function in particular sentences.			
b. Use intensive pronouns (e.g., <i>myself, ourselves</i> ).	b. Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.	b. Form and use verbs in the active and passive voice.			
c. Recognize and correct inappropriate shifts in pronoun number and person. *	c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers. *	c. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.			
d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). *		d. Recognize and correct inappropriate shifts in verb voice and mood. *			
e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language. *					
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.			
a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. *	a. Use a comma to separate coordinate adjectives (e.g., <i>It was a fascinating, enjoyable movie</i> but not <i>He wore an old[,] green shirt</i> ).	a. Use punctuation (comma, ellipsis, dash) to indicate a pause or break.			
b. Spell correctly.	b. Spell correctly.	b. Use an ellipsis to indicate an omission.			
		c. Spell correctly.			
Knowledge of Language					
3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.	3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.	3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.			
a. Vary sentence patterns for meaning, reader/listener interest, and style. *	a. Choose language that expresses ideas precisely and concisely; recognizing and eliminating wordiness and redundancy. *	a. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).			
b. Maintain consistency in style and tone. *					



# Language Standards 6–8

L

## Grade 6 students:

### Vocabulary acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 6 reading and content*, choosing flexibly from a range of strategies.
  - a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
  - b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *audience, auditor, audible*).
  - c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
  - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

## Grade 7 students:

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 7 reading and content*, choosing flexibly from a range of strategies.
  - a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
  - b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *belligerent, bellicose, rebel*).
  - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
  - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

## Grade 8 students:

4. Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on *grade 8 reading and content*, choosing flexibly from a range of strategies.
  - a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
  - b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *precede, recede, secede*).
  - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
  - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
  - a. Interpret figures of speech (e.g., personification) in context.
  - b. Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.
  - c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *stingy, scrimping, economical, unwise, thrifty*).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
  - a. Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context.
  - b. Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words.
  - c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *refined, respectful, polite, diplomatic, condescending*).
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.



# Language Progressive Skills, by Grade

The following skills, marked with an asterisk (\*) in Language standards 1–3, are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

Standard	3	4	5	6	7	8	9–10	11–12
<b>L.3.1f.</b> Ensure subject-verb and pronoun-antecedent agreement.								
<b>L.3.3a.</b> Choose words and phrases for effect.								
<b>L.4.1f.</b> Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.								
<b>L.4.1g.</b> Correctly use frequently confused words (e.g., <i>to/too/two; there/their</i> ).								
<b>L.4.3a.</b> Choose words and phrases to convey ideas precisely.*								
<b>L.4.3b.</b> Choose punctuation for effect.								
<b>L.5.1d.</b> Recognize and correct inappropriate shifts in verb tense.								
<b>L.5.2a.</b> Use punctuation to separate items in a series.†								
<b>L.6.1c.</b> Recognize and correct inappropriate shifts in pronoun number and person.								
<b>L.6.1d.</b> Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).								
<b>L.6.1e.</b> Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.								
<b>L.6.2a.</b> Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.								
<b>L.6.3a.</b> Vary sentence patterns for meaning, reader/listener interest, and style.‡								
<b>L.6.3b.</b> Maintain consistency in style and tone.								
<b>L.7.1c.</b> Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.								
<b>L.7.3a.</b> Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.								
<b>L.8.1d.</b> Recognize and correct inappropriate shifts in verb voice and mood.								
<b>L.9–10.1a.</b> Use parallel structure.								

\* Subsumed by L.7.3a  
† Subsumed by L.9–10.1a  
‡ Subsumed by L.11–12.3a



**College, Career & Civic Life  
C3 Framework  
For Social Studies State Standards**

**TABLE 1: C3 Framework Organization**

DIMENSION 1: DEVELOPING QUESTIONS AND PLANNING INQUIRIES	DIMENSION 2: APPLYING DISCIPLINARY TOOLS AND CONCEPTS	DIMENSION 3: EVALUATING SOURCES AND USING EVIDENCE	DIMENSION 4: COMMUNICATING CONCLUSIONS AND TAKING INFORMED ACTION
Developing Questions and Planning Inquiries	Civics  Economics  Geography  History	Gathering and Evaluating Sources   Developing Claims and Using Evidence	Communicating and Critiquing Conclusions   Taking Informed Action

**TABLE 2: Dimension 2—Applying Disciplinary Tools and Concepts**

CIVICS	ECONOMICS	GEOGRAPHY	HISTORY
Civic and Political Institutions	Economic Decision Making	Geographic Representations: Spatial Views of the World	Change, Continuity, and Context
Participation and Deliberation: Applying Civic Virtues and Democratic Principles	Exchange and Markets	Human-Environment Interaction: Place, Regions, and Culture	Perspectives
Processes, Rules, and Laws	The National Economy  The Global Economy	Human Population: Spatial Patterns and Movements  Global Interconnections: Changing Spatial Patterns	Historical Sources and Evidence  Causation and Argument

**TABLE 3: Connections between the C3 Framework and the CCR Anchor Standards in the ELA/Literacy Common Core Standards**

FOUNDATIONAL	All ELA/Literacy Common Core Standards
SUPPORTIVE	Reading 1-10; Writing 1, 7-9; Speaking and Listening 1-6; Language 6
VITAL	Reading 1; Writing 7; Speaking and Listening 1



**TABLE 4: Connections between the C3 Framework and the CCR Anchor Standards in the ELA/Literacy Common Core Standards**

DIMENSION 1	ANCHOR STANDARDS	DIMENSION 2	ANCHOR STANDARDS	DIMENSION 3	ANCHOR STANDARDS	DIMENSION 4	ANCHOR STANDARDS
Developing Questions	R1 W7	Civics Economics Geography History	R1-10 W7	Gathering and Evaluating Sources	R1-10 W1, 2, 7-10	Communicating and Critiquing Conclusions	R1 W1-8
and Planning Inquiries	SL1		SL1 L6	Developing Claims and Using Evidence	SL1	Taking Action	SL1-6

**TABLE 5: Suggested K-12 Pathway for College, Career, and Civic Readiness Dimension 1, Constructing Compelling Questions**

BY THE END OF GRADE 2*	BY THE END OF GRADE 5*	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS CONSTRUCT COMPELLING QUESTIONS, AND ...			
D1.1.K-2. Explain why the compelling question is important to the student.	D1.1.3-5. Explain why compelling questions are important to others (e.g., peers, adults).	D1.1.6-8. Explain how a question represents key ideas in the field.	D1.1.9-12. Explain how a question reflects an enduring issue in the field.
D1.2.K-2. Identify disciplinary ideas associated with a compelling question.	D1.2.3-5. Identify disciplinary concepts and ideas associated with a compelling question that are open to different interpretations.	D1.2.6-8. Explain points of agreement experts have about interpretations and applications of disciplinary concepts and ideas associated with a compelling question.	D1.2.9-12. Explain points of agreement and disagreement experts have about interpretations and applications of disciplinary concepts and ideas associated with a compelling question.



**TABLE 6: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 1, Constructing Supporting Questions**

BY THE END OF GRADE 2*	BY THE END OF GRADE 5*	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS CONSTRUCT SUPPORTING QUESTIONS, AND ...			
D1.3.K-2. Identify facts and concepts associated with a supporting question.	D1.3.3-5. Identify the disciplinary concepts and ideas associated with a supporting question that are open to interpretation.	D1.3.6-8. Explain points of agreement experts have about interpretations and applications of disciplinary concepts and ideas associated with a supporting question.	D1.3.9-12. Explain points of agreement and disagreement experts have about interpretations and applications of disciplinary concepts and ideas associated with a supporting question.
D1.4.K-2. Make connections between supporting questions and compelling questions.	D1.4.3-5. Explain how supporting questions help answer compelling questions in an inquiry.	D1.4.6-8. Explain how the relationship between supporting questions and compelling questions is mutually reinforcing.	D1.4.9-12. Explain how supporting questions contribute to an inquiry and how, through engaging source work, new compelling and supporting questions emerge.

**TABLE 7: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 1, Determining Helpful Sources**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS ...			
D1.5.K-2. Determine the kinds of sources that will be helpful in answering compelling and supporting questions.	D1.5.3-5. Determine the kinds of sources that will be helpful in answering compelling and supporting questions, taking into consideration the different opinions people have about how to answer the questions.	D1.5.6-8. Determine the kinds of sources that will be helpful in answering compelling and supporting questions, taking into consideration multiple points of view represented in the sources.	D1.5.9-12. Determine the kinds of sources that will be helpful in answering compelling and supporting questions, taking into consideration multiple points of view represented in the sources, the types of sources available, and the potential uses of the sources.

**TABLE 8: Connections between Dimension 1 and the CCR Anchor Standards in the ELA/Literacy Common Core Standards**

ELA/LITERACY CCR ANCHOR STANDARDS CONNECTIONS	Anchor Reading Standard 1 Anchor Writing Standard 7 Anchor Speaking and Listening Standard 1
SHARED LANGUAGE	Questioning; Argument; Explanation; Point of View



**TABLE 9: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Civic and Political Institutions**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Civ.1.K-2.</b> Describe roles and responsibilities of people in authority.	<b>D2.Civ.1.3-5.</b> Distinguish the responsibilities and powers of government officials at various levels and branches of government and in different times and places.	<b>D2.Civ.1.6-8.</b> Distinguish the powers and responsibilities of citizens, political parties, interest groups, and the media in a variety of governmental and nongovernmental contexts.	<b>D2.Civ.1.9-12.</b> Distinguish the powers and responsibilities of local, state, tribal, national, and international civic and political institutions.
<b>D2.Civ.2.K-2.</b> Explain how all people, not just official leaders, play important roles in a community.	<b>D2.Civ.2.3-5.</b> Explain how a democracy relies on people's responsible participation, and draw implications for how individuals should participate.	<b>D2.Civ.2.6-8.</b> Explain specific roles played by citizens (such as voters, jurors, taxpayers, members of the armed forces, petitioners, protesters, and office-holders).	<b>D2.Civ.2.9-12.</b> Analyze the role of citizens in the U.S. political system, with attention to various theories of democracy, changes in Americans' participation over time, and alternative models from other countries, past and present.
<b>D2.Civ.3.K-2.</b> Explain the need for and purposes of rules in various settings inside and outside of school.	<b>D2.Civ.3.3-5.</b> Examine the origins and purposes of rules, laws, and key U.S. constitutional provisions.	<b>D2.Civ.3.6-8.</b> Examine the origins, purposes, and impact of constitutions, laws, treaties, and international agreements.	<b>D2.Civ.3.9-12.</b> Analyze the impact of constitutions, laws, treaties, and international agreements on the maintenance of national and international order.
<b>D2.Civ.4.K-2.</b> <i>Begins in grades 3–5</i>	<b>D2.Civ.4.3-5.</b> Explain how groups of people make rules to create responsibilities and protect freedoms.	<b>D2.Civ.4.6-8.</b> Explain the powers and limits of the three branches of government, public officials, and bureaucracies at different levels in the United States and in other countries.	<b>D2.Civ.4.9-12.</b> Explain how the U.S. Constitution establishes a system of government that has powers, responsibilities, and limits that have changed over time and that are still contested.
<b>D2.Civ.5.K-2.</b> Explain what governments are and some of their functions.	<b>D2.Civ.5.3-5.</b> Explain the origins, functions, and structure of different systems of government, including those created by the U.S. and state constitutions.	<b>D2.Civ.5.6-8.</b> Explain the origins, functions, and structure of government with reference to the U.S. Constitution, state constitutions, and selected other systems of government.	<b>D2.Civ.5.9-12.</b> Evaluate citizens' and institutions' effectiveness in addressing social and political problems at the local, state, tribal, national, and/or international level.
<b>D2.Civ.6.K-2.</b> Describe how communities work to accomplish common tasks, establish responsibilities, and fulfill roles of authority.	<b>D2.Civ.6.3-5.</b> Describe ways in which people benefit from and are challenged by working together, including through government, workplaces, voluntary organizations, and families.	<b>D2.Civ.6.6-8.</b> Describe the roles of political, civil, and economic organizations in shaping people's lives.	<b>D2.Civ.6.9-12.</b> Critique relationships among governments, civil societies, and economic markets.



**TABLE 10: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Participation and Deliberation**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Civ.7.K-2.</b> Apply civic virtues when participating in school settings.	<b>D2.Civ.7.3-5.</b> Apply civic virtues and democratic principles in school settings.	<b>D2.Civ.7.6-8.</b> Apply civic virtues and democratic principles in school and community settings.	<b>D2.Civ.7.9-12.</b> Apply civic virtues and democratic principles when working with others.
<b>D2.Civ.8.K-2.</b> Describe democratic principles such as equality, fairness, and respect for legitimate authority and rules.	<b>D2.Civ.8.3-5.</b> Identify core civic virtues and democratic principles that guide government, society, and communities.	<b>D2.Civ.8.6-8.</b> Analyze ideas and principles contained in the founding documents of the United States, and explain how they influence the social and political system.	<b>D2.Civ.8.9-12.</b> Evaluate social and political systems in different contexts, times, and places, that promote civic virtues and enact democratic principles.
<b>D2.Civ.9.K-2.</b> Follow agreed-upon rules for discussions while responding attentively to others when addressing ideas and making decisions as a group.	<b>D2.Civ.9.3-5.</b> Use deliberative processes when making decisions or reaching judgments as a group.	<b>D2.Civ.9.6-8.</b> Compare deliberative processes used by a wide variety of groups in various settings.	<b>D2.Civ.9.9-12.</b> Use appropriate deliberative processes in multiple settings.
<b>D2.Civ.10.K-2.</b> Compare their own point of view with others' perspectives.	<b>D2.Civ.10.3-5.</b> Identify the beliefs, experiences, perspectives, and values that underlie their own and others' points of view about civic issues.	<b>D2.Civ.10.6-8.</b> Explain the relevance of personal interests and perspectives, civic virtues, and democratic principles when people address issues and problems in government and civil society.	<b>D2.Civ.10.9-12.</b> Analyze the impact and the appropriate roles of personal interests and perspectives on the application of civic virtues, democratic principles, constitutional rights, and human rights.

**TABLE 11: Suggested K-12 Pathway for College, Career, and Civic Readiness Dimension 2, Processes, Rules, and Laws**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Civ.11.K-2.</b> Explain how people can work together to make decisions in the classroom.	<b>D2.Civ.11.3-5.</b> Compare procedures for making decisions in a variety of settings, including classroom, school, government, and/or society.	<b>D2.Civ.11.6-8.</b> Differentiate among procedures for making decisions in the classroom, school, civil society, and local, state, and national government in terms of how civic purposes are intended.	<b>D2.Civ.11.9-12.</b> Evaluate multiple procedures for making governmental decisions at the local, state, national, and international levels in terms of the civic purposes achieved.
<b>D2.Civ.12.K-2.</b> Identify and explain how rules function in public (classroom and school) settings.	<b>D2.Civ.12.3-5.</b> Explain how rules and laws change society and how people change rules and laws.	<b>D2.Civ.12.6-8.</b> Assess specific rules and laws (both actual and proposed) as means of addressing public problems.	<b>D2.Civ.12.9-12.</b> Analyze how people use and challenge local, state, national, and international laws to address a variety of public issues.
<i>Begins in grades 3–5</i>	<b>D2.Civ.13.3-5.</b> Explain how policies are developed to address public problems.	<b>D2.Civ.13.6-8.</b> Analyze the purposes, implementation, and consequences of public policies in multiple settings.	<b>D2.Civ.13.9-12.</b> Evaluate public policies in terms of intended and unintended outcomes, and related consequences.



**TABLE 12: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Economic Decision Making**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Eco.1.K-2.</b> Explain how scarcity necessitates decision making.	<b>D2.Eco.1.3-5.</b> Compare the benefits and costs of individual choices.	<b>D2.Eco.1.6-8.</b> Explain how economic decisions affect the well-being of individuals, businesses, and society.	<b>D2.Eco.1.9-12.</b> Analyze how incentives influence choices that may result in policies with a range of costs and benefits for different groups.
<b>D2.Eco.2.K-2.</b> Identify the benefits and costs of making various personal decisions.	<b>D2.Eco.2.3-5.</b> Identify positive and negative incentives that influence the decisions people make.	<b>D2.Eco.2.6-8.</b> Evaluate alternative approaches or solutions to current economic issues in terms of benefits and costs for different groups and society as a whole.	<b>D2.Eco.2.9-12.</b> Use marginal benefits and marginal costs to construct an argument for or against an approach or solution to an economic issue.

**TABLE 13: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Exchange and Markets**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Eco.3.K-2.</b> Describe the skills and knowledge required to produce certain goods and services.	<b>D2.Eco.3.3-5.</b> Identify examples of the variety of resources (human capital, physical capital, and natural resources) that are used to produce goods and services.	<b>D2.Eco.3.6-8.</b> Explain the roles of buyers and sellers in product, labor, and financial markets.	<b>D2.Eco.3.9-12.</b> Analyze the ways in which incentives influence what is produced and distributed in a market system.
<b>D2.Eco.4.K-2.</b> Describe the goods and services that people in the local community produce and those that are produced in other communities.	<b>D2.Eco.4.3-5.</b> Explain why individuals and businesses specialize and trade.	<b>D2.Eco.4.6-8.</b> Describe the role of competition in the determination of prices and wages in a market economy.	<b>D2.Eco.4.9-12.</b> Evaluate the extent to which competition among sellers and among buyers exists in specific markets.
<b>D2.Eco.5.K-2.</b> Identify prices of products in a local market.	<b>D2.Eco.5.3-5.</b> Explain the role of money in making exchange easier.	<b>D2.Eco.5.6-8.</b> Explain ways in which money facilitates exchange by reducing transactional costs.	<b>D2.Eco.5.9-12.</b> Describe the consequences of competition in specific markets.
<b>D2.Eco.6.K-2.</b> Explain how people earn income.	<b>D2.Eco.6.3-5.</b> Explain the relationship between investment in human capital, productivity, and future incomes.	<b>D2.Eco.6.6-8.</b> Explain how changes in supply and demand cause changes in prices and quantities of goods and services, labor, credit, and foreign currencies.	<b>D2.Eco.6.9-12.</b> Generate possible explanations for a government role in markets when market inefficiencies exist.
<b>D2.Eco.7.K-2.</b> Describe examples of costs of production.	<b>D2.Eco.7.3-5.</b> Explain how profits influence sellers in markets.	<b>D2.Eco.7.6-8.</b> Analyze the role of innovation and entrepreneurship in a market economy.	<b>D2.Eco.7.9-12.</b> Use benefits and costs to evaluate the effectiveness of government policies to improve market outcomes.



**TABLE 14: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, The National Economy**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<p><b>D2.Eco.10.K-2.</b> Explain why people save.</p> <p><i>Begins in grades 3–5</i></p>	<p><b>D2.Eco.10.3-5.</b> Explain what interest rates are.</p> <p><b>D2.Eco.11.3-5.</b> Explain the meaning of inflation, deflation, and unemployment.</p>	<p><b>D2.Eco.10.6-8.</b> Explain the influence of changes in interest rates on borrowing and investing.</p> <p><b>D2.Eco.11.6-8.</b> Use appropriate data to evaluate the state of employment, unemployment, inflation, total production, income, and economic growth in the economy.</p>	<p><b>D2.Eco.10.9-12.</b> Use current data to explain the influence of changes in spending, production, and the money supply on various economic conditions.</p> <p><b>D2.Eco.11.9-12.</b> Use economic indicators to analyze the current and future state of the economy.</p>
<p><b>D2.Eco.12.K-2.</b> Describe examples of the goods and services that governments provide.</p>	<p><b>D2.Eco.12.3-5.</b> Explain the ways in which the government pays for the goods and services it provides.</p>	<p><b>D2.Eco.12.6-8.</b> Explain how inflation, deflation, and unemployment affect different groups.</p>	<p><b>D2.Eco.12.9-12.</b> Evaluate the selection of monetary and fiscal policies in a variety of economic conditions.</p>
<p><b>D2.Eco.13.K-2.</b> Describe examples of capital goods and human capital.</p>	<p><b>D2.Eco.13.3-5.</b> Describe ways people can increase productivity by using improved capital goods and improving their human capital.</p>	<p><b>D2.Eco.13.6-8.</b> Explain why standards of living increase as productivity improves.</p>	<p><b>D2.Eco.13.9-12.</b> Explain why advancements in technology and investments in capital goods and human capital increase economic growth and standards of living.</p>

**TABLE 15: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, The Global Economy**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<p><b>D2.Eco.14.K-2.</b> Describe why people in one country trade goods and services with people in other countries.</p>	<p><b>D2.Eco.14.3-5.</b> Explain how trade leads to increasing economic interdependence among nations.</p>	<p><b>D2.Eco.14.6-8.</b> Explain barriers to trade and how those barriers influence trade among nations.</p>	<p><b>D2.Eco.14.9-12.</b> Analyze the role of comparative advantage in international trade of goods and services.</p>
<p><b>D2.Eco.15.K-2.</b> Describe products that are produced abroad and sold domestically and products that are produced domestically and sold abroad.</p>	<p><b>D2.Eco.15.3-5.</b> Explain the effects of increasing economic interdependence on different groups within participating nations.</p>	<p><b>D2.Eco.15.6-8.</b> Explain the benefits and the costs of trade policies to individuals, businesses, and society.</p>	<p><b>D2.Eco.15.9-12.</b> Explain how current globalization trends and policies affect economic growth, labor markets, rights of citizens, the environment, and resource and income distribution in different nations.</p>



**TABLE 16: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Geographic Representations**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Geo.1.K-2.</b> Construct maps, graphs, and other representations of familiar places.	<b>D2.Geo.1.3-5.</b> Construct maps and other graphic representations of both familiar and unfamiliar places.	<b>D2.Geo.1.6-8.</b> Construct maps to represent and explain the spatial patterns of cultural and environmental characteristics.	<b>D2.Geo.1.9-12.</b> Use geospatial and related technologies to create maps to display and explain the spatial patterns of cultural and environmental characteristics.
<b>D2.Geo.2.K-2.</b> Use maps, graphs, photographs, and other representations to describe places and the relationships and interactions that shape them.	<b>D2.Geo.2.3-5.</b> Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions and their environmental characteristics.	<b>D2.Geo.2.6-8.</b> Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions, and changes in their environmental characteristics.	<b>D2.Geo.2.9-12.</b> Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions and their political, cultural, and economic dynamics.
<b>D2.Geo.3.K-2.</b> Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places.	<b>D2.Geo.3.3-5.</b> Use maps of different scales to describe the locations of cultural and environmental characteristics.	<b>D2.Geo.3.6-8.</b> Use paper-based and electronic mapping and graphing techniques to represent and analyze spatial patterns of different environmental and cultural characteristics.	<b>D2.Geo.3.9-12.</b> Use geographic data to analyze variations in the spatial patterns of cultural and environmental characteristics at multiple scales.

**TABLE 17: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Human-Environment Interaction**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Geo.4.K-2.</b> Explain how weather, climate, and other environmental characteristics affect people's lives in a place or region.	<b>D2.Geo.4.3-5.</b> Explain how culture influences the way people modify and adapt to their environments.	<b>D2.Geo.4.6-8.</b> Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places.	<b>D2.Geo.4.9-12.</b> Analyze relationships and interactions within and between human and physical systems to explain reciprocal influences that occur among them.
<b>D2.Geo.5.K-2.</b> Describe how human activities affect the cultural and environmental characteristics of places or regions.	<b>D2.Geo.5.3-5.</b> Explain how the cultural and environmental characteristics of places change over time.	<b>D2.Geo.5.6-8.</b> Analyze the combinations of cultural and environmental characteristics that make places both similar to and different from other places.	<b>D2.Geo.5.9-12.</b> Evaluate how political and economic decisions throughout time have influenced cultural and environmental characteristics of various places and regions.
<b>D2.Geo.6.K-2.</b> Identify some cultural and environmental characteristics of specific places.	<b>D2.Geo.6.3-5.</b> Describe how environmental and cultural characteristics influence population distribution in specific places or regions.	<b>D2.Geo.6.6-8.</b> Explain how the physical and human characteristics of places and regions are connected to human identities and cultures.	<b>D2.Geo.6.9-12.</b> Evaluate the impact of human settlement activities on the environmental and cultural characteristics of specific places and regions.



**TABLE 18: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 2, Human Population: Spatial Patterns and Movements**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Geo.7.K-2.</b> Explain why and how people, goods, and ideas move from place to place.	<b>D2.Geo.7.3-5.</b> Explain how cultural and environmental characteristics affect the distribution and movement of people, goods, and ideas.	<b>D2.Geo.7.6-8.</b> Explain how changes in transportation and communication technology influence the spatial connections among human settlements and affect the diffusion of ideas and cultural practices.	<b>D2.Geo.7.9-12.</b> Analyze the reciprocal nature of how historical events and the spatial diffusion of ideas, technologies, and cultural practices have influenced migration patterns and the distribution of human population.
<b>D2.Geo.8.K-2.</b> Compare how people in different types of communities use local and distant environments to meet their daily needs.	<b>D2.Geo.8.3-5.</b> Explain how human settlements and movements relate to the locations and use of various natural resources.	<b>D2.Geo.8.6-8.</b> Analyze how relationships between humans and environments extend or contract spatial patterns of settlement and movement.	<b>D2.Geo.8.9-12.</b> Evaluate the impact of economic activities and political decisions on spatial patterns within and among urban, suburban, and rural regions.
<b>D2.Geo.9.K-2.</b> Describe the connections between the physical environment of a place and the economic activities found there.	<b>D2.Geo.9.3-5.</b> Analyze the effects of catastrophic environmental and technological events on human settlements and migration.	<b>D2.Geo.9.6-8.</b> Evaluate the influences of long-term human-induced environmental change on spatial patterns of conflict and cooperation.	<b>D2.Geo.9.9-12.</b> Evaluate the influence of long-term climate variability on human migration and settlement patterns, resource use, and land uses at local-to-global scales.

**TABLE 19: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 2, Global Interconnections**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.Geo.10.K-2.</b> Describe changes in the physical and cultural characteristics of various world regions.	<b>D2.Geo.10.3-5.</b> Explain why environmental characteristics vary among different world regions.	<b>D2.Geo.10.6-8.</b> Analyze the ways in which cultural and environmental characteristics vary among various regions of the world.	<b>D2.Geo.10.9-12.</b> Evaluate how changes in the environmental and cultural characteristics of a place or region influence spatial patterns of trade and land use.
<b>D2.Geo.11.K-2.</b> Explain how the consumption of products connects people to distant places.	<b>D2.Geo.11.3-5.</b> Describe how the spatial patterns of economic activities in a place change over time because of interactions with nearby and distant places.	<b>D2.Geo.11.6-8.</b> Explain how the relationship between the environmental characteristics of places and production of goods influences the spatial patterns of world trade.	<b>D2.Geo.11.9-12.</b> Evaluate how economic globalization and the expanding use of scarce resources contribute to conflict and cooperation within and among countries.
<b>D2.Geo.12.K-2.</b> Identify ways that a catastrophic disaster may affect people living in a place.	<b>D2.Geo.12.3-5.</b> Explain how natural and human-made catastrophic events in one place affect people living in other places.	<b>D2.Geo.12.6-8.</b> Explain how global changes in population distribution patterns affect changes in land use in particular places.	<b>D2.Geo.12.9-12.</b> Evaluate the consequences of human-made and natural catastrophes on global trade, politics, and human migration.



**Table 20: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Change, Continuity, and Context**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.His.1.K-2.</b> Create a chronological sequence of multiple events.	<b>D2.His.1.3-5.</b> Create and use a chronological sequence of related events to compare developments that happened at the same time.	<b>D2.His.1.6-8.</b> Analyze connections among events and developments in broader historical contexts.	<b>D2.His.1.9-12.</b> Evaluate how historical events and developments were shaped by unique circumstances of time and place as well as broader historical contexts.
<b>D2.His.2.K-2.</b> Compare life in the past to life today.	<b>D2.His.2.3-5.</b> Compare life in specific historical time periods to life today.	<b>D2.His.2.6-8.</b> Classify series of historical events and developments as examples of change and/or continuity.	<b>D2.His.2.9-12.</b> Analyze change and continuity in historical eras.
<b>D2.His.3.K-2.</b> Generate questions about individuals and groups who have shaped a significant historical change.	<b>D2.His.3.3-5.</b> Generate questions about individuals and groups who have shaped significant historical changes and continuities.	<b>D2.His.3.6-8.</b> Use questions generated about individuals and groups to analyze why they, and the developments they shaped, are seen as historically significant.	<b>D2.His.3.9-12.</b> Use questions generated about individuals and groups to assess how the significance of their actions changes over time and is shaped by the historical context.

**TABLE 21: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Perspectives**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.His.4.K-2.</b> Compare perspectives of people in the past to those of people in the present.	<b>D2.His.4.3-5.</b> Explain why individuals and groups during the same historical period differed in their perspectives.	<b>D2.His.4.6-8.</b> Analyze multiple factors that influenced the perspectives of people during different historical eras.	<b>D2.His.4.9-12.</b> Analyze complex and interacting factors that influenced the perspectives of people during different historical eras.
<i>Begins in grades 3–5</i>	<b>D2.His.5.3-5.</b> Explain connections among historical contexts and people's perspectives at the time.	<b>D2.His.5.6-8.</b> Explain how and why perspectives of people have changed over time.	<b>D2.His.5.9-12.</b> Analyze how historical contexts shaped and continue to shape people's perspectives.
<b>D2.His.6.K-2.</b> Compare different accounts of the same historical event.	<b>D2.His.6.3-5.</b> Describe how people's perspectives shaped the historical sources they created.	<b>D2.His.6.6-8.</b> Analyze how people's perspectives influenced what information is available in the historical sources they created.	<b>D2.His.6.9-12.</b> Analyze the ways in which the perspectives of those writing history shaped the history that they produced.
<i>Begins in grades 9–12</i>	<i>Begins in grades 9–12</i>	<i>Begins in grades 9–12</i>	<b>D2.His.7.9-12.</b> Explain how the perspectives of people in the present shape interpretations of the past.



**TABLE 22: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 2, Historical Sources and Evidence**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.His.9.K-2.</b> Identify different kinds of historical sources.	<b>D2.His.9.3-5.</b> Summarize how different kinds of historical sources are used to explain events in the past.	<b>D2.His.9.6-8.</b> Classify the kinds of historical sources used in a secondary interpretation.	<b>D2.His.9.9-12.</b> Analyze the relationship between historical sources and the secondary interpretations made from them.
<b>D2.His.10.K-2.</b> Explain how historical sources can be used to study the past.	<b>D2.His.10.3-5.</b> Compare information provided by different historical sources about the past.	<b>D2.His.10.6-8.</b> Detect possible limitations in the historical record based on evidence collected from different kinds of historical sources.	<b>D2.His.10.9-12.</b> Detect possible limitations in various kinds of historical evidence and differing secondary interpretations.
<b>D2.His.11.K-2.</b> Identify the maker, date, and place of origin for a historical source from information within the source itself.	<b>D2.His.11.3-5.</b> Infer the intended audience and purpose of a historical source from information within the source itself.	<b>D2.His.11.6-8.</b> Use other historical sources to infer a plausible maker, date, place of origin, and intended audience for historical sources where this information is not easily identified.	<b>D2.His.11.9-12.</b> Critique the usefulness of historical sources for a specific historical inquiry based on their maker, date, place of origin, intended audience, and purpose.
<b>D2.His.12.K-2.</b> Generate questions about a particular historical source as it relates to a particular historical event or development.	<b>D2.His.12.3-5.</b> Generate questions about multiple historical sources and their relationships to particular historical events and developments.	<b>D2.His.12.6-8.</b> Use questions generated about multiple historical sources to identify further areas of inquiry and additional sources.	<b>D2.His.12.9-12.</b> Use questions generated about multiple historical sources to pursue further inquiry and investigate additional sources.
<i>Begins at grade 3–5</i>	<b>D2.His.13.3-5.</b> Use information about a historical source, including the maker, date, place of origin, intended audience, and purpose to judge the extent to which the source is useful for studying a particular topic.	<b>D2.His.13.6-8.</b> Evaluate the relevancy and utility of a historical source based on information such as maker, date, place of origin, intended audience, and purpose.	<b>D2.His.13.9-12.</b> Critique the appropriateness of the historical sources used in a secondary interpretation.



**TABLE 23: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 2, Causation and Argumentation**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D2.His.14.K-2.</b> Generate possible reasons for an event or development in the past.  <i>Begins in grades 6–8</i>	<b>D2.His.14.3-5.</b> Explain probable causes and effects of events and developments.  <i>Begins in grades 6–8</i>	<b>D2.His.14.6-8.</b> Explain multiple causes and effects of events and developments in the past.  <b>D2.His.15.6-8.</b> Evaluate the relative influence of various causes of events and developments in the past.	<b>D2.His.14.9-12.</b> Analyze multiple and complex causes and effects of events in the past.  <b>D2.His.15.9-12.</b> Distinguish between long-term causes and triggering events in developing a historical argument.
<b>D2.His.16.K-2.</b> Select which reasons might be more likely than others to explain a historical event or development.  <i>Begins in grades 3–5</i>	<b>D2.His.16.3-5.</b> Use evidence to develop a claim about the past.  <b>D2.His.17.3-5.</b> Summarize the central claim in a secondary work of history.	<b>D2.His.16.6-8.</b> Organize applicable evidence into a coherent argument about the past.  <b>D2.His.17.6-8.</b> Compare the central arguments in secondary works of history on related topics in multiple media.	<b>D2.His.16.9-12.</b> Integrate evidence from multiple relevant historical sources and interpretations into a reasoned argument about the past.  <b>D2.His.17.9-12.</b> Critique the central arguments in secondary works of history on related topics in multiple media in terms of their historical accuracy.

**TABLE 24: Connections between Dimension 2 and the CCR Anchor Standards in the ELA/Literacy Common Core Standards**

ELA/LITERACY CCR ANCHOR STANDARDS CONNECTIONS	Civics	
	Economics	Anchor Reading Standards 1–10 Anchor Writing Standard 7
	Geography	Anchor Speaking and Listening Standard 1 Anchor Language Standard 6
	History	
SHARED LANGUAGE		Analysis; Argument; Evidence; Questioning



**TABLE 25: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 3, Gathering and Evaluating Sources**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D3.1.K-2.</b> Gather relevant information from one or two sources while using the origin and structure to guide the selection.	<b>D3.1.3-5.</b> Gather relevant information from multiple sources while using the origin, structure, and context to guide the selection.	<b>D3.1.6-8.</b> Gather relevant information from multiple sources while using the origin, authority, structure, context, and corroborative value of the sources to guide the selection.	<b>D3.1.9-12.</b> Gather relevant information from multiple sources representing a wide range of views while using the origin, authority, structure, context, and corroborative value of the sources to guide the selection.
<b>D3.2.K-2.</b> Evaluate a source by distinguishing between fact and opinion.	<b>D3.2.3-5.</b> Use distinctions among fact and opinion to determine the credibility of multiple sources.	<b>D3.2.6-8.</b> Evaluate the credibility of a source by determining its relevance and intended use.	<b>D3.2.9-12.</b> Evaluate the credibility of a source by examining how experts value the source.

**TABLE 26: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 3, Developing Claims and Using Evidence**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<i>Begins in grades 3–5</i>	<b>D3.3.3-5.</b> Identify evidence that draws information from multiple sources in response to compelling questions.	<b>D3.3.6-8.</b> Identify evidence that draws information from multiple sources to support claims, noting evidentiary limitations.	<b>D3.3.9-12.</b> Identify evidence that draws information directly and substantively from multiple sources to detect inconsistencies in evidence in order to revise or strengthen claims.
<i>Begins in grades 3–5</i>	<b>D3.4.3-5.</b> Use evidence to develop claims in response to compelling questions.	<b>D3.4.6-8.</b> Develop claims and counterclaims while pointing out the strengths and limitations of both.	<b>D3.4.9-12.</b> Refine claims and counterclaims attending to precision, significance, and knowledge conveyed through the claim while pointing out the strengths and limitations of both.

**TABLE 27: Connections with Common Core ELA Literacy Standards**  
**Dimension 3, Developing Claims and Using Evidence**

ELA/LITERACY CCR ANCHOR STANDARDS CONNECTIONS	Gathering and Evaluating Sources	Reading 1–10 Writing 1, 2, 7–10 Speaking and Listening 1
	Developing Claims and Using Evidence	
SHARED LANGUAGE		Argument; Sources; Evidence; Claims, Counterclaims; Gather



**TABLE 28: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 4, Communicating Conclusions**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS USE WRITING, VISUALIZING, AND SPEAKING TO...			
<b>D4.1.K-2.</b> Construct an argument with reasons.	<b>D4.1.3-5.</b> Construct arguments using claims and evidence from multiple sources.	<b>D4.1.6-8.</b> Construct arguments using claims and evidence from multiple sources, while acknowledging the strengths and limitations of the arguments.	<b>D4.1.9-12.</b> Construct arguments using precise and knowledgeable claims, with evidence from multiple sources, while acknowledging counterclaims and evidentiary weaknesses.
<b>D4.2.K-2.</b> Construct explanations using correct sequence and relevant information.	<b>D4.2.3-5.</b> Construct explanations using reasoning, correct sequence, examples, and details with relevant information and data.	<b>D4.2.6-8.</b> Construct explanations using reasoning, correct sequence, examples, and details with relevant information and data, while acknowledging the strengths and weaknesses of the explanations.	<b>D4.2.9-12.</b> Construct explanations using sound reasoning, correct sequence (linear or non-linear), examples, and details with significant and pertinent information and data, while acknowledging the strengths and weaknesses of the explanation given its purpose (e.g., cause and effect, chronological, procedural, technical).
<b>D4.3.K-2.</b> Present a summary of an argument using print, oral, and digital technologies.	<b>D4.3.3-5.</b> Present a summary of arguments and explanations to others outside the classroom using print and oral technologies (e.g., posters, essays, letters, debates, speeches, and reports) and digital technologies (e.g., Internet, social media, and digital documentary).	<b>D4.3.6-8.</b> Present adaptations of arguments and explanations on topics of interest to others to reach audiences and venues outside the classroom using print and oral technologies (e.g., posters, essays, letters, debates, speeches, reports, and maps) and digital technologies (e.g., Internet, social media, and digital documentary).	<b>D4.3.9-12.</b> Present adaptations of arguments and explanations that feature evocative ideas and perspectives on issues and topics to reach a range of audiences and venues outside the classroom using print and oral technologies (e.g., posters, essays, letters, debates, speeches, reports, and maps) and digital technologies (e.g., Internet, social media, and digital documentary).

**TABLE 29: Suggested K-12 Pathway for College, Career, and Civic Readiness**  
**Dimension 4, Critiquing Conclusions**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D4.4.K-2.</b> Ask and answer questions about arguments.	<b>D4.4.3-5.</b> Critique arguments.	<b>D4.4.6-8.</b> Critique arguments for credibility.	<b>D4.4.9-12.</b> Critique the use of claims and evidence in arguments for credibility.
<b>D4.5.K-2.</b> Ask and answer questions about explanations.	<b>D4.5.3-5.</b> Critique explanations.	<b>D4.5.6-8.</b> Critique the structure of explanations.	<b>D4.5.9-12.</b> Critique the use of the reasoning, sequencing, and supporting details of explanations.



**TABLE 30: Suggested K-12 Pathway for College, Career, and Civic Readiness  
Dimension 4, Taking Informed Action**

BY THE END OF GRADE 2	BY THE END OF GRADE 5	BY THE END OF GRADE 8	BY THE END OF GRADE 12
INDIVIDUALLY AND WITH OTHERS, STUDENTS...			
<b>D4.6.K-2.</b> Identify and explain a range of local, regional, and global problems, and some ways in which people are trying to address these problems.	<b>D4.6.3-5.</b> Draw on disciplinary concepts to explain the challenges people have faced and opportunities they have created, in addressing local, regional, and global problems at various times and places.	<b>D4.6.6-8.</b> Draw on multiple disciplinary lenses to analyze how a specific problem can manifest itself at local, regional, and global levels over time, identifying its characteristics and causes, and the challenges and opportunities faced by those trying to address the problem.	<b>D4.6.9-12.</b> Use disciplinary and interdisciplinary lenses to understand the characteristics and causes of local, regional, and global problems; instances of such problems in multiple contexts; and challenges and opportunities faced by those trying to address these problems over time and place.
<b>D4.7.K-2.</b> Identify ways to take action to help address local, regional, and global problems.	<b>D4.7.3-5.</b> Explain different strategies and approaches students and others could take in working alone and together to address local, regional, and global problems, and predict possible results of their actions.	<b>D4.7.6-8.</b> Assess their individual and collective capacities to take action to address local, regional, and global problems, taking into account a range of possible levers of power, strategies, and potential outcomes.	<b>D4.7.9-12.</b> Assess options for individual and collective action to address local, regional, and global problems by engaging in self-reflection, strategy identification, and complex causal reasoning.
<b>D4.8.K-2.</b> Use listening, consensus-building, and voting procedures to decide on and take action in their classrooms.	<b>D4.8.3-5.</b> Use a range of deliberative and democratic procedures to make decisions about and act on civic problems in their classrooms and schools.	<b>D4.8.6-8.</b> Apply a range of deliberative and democratic procedures to make decisions and take action in their classrooms and schools, and in out-of-school civic contexts.	<b>D4.8.9-12.</b> Apply a range of deliberative and democratic strategies and procedures to make decisions and take action in their classrooms, schools, and out-of-school civic contexts.

**TABLE 31: Connections between Dimension 4 and the CCR Anchor Standards in the ELA/Literacy Common Core Standards**

ELA/LITERACY CCR ANCHOR STANDARDS CONNECTIONS	Communicating Conclusions	Reading 1 Writing 1–8 Speaking and Listening 1–6
	Taking Informed Action	Argument; Explanation; Sources; Evidence; Claims; Counterclaims; Visually/Visualize; Credibility.
SHARED LANGUAGE		







# CCSS Mathematics

## Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council’s report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy).

### **1. Make sense of problems and persevere in solving them.**

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.



## **2. Reason abstractly and quantitatively.**

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

## **3. Construct viable arguments and critique the reasoning of others.**

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.



#### **4. Model with mathematics.**

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

#### **5. Use appropriate tools strategically.**

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.



## **6. Attend to precision.**

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definition.

## **7. Look for and make use of structure.**

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see  $7 \times 8$  equals the well remembered  $7 \times 5 + 7 \times 3$ , in preparation for learning about the distributive property. In the expression  $x^2 + 9x + 14$ , older students can see the 14 as  $2 \times 7$  and the 9 as  $2 + 7$ . They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see  $5 - 3(x - y)^2$  as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers  $x$  and  $y$ .

## **8. Look for and express regularity in repeated reasoning.**

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle



school students might abstract the equation  $(y - 2)/(x - 1) = 3$ . Noticing the regularity in the way terms cancel when expanding  $(x - 1)(x + 1)$ ,  $(x - 1)(x^2 + x + 1)$ , and  $(x - 1)(x^3 + x^2 + x + 1)$  might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

## **Connecting the Standards for Mathematical Practice**

### **to the Standards for Mathematical Content**

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years.

Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.

The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices.



## Grade K Overview

### Counting and Cardinality

- Know number names and the count sequence.
- Count to tell the number of objects.
- Compare numbers.

### Operations and algebraic thinking

- Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

### Number and operations in Base ten

- Work with numbers 11–19 to gain foundations for place value.

### Measurement and data

- Describe and compare measurable attributes.
- Classify objects and count the number of objects in categories.

### Geometry

- Identify and describe shapes.
- analyze, compare, create, and compose shapes.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



**Know number names and the count sequence.**

1. Count to 100 by ones and by tens.
2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

**Count to tell the number of objects.**

4. Understand the relationship between numbers and quantities; connect counting to cardinality.
  - a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
  - b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
  - c. Understand that each successive number name refers to a quantity that is one larger.
5. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

**Compare numbers.**

6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.<sup>1</sup>
7. Compare two numbers between 1 and 10 presented as written numerals.

**Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.**

1. Represent addition and subtraction with objects, fingers, mental images, drawings<sup>2</sup>, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g.,  $5 = 2 + 3$  and  $5 = 4 + 1$ ).



4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
5. Fluently add and subtract within 5.

## Number and Operations in Base Ten

K.nBt

**Work with numbers 11–19 to gain foundations for place value.**

1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g.,  $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

## Measurement and Data

K.md

**Describe and compare measurable attributes.**

1. Describe measurable attributes of objects, such as length or weight.
2. Describe several measurable attributes of a single object.
3. Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

**Classify objects and count the number of objects in each category.**

4. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

## Geometry

K.G

**Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).**

1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.
2. Correctly name shapes regardless of their orientations or overall size.
3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

**Analyze, compare, create, and compose shapes.**

4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).
5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.



## Grade 1 Overview

### Operations and Algebraic thinking

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and subtract within 20.
- Work with addition and subtraction equations.

### Number and Operations in Base ten

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

### Measurement and Data

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

### Geometry

- Reason with shapes and their attributes.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



**Represent and solve problems involving addition and subtraction.**

1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.<sup>2</sup>
2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

**Understand and apply properties of operations and the relationship between addition and subtraction.**

3. Apply properties of operations as strategies to add and subtract.<sup>3</sup> *Examples: If  $8 + 3 = 11$  is known, then  $3 + 8 = 11$  is also known. (Commutative property of addition.) To add  $2 + 6 + 4$ , the second two numbers can be added to make a ten, so  $2 + 6 + 4 = 2 + 10 = 12$ . (Associative property of addition.)*
4. Understand subtraction as an unknown-addend problem. *For example, subtract  $10 - 8$  by finding the number that makes 10 when added to 8.*

**Add and subtract within 20.**

5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ ).



## Work with addition and subtraction equations.

- Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false?  $6 = 6$ ,  $7 = 8 - 1$ ,  $5 + 2 = 2 + 5$ ,  $4 + 1 = 5 + 2$ .*
- Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations  $8 + ? = 11$ ,  $5 = \square - 3$ ,  $6 + 6 = \square$ .*

## Number and Operations in Base Ten

1.nBt

### Extend the counting sequence.

- Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

### Understand place value.

- Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
  - 10 can be thought of as a bundle of ten ones — called a “ten.”
  - The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
  - The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
- Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$ .

### Use place value understanding and properties of operations to add and subtract.

- Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-



digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

## Measurement and Data

1.md

### Measure lengths indirectly and by iterating length units.

1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

### Tell and write time.

3. Tell and write time in hours and half-hours using analog and digital clocks.

### Represent and interpret data.

4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

## Geometry

1.G

### Reason with shapes and their attributes.

1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw



shapes to possess defining attributes.

2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.<sup>4</sup>
3. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.



## Grade 2 Overview

### Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Add and subtract within 20.
- Work with equal groups of objects to gain foundations for multiplication.

### Number and Operations in Base ten

- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

### Measurement and Data

- Measure and estimate lengths in standard units.
- Relate addition and subtraction to length.
- Work with time and money.
- Represent and interpret data.

### Geometry

- Reason with shapes and their attributes.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



**Represent and solve problems involving addition and subtraction.**

1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.<sup>1</sup>

**Add and subtract within 20.**

2. Fluently add and subtract within 20 using mental strategies.<sup>2</sup> By end of Grade 2, know from memory all sums of two one-digit numbers.

**Work with equal groups of objects to gain foundations for multiplication.**

3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

**Understand place value.**

1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
  - a. 100 can be thought of as a bundle of ten tens — called a “hundred.”
  - b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
2. Count within 1000; skip-count by 5s, 10s, and 100s.
3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.



4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.

**Use place value understanding and properties of operations to add and subtract.**

5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
6. Add up to four two-digit numbers using strategies based on place value and properties of operations.
7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
9. Explain why addition and subtraction strategies work, using place value and the properties of operations.

**Measurement and Data**

2.md

**Measure and estimate lengths in standard units.**

1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
3. Estimate lengths using units of inches, feet, centimeters, and meters.
4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

**Relate addition and subtraction to length.**



5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

### **Work with time and money.**

7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*

### **Represent and interpret data.**

9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems<sup>4</sup> using information presented in a bar graph.

## **Geometry**

## **2.G**

### **Reason with shapes and their attributes.**

1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.<sup>5</sup> Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.



3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.



## Grade 3 Overview

### Operations and Algebraic Thinking

- represent and solve problems involving multiplication and division.
- Understand properties of multiplication and the relationship between multiplication and division.
- multiply and divide within 100.
- Solve problems involving the four operations, and identify and explain patterns in arithmetic.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

### Number and Operations in Base ten

- Use place value understanding and properties of operations to perform multi-digit arithmetic.

### Number and Operations—fractions

- develop understanding of fractions as numbers.

### Measurement and Data

- Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
- represent and interpret data.
- Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
- Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.



**Represent and solve problems involving multiplication and division.**

1. Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .*
2. Interpret whole-number quotients of whole numbers, e.g., interpret  $56 \div 8$  as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as  $56 \div 8$ .*
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.<sup>1</sup>
4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = \square \div 3$ ,  $6 \times 6 = ?$ .*

**Understand properties of multiplication and the relationship between multiplication and division.**

5. Apply properties of operations as strategies to multiply and divide.<sup>2</sup> *Examples: If  $6 \times 4 = 24$  is known, then  $4 \times 6 = 24$  is also known. (Commutative property of multiplication.)  $3 \times 5 \times 2$  can be found by  $3 \times 5 = 15$ , then  $15 \times 2 = 30$ , or by  $5 \times 2 = 10$ , then  $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that  $8 \times 5 = 40$  and  $8 \times 2 = 16$ , one can find  $8 \times 7$  as  $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.)*
6. Understand division as an unknown-factor problem. *For example, find  $32 \div 8$  by finding the number that makes 32 when multiplied by 8.*

**Multiply and divide within 100.**

7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8



$\times 5 = 40$ , one knows  $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

**Solve problems involving the four operations, and identify and explain patterns in arithmetic.**

8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.<sup>3</sup>
9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

**Number and Operations in Base Ten**

**3.NBT**

**Use place value understanding and properties of operations to perform multi-digit arithmetic.<sup>4</sup>**

1. Use place value understanding to round whole numbers to the nearest 10 or 100.
2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g.,  $9 \times 80$ ,  $5 \times 60$ ) using strategies based on place value and properties of operations.

**Number and Operations—Fractions<sup>5</sup>**

**3.NF**

**Develop understanding of fractions as numbers.**

1. Understand a fraction  $1/b$  as the quantity formed by 1 part when a whole is partitioned into  $b$  equal parts; understand a fraction  $a/b$  as the quantity formed by  $a$  parts of size  $1/b$ .
2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.



- a. Represent a fraction  $1/b$  on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into  $b$  equal parts. Recognize that each part has size  $1/b$  and that the endpoint of the part based at 0 locates the number  $1/b$  on the number line.
  - b. Represent a fraction  $a/b$  on a number line diagram by marking off  $a$  lengths  $1/b$  from 1. Recognize that the resulting interval has size  $a/b$  and that its endpoint locates the number  $a/b$  on the number line.
3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
- a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
  - b. Recognize and generate simple equivalent fractions, e.g.,  $1/2 = 2/4$ ,  $4/6 = 2/3$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.
  - c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form  $3 = 3/1$ ; recognize that  $6/1 = 6$ ; locate  $4/4$  and 1 at the same point of a number line diagram.*
  - d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

## Measurement and Data

## 3.MD

### **Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.**

2. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.



2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).<sup>6</sup> Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.<sup>7</sup>

**Represent and interpret data.**

3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*
4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

**Geometric measurement: understand concepts of area and relate area to multiplication and to addition.**

5. Recognize area as an attribute of plane figures and understand concepts of area measurement.
  - a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
  - b. A plane figure which can be covered without gaps or overlaps by  $n$  unit squares is said to have an area of  $n$  square units.
6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
7. Relate area to the operations of multiplication and addition.
  - a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.



- b. Multiply side lengths to find areas of rectangles with whole- number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
- c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths  $a$  and  $b + c$  is the sum of  $a \times b$  and  $a \times c$ . Use area models to represent the distributive property in mathematical reasoning.
- d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

**Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.**

- 8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

## Geometry

3.G

**Reason with shapes and their attributes.**

- 1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
- 2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as  $1/4$  of the area of the shape.*



## Grade 4 Overview

### Operations and Algebraic Thinking

- Use the four operations with whole numbers to solve problems.
- Gain familiarity with factors and multiples.
- Generate and analyze patterns.

### Number and Operations in Base Ten

- Generalize place value understanding for multi-digit whole numbers.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.

### Number and Operations—Fractions

- Extend understanding of fraction equivalence and ordering.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- Understand decimal notation for fractions, and compare decimal fractions.

### Measurement and Data

- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Geometric measurement: understand concepts of angle and measure angles.

### Geometry

- draw and identify lines and angles, and classify shapes by properties of their lines and angles.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



**Use the four operations with whole numbers to solve problems.**

1. Interpret a multiplication equation as a comparison, e.g., interpret  $35 = 5 \times 7$  as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
2. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.<sup>1</sup>
3. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

**Gain familiarity with factors and multiples.**

4. Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

**Generate and analyze patterns.**

5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way*



**Generalize place value understanding for multi-digit whole numbers.**

1. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that  $700 \div 70 = 10$  by applying concepts of place value and division.*
2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.
3. Use place value understanding to round multi-digit whole numbers to any place.

**Use place value understanding and properties of operations to perform multi-digit arithmetic.**

4. Fluently add and subtract multi-digit whole numbers using the standard algorithm.
5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.



6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

### Number and operations—fractions<sup>3</sup> 4.nf

#### **Extend understanding of fraction equivalence and ordering.**

1. Explain why a fraction  $a/b$  is equivalent to a fraction  $(n \times a)/(n \times b)$  by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $1/2$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

#### **Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.**

3. Understand a fraction  $a/b$  with  $a > 1$  as a sum of fractions  $1/b$ .
  - a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
  - b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. *Examples:*  $3/8 = 1/8 + 1/8 + 1/8$ ;  $3/8 = 1/8 + 2/8$ ;  $2\ 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$ .
  - c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations



and the relationship between addition and subtraction.

- d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
  - a. Understand a fraction  $a/b$  as a multiple of  $1/b$ . *For example, use a visual fraction model to represent  $5/4$  as the product  $5 \times (1/4)$ , recording the conclusion by the equation  $5/4 = 5 \times (1/4)$ .*
  - b. Understand a multiple of  $a/b$  as a multiple of  $1/b$ , and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express  $3 \times (2/5)$  as  $6 \times (1/5)$ , recognizing this product as  $6/5$ . (In general,  $n \times (a/b) = (n \times a)/b$ .)*
  - c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example, if each person at a party will eat  $3/8$  of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*

#### **Understand decimal notation for fractions, and compare decimal fractions.**

5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.<sup>4</sup> *For example, express  $3/10$  as  $30/100$ , and add  $3/10 + 4/100 = 34/100$ .*
6. Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite  $0.62$  as  $62/100$ ; describe a length as  $0.62$  meters; locate  $1.62$  on a number line diagram.*
7. Compare two decimals to hundredths by reasoning about their size.



when the two decimals refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual model.

## Measurement and Data

4.md

### Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

1. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...*
2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*

### Represent and interpret data.

4. Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*

### Geometric measurement: understand concepts of angle and measure angles.



5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
  - a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through  $\frac{1}{360}$  of a circle is called a “one-degree angle,” and can be used to measure angles.
  - b. An angle that turns through  $n$  one-degree angles is said to have an angle measure of  $n$  degrees.
6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
7. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

## Geometry

4.G

### **Draw and identify lines and angles, and classify shapes by properties of their lines and angles.**

1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.



## Grade 5 Overview

### Operations and algebraic thinking

- Write and interpret numerical expressions.
- Analyze patterns and relationships.

### Number and Operations in Base ten

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to hundredths.

### Number and Operations—fractions

- Use equivalent fractions as a strategy to add and subtract fractions.
- apply and extend previous understandings of multiplication and division to multiply and divide fractions.

### Measurement and Data

- Convert like measurement units within a given measurement system.
- Represent and interpret data.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

### Geometry

- Graph points on the coordinate plane to solve real-world and mathematical problems.
- Classify two-dimensional figures into categories based on their properties.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



**Write and interpret numerical expressions.**

1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation “add 8 and 7, then multiply by 2” as  $2 \times (8 + 7)$ . Recognize that  $3 \times (18932 + 921)$  is three times as large as  $18932 + 921$ , without having to calculate the indicated sum or product.*

**Analyze patterns and relationships.**

3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*

**Understand the place value system.**

1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $1/10$  of what it represents in the place to its left.
2. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
3. Read, write, and compare decimals to thousandths.



- a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g.,  $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ .
  - b. Compare two decimals to thousandths based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.
4. Use place value understanding to round decimals to any place.

**Perform operations with multi-digit whole numbers and with decimals to hundredths.**

5. Fluently multiply multi-digit whole numbers using the standard algorithm.
6. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
7. Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

**Number and Operations—fractions** **5.nf**

**Use equivalent fractions as a strategy to add and subtract fractions.**

1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example,  $2/3 + 5/4 = 8/12 + 15/12 = 23/12$ . (In general,  $a/b + c/d = (ad + bc)/bd$ .)*
2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction



models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result  $2/5 + 1/2 = 3/7$ , by observing that  $3/7 < 1/2$ .*

**Apply and extend previous understandings of multiplication and division to multiply and divide fractions.**

3. Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret  $3/4$  as the result of dividing 3 by 4, noting that  $3/4$  multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size  $3/4$ . If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*
4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
  - a. Interpret the product  $(a/b) \times q$  as  $a$  parts of a partition of  $q$  into  $b$  equal parts; equivalently, as the result of a sequence of operations  $a \times q \div b$ . *For example, use a visual fraction model to show  $(2/3) \times 4 = 8/3$ , and create a story context for this equation. Do the same with  $(2/3) \times (4/5) = 8/15$ . (In general,  $(a/b) \times (c/d) = ac/bd$ .)*
  - b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
5. Interpret multiplication as scaling (resizing), by:



- a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
  - b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence  $a/b = (n \times a)/(n \times b)$  to the effect of multiplying  $a/b$  by 1.
6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.<sup>1</sup>
- a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for  $(1/3) \div 4$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $(1/3) \div 4 = 1/12$  because  $(1/12) \times 4 = 1/3$ .*
  - b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for  $4 \div (1/5)$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $4 \div (1/5) = 20$  because  $20 \times (1/5) = 4$ .*
  - c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share  $1/2$  lb*



*of chocolate equally? How many  $\frac{1}{3}$ -cup servings are in 2 cups of raisins?*

## Measurement and Data

5.md

### **Convert like measurement units within a given measurement system.**

1. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 1.5 m), and use these conversions in solving multi-step, real world problems.

### **Represent and interpret data.**

2. Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*

### **Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.**

3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement.
  - a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.
  - b. A solid figure which can be packed without gaps or overlaps using  $n$  unit cubes is said to have a volume of  $n$  cubic units.
4. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
  - a. Find the volume of a right rectangular prism with whole-number side lengths by



packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

- b. Apply the formulas  $V = l \times w \times h$  and  $V = b \times h$  for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
- c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

## Geometry

5.G

### **Graph points on the coordinate plane to solve real-world and mathematical problems.**

1. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g.,  $x$ -axis and  $x$ -coordinate,  $y$ -axis and  $y$ -coordinate).
2. Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.



**Classify two-dimensional figures into categories based on their properties.**

3. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.  
*For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*
4. Classify two-dimensional figures in a hierarchy based on properties.



## Grade 6 Overview

### Ratios and Proportional Relationships

- Understand ratio concepts and use ratio reasoning to solve problems.

### The Number System

- apply and extend previous understandings of multiplication and division to divide fractions by fractions.
- Compute fluently with multi-digit numbers and find common factors and multiples.
- Apply and extend previous understandings of numbers to the system of rational numbers.

### Expressions and Equations

- Apply and extend previous understandings of arithmetic to algebraic expressions.
- Reason about and solve one-variable equations and inequalities.
- Represent and analyze quantitative relationships between dependent and independent variables.

### Geometry

- Solve real-world and mathematical problems involving area, surface area, and volume.

### Statistics and Probability

- Develop understanding of statistical variability.
- Summarize and describe distributions.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



**Understand ratio concepts and use ratio reasoning to solve problems.**

1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”*
2. Understand the concept of a unit rate  $a/b$  associated with a ratio  $a:b$  with  $b \neq 0$ , and use rate language in the context of a ratio relationship. *For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is  $3/4$  cup of flour for each cup of sugar.” “We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.”*<sup>1</sup>
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
  - a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
  - b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*
  - c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means  $30/100$  times the quantity); solve problems involving finding the whole, given a part and the percent.
  - d. Use ratio reasoning to convert



measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

## The Number System

6.nS

**Apply and extend previous understandings of multiplication and division to divide fractions by fractions.**

1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for  $(2/3) \div (3/4)$  and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that  $(2/3) \div (3/4) = 8/9$  because  $3/4$  of  $8/9$  is  $2/3$ . (In general,  $(a/b) \div (c/d) = ad/bc$ .) How much chocolate will each person get if 3 people share  $1/2$  lb of chocolate equally? How many  $3/4$ -cup servings are in  $2/3$  of a cup of yogurt? How wide is a rectangular strip of land with length  $3/4$  mi and area  $1/2$  square mi?*

**Compute fluently with multi-digit numbers and find common factors and multiples.**

2. Fluently divide multi-digit numbers using the standard algorithm.
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express  $36 + 8$  as  $4(9 + 2)$ .*

**Apply and extend previous understandings of numbers to the system of rational numbers.**

5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below



zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.

6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.
  - a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g.,  $-(-3) = 3$ , and that 0 is its own opposite.
  - b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
  - c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
7. Understand ordering and absolute value of rational numbers.
  - a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret  $-3 > -7$  as a statement that  $-3$  is located to the right of  $-7$  on a number line oriented from left to right.*
  - b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write  $-3^{\circ}\text{C} > -7^{\circ}\text{C}$  to express the fact that  $-3^{\circ}\text{C}$  is warmer than  $-7^{\circ}\text{C}$ .*
  - c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as



magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of  $-30$  dollars, write  $|-30| = 30$  to describe the size of the debt in dollars.*

- d. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than  $-30$  dollars represents a debt greater than 30 dollars.*
8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.

## Expressions and Equations

6.ee

### Apply and extend previous understandings of arithmetic to algebraic expressions.

1. Write and evaluate numerical expressions involving whole-number exponents.
2. Write, read, and evaluate expressions in which letters stand for numbers.
  - a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation “Subtract  $y$  from 5” as  $5 - y$ .*
  - b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression  $2(8 + 7)$  as a product of two factors; view  $(8 + 7)$  as both a single entity and a sum of two terms.*
  - c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas  $V = s^3$  and  $A = 6s^2$  to find the volume and surface area of a*



*cube with sides of length  $s = 1/2$ .*

3. Apply the properties of operations to generate equivalent expressions.  
*For example, apply the distributive property to the expression  $3(2 + x)$  to produce the equivalent expression  $6 + 3x$ ; apply the distributive property to the expression  $24x + 18y$  to produce the equivalent expression  $6(4x + 3y)$ ; apply properties of operations to  $y + y + y$  to produce the equivalent expression  $3y$ .*
4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions  $y + y + y$  and  $3y$  are equivalent because they name the same number regardless of which number  $y$  stands for.*

### **Reason about and solve one-variable equations and inequalities.**

5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.
6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
7. Solve real-world and mathematical problems by writing and solving equations of the form  $x + p = q$  and  $px = q$  for cases in which  $p$ ,  $q$  and  $x$  are all nonnegative rational numbers.
8. Write an inequality of the form  $x > c$  or  $x < c$  to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form  $x > c$  or  $x < c$  have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

### **Represent and analyze quantitative relationships between dependent and independent variables.**

9. Use variables to represent two quantities in a



real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation  $d = 65t$  to represent the relationship between distance and time.*

## Geometry

## 6.G

### **Solve real-world and mathematical problems involving area, surface area, and volume.**

1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas  $V = lwh$  and  $V = bh$  to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context



of solving real-world and mathematical problems.

## Statistics and Probability

## 6.SP

### **Develop understanding of statistical variability.**

1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.*
2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

### **Summarize and describe distributions.**

4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
5. Summarize numerical data sets in relation to their context, such as by:
  - a. Reporting the number of observations.
  - b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
  - c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.
  - d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.



## Grade 7 Overview

### Ratios and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems.

### The number System

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

### Expressions and equations

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

### Geometry

- Draw, construct and describe geometrical figures and describe the relationships between them
- Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

### Statistics and Probability

- Use random sampling to draw inferences about a population.
- Draw informal comparative inferences about two populations.
- Investigate chance processes and develop, use, and evaluate probability models.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



**Analyze proportional relationships and use them to solve real-world and mathematical problems.**

1. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks  $1/2$  mile in each  $1/4$  hour, compute the unit rate as the complex fraction  $1/2/1/4$  miles per hour, equivalently 2 miles per hour.*
2. Recognize and represent proportional relationships between quantities.
  - a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
  - b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
  - c. Represent proportional relationships by equations. *For example, if total cost  $t$  is proportional to the number  $n$  of items purchased at a constant price  $p$ , the relationship between the total cost and the number of items can be expressed as  $t = pn$ .*
  - d. Explain what a point  $(x, y)$  on the graph of a proportional relationship means in terms of the situation, with special attention to the points  $(0, 0)$  and  $(1, r)$  where  $r$  is the unit rate.
3. Use proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.*

**Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.**

1. Apply and extend previous understandings of addition and subtraction to add and subtract



rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

- a. Describe situations in which opposite quantities combine to make 0. *For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.*
  - b. Understand  $p + q$  as the number located a distance  $|q|$  from  $p$ , in the positive or negative direction depending on whether  $q$  is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
  - c. Understand subtraction of rational numbers as adding the additive inverse,  $p - q = p + (-q)$ . Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
  - d. Apply properties of operations as strategies to add and subtract rational numbers.
2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
- a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as  $(-1)(-1) = 1$  and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.
  - b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If  $p$  and  $q$  are integers, then  $-(p/q) = (-p)/q = p/(-q)$ . Interpret quotients of rational numbers by describing real-world contexts.
  - c. Apply properties of operations as strategies to multiply and divide rational numbers.
  - d. Convert a rational number to a decimal using long division; know that the decimal



form of a rational number terminates in 0s or eventually repeats.

3. Solve real-world and mathematical problems involving the four operations with rational numbers.<sup>1</sup>

## Expressions and Equations

7.ee

### Use properties of operations to generate equivalent expressions.

1. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
2. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example,  $a + 0.05a = 1.05a$  means that “increase by 5%” is the same as “multiply by 1.05.”*

### Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

3. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional  $\frac{1}{10}$  of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar  $9\frac{3}{4}$  inches long in the center of a door that is  $27\frac{1}{2}$  inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*
4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
  - a. Solve word problems leading to equations of the form  $px + q = r$  and  $p(x + q) = r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For*



*example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*

- b. Solve word problems leading to inequalities of the form  $px + q > r$  or  $px + q < r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.*

## Geometry

## 7.G

### **Draw, construct, and describe geometrical figures and describe the relationships between them.**

1. Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
2. Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.
3. Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

### **Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.**

4. Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.



involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

## Statistics and Probability

7.SP

### Use random sampling to draw inferences about a population.

1. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.
2. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*

### Draw informal comparative inferences about two populations.

3. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*
4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*

### Investigate chance processes and develop, use, and evaluate probability models.



5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around  $\frac{1}{2}$  indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.
6. Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.*
7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
  - a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.*
  - b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?*
8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.
  - a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
  - b. Represent sample spaces for compound events using methods such as organized



lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.

- c. Design and use a simulation to generate frequencies for compound events. *For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?*



## Grade 8 Overview

### The Number System

- Know that there are numbers that are not rational, and approximate them by rational numbers.

### Expressions and equations

- Work with radicals and integer exponents.
- Understand the connections between proportional relationships, lines, and linear equations.
- Analyze and solve linear equations and pairs of simultaneous linear equations.

### Functions

- Define, evaluate, and compare functions.
- Use functions to model relationships between quantities.

### Geometry

- Understand congruence and similarity using physical models, transparencies, or geometry software.
- Understand and apply the Pythagorean theorem.
- Solve real-world and mathematical problems involving volume of cylinders, cones and spheres.

### Statistics and Probability

- Investigate patterns of association in bivariate data.

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



**Know that there are numbers that are not rational, and approximate them by rational numbers.**

1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g.,  $\sqrt{2}$ ). *For example, by truncating the decimal expansion of  $\sqrt{2}$ , show that  $\sqrt{2}$  is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*

**Work with radicals and integer exponents.**

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example,  $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$ .*
2. Use square root and cube root symbols to represent solutions to equations of the form  $x^2 = p$  and  $x^3 = p$ , where  $p$  is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that  $\sqrt{2}$  is irrational.
3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as  $3 \times 10^8$  and the population of the world as  $7 \times 10^9$ , and determine that the world population is more than 20 times larger.*



4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

**Understand the connections between proportional relationships, lines, and linear equations.**

5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.  
*For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*
6. Use similar triangles to explain why the slope  $m$  is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation  $y = mx$  for a line through the origin and the equation  $y = mx + b$  for a line intercepting the vertical axis at  $b$ .

**Analyze and solve linear equations and pairs of simultaneous linear equations.**

7. Solve linear equations in one variable.
  - a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form  $x = a$ ,  $a = a$ , or  $a = b$  results (where  $a$  and  $b$  are different numbers).
  - b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.



8. Analyze and solve pairs of simultaneous linear equations.
  - a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
  - b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example,  $3x + 2y = 5$  and  $3x + 2y = 6$  have no solution because  $3x + 2y$  cannot simultaneously be 5 and 6.*
  - c. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*

## Functions

8.f

### Define, evaluate, and compare functions.

1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*
3. Interpret the equation  $y = mx + b$  as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function  $A = s^2$  giving the area of a square as a function of its side length*



*is not linear because its graph contains the points  $(1,1)$ ,  $(2,4)$  and  $(3,9)$ , which are not on a straight line.*

**Use functions to model relationships between quantities.**

4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two  $(x, y)$  values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

**Geometry**

**8.G**

**Understand congruence and similarity using physical models, transparencies, or geometry software.**

1. Verify experimentally the properties of rotations, reflections, and translations:
  - a. Lines are taken to lines, and line segments to line segments of the same length.
  - b. Angles are taken to angles of the same measure.
  - c. Parallel lines are taken to parallel lines.
2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.



3. Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.  
*For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*

#### **Understand and apply the Pythagorean Theorem.**

6. Explain a proof of the Pythagorean Theorem and its converse.
7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
8. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

#### **Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.**

9. Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

### **Statistics and Probability**

**8.SP**

#### **Investigate patterns of association in bivariate data.**

1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear



association.

2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*
4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*



# Next Generation Science Standards

## K-PS2 Motion and Stability: Forces and Interactions

K-PS2 Motion and Stability: Forces and interactions		
Students who demonstrate understanding can:		
K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. [Clarification Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.] [Assessment Boundary: Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.]		
K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.* [Clarification Statement: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn.] [Assessment Boundary: Assessment does not include friction as a mechanism for change in speed.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"><li>With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1)</li></ul> <p><b>Analyzing and Interpreting Data</b> Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"><li>Analyze data from tests of an object or tool to determine if it works as intended. (K-PS2-2)</li></ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Scientific Investigations Use a Variety of Methods</b></p> <ul style="list-style-type: none"><li>Scientists use different ways to study the world. (K-PS2-1)</li></ul>	<p><b>PS2.A: Forces and Motion</b></p> <ul style="list-style-type: none"><li>Pushes and pulls can have different strengths and directions. (K-PS2-1),(K-PS2-2)</li><li>Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-1),(K-PS2-2)</li></ul> <p><b>PS2.B: Types of Interactions</b></p> <ul style="list-style-type: none"><li>When objects touch or collide, they push on one another and can change motion. (K-PS2-1)</li></ul> <p><b>PS3.C: Relationship Between Energy and Forces</b></p> <ul style="list-style-type: none"><li>A bigger push or pull makes things speed up or slow down more quickly. (secondary to K-PS2-1)</li></ul> <p><b>ETS1.A: Defining Engineering Problems</b></p> <ul style="list-style-type: none"><li>A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions. (secondary to K-PS2-2)</li></ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"><li>Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1),(K-PS2-2)</li></ul>
Connections to other DCIs in kindergarten: K.ETS1.A (K-PS2-2); K.ETS1.B (K-PS2-2)		
Articulation of DCIs across grade-levels: 2.ETS1.B (K-PS2-2); 3.PS2.A (K-PS2-1),(K-PS2-2); 3.PS2.B (K-PS2-1); 4.PS3.A (K-PS2-1); 4.ETS1.A (K-PS2-2)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.K.1	With prompting and support, ask and answer questions about key details in a text. (K-PS2-2)	
W.K.7	Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-PS2-1)	
SL.K.3	Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-PS2-2)	
Mathematics –		
MP.2	Reason abstractly and quantitatively. (K-PS2-1)	
K.MD.A.1	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (K-PS2-1)	
K.MD.A.2	Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. (K-PS2-1)	



## K-PS3 Energy

### K-PS3 Energy

Students who demonstrate understanding can:

- K-PS3-1.** Make observations to determine the effect of sunlight on Earth's surface. [Clarification Statement: Examples of Earth's surface could include sand, soil, rocks, and water] [Assessment Boundary: Assessment of temperature is limited to relative measures such as warmer/cooler.]
- K-PS3-2.** Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.\* [Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

#### Science and Engineering Practices

##### Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in K-2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.

- Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1)

##### Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in K-2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.

- Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2)

#### Connections to Nature of Science

##### Scientific Investigations Use a Variety of Methods

- Scientists use different ways to study the world. (K-PS3-1)

#### Disciplinary Core Ideas

##### PS3.B: Conservation of Energy and Energy Transfer

- Sunlight warms Earth's surface. (K-PS3-1),(K-PS3-2)

#### Crosscutting Concepts

##### Cause and Effect

- Events have causes that generate observable patterns. (K-PS3-1),(K-PS3-2)

Connections to other DCIs in kindergarten: K.ETS1.A (K-PS3-2); K.ETS1.B (K-PS3-2)

Articulation of DCIs across grade-levels: 1.PS4.B (K-PS3-1),(K-PS3-2); 2.ETS1.B (K-PS3-2); 3.ESS2.D (K-PS3-1); 4.ETS1.A (K-PS3-2)

Common Core State Standards Connections:

ELA/Literacy –

W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-PS3-1),(K-PS3-2)

Mathematics –

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. (K-PS3-1),(K-PS3-2)



## K-LS1 From Molecules to Organisms: Structures and Processes

K-LS1 From Molecules to Organisms: Structures and Processes		
Students who demonstrate understanding can:		
K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive. <span style="color: red;">[Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]</span>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<b>Analyzing and Interpreting Data</b> Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. <ul style="list-style-type: none"> <li>Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1)</li> </ul> <hr style="border-top: 1px dashed #000;"/> <p style="text-align: center;">Connections to Nature of Science</p> <b>Scientific Knowledge is Based on Empirical Evidence</b> <ul style="list-style-type: none"> <li>Scientists look for patterns and order when making observations about the world. (K-LS1-1)</li> </ul>	<b>LS1.C: Organization for Matter and Energy Flow in Organisms</b> <ul style="list-style-type: none"> <li>All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)</li> </ul>	<b>Patterns</b> <ul style="list-style-type: none"> <li>Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1)</li> </ul>
Connections to other DCIs in kindergarten: N/A		
Articulation of DCIs across grade-levels: 1.LS1.A (K-LS1-1); 2.LS2.A (K-LS1-1); 3.LS2.C (K-LS1-1); 3.LS4.B (K-LS1-1); 5.LS1.C (K-LS1-1); 5.LS2.A (K-LS1-1)		
Common Core State Standards Connections:		
ELA/Literacy – W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-LS1-1) Mathematics – K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. (K-LS1-1)		



## K-ESS2 Earth's Systems

### K-ESS2 Earth's Systems

Students who demonstrate understanding can:

**K-ESS2-1.** Use and share observations of local weather conditions to describe patterns over time. [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.] [Assessment Boundary: Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.]

**K-ESS2-2.** Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. [Clarification Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

#### Science and Engineering Practices

##### Analyzing and Interpreting Data

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-ESS2-1)

##### Engaging in Argument from Evidence

Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s).

- Construct an argument with evidence to support a claim. (K-ESS2-2)

#### Connections to Nature of Science

##### Science Knowledge is Based on Empirical Evidence

- Scientists look for patterns and order when making observations about the world. (K-ESS2-1)

#### Disciplinary Core Ideas

##### ESS2.D: Weather and Climate

- Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (K-ESS2-1)

##### ESS2.E: Biogeology

- Plants and animals can change their environment. (K-ESS2-2)

##### ESS3.C: Human Impacts on Earth Systems

- Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (secondary to K-ESS2-2)

#### Crosscutting Concepts

##### Patterns

- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1)

##### Systems and System Models

- Systems in the natural and designed world have parts that work together. (K-ESS2-2)

Connections to other DCIs in kindergarten: N/A

Articulation of DCIs across grade-levels: 2.ESS2.A (K-ESS2-1); 3.ESS2.D (K-ESS2-1); 4.ESS2.A (K-ESS2-1); 4.ESS2.E (K-ESS2-2); 5.ESS2.A (K-ESS2-2)

Common Core State Standards Connections:

ELA/Literacy–

RI.K.1 With prompting and support, ask and answer questions about key details in a text. (K-ESS2-2)

W.K.1 Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book. (K-ESS2-2)

W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. (K-ESS2-2)

W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-ESS2-1)

Mathematics–

MP.2 Reason abstractly and quantitatively. (K-ESS2-1)

MP.4 Model with mathematics. (K-ESS2-1)

K.CC.A Know number names and the count sequence. (K-ESS2-1)

K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (K-ESS2-1)

K.MD.B.3 Classify objects into given categories; count the number of objects in each category and sort the categories by count. (K-ESS2-1)



## K-ESS3 Earth and Human Activity

K-ESS3 Earth and Human Activity		
Students who demonstrate understanding can:		
K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. [Clarification Statement: Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.]		
K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.* [Clarification Statement: Emphasis is on local forms of severe weather.]		
K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.* [Clarification Statement: Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Asking Questions and Defining Problems</b> Asking questions and defining problems in grades K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"><li>Ask questions based on observations to find more information about the designed world. (K-ESS3-2)</li></ul> <p><b>Developing and Using Models</b> Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, storyboard) that represent concrete events or design solutions.</p> <ul style="list-style-type: none"><li>Use a model to represent relationships in the natural world. (K-ESS3-1)</li></ul> <p><b>Obtaining, Evaluating, and Communicating Information</b> Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <ul style="list-style-type: none"><li>Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world. (K-ESS3-2)</li><li>Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3)</li></ul>	<p><b>ESS3.A: Natural Resources</b></p> <ul style="list-style-type: none"><li>Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1)</li></ul> <p><b>ESS3.B: Natural Hazards</b></p> <ul style="list-style-type: none"><li>Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. (K-ESS3-2)</li></ul> <p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"><li>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3)</li></ul> <p><b>ETS1.A: Defining and Delimiting an Engineering Problem</b></p> <ul style="list-style-type: none"><li>Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary to K-ESS3-2)</li></ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"><li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people. (secondary to K-ESS3-3)</li></ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"><li>Events have causes that generate observable patterns. (K-ESS3-2),(K-ESS3-3)</li></ul> <p><b>Systems and System Models</b></p> <ul style="list-style-type: none"><li>Systems in the natural and designed world have parts that work together. (K-ESS3-1)</li></ul> <p>-----</p> <p><b>Connections to Engineering, Technology and Applications of Science</b></p> <p><b>Interdependence of Science, Engineering, and Technology</b></p> <ul style="list-style-type: none"><li>People encounter questions about the natural world every day. (K-ESS3-2)</li></ul> <p><b>Influence of Engineering, Technology, and Science on Society and the Natural World</b></p> <ul style="list-style-type: none"><li>People depend on various technologies in their lives; human life would be very different without technology. (K-ESS3-2)</li></ul>
Connections to other DCIs in kindergarten: K.ETS1.A (K-ESS3-2),(K-ESS3-3)		
Articulation of DCIs across grade-levels: 1.LS1.A (K-ESS3-1); 2.ESS1.C (K-ESS3-2); 2.ETS1.B (K-ESS3-3); 3.ESS3.B (K-ESS3-2); 4.ESS3.A (K-ESS3-3); 4.ESS3.B (K-ESS3-2); 5.LS2.A (K-ESS3-1); 5.ESS2.A (K-ESS3-1); 5.ESS3.C (K-ESS3-3)		
Common Core State Standards Connections:		
ELA/Literacy–		
RI.K.1	With prompting and support, ask and answer questions about key details in a text. (K-ESS3-2)	
W.K.2	Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. (K-ESS3-3)	
SL.K.3	Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-ESS3-2)	
SL.K.5	Add drawings or other visual displays to descriptions as desired to provide additional detail. (K-ESS3-1)	
Mathematics–		
MP.2	Reason abstractly and quantitatively. (K-ESS3-1)	
MP.4	Model with mathematics. (K-ESS3-1),(K-ESS3-2)	
K.CC	Counting and Cardinality (K-ESS3-1),(K-ESS3-2)	



## K-2-ETS1 Engineering Design

K-2-ETS1 Engineering Design		
<p>Students who demonstrate understanding can:</p> <p>K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <p>K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K-2 builds on prior experiences and progresses to simple descriptive questions.</p> <ul style="list-style-type: none"> <li>Ask questions based on observations to find more information about the natural and/or designed world(s). (K-2-ETS1-1)</li> <li>Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1)</li> </ul> <p><b>Developing and Using Models</b></p> <p>Modeling in K-2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.</p> <ul style="list-style-type: none"> <li>Develop a simple model based on evidence to represent a proposed object or tool. (K-2-ETS1-2)</li> </ul> <p><b>Analyzing and Interpreting Data</b></p> <p>Analyzing data in K-2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> <li>Analyze data from tests of an object or tool to determine if it works as intended. (K-2-ETS1-3)</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1)</li> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems. (K-2-ETS1-1)</li> <li>Before beginning to design a solution, it is important to clearly understand the problem. (K-2-ETS1-1)</li> </ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (K-2-ETS1-2)</li> </ul> <p><b>ETS1.C: Optimizing the Design Solution</b></p> <ul style="list-style-type: none"> <li>Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K-2-ETS1-3)</li> </ul>	<p><b>Structure and Function</b></p> <ul style="list-style-type: none"> <li>The shape and stability of structures of natural and designed objects are related to their function(s). (K-2-ETS1-2)</li> </ul>
<p>Connections to K-2-ETS1.A: Defining and Delimiting Engineering Problems include:</p> <p>Kindergarten: K-PS2-2, K-ESS3-2</p> <p>Connections to K-2-ETS1.B: Developing Possible Solutions to Problems include:</p> <p>Kindergarten: K-ESS3-3, First Grade: 1-PS4-4, Second Grade: 2-LS2-2</p> <p>Connections to K-2-ETS1.C: Optimizing the Design Solution include:</p> <p>Second Grade: 2-ESS2-1</p>		
<p>Articulation of DCIs across grade-bands: 3-5.ETS1.A (K-2-ETS1-1),(K-2-ETS1-2),(K-2-ETS1-3); 3-5.ETS1.B (K-2-ETS1-2),(K-2-ETS1-3); 3-5.ETS1.C (K-2-ETS1-1),(K-2-ETS1-2),(K-2-ETS1-3)</p>		
<p>Common Core State Standards Connections:</p> <p><b>ELA/Literacy –</b></p> <p>RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (K-2-ETS1-1)</p> <p>W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>SL.2.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (K-2-ETS1-2)</p> <p><b>Mathematics –</b></p> <p>MP.2 Reason abstractly and quantitatively. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>MP.4 Model with mathematics. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>MP.5 Use appropriate tools strategically. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (K-2-ETS1-1),(K-2-ETS1-3)</p>		



# 1-PS4 Waves and their Applications in Technologies for Information Transfer

1-PS4 Waves and their Applications in Technologies for Information Transfer		
Students who demonstrate understanding can:		
1-PS4-1.	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can makematerialsvibrate. [Clarification Statement: Examplesofvibrating materialsthatmakesoundcouldincludetuning forks and pluckingastretched string. Examples of how sound can make matter vibrate could include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.]	
1-PS4-2.	Make observations to construct an evidence-based account that objects can be seen only when illuminated. [Clarification Statement: Examples of observations could include those made in a completely dark room, a pinhole box, and a video of a cave explorer with a flashlight. Illumination could be from an external light source or by an object giving off its own light.]	
1-PS4-3.	Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. [Clarification Statement: Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror).][Assessment Boundary: Assessment does not include the speed of light.]	
1-PS4-4.	Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.* [Clarification Statement: Examples of devices could include a light source to send signals, paper cup and string “telephones,”and a pattern of drum beats.][Assessment Boundary: Assessment does not include technological details for how communication devices work.]	
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. <ul style="list-style-type: none"><li>Plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question. (1-PS4-1),(1-PS4-3)</li></ul> Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions. <ul style="list-style-type: none"><li>Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (1-PS4-2)</li><li>Use tools and materials provided to design a device that solves a specific problem. (1-PS4-4)</li></ul> <div>Connections to Nature of Science</div> Scientific Investigations Use a Variety of Methods <ul style="list-style-type: none"><li>Science investigations begin with a question. (1-PS4-1)</li><li>Scientists use different ways to study the world. (1-PS4-1)</li></ul>	PS4.A: Wave Properties <ul style="list-style-type: none"><li>Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1)</li></ul> PS4.B: Electromagnetic Radiation <ul style="list-style-type: none"><li>Objects can be seen if light is available to illuminate them or if they give off their own light. (1-PS4-2)</li><li>Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.) (1-PS4-3)</li></ul> PS4.C: Information Technologies and Instrumentation <ul style="list-style-type: none"><li>People also use a variety of devices to communicate (send and receive information) over long distances. (1-PS4-4)</li></ul>	Cause and Effect <ul style="list-style-type: none"><li>Simple tests can be designed to gather evidence to support or refute student ideas about causes. (1-PS4-1),(1-PS4-2),(1-PS4-3)</li></ul> <div>Connections to Engineering, Technology, and Applications of Science</div> <div>Influence of Engineering, Technology, and Science, on Society and the Natural World<ul style="list-style-type: none"><li>People depend on various technologies in their lives; human life would be very different without technoloav. (1-PS4-4)</li></ul></div>
Connections to other DCIs in first grade: N/A		
Articulation of DCIs across grade-levels: K.ETS1.A (1-PS4-4); 2.PS1.A (1-PS4-3); 2.ETS1.B (1-PS4-4); 4.PS4.C (1-PS4-4); 4.PS4.B (1-PS4-2); 4.ETS1.A (1-PS4-4)		
Common Core State Standards Connections:		
ELA/Literacy –		
W.1.2	Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. (1-PS4-2)	
W.1.7	Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-PS4-1),(1-PS4-2),(1-PS4-3),(1-PS4-4)	
W.1.8	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-PS4-1),(1-PS4-2),(1-PS4-3)	
SL.1.1	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. (1-PS4-1),(1-PS4-2),(1-PS4-3)	
Mathematics –		
MP.5	Use appropriate tools strategically. (1-PS4-4)	
1.MD.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-PS4-4)	
1.MD.A.2	Express the length of an object as a whole number of length units, by layering multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. (1-PS4-4)	



# 1-LS1 From Molecules to Organisms: Structures and Processes

## 1-LS1 From Molecules to Organisms: Structures and Processes

Students who demonstrate understanding can:

- 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.\* [Clarification Statement: Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears.]
- 1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. [Clarification Statement: Examples of patterns of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring).]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Use materials to design a device that solves a specific problem or a solution to a specific problem. (1-LS1-1)</li> </ul> <p><b>Obtaining, Evaluating, and Communicating Information</b></p> <p>Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <ul style="list-style-type: none"> <li>Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world. (1-LS1-2)</li> </ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge is Based on Empirical Evidence</b></p> <ul style="list-style-type: none"> <li>Scientists look for patterns and order when making observations about the world. (1-LS1-2)</li> </ul>	<p><b>LS1.A: Structure and Function</b></p> <ul style="list-style-type: none"> <li>All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)</li> </ul> <p><b>LS1.B: Growth and Development of Organisms</b></p> <ul style="list-style-type: none"> <li>Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. (1-LS1-2)</li> </ul> <p><b>LS1.D: Information Processing</b></p> <ul style="list-style-type: none"> <li>Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. (1-LS1-1)</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (1-LS1-2)</li> </ul> <p><b>Structure and Function</b></p> <ul style="list-style-type: none"> <li>The shape and stability of structures of natural and designed objects are related to their function(s). (1-LS1-1)</li> </ul> <p>-----</p> <p><b>Connections to Engineering, Technology, and Applications of Science</b></p> <p><b>Influence of Engineering, Technology, and Science on Society and the Natural World</b></p> <ul style="list-style-type: none"> <li>Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world. (1-LS1-1)</li> </ul>
Connections to other DCIs in first grade: N/A		
Articulation of DCIs across grade-levels: K.ETS1.A (1-LS1-1); 3.LS2.D (1-LS1-2); 4.LS1.A (1-LS1-1); 4.LS1.D (1-LS1-1); 4.ETS1.A (1-LS1-1)		
Common Core State Standards Connections:		
<p><b>ELA/Literacy –</b></p> <p>RI.1.1 Ask and answer questions about key details in a text. (1-LS1-2)</p> <p>RI.1.2 Identify the main topic and retell key details of a text. (1-LS1-2)</p> <p>RI.1.10 With prompting and support, read informational texts appropriately complex for grade. (1-LS1-2)</p> <p>W.1.7 Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-LS1-1)</p> <p><b>Mathematics –</b></p> <p>1.NBT.B.3 Compare two two-digit numbers based on the meanings of the tens and one digits, recording the results of comparisons with the symbols !, “, and #. (1-LS1-2)</p> <p>1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning uses. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. (1-LS1-2)</p> <p>1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (1-LS1-2)</p> <p>1.NBT.C.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. (1-LS1-2)</p>		



# 1-LS3 Heredity: Inheritance and Variation of Traits

1-LS3 Heredity: Inheritance and Variation of Traits		
<p>Students who demonstrate understanding can:</p> <p>1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. [Clarification Statement: Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same.] [Assessment Boundary: Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.]</p>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<p><b>Science and Engineering Practices</b></p> <p>Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (1-LS3-1)</li> </ul>	<p><b>Disciplinary Core Ideas</b></p> <p>LS3.A: Inheritance of Traits</p> <ul style="list-style-type: none"> <li>Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. (1-LS3-1)</li> </ul> <p>LS3.B: Variation of Traits</p> <ul style="list-style-type: none"> <li>Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. (1-LS3-1)</li> </ul>	<p><b>Crosscutting Concepts</b></p> <p>Patterns</p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (1-LS3-1)</li> </ul>
Connections to other DCIs in first grade: N/A		
Articulation of DCIs across grade-levels: 3.LS3.A (1-LS3-1); 3.LS3.B (1-LS3-1)		
Common Core State Standards Connections:		
<p>ELA/Literacy –</p> <p>RI.1.1 Ask and answer questions about key details in a text. (1-LS3-1)</p> <p>W.1.7 Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-LS3-1)</p> <p>W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-LS3-1)</p> <p>Mathematics –</p> <p>MP.2 Reason abstractly and quantitatively. (1-LS3-1)</p> <p>MP.5 Use appropriate tools strategically. (1-LS3-1)</p> <p>1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-LS3-1)</p>		



# 1-ESS1 Earth's Place in the Universe

1-ESS1 Earth's Place in the Universe		
Students who demonstrate understanding can:		
1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted. [Clarification Statement: Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day.] [Assessment Boundary: Assessment of star patterns is limited to stars being seen at night and not during the day.]		
1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year. [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.] [Assessment Boundary: Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Planning and Carrying Out Investigations</b></p> <p>Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"><li>Make observations (firsthand or from media) to collect data that can be used to make comparisons. (1-ESS1-2)</li></ul> <p><b>Analyzing and Interpreting Data</b></p> <p>Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"><li>Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (1-ESS1-1)</li></ul>	<p><b>ESS1.A: The Universe and its Stars</b></p> <ul style="list-style-type: none"><li>Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted. (1-ESS1-1)</li></ul> <p><b>ESS1.B: Earth and the Solar System</b></p> <ul style="list-style-type: none"><li>Seasonal patterns of sunrise and sunset can be observed, described, and predicted. (1-ESS1-2)</li></ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"><li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (1-ESS1-1),(1-ESS1-2)</li></ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge Assumes an Order and Consistency in Natural Systems</b></p> <ul style="list-style-type: none"><li>Science assumes natural events happen today as they happened in the past. (1-ESS1-1)</li><li>Many events are repeated. (1-ESS1-1)</li></ul>
Connections to other DCIs in first grade: N/A		
Articulation of DCIs across grade-levels: 3.PS2.A (1-ESS1-1); 5.PS2.B (1-ESS1-1),(1-ESS1-2); 5-ESS1.B (1-ESS1-1),(1-ESS1-2)		
Common Core State Standards Connections:		
ELA/Literacy –		
W.1.7	Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-ESS1-1),(1-ESS1-2)	
W.1.8	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-ESS1-1),(1-ESS1-2)	
Mathematics –		
MP.2	Reason abstractly and quantitatively. (1-ESS1-2)	
MP.4	Model with mathematics. (1-ESS1-2)	
MP.5	Use appropriate tools strategically. (1-ESS1-2)	
1.OA.A.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations to represent the problem. (1-ESS1-2)	
1.MD.C.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. (1-ESS1-2)	



## K-2-ETS1 Engineering Design

K-2-ETS1 Engineering Design		
<p>Students who demonstrate understanding can:</p> <p>K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <p>K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions.</p> <ul style="list-style-type: none"> <li>Ask questions based on observations to find more information about the natural and/or designed world(s). (K-2-ETS1-1)</li> <li>Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1)</li> </ul> <p><b>Developing and Using Models</b></p> <p>Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.</p> <ul style="list-style-type: none"> <li>Develop a simple model based on evidence to represent a proposed object or tool. (K-2-ETS1-2)</li> </ul> <p><b>Analyzing and Interpreting Data</b></p> <p>Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> <li>Analyze data from tests of an object or tool to determine if it works as intended. (K-2-ETS1-3)</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1)</li> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems. (K-2-ETS1-1)</li> <li>Before beginning to design a solution, it is important to clearly understand the problem. (K-2-ETS1-1)</li> </ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (K-2-ETS1-2)</li> </ul> <p><b>ETS1.C: Optimizing the Design Solution</b></p> <ul style="list-style-type: none"> <li>Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K-2-ETS1-3)</li> </ul>	<p><b>Structure and Function</b></p> <ul style="list-style-type: none"> <li>The shape and stability of structures of natural and designed objects are related to their function(s). (K-2-ETS1-2)</li> </ul>
<p>Connections to K-2-ETS1.A: Defining and Delimiting Engineering Problems include:</p> <p>Kindergarten: K-PS2-2, K-ESS3-2</p> <p>Connections to K-2-ETS1.B: Developing Possible Solutions to Problems include:</p> <p>Kindergarten: K-ESS3-3, First Grade: 1-PS4-4, Second Grade: 2-LS2-2</p> <p>Connections to K-2-ETS1.C: Optimizing the Design Solution include:</p> <p>Second Grade: 2-ESS2-1</p>		
<p>Articulation of DCIs across grade-bands: 3-5.ETS1.A (K-2-ETS1-1),(K-2-ETS1-2),(K-2-ETS1-3); 3-5.ETS1.B (K-2-ETS1-2),(K-2-ETS1-3); 3-5.ETS1.C (K-2-ETS1-1),(K-2-ETS1-2),(K-2-ETS1-3)</p>		
<p>Common Core State Standards Connections:</p> <p><b>ELA/Literacy –</b></p> <p>RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (K-2-ETS1-1)</p> <p>W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>SL.2.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (K-2-ETS1-2)</p> <p><b>Mathematics –</b></p> <p>MP.2 Reason abstractly and quantitatively. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>MP.4 Model with mathematics. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>MP.5 Use appropriate tools strategically. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (K-2-ETS1-1),(K-2-ETS1-3)</p>		



## 2-PS1 Matter and its Interactions

2-PS1 Matter and its Interactions		
Students who demonstrate understanding can:		
2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. [Clarification Statement: Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.] 2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.* [Clarification Statement: Examples of properties could include, strength, flexibility, hardness, texture, and absorbency.][Assessment Boundary: Assessment of quantitative measurements is limited to length.] 2-PS1-3. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. [Clarification Statement: Examples of pieces could include blocks, building bricks, or other assorted small objects.] 2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. [Clarification Statement: Examples of reversible changes could include materials such as water and butter at different temperatures. Examples of irreversible changes could include cooking an egg, freezing a plant leaf, and heating paper.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. <ul style="list-style-type: none"> <li>Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-PS1-1)</li> </ul> <b>Analyzing and Interpreting Data</b> Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. <ul style="list-style-type: none"> <li>Analyze data from tests of an object or tool to determine if it works as intended. (2-PS1-2)</li> </ul> <b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions. <ul style="list-style-type: none"> <li>Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (2-PS1-3)</li> </ul> <b>Engaging in Argument from Evidence</b> Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s). <ul style="list-style-type: none"> <li>Construct an argument with evidence to support a claim. (2-PS1-4)</li> </ul>	<b>PS1.A: Structure and Properties of Matter</b> <ul style="list-style-type: none"> <li>Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. (2-PS1-1)</li> <li>Different properties are suited to different purposes. (2-PS1-2),(2-PS1-3)</li> <li>A great variety of objects can be built up from a small set of pieces. (2-PS1-3)</li> </ul> <b>PS1.B: Chemical Reactions</b> <ul style="list-style-type: none"> <li>Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not. (2-PS1-4)</li> </ul>	<b>Patterns</b> <ul style="list-style-type: none"> <li>Patterns in the natural and human designed world can be observed. (2-PS1-1)</li> </ul> <b>Cause and Effect</b> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns. (2-PS1-4)</li> <li>Simple tests can be designed to gather evidence to support or refute student ideas about causes. (2-PS1-2)</li> </ul> <b>Energy and Matter</b> <ul style="list-style-type: none"> <li>Objects may break into smaller pieces and be put together into larger pieces, or change shapes. (2-PS1-3)</li> </ul>
----- <b>Connections to Nature of Science</b> ----- <b>Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena</b> <ul style="list-style-type: none"> <li>Scientists search for cause and effect relationships to explain natural events. (2-PS1-4)</li> </ul>		----- <b>Connections to Engineering, Technology, and Applications of Science</b> ----- <b>Influence of Engineering, Technology, and Science on Society and the Natural World</b> <ul style="list-style-type: none"> <li>Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world. (2-PS1-2)</li> </ul>
Connections to other DCIs in second grade: N/A		
Articulation of DCIs across grade-levels: 4.ESS2.A (2-PS1-3); 5.PS1.A (2-PS1-1),(2-PS1-2),(2-PS1-3); 5.PS1.B (2-PS1-4); 5.LS2.A (2-PS1-3)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (2-PS1-4)		
RI.2.3 Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2-PS1-4)		
RI.2.8 Describe how reasons support specific points the author makes in a text. (2-PS1-2),(2-PS1-4)		
W.2.1 Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section. (2-PS1-4)		
W.2.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-PS1-1),(2-PS1-2),(2-PS1-3)		
W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-PS1-1),(2-PS1-2),(2-PS1-3)		
Mathematics –		
MP.2 Reason abstractly and quantitatively. (2-PS1-2)		
MP.4 Model with mathematics. (2-PS1-1),(2-PS1-2)		
MP.5 Use appropriate tools strategically. (2-PS1-2)		
2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (2-PS1-1),(2-PS1-2)		



## 2-LS2 Ecosystems: Interactions, Energy, and Dynamics

2-LS2 Ecosystems: Interactions, Energy, and Dynamics		
Students who demonstrate understanding can:		
2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow. [Assessment Boundary: Assessment is limited to testing one variable at a time.]		
2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Developing and Using Models</b> Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.</p> <ul style="list-style-type: none"> <li>Develop a simple model based on evidence to represent a proposed object or tool. (2-LS2-2)</li> </ul> <p><b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-LS2-1)</li> </ul>	<p><b>LS2.A: Interdependent Relationships in Ecosystems</b></p> <ul style="list-style-type: none"> <li>Plants depend on water and light to grow. (2-LS2-1)</li> <li>Plants depend on animals for pollination or to move their seeds around. (2-LS2-2)</li> </ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (secondary to 2-LS2-2)</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns. (2-LS2-1)</li> </ul> <p><b>Structure and Function</b></p> <ul style="list-style-type: none"> <li>The shape and stability of structures of natural and designed objects are related to their function(s). (2-LS2-2)</li> </ul>
Connections to other DCIs in second grade: N/A		
Articulation of DCIs across grade-levels: K.LS1.C (2-LS2-1); K.ESS3.A (2-LS2-1); K.ETS1.A (2-LS2-2); 5.LS1.C (2-LS2-1); 5.LS2.A (2-LS2-2)		
Common Core State Standards Connections:		
<p><b>ELA/Literacy –</b></p> <p>W.2.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-LS2-1)</p> <p>W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-LS2-1)</p> <p>SL.2.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (2-LS2-2)</p> <p><b>Mathematics –</b></p> <p>MP.2 Reason abstractly and quantitatively. (2-LS2-1)</p> <p>MP.4 Model with mathematics. (2-LS2-1),(2-LS2-2)</p> <p>MP.5 Use appropriate tools strategically. (2-LS2-1)</p> <p>2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems. (2-LS2-2)</p>		



## 2-LS4 Biological Evolution: Unity and Diversity

2-LS4 Biological Evolution: Unity and Diversity		
Students who demonstrate understanding can:		
2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats. <b>[Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.] [Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.]</b>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<b>Science and Engineering Practices</b> <b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. <ul style="list-style-type: none"> <li>Make observations (firsthand or from media) to collect data which can be used to make comparisons. (2-LS4-1)</li> </ul> <hr/> <b>Connections to Nature of Science</b> <b>Scientific Knowledge is Based on Empirical Evidence</b> <ul style="list-style-type: none"> <li>Scientists look for patterns and order when making observations about the world. (2-LS4-1)</li> </ul>	<b>Disciplinary Core Ideas</b> <b>LS4.D: Biodiversity and Humans</b> <ul style="list-style-type: none"> <li>There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)</li> </ul>	<b>Crosscutting Concepts</b>
Connections to other DCIs in second grade: N/A		
Articulation of DCIs across grade-levels: 3.LS4.C (2-LS4-1); 3.LS4.D (2-LS4-1); 5.LS2.A (2-LS4-1)		
Common Core State Standards Connections:		
ELA/Literacy – W.2.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-LS4-1) W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-LS4-1) Mathematics – MP.2 Reason abstractly and quantitatively. (2-LS4-1) MP.4 Model with mathematics. (2-LS4-1) 2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems. (2-LS4-1)		



## 2-ESS1 Earth's Place in the Universe

2-ESS1 Earth's Place in the Universe		
Students who demonstrate understanding can:		
2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly. [Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.] [Assessment Boundary: Assessment does not include quantitative measurements of timescales.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Constructing Explanations and Designing Solutions</p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Make observations from several sources to construct an evidence-based account for natural phenomena. (2-ESS1-1)</li> </ul>	<p>ESS1.C: The History of Planet Earth</p> <ul style="list-style-type: none"> <li>Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)</li> </ul>	<p>Stability and Change</p> <ul style="list-style-type: none"> <li>Things may change slowly or rapidly. (2-ESS1-1)</li> </ul>
Connections to other DCIs in second grade: N/A		
Articulation of DCIs across grade-levels: 3.LS2.C (2-ESS1-1); 4.ESS1.C (2-ESS1-1); 4.ESS2.A (2-ESS1-1)		
Common Core State Standards Connections:		
<p>ELA/Literacy –</p> <p>RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (2-ESS1-1)</p> <p>RI.2.3 Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2-ESS1-1)</p> <p>W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (2-ESS1-1)</p> <p>W.2.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-ESS1-1)</p> <p>W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-ESS1-1)</p> <p>SL.2.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. (2-ESS1-1)</p> <p>Mathematics –</p> <p>MP.2 Reason abstractly and quantitatively. (2-ESS1-1)</p> <p>MP.4 Model with mathematics. (2-ESS1-1)</p> <p>2.NBT.A Understand place value. (2-ESS1-1)</p>		



## 2-ESS2 Earth's Systems

2-ESS2 Earth's Systems		
Students who demonstrate understanding can:		
2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.* [Clarification Statement: Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.]		
2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area. [Assessment Boundary: Assessment does not include quantitative scaling in models.]		
2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<b>Science and Engineering Practices</b>  <b>Developing and Using Models</b> Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions. • Develop a model to represent patterns in the natural world. (2-ESS2-2)  <b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions. • Compare multiple solutions to a problem. (2-ESS2-1)  <b>Obtaining, Evaluating, and Communicating Information</b> Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information. • Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question. (2-ESS2-3)	<b>Disciplinary Core Ideas</b>  <b>ESS2.A: Earth Materials and Systems</b> • Wind and water can change the shape of the land. (2-ESS2-1)  <b>ESS2.B: Plate Tectonics and Large-Scale System Interactions</b> • Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2)  <b>ESS2.C: The Roles of Water in Earth's Surface Processes</b> • Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)  <b>ETS1.C: Optimizing the Design Solution</b> • Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (secondary to 2-ESS2-1)	<b>Crosscutting Concepts</b>  <b>Patterns</b> • Patterns in the natural world can be observed. (2-ESS2-2),(2-ESS2-3)  <b>Stability and Change</b> • Things may change slowly or rapidly. (2-ESS2-1)  ----- <b>Connections to Engineering, Technology, and Applications of Science</b>  <b>Influence of Engineering, Technology, and Science on Society and the Natural World</b> • Developing and using technology has impacts on the natural world. (2-ESS2-1)  ----- <b>Connections to Nature of Science</b>  <b>Science Addresses Questions About the Natural and Material World</b> • Scientists study the natural and material world. (2-ESS2-1)
Connections to other DCIs in second grade: 2.PS1.A (2-ESS2-3)		
Articulation of DCIs across grade-levels: K.ETS1.A (2-ESS2-1); 4.ESS2.A (2-ESS2-1); 4.ESS2.B (2-ESS2-2); 4.ETS1.A (2-ESS2-1); 4.ETS1.B (2-ESS2-1); 4.ETS1.C (2-ESS2-1); 5.ESS2.A (2-ESS2-1); 5.ESS2.C (2-ESS2-2),(2-ESS2-3)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.2.3 Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2-ESS2-1)		
RI.2.9 Compare and contrast the most important points presented by two texts on the same topic. (2-ESS2-1)		
W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (2-ESS2-3)		
W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-ESS2-3)		
SL.2.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (2-ESS2-2)		
Mathematics –		
MP.2 Reason abstractly and quantitatively. (2-ESS2-1),(2-ESS2-2)		
MP.4 Model with mathematics. (2-ESS2-1),(2-ESS2-2)		
MP.5 Use appropriate tools strategically. (2-ESS2-1)		
2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (2-ESS2-2)		
2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. (2-ESS2-1)		



## K-2-ETS1 Engineering Design

K-2-ETS1 Engineering Design		
<p>Students who demonstrate understanding can:</p> <p>K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <p>K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions.</p> <ul style="list-style-type: none"> <li>Ask questions based on observations to find more information about the natural and/or designed world(s). (K-2-ETS1-1)</li> <li>Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1)</li> </ul> <p><b>Developing and Using Models</b></p> <p>Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.</p> <ul style="list-style-type: none"> <li>Develop a simple model based on evidence to represent a proposed object or tool. (K-2-ETS1-2)</li> </ul> <p><b>Analyzing and Interpreting Data</b></p> <p>Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> <li>Analyze data from tests of an object or tool to determine if it works as intended. (K-2-ETS1-3)</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1)</li> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems. (K-2-ETS1-1)</li> <li>Before beginning to design a solution, it is important to clearly understand the problem. (K-2-ETS1-1)</li> </ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (K-2-ETS1-2)</li> </ul> <p><b>ETS1.C: Optimizing the Design Solution</b></p> <ul style="list-style-type: none"> <li>Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K-2-ETS1-3)</li> </ul>	<p><b>Structure and Function</b></p> <ul style="list-style-type: none"> <li>The shape and stability of structures of natural and designed objects are related to their function(s). (K-2-ETS1-2)</li> </ul>
<p>Connections to K-2-ETS1.A: Defining and Delimiting Engineering Problems include:</p> <p>Kindergarten: K-PS2-2, K-ESS3-2</p> <p>Connections to K-2-ETS1.B: Developing Possible Solutions to Problems include:</p> <p>Kindergarten: K-ESS3-3, First Grade: 1-PS4-4, Second Grade: 2-LS2-2</p> <p>Connections to K-2-ETS1.C: Optimizing the Design Solution include:</p> <p>Second Grade: 2-ESS2-1</p>		
<p>Articulation of DCIs across grade-bands: 3-5.ETS1.A (K-2-ETS1-1),(K-2-ETS1-2),(K-2-ETS1-3); 3-5.ETS1.B (K-2-ETS1-2),(K-2-ETS1-3); 3-5.ETS1.C (K-2-ETS1-1),(K-2-ETS1-2),(K-2-ETS1-3)</p>		
<p>Common Core State Standards Connections:</p> <p><b>ELA/Literacy –</b></p> <p>RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (K-2-ETS1-1)</p> <p>W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>SL.2.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (K-2-ETS1-2)</p> <p><b>Mathematics –</b></p> <p>MP.2 Reason abstractly and quantitatively. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>MP.4 Model with mathematics. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>MP.5 Use appropriate tools strategically. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (K-2-ETS1-1),(K-2-ETS1-3)</p>		



## 3-PS2 Motion and Stability: Forces and Interactions

3-PS2 Motion and Stability: Forces and Interactions		
<p>Students who demonstrate understanding can:</p> <p>3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. [Clarification Statement: Examples could include an unbalanced force on one side of a ball can make it start moving; and, balanced forces pushing on a box from both sides will not produce any motion at all.] [Assessment Boundary: Assessment is limited to one variable at a time: number, size, or direction of forces. Assessment does not include quantitative force size, only qualitative and relative. Assessment is limited to gravity being addressed as a force that pulls objects down.]</p> <p>3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. [Clarification Statement: Examples of motion with a predictable pattern could include a child swinging in a swing, a ball rolling back and forth in a bowl, and two children on a see-saw.] [Assessment Boundary: Assessment does not include technical terms such as period and frequency.]</p> <p>3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. [Clarification Statement: Examples of an electric force could include the force on hair from an electrically charged balloon and the electrical forces between a charged rod and pieces of paper; examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paperclips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.] [Assessment Boundary: Assessment is limited to forces produced by objects that can be manipulated by students, and electrical interactions are limited to static electricity.]</p> <p>3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets.* [Clarification Statement: Examples of problems could include constructing a latch to keep a door shut and creating a device to keep two moving objects from touching each other.]</p> <p>The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:</p>		
<b>Science and Engineering Practices</b>	<b>Disciplinary Core Ideas</b>	<b>Crosscutting Concepts</b>
<p><b>Asking Questions and Defining Problems</b> Asking questions and defining problems in grades 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships.</p> <ul style="list-style-type: none"> <li>Ask questions that can be investigated based on patterns such as cause and effect relationships. (3-PS2-3)</li> <li>Define a simple problem that can be solved through the development of a new or improved object or tool. (3-PS2-4)</li> </ul> <p><b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. (3-PS2-1)</li> <li>Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution. (3-PS2-2)</li> </ul> <p style="text-align: center;">-----</p> <p style="text-align: center;">Connections to Nature of Science</p> <p><b>Science Knowledge is Based on Empirical Evidence</b> Science findings are based on recognizing patterns. (3-PS2-2)</p> <p><b>Scientific Investigations Use a Variety of Methods</b> Science investigations use a variety of methods, tools, and techniques. (3-PS2-1)</p>	<p><b>PS2.A: Forces and Motion</b></p> <ul style="list-style-type: none"> <li>Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. (Boundary: Qualitative and conceptual, but not quantitative addition of forces are used at this level.) (3-PS2-1)</li> <li>The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. (Boundary: Technical terms, such as magnitude, velocity, momentum, and vector quantity, are not introduced at this level, but the concept that some quantities need both size and direction to be described is developed.) (3-PS2-2)</li> </ul> <p><b>PS2.B: Types of Interactions</b></p> <ul style="list-style-type: none"> <li>Objects in contact exert forces on each other. (3-PS2-1)</li> <li>Electric, and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, on their orientation relative to each other. (3-PS2-3),(3-PS2-4)</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns of change can be used to make predictions. (3-PS2-2)</li> </ul> <p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Cause and effect relationships are routinely identified. (3-PS2-1)</li> <li>Cause and effect relationships are routinely identified, tested, and used to explain change. (3-PS2-3)</li> </ul> <p style="text-align: center;">-----</p> <p style="text-align: center;">Connections to Engineering, Technology, and Applications of Science</p> <p><b>Interdependence of Science, Engineering, and Technology</b></p> <ul style="list-style-type: none"> <li>Scientific discoveries about the natural world can often lead to new and improved technologies, which are developed through the engineering design process. (3-PS2-4)</li> </ul>
Connections to other DCIs in third grade: N/A		
<p>Articulation of DCIs across grade-levels: K.PS2.A (3-PS2-1); K.PS2.B (3-PS2-1); K.PS3.C (3-PS2-1); K.ETS1.A (3-PS2-4); 1.ESS1.A (3-PS2-2); 4.PS4.A (3-PS2-2); 4.ETS1.A (3-PS2-4); 5.PS2.B (3-PS2-1); MS.PS2.A (3-PS2-1),(3-PS2-2); MS.PS2.B (3-PS2-3),(3-PS2-4); MS.ESS1.B (3-PS2-1),(3-PS2-2); MS.ESS2.C (3-PS2-1)</p>		
<p>Common Core State Standards Connections:</p> <p><b>ELA/Literacy –</b></p> <p>RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-PS2-1),(3-PS2-3)</p> <p>RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-PS2-3)</p> <p>RI.3.8 Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence). (3-PS2-3)</p> <p>W.3.7 Conduct short research projects that build knowledge about a topic. (3-PS2-1),(3-PS2-2)</p> <p>W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-PS2-1),(3-PS2-2)</p> <p>SL.3.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. (3-PS2-3)</p> <p><b>Mathematics –</b></p> <p>MP.2 Reason abstractly and quantitatively. (3-PS2-1)</p> <p>MP.5 Use appropriate tools strategically. (3-PS2-1)</p> <p>3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (3-PS2-1)</p>		



### 3-LS1 From Molecules to Organisms: Structures and Processes

3-LS1 From Molecules to Organisms: Structures and Processes		
Students who demonstrate understanding can:		
3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. [Clarification Statement: Changes organisms go through during their life form a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Developing and Using Models</b> Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> <li>Develop models to describe phenomena. (3-LS1-1)</li> </ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge is Based on Empirical Evidence</b></p> <ul style="list-style-type: none"> <li>Science findings are based on recognizing patterns. (3-LS1-1)</li> </ul>	<p><b>LS1.B: Growth and Development of Organisms</b></p> <ul style="list-style-type: none"> <li>Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1)</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns of change can be used to make predictions. (3-LS1-1)</li> </ul>
Connections to other DCIs in third grade: N/A		
Articulation of DCIs across grade-levels: MS.LS1.B (3-LS1-1)		
Common Core State Standards Connections:		
<p><b>ELA/Literacy—</b></p> <p>RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). (3-LS1-1)</p> <p>SL.3.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details. (3-LS1-1)</p> <p><b>Mathematics—</b></p> <p>MP.4 Model with mathematics. (3-LS1-1)</p> <p>3.NBT Number and Operations in Base Ten (3-LS1-1)</p> <p>3.NF Number and Operations—Fractions (3-LS1-1)</p>		



## 3-LS2 Ecosystems: Interactions, Energy, and Dynamics

### 3-LS2 Ecosystems: Interactions, Energy, and Dynamics

Students who demonstrate understanding can:

**3-LS2-1. Construct an argument that some animals form groups that help members survive.**

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Engaging in Argument from Evidence</b></p> <p>Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).</p> <ul style="list-style-type: none"> <li>Construct an argument with evidence, data, and/or a model. (3-LS2-1)</li> </ul>	<p><b>LS2.D: Social Interactions and Group Behavior</b></p> <ul style="list-style-type: none"> <li>Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size (Note: Moved from K–2). (3-LS2-1)</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Cause and effect relationships are routinely identified and used to explain change. (3-LS2-1)</li> </ul>
Connections to other DCIs in third grade: N/A		
Articulation of DCIs across grade-levels: 1.LS1.B (3-LS2-1); MS.LS2.A (3-LS2-1); MS.LS2.D (3-LS2-1)		
<p>Common Core State Standards Connections:</p> <p><b>ELA/Literacy –</b></p> <p>RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS2-1)</p> <p>RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS2-1)</p> <p>W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-LS2-1)</p> <p><b>Mathematics –</b></p> <p>MP.4 Model with mathematics. (3-LS2-1)</p> <p>3.NBT Number and Operations in Base Ten (3-LS2-1)</p>		



## 3-LS3 Heredity: Inheritance and Variation of Traits

3-LS3 Heredity: Inheritance and Variation of Traits		
<p>Students who demonstrate understanding can:</p> <p>3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. <span style="color: red;">[Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]</span></p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment. <span style="color: red;">[Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]</span></p> <p>The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:</p>		
<b>Science and Engineering Practices</b>	<b>Disciplinary Core Ideas</b>	<b>Crosscutting Concepts</b>
<p><b>Analyzing and Interpreting Data</b> Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.</p> <ul style="list-style-type: none"> <li>Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS3-1)</li> </ul> <p><b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.</p> <ul style="list-style-type: none"> <li>Use evidence (e.g., observations, patterns) to support an explanation. (3-LS3-2)</li> </ul>	<p><b>LS3.A: Inheritance of Traits</b></p> <ul style="list-style-type: none"> <li>Many characteristics of organisms are inherited from their parents. (3-LS3-1)</li> <li>Other characteristics result from individuals’ interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. (3-LS3-2)</li> </ul> <p><b>LS3.B: Variation of Traits</b></p> <ul style="list-style-type: none"> <li>Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1)</li> <li>The environment also affects the traits that an organism develops. (3-LS3-2)</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Similarities and differences in patterns can be used to sort and classify natural phenomena. (3-LS3-1)</li> </ul> <p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Cause and effect relationships are routinely identified and used to explain change. (3-LS3-2)</li> </ul>
Connections to other DCIs in third grade: N/A		
Articulation of DCIs across grade-levels: 1.LS3.A (3-LS3-1); 1.LS3.B (3-LS3-1); MS.LS1.B (3-LS3-2); MS.LS3.A (3-LS3-1); MS.LS3.B (3-LS3-1)		
Common Core State Standards Connections:		
<p><b>ELA/Literacy –</b></p> <p>RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS3-1),(3-LS3-2)</p> <p>RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS3-1),(3-LS3-2)</p> <p>RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS3-1),(3-LS3-2)</p> <p>W.3.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS3-1),(3-LS3-2)</p> <p>SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3-LS3-1),(3-LS3-2)</p> <p><b>Mathematics –</b></p> <p>MP.2 Reason abstractly and quantitatively. (3-LS3-1),(3-LS3-2)</p> <p>MP.4 Model with mathematics. (3-LS3-1),(3-LS3-2)</p> <p>3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS3-1),(3-LS3-2)</p>		



## 3-LS4 Biological Evolution: Unity and Diversity

### 3-LS4 Biological Evolution: Unity and Diversity

Students who demonstrate understanding can:

- 3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. [Clarification Statement: Examples of data could include type, size, and distributions of fossil organisms. Examples of fossils and environments could include marine fossils found on dry land, tropical plant fossils found in Arctic areas, and fossils of extinct organisms.] [Assessment Boundary: Assessment does not include identification of specific fossils or present plants and animals. Assessment is limited to major fossil types and relative ages.]
- 3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]
- 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]
- 3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.\* [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.] [Assessment Boundary: Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

#### Science and Engineering Practices

##### Analyzing and Interpreting Data

Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

- Analyze and interpret data to make sense of phenomena using logical reasoning. (3-LS4-1)

Constructing Explanations and Designing Solutions  
Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.

- Use evidence (e.g., observations, patterns) to construct an explanation. (3-LS4-2)

##### Engaging in Argument from Evidence

Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).

- Construct an argument with evidence. (3-LS4-3)
- Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. (3-LS4-4)

#### Disciplinary Core Ideas

##### LS2.C: Ecosystem Dynamics, Functioning, and Resilience

- When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. (secondary to 3-LS4-4)

##### LS4.A: Evidence of Common Ancestry and Diversity

- Some kinds of plants and animals that once lived on Earth are no longer found anywhere. (Note: moved from K-2) (3-LS4-1)
- Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments. (3-LS4-1)

##### LS4.B: Natural Selection

- Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. (3-LS4-2)

##### LS4.C: Adaptation

- For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)

##### LS4.D: Biodiversity and Humans

- Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4)

#### Crosscutting Concepts

##### Cause and Effect

- Cause and effect relationships are routinely identified and used to explain change. (3-LS4-2),(3-LS4-3)

##### Scale, Proportion, and Quantity

- Observable phenomena exist from very short to very long time periods. (3-LS4-1)

##### Systems and System Models

- A system can be described in terms of its components and their interactions. (3-LS4-4)

##### Connections to Engineering, Technology, and Applications of Science

##### Interdependence of Science, Engineering, and Technology

- Knowledge of relevant scientific concepts and research findings is important in engineering. (3-LS4-3)

##### Connections to Nature of Science

##### Scientific Knowledge Assumes an Order and Consistency in Natural Systems

- Science assumes consistent patterns in natural systems. (3-LS4-1)

Connections to other DCIs in third grade: 3-LS4.C (3-LS4-2); 3.ESS2.D (3-LS4-3); 3.ESS3.B (3-LS4-4)

Articulation of DCIs across grade-levels: K.ESS3.A (3-LS4-3)(3-LS4-4); K.ETS1.A (3-LS4-4); 1.LS3.A (3-LS4-3),(3-LS4-4); 2.LS2.A (3-LS4-3),(3-LS4-4); 2.LS4.D (3-LS4-3),(3-LS4-4); 4.ESS1.C (3-LS4-1); 4.ESS3.B (3-LS4-4); 4.ETS1.A (3-LS4-4); MS.LS2.A (3-LS4-1),(3-LS4-2),(3-LS4-3),(3-LS4-4); MS.LS2.C (3-LS4-4); MS.LS3.B (3-LS4-2); MS.LS4.A (3-LS4-1); MS.LS4.B (3-LS4-2),(3-LS4-3); MS.LS4.C (3-LS4-3),(3-LS4-4); MS.ESS1.C (3-LS4-1),(3-LS4-3),(3-LS4-4); MS.ESS2.B (3-LS4-1); MS.ESS3.C (3-LS4-4)

Common Core State Standards Connections:

##### ELA/Literacy–

- RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS4-1),(3-LS4-2),(3-LS4-3)
- RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS4-1),(3-LS4-2),(3-LS4-3),(3-LS4-4)
- RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS4-1),(3-LS4-2),(3-LS4-3),(3-LS4-4)
- W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-LS4-1),(3-LS4-3),(3-LS4-4)
- W.3.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS4-1),(3-LS4-2),(3-LS4-3),(3-LS4-4)
- W.3.9 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-LS4-1)
- SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3-LS4-2),(3-LS4-3),(3-LS4-4)

##### Mathematics–

- MP.2 Reason abstractly and quantitatively. (3-LS4-1),(3-LS4-2),(3-LS4-3),(3-LS4-4)
- MP.4 Model with mathematics. (3-LS4-1),(3-LS4-2),(3-LS4-3),(3-LS4-4)
- MP.5 Use appropriate tools strategically. (3-LS4-1)
- 3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3-LS4-2),(3-LS4-3)
- 3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS4-1)



## 3-ESS2 Earth's Systems

3-ESS2 Earth's Systems		
Students who demonstrate understanding can:		
3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. [Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.] [Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.]		
3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
	Disciplinary Core Ideas	Crosscutting Concepts
	ESS2.D: Weather and Climate <ul style="list-style-type: none"><li>Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS2-1)</li><li>Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2)</li></ul>	Patterns <ul style="list-style-type: none"><li>Patterns of change can be used to make predictions. (3-ESS2-1),(3-ESS2-2)</li></ul>
Connections to other DCIs in third grade: N/A		
Articulation of DCIs across grade-levels: K.ESS2.D (3-ESS2-1); 4.ESS2.A (3-ESS2-1); 5.ESS2.A (3-ESS2-1); MS.ESS2.C (3-ESS2-1),(3-ESS2-2); MS.ESS2.D (3-ESS2-1),(3-ESS2-2)		
Common Core State Standards Connections:		
ELA/Literacy—		
RI.3.1	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-ESS2-2)	
RI.3.9	Compare and contrast the most important points and key details presented in two texts on the same topic. (3-ESS2-2)	
W.3.9	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-ESS2-2)	
Mathematics—		
MP.2	Reason abstractly and quantitatively. (3-ESS2-1),(3-ESS2-2)	
MP.4	Model with mathematics. (3-ESS2-1),(3-ESS2-2)	
MP.5	Use appropriate tools strategically. (3-ESS2-1)	
3.MD.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (3-ESS2-1)	
3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in bar graphs. (3-ESS2-1)	



## 3-ESS3 Earth and Human Activity

### 3-ESS3 Earth and Human Activity

Students who demonstrate understanding can:

#### 3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.\*

[Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Engaging in Argument from Evidence</p> <p>Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).</p> <ul style="list-style-type: none"> <li>Make a claim about the merit of a solution to a problem by citing relevant evidence about how it meets the criteria and constraints of the problem. (3-ESS3-1)</li> </ul>	<p>ESS3.B: Natural Hazards</p> <ul style="list-style-type: none"> <li>A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (3-ESS3-1) (Note: This Disciplinary Core Idea is also addressed by 4-ESS3-2.)</li> </ul>	<p>Cause and Effect</p> <ul style="list-style-type: none"> <li>Cause and effect relationships are routinely identified, tested, and used to explain change. (3-ESS3-1)</li> </ul> <p>-----</p> <p>Connections to Engineering, Technology, and Applications of Science</p> <p>Influence of Engineering, Technology, and Science on Society and the Natural World</p> <ul style="list-style-type: none"> <li>Engineers improve existing technologies or develop new ones to increase their benefits (e.g., better artificial limbs), decrease known risks (e.g., seatbelts in cars), and meet societal demands (e.g., cell phones). (3-ESS3-1)</li> </ul> <p>-----</p> <p>Connections to Nature of Science</p> <p>Science is a Human Endeavor</p> <ul style="list-style-type: none"> <li>Science affects everyday life. (3-ESS3-1)</li> </ul>
Connections to other DCIs in third grade: N/A		
Articulation of DCIs across grade-levels: K.ESS3.B (3-ESS3-1); K.ETS1.A (3-ESS3-1); 4.ESS3.B (3-ESS3-1); 4.ETS1.A (3-ESS3-1); MS.ESS3.B (3-ESS3-1)		
<p>Common Core State Standards Connections:</p> <p>ELA/Literacy –</p> <p>W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-ESS3-1)</p> <p>W.3.7 Conduct short research projects that build knowledge about a topic. (3-ESS3-1)</p> <p>Mathematics –</p> <p>MP.2 Reason abstractly and quantitatively. (3-ESS3-1)</p> <p>MP.4 Model with mathematics. (3-ESS3-1)</p>		



## 3-5-ETS1 Engineering Design

### 3-5-ETS1 Engineering Design

Students who demonstrate understanding can:

- 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- 3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

#### Science and Engineering Practices

##### Asking Questions and Defining Problems

Asking questions and defining problems in 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships.

- Define a simple design problem that can be solved through the development of an object, tool, process, or system and includes several criteria for success and constraints on materials, time, or cost. (3-5-ETS1-1)

##### Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.

- Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. (3-5-ETS1-3)

##### Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.

- Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design problem. (3-5-ETS1-2)

#### Disciplinary Core Ideas

##### ETS1.A: Defining and Delimiting Engineering Problems

- Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (3-5-ETS1-1)

##### ETS1.B: Developing Possible Solutions

- Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2)
- At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (3-5-ETS1-2)
- Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved. (3-5-ETS1-3)

##### ETS1.C: Optimizing the Design Solution

- Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints. (3-5-ETS1-3)

#### Crosscutting Concepts

##### Influence of Engineering, Technology, and Science on Society and the Natural World

- People's needs and wants change over time, as do their demands for new and improved technologies. (3-5-ETS1-1)
- Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands. (3-5-ETS1-2)

Connections to 3-5-ETS1.A: Defining and Delimiting Engineering Problems include:

Fourth Grade: 4-PS3-4

Connections to 3-5-ETS1.B: Designing Solutions to Engineering Problems include:

Fourth Grade: 4-ESS3-2

Connections to 3-5-ETS1.C: Optimizing the Design Solution include:

Fourth Grade: 4-PS4-3

Articulation of DCIs across grade-bands: K-2.ETS1.A (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3); K-2.ETS1.B (3-5-ETS1-2); K-2.ETS1.C (3-5-ETS1-2),(3-5-ETS1-3); MS.ETS1.A (3-5-ETS1-1); MS.ETS1.B (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3); MS.ETS1.C (3-5-ETS1-2),(3-5-ETS1-3)

Common Core State Standards Connections:

##### ELA/Literacy –

- RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (3-5-ETS-2)
- RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (3-5-ETS-2)
- RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (3-5-ETS-2)
- W.5.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (3-5-ETS1-1),(3-5-ETS1-3)
- W.5.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (3-5-ETS1-1),(3-5-ETS1-3)
- W.5.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. (3-5-ETS1-1),(3-5-ETS1-3)

##### Mathematics –

- MP.2 Reason abstractly and quantitatively. (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3)
- MP.4 Model with mathematics. (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3)
- MP.5 Use appropriate tools strategically. (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3)
- 3-5.OA Operations and Algebraic Thinking (3-5-ETS1-1),(3-5-ETS1-2)



## 4-PS3 Energy

### 4-PS3 Energy

Students who demonstrate understanding can:

- 4-PS3-1. Use evidence to construct an explanation relating the speed of an object to the energy of that object. [Assessment Boundary: Assessment does not include quantitative measures of changes in the speed of an object or on any precise or quantitative definition of energy.]
- 4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. [Assessment Boundary: Assessment does not include quantitative measurements of energy.]
- 4-PS3-3. Ask questions and predict outcomes about the changes in energy that occur when objects collide. [Clarification Statement: Emphasis is on the change in the energy due to the change in speed, not on the forces, as objects interact.] [Assessment Boundary: Assessment does not include quantitative measurements of energy.]
- 4-PS3-4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.\* [Clarification Statement: Examples of devices could include electric circuits that convert electrical energy into motion energy of a vehicle, light, or sound; and, a passive solar heater that converts light into heat. Examples of constraints could include the materials, cost, or time to design the device.] [Assessment Boundary: Devices should be limited to those that convert motion energy to electric energy or use stored energy to cause motion or produce light or sound.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Asking Questions and Defining Problems</b> Asking questions and defining problems in grades 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships.</p> <ul style="list-style-type: none"> <li>Ask questions that can be investigated and predict reasonable outcomes based on patterns such as cause and effect relationships. (4-PS3-3)</li> </ul> <p><b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>Make observations to produce data to serve as the basis for evidence for an explanation of a phenomenon or test a design solution. (4-PS3-2)</li> </ul> <p><b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.</p> <ul style="list-style-type: none"> <li>Use evidence (e.g., measurements, observations, patterns) to construct an explanation. (4-PS3-1)</li> <li>Apply scientific ideas to solve design problems. (4-PS3-4)</li> </ul>	<p><b>PS3.A: Definitions of Energy</b></p> <ul style="list-style-type: none"> <li>The faster a given object is moving, the more energy it possesses. (4-PS3-1)</li> <li>Energy can be moved from place to place by moving objects or through sound, light, or electric currents. (4-PS3-2),(4-PS3-3)</li> </ul> <p><b>PS3.B: Conservation of Energy and Energy Transfer</b></p> <ul style="list-style-type: none"> <li>Energy is present whenever there are moving objects, sound, light, or heat. When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air; as a result, the air gets heated and sound is produced. (4-PS3-2),(4-PS3-3)</li> <li>Light also transfers energy from place to place. (4-PS3-2)</li> <li>Energy can also be transferred from place to place by electric currents, which can then be used locally to produce motion, sound, heat, or light. The currents may have been produced to begin with by transforming the energy of motion into electrical energy. (4-PS3-2),(4-PS3-4)</li> </ul> <p><b>PS3.C: Relationship Between Energy and Forces</b></p> <ul style="list-style-type: none"> <li>When objects collide, the contact forces transfer energy so as to change the objects' motions. (4-PS3-3)</li> </ul> <p><b>PS3.D: Energy in Chemical Processes and Everyday Life</b></p> <ul style="list-style-type: none"> <li>The expression "produce energy" typically refers to the conversion of stored energy into a desired form for practical use. (4-PS3-4)</li> </ul> <p><b>ETS1.A: Defining Engineering Problems</b></p> <ul style="list-style-type: none"> <li>Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (secondary to 4-PS3-4)</li> </ul>	<p><b>Energy and Matter</b></p> <ul style="list-style-type: none"> <li>Energy can be transferred in various ways and between objects. (4-PS3-1),(4-PS3-2),(4-PS3-3),(4-PS3-4)</li> </ul> <p>-----</p> <p><b>Connections to Engineering, Technology, and Applications of Science</b></p> <p><b>Influence of Science, Engineering and Technology on Society and the Natural World</b></p> <ul style="list-style-type: none"> <li>Engineers improve existing technologies or develop new ones. (4-PS3-4)</li> </ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Science is a Human Endeavor</b></p> <ul style="list-style-type: none"> <li>Most scientists and engineers work in teams. (4-PS3-4)</li> <li>Science affects everyday life. (4-PS3-4)</li> </ul>

Connections to other DCIs in fourth grade: N/A

Articulation of DCIs across grade-levels: K.PS2.B (4-PS3-3); K.ETS1.A (4-PS3-4); 2.ETS1.B (4-PS3-4); 3.PS2.A (4-PS3-3); 5.PS3.D (4-PS3-4); 5.LS1.C (4-PS3-4); MS.PS2.A (4-PS3-3); MS.PS2.B (4-PS3-2); MS.PS3.A (4-PS3-1),(4-PS3-2),(4-PS3-3),(4-PS3-4); MS.PS3.B (4-PS3-2),(4-PS3-3),(4-PS3-4); MS.PS3.C (4-PS3-3); MS.PS4.B (4-PS3-2); MS.ETS1.B (4-PS3-4); MS.ETS1.C (4-PS3-4)

Common Core State Standards Connections:

<b>ELA/Literacy –</b>	
RI.4.1	Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. (4-PS3-1)
RI.4.3	Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text. (4-PS3-1)
RI.4.9	Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably. (4-PS3-1)
W.4.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (4-PS3-1)
W.4.7	Conduct short research projects that build knowledge through investigation of different aspects of a topic. (4-PS3-2),(4-PS3-3),(4-PS3-4)
W.4.8	Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. (4-PS3-1),(4-PS3-2),(4-PS3-3),(4-PS3-4)
W.4.9	Draw evidence from literary or informational texts to support analysis, reflection, and research. (4-PS3-1)
<b>Mathematics –</b>	
4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (4-PS3-4)



## 4-PS4 Waves and their Applications in Technologies for Information Transfer

### 4-PS4 Waves and their Applications in Technologies for Information Transfer

Students who demonstrate understanding can:

- 4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. [Clarification Statement: Examples of models could include diagrams, analogies, and physical models using wire to illustrate wavelength and amplitude of waves.] [Assessment Boundary: Assessment does not include interference effects, electromagnetic waves, non-periodic waves, or quantitative model of amplitude and wavelength.]
- 4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. [Assessment Boundary: Assessment does not include knowledge of specific colors reflected and seen, the cellular mechanisms of vision, or how the retina works.]
- 4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information.\* [Clarification Statement: Examples of solutions could include drums sending coded information through sound waves, using a grid of 1's and 0's representing black and white to send information about a picture, and using Morse code to send text.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Developing and Using Models</b></p> <p>Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> <li>Develop a model using an analogy, example, or abstract representation to describe a scientific principle. (4-PS4-1)</li> <li>Develop a model to describe phenomena. (4-PS4-2)</li> </ul> <p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.</p> <ul style="list-style-type: none"> <li>Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design solution. (4-PS4-3)</li> </ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge is Based on Empirical Evidence</b></p> <ul style="list-style-type: none"> <li>Science findings are based on recognizing patterns. (4-PS4-1)</li> </ul>	<p><b>PS4.A: Wave Properties</b></p> <ul style="list-style-type: none"> <li>Waves, which are regular patterns of motion, can be made in water by disturbing the surface. When waves move across the surface of deep water, the water goes up and down in place; there is no net motion in the direction of the wave except when the water meets a beach. (Note: This grade band endpoint was moved from K–2.) (4-PS4-1)</li> <li>Waves of the same type can differ in amplitude (height of the wave) and wavelength (spacing between wave peaks). (4-PS4-1)</li> </ul> <p><b>PS4.B: Electromagnetic Radiation</b></p> <ul style="list-style-type: none"> <li>An object can be seen when light reflected from its surface enters the eyes. (4-PS4-2)</li> </ul> <p><b>PS4.C: Information Technologies and Instrumentation</b></p> <ul style="list-style-type: none"> <li>Digitized information can be transmitted over long distances without significant degradation. High-tech devices, such as computers or cell phones, can receive and decode information—convert it from digitized form to voice—and vice versa. (4-PS4-3)</li> </ul> <p><b>ETS1.C: Optimizing The Design Solution</b></p> <ul style="list-style-type: none"> <li>Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints. (secondary to 4-PS4-3)</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Similarities and differences in patterns can be used to sort and classify natural phenomena. (4-PS4-1)</li> <li>Similarities and differences in patterns can be used to sort and classify designed products. (4-PS4-3)</li> </ul> <p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Cause and effect relationships are routinely identified. (4-PS4-2)</li> </ul> <p>-----</p> <p><b>Connections to Engineering, Technology, and Applications of Science</b></p> <p><b>Interdependence of Science, Engineering, and Technology</b></p> <ul style="list-style-type: none"> <li>Knowledge of relevant scientific concepts and research findings is important in engineering. (4-PS4-3)</li> </ul>
Connections to other DCIs in fourth grade: 4.PS3.A (4-PS4-1); 4.PS3.B (4-PS4-1); 4.ETS1.A (4-PS4-3)		
Articulation of DCIs across grade-levels: K.ETS1.A (4-PS4-3); 1.PS4.B (4-PS4-2); 1.PS4.C (4-PS4-3); 2.ETS1.B (4-PS4-3); 2.ETS1.C (4-PS4-3); 3.PS2.A (4-PS4-3); MS.PS4.A (4-PS4-1); MS.PS4.B (4-PS4-2); MS.PS4.C (4-PS4-3); MS.LS1.D (4-PS4-2); MS.ETS1.B (4-PS4-3)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. (4-PS4-3)		
RI.4.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably. (4-PS4-3)		
SL.4.5 Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes. (4-PS4-1),(4-PS4-2)		
Mathematics –		
MP.4 Model with mathematics. (4-PS4-1),(4-PS4-2)		
4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. (4-PS4-1),(4-PS4-2)		



## 4-LS1 From Molecules to Organisms: Structures and Processes

4-LS1 From Molecules to Organisms: Structures and Processes		
Students who demonstrate understanding can:		
4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.][Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.]		
4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. [Clarification Statement: Emphasis is on systems of information transfer.][Assessment Boundary: Assessment does not include the mechanisms by which the brain stores and recalls information or the mechanisms of how sensory receptors function.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<div>Science and Engineering Practices</div> <div>Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.<ul style="list-style-type: none"><li>Use a model to test interactions concerning the functioning of a natural system. (4-LS1-2)</li></ul>Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).<ul style="list-style-type: none"><li>Construct an argument with evidence, data, and/or a model. (4-LS1-1)</li></ul></div>	<div>Disciplinary Core Ideas</div> <div>LS1.A: Structure and Function<ul style="list-style-type: none"><li>Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)</li></ul>LS1.D: Information Processing<ul style="list-style-type: none"><li>Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)</li></ul></div>	<div>Crosscutting Concepts</div> <div>Systems and System Models<ul style="list-style-type: none"><li>A system can be described in terms of its components and their interactions. (4-LS1-1) (4-LS1-2)</li></ul></div>
Connections to other DCIs in fourth grade: N/A		
Articulation of DCIs across grade-levels: 1.LS1.A (4-LS1-1); 1.LS1.D (4-LS1-2); 3.LS3.B (4-LS1-1); MS.LS1.A (4-LS1-1),(4-LS1-2); MS.LS1.D (4-LS1-2)		
Common Core State Standards Connections:		
ELA/Literacy –		
W.4.1	Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (4-LS1-1)	
SL.4.5	Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes. (4-LS1-2)	
Mathematics –		
4.G.A.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded across the line into matching parts. Identify line-symmetric figures and draw lines of symmetry. (4-LS1-1)	



## 4-ESS1 Earth's Place in the Universe

4-ESS1 Earth's Place in the Universe		
Students who demonstrate understanding can:		
4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. <span style="color: red;">[Clarification Statement: Examples of evidence from patterns could include rock layers with marine shell fossils above rock layers with plant fossils and no shells, indicating a change from land to water over time; and, a canyon with different rock layers in the walls and a river in the bottom, indicating that over time a river cut through the rock.] [Assessment Boundary: Assessment does not include specific knowledge of the mechanism of rock formation or memorization of specific rock formations and layers. Assessment is limited to relative time.]</span>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<b>Science and Engineering Practices</b>	<b>Disciplinary Core Ideas</b>	<b>Crosscutting Concepts</b>
<b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems. <ul style="list-style-type: none"> <li>Identify the evidence that supports particular points in an explanation. (4-ESS1-1)</li> </ul>	<b>ESS1.C: The History of Planet Earth</b> <ul style="list-style-type: none"> <li>Local, regional, and global patterns of rock formations reveal changes over time due to earth forces, such as earthquakes. The presence and location of certain fossil types indicate the order in which rock layers were formed. (4-ESS1-1)</li> </ul>	<b>Patterns</b> <ul style="list-style-type: none"> <li>Patterns can be used as evidence to support an explanation. (4-ESS1-1)</li> </ul> <p style="text-align: center;">-----</p> <p style="text-align: center;"><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge Assumes an Order and Consistency in Natural Systems</b></p> <ul style="list-style-type: none"> <li>Science assumes consistent patterns in natural systems. (4-ESS1-1)</li> </ul>
Connections to other DCIs in fourth grade: N/A		
Articulation of DCIs across grade-levels: 2.ESS1.C (4-ESS1-1); 3.LS4.A (4-ESS1-1); MS.LS4.A (4-ESS1-1); MS.ESS1.C (4-ESS1-1) MS.ESS2.A (4-ESS1-1); MS.ESS2.B (4-ESS1-1)		
Common Core State Standards Connections:		
ELA/Literacy – <ul style="list-style-type: none"> <li>W.4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic. (4-ESS1-1)</li> <li>W.4.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. (4-ESS1-1)</li> <li>W.4.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. (4-ESS1-1)</li> </ul> Mathematics – <ul style="list-style-type: none"> <li>MP.2 Reason abstractly and quantitatively. (4-ESS1-1)</li> <li>MP.4 Model with mathematics. (4-ESS1-1)</li> <li>4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. (4-ESS1-1)</li> </ul>		



## 4-ESS2 Earth's Systems

4-ESS2 Earth's Systems		
<p>Students who demonstrate understanding can:</p> <p>4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. [Clarification Statement: Examples of variables to test could include angle of slope in the downhill movement of water, amount of vegetation, speed of wind, relative rate of deposition, cycles of freezing and thawing of water, cycles of heating and cooling, and volume of water flow.] [Assessment Boundary: Assessment is limited to a single form of weathering or erosion.]</p> <p>4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features. [Clarification Statement: Maps can include topographic maps of Earth's land and ocean floor, as well as maps of the locations of mountains, continental boundaries, volcanoes, and earthquakes.]</p> <p>The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:</p>		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon. (4-ESS2-1)</li> </ul> <p><b>Analyzing and Interpreting Data</b> Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.</p> <ul style="list-style-type: none"> <li>Analyze and interpret data to make sense of phenomena using logical reasoning. (4-ESS2-2)</li> </ul>	<p><b>ESS2.A: Earth Materials and Systems</b></p> <ul style="list-style-type: none"> <li>Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms, and gravity break rocks, soils, and sediments into smaller particles and move them around. (4-ESS2-1)</li> </ul> <p><b>ESS2.B: Plate Tectonics and Large-Scale System Interactions</b></p> <ul style="list-style-type: none"> <li>The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes occur in patterns. Most earthquakes and volcanoes occur in bands that are often along the boundaries between continents and oceans. Major mountain chains form inside continents or near their edges. Maps can help locate the different land and water features areas of Earth. (4-ESS2-2)</li> </ul> <p><b>ESS2.E: Biogeology</b></p> <ul style="list-style-type: none"> <li>Living things affect the physical characteristics of their regions. (4-ESS2-1)</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns can be used as evidence to support an explanation. (4-ESS2-2)</li> </ul> <p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Cause and effect relationships are routinely identified, tested, and used to explain change. (4-ESS2-1)</li> </ul>
Connections to other DCIs in fourth grade: N/A		
Articulation of DCIs across grade-levels: 2.ESS1.C (4-ESS2-1); 2.ESS2.A (4-ESS2-1); 2.ESS2.B (4-ESS2-2); 2.ESS2.C (4-ESS2-2); 5.ESS2.A (4-ESS2-1); 5.ESS2.C (4-ESS2-2); MS.ESS1.C (4-ESS2-2); MS.ESS2.A (4-ESS2-2); MS.ESS2.B (4-ESS2-2)		
Common Core State Standards Connections:		
<p><b>ELA/Literacy –</b></p> <p>RI.4.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. (4-ESS2-2)</p> <p>W.4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic. (4-ESS2-1)</p> <p>W.4.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. (4-ESS2-1)</p> <p><b>Mathematics –</b></p> <p>MP.2 Reason abstractly and quantitatively. (4-ESS2-1)</p> <p>MP.4 Model with mathematics. (4-ESS2-1)</p> <p>MP.5 Use appropriate tools strategically. (4-ESS2-1)</p> <p>4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. (4-ESS2-1)</p> <p>4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. (4-ESS2-1),(4-ESS2-2)</p>		



## 4-ESS3 Earth and Human Activity

### 4-ESS3 Earth and Human Activity

Students who demonstrate understanding can:

- 4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. [Clarification Statement: Examples of renewable energy resources could include wind energy, water behind dams, and sunlight; non-renewable energy resources are fossil fuels and fissile materials. Examples of environmental effects could include loss of habitat due to dams, loss of habitat due to surface mining, and air pollution from burning of fossil fuels.]
- 4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.\* [Clarification Statement: Examples of solutions could include designing an earthquake-resistant building and improving monitoring of volcanic activity.][Assessment Boundary: Assessment is limited to earthquakes, floods, tsunamis, and volcanic eruptions.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

#### Science and Engineering Practices

**Constructing Explanations and Designing Solutions**  
Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.

- Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design solution. (4-ESS3-2)

**Obtaining, Evaluating, and Communicating Information**  
Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluate the merit and accuracy of ideas and methods.

- Obtain and combine information from books and other reliable media to explain phenomena. (4-ESS3-1)

#### Disciplinary Core Ideas

- ESS3.A: Natural Resources**
- Energy and fuels that humans use are derived from natural sources, and their use affects the environment in multiple ways. Some resources are renewable over time, and others are not. (4-ESS3-1)
- ESS3.B: Natural Hazards**
- A variety of hazards result from natural processes (e.g., earthquakes, tsunamis, volcanic eruptions). Humans cannot eliminate the hazards but can take steps to reduce their impacts. (4-ESS3-2) (Note: This Disciplinary Core Idea can also be found in 3.WC.)
- ETS1.B: Designing Solutions to Engineering Problems**
- Testing a solution involves investigating how well it performs under a range of likely conditions. (secondary to 4-ESS3-2)

#### Crosscutting Concepts

- Cause and Effect**
- Cause and effect relationships are routinely identified and used to explain change. (4-ESS3-1)
  - Cause and effect relationships are routinely identified, tested, and used to explain change. (4-ESS3-2)
- 
- Connections to Engineering, Technology, and Applications of Science**
- Interdependence of Science, Engineering, and Technology**
- Knowledge of relevant scientific concepts and research findings is important in engineering. (4-ESS3-1)
- Influence of Science, Engineering and Technology on Society and the Natural World**
- Over time, people's needs and wants change, as do their demands for new and improved technologies. (4-ESS3-1)
  - Engineers improve existing technologies or develop new ones to increase their benefits, to decrease known risks, and to meet societal demands. (4-ESS3-2)

Connections to other DCIs in fourth grade: 4.ETS1.C (4-ESS3-2)

Articulation of DCIs across grade-levels: K.ETS1.A (4-ESS3-2); 2.ETS1.B (4-ESS3-2); 2.ETS1.C (4-ESS3-2); 5.ESS3.C (4-ESS3-1); MS.PS3.D (4-ESS3-1); MS.ESS2.A (4-ESS3-1),(4-ESS3-2); MS.ESS3.A (4-ESS3-1); MS.ESS3.B (4-ESS3-2); MS.ESS3.C (4-ESS3-1); MS.ESS3.D (4-ESS3-1); MS.ETS1.B (4-ESS3-2)

Common Core State Standards Connections:

- ELA/Literacy–**
- RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. (4-ESS3-2)
- RI.4.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably. (4-ESS3-2)
- W.4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic. (4-ESS3-1)
- W.4.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. (4-ESS3-1)
- W.4.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. (4-ESS3-1)
- Mathematics–**
- MP.2 Reason abstractly and quantitatively. (4-ESS3-1),(4-ESS3-2)
- MP.4 Model with mathematics. (4-ESS3-1),(4-ESS3-2)
- 4.OA.A.1 Interpret a multiplication equation as a comparison, e.g., interpret  $35 = 5 \times 7$  as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. (4-ESS3-1),(4-ESS3-2)



## 3-5-ETS1 Engineering Design

3-5-ETS1 Engineering Design		
<p>Students who demonstrate understanding can:</p> <p>3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <p>3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <p>3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p> <p>The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:</p>		
<p style="text-align: center;"><b>Science and Engineering Practices</b></p> <p><b>Asking Questions and Defining Problems</b> Asking questions and defining problems in 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships.</p> <ul style="list-style-type: none"> <li>Define a simple design problem that can be solved through the development of an object, tool, process, or system and includes several criteria for success and constraints on materials, time, or cost. (3-5-ETS1-1)</li> </ul> <p><b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. (3-5-ETS1-3)</li> </ul> <p><b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.</p> <ul style="list-style-type: none"> <li>Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design problem. (3-5-ETS1-2)</li> </ul>	<p style="text-align: center;"><b>Disciplinary Core Ideas</b></p> <p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (3-5-ETS1-1)</li> </ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2)</li> <li>At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (3-5-ETS1-2)</li> <li>Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved. (3-5-ETS1-3)</li> </ul> <p><b>ETS1.C: Optimizing the Design Solution</b></p> <ul style="list-style-type: none"> <li>Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints. (3-5-ETS1-3)</li> </ul>	<p style="text-align: center;"><b>Crosscutting Concepts</b></p> <p><b>Influence of Engineering, Technology, and Science on Society and the Natural World</b></p> <ul style="list-style-type: none"> <li>People's needs and wants change over time, as do their demands for new and improved technologies. (3-5-ETS1-1)</li> <li>Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands. (3-5-ETS1-2)</li> </ul>
<p>Connections to 3-5-ETS1.A: Defining and Delimiting Engineering Problems include: Fourth Grade: 4-PS3-4</p> <p>Connections to 3-5-ETS1.B: Designing Solutions to Engineering Problems include: Fourth Grade: 4-ESS3-2</p> <p>Connections to 3-5-ETS1.C: Optimizing the Design Solution include: Fourth Grade: 4-PS4-3</p>		
<p>Articulation of DCIs across grade-bands: K-2.ETS1.A (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3); K-2.ETS1.B (3-5-ETS1-2); K-2.ETS1.C (3-5-ETS1-2),(3-5-ETS1-3); MS.ETS1.A (3-5-ETS1-1); MS.ETS1.B (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3); MS.ETS1.C (3-5-ETS1-2),(3-5-ETS1-3)</p>		
<p>Common Core State Standards Connections:</p> <p><b>ELA/Literacy –</b></p> <p>RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (3-5-ETS-2)</p> <p>RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (3-5-ETS-2)</p> <p>RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (3-5-ETS-2)</p> <p>W.5.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (3-5-ETS1-1),(3-5-ETS1-3)</p> <p>W.5.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (3-5-ETS1-1),(3-5-ETS1-3)</p> <p>W.5.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. (3-5-ETS1-1),(3-5-ETS1-3)</p> <p><b>Mathematics –</b></p> <p>MP.2 Reason abstractly and quantitatively. (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3)</p> <p>MP.4 Model with mathematics. (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3)</p> <p>MP.5 Use appropriate tools strategically. (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3)</p> <p>3-5.OA Operations and Algebraic Thinking (3-5-ETS1-1),(3-5-ETS1-2)</p>		



## 5-PS1 Matter and Its Interactions

5-PS1 Matter and Its Interactions		
Students who demonstrate understanding can:		
5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. [Clarification Statement: Examples of evidence could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.][Assessment Boundary: Assessment does not include the atomic-scale mechanism of evaporation and condensation or defining the unseen particles.]		
5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. [Clarification Statement: Examples of reactions or changes could include phase changes, dissolving, and mixing that form new substances.][Assessment Boundary: Assessment does not include distinguishing mass and weight.]		
5-PS1-3. Make observations and measurements to identify materials based on their properties. [Clarification Statement: Examples of materials to be identified could include baking soda and other powders, metals, minerals, and liquids. Examples of properties could include color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility; density is not intended as an identifiable property.][Assessment Boundary: Assessment does not include density or distinguishing mass and weight.]		
5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Developing and Using Models</b></p> <p>Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"><li>Develop a model to describe phenomena. (5-PS1-1)</li></ul> <p><b>Planning and Carrying Out Investigations</b></p> <p>Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.</p> <ul style="list-style-type: none"><li>Conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. (5-PS1-4)</li><li>Make observations and measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon. (5-PS1-3)</li></ul> <p><b>Using Mathematics and Computational Thinking</b></p> <p>Mathematical and computational thinking in 3–5 builds on K–2 experiences and progresses to extending quantitative measurements to a variety of physical properties and using computation and mathematics to analyze data and compare alternative design solutions.</p> <ul style="list-style-type: none"><li>Measure and graph quantities such as weight to address scientific and engineering questions and problems. (5-PS1-2)</li></ul>	<p><b>PS1.A: Structure and Properties of Matter</b></p> <ul style="list-style-type: none"><li>Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations, including the inflation and shape of a balloon and the effects of air on larger particles or objects. (5-PS1-1)</li><li>The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish. (5-PS1-2)</li><li>Measurements of a variety of properties can be used to identify materials. (Boundary: At this grade level, mass and weight are not distinguished, and no attempt is made to define the unseen particles or explain the atomic-scale mechanism of evaporation and condensation.) (5-PS1-3)</li></ul> <p><b>PS1.B: Chemical Reactions</b></p> <ul style="list-style-type: none"><li>When two or more different substances are mixed, a new substance with different properties may be formed. (5-PS1-4)</li><li>No matter what reaction or change in properties occurs, the total weight of the substances does not change. (Boundary: Mass and weight are not distinguished at this grade level.) (5-PS1-2)</li></ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"><li>Cause and effect relationships are routinely identified, tested, and used to explain change. (5-PS1-4)</li></ul> <p><b>Scale, Proportion, and Quantity</b></p> <ul style="list-style-type: none"><li>Natural objects exist from the very small to the immensely large. (5-PS1-1)</li><li>Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume. (5-PS1-2),(5-PS1-3)</li></ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge Assumes an Order and Consistency in Natural Systems</b></p> <ul style="list-style-type: none"><li>Science assumes consistent patterns in natural systems. (5-PS1-2)</li></ul>
Connections to other DCIs in fifth grade: N/A		
Articulation of DCIs across grade-levels: 2.PS1.A (5-PS1-1),(5-PS1-2),(5-PS1-3); 2.PS1.B (5-PS1-2),(5-PS1-4); MS.PS1.A (5-PS1-1),(5-PS1-2),(5-PS1-3),(5-PS1-4); MS.PS1.B (5-PS1-2),(5-PS1-4)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-PS1-1)	
W.5.7	Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (5-PS1-2),(5-PS1-3),(5-PS1-4)	
W.5.8	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (5-PS1-2),(5-PS1-3),(5-PS1-4)	
W.5.9	Draw evidence from literary or informational texts to support analysis, reflection, and research. (5-PS1-2),(5-PS1-3),(5-PS1-4)	
Mathematics –		
MP.2	Reason abstractly and quantitatively. (5-PS1-1),(5-PS1-2),(5-PS1-3)	
MP.4	Model with mathematics. (5-PS1-1),(5-PS1-2),(5-PS1-3)	
MP.5	Use appropriate tools strategically. (5-PS1-2),(5-PS1-3)	
5.NBT.A.1	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. (5-PS1-1)	
5.NF.B.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. (5-PS1-1)	
5.MD.A.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real-world problems. (5-PS1-2)	
5.MD.C.3	Recognize volume as an attribute of solid figures and understand concepts of volume measurement. (5-PS1-1)	
5.MD.C.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. (5-PS1-1)	



## 5-PS2 Motion and Stability: Forces and Interactions

### 5-PS2 Motion and Stability: Forces and Interactions

Students who demonstrate understanding can:

- 5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down. [Clarification Statement: "Down" is a local description of the direction that points toward the center of the spherical Earth.] [Assessment Boundary: Assessment does not include mathematical representation of gravitational force.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Engaging in Argument from Evidence</p> <p>Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).</p> <ul style="list-style-type: none"> <li>Support an argument with evidence, data, or a model. (5-PS2-1)</li> </ul>	<p>PS2.B: Types of Interactions</p> <ul style="list-style-type: none"> <li>The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center. (5-PS2-1)</li> </ul>	<p>Cause and Effect</p> <p>§ Cause and effect relationships are routinely identified and used to explain change. (5-PS2-1)</p>
<p>Connections to other DCIs in fifth grade: N/A</p> <p>Articulation of DCIs across grade-levels: 3.PS2.A (5-PS2-1); 3.PS2.B (5-PS2-1); MS.PS2.B (5-PS2-1); MS.ESS1.B (5-PS2-1); MS.ESS2.C (5-PS2-1)</p>		
<p>Common Core State Standards Connections:</p> <p>ELA/Literacy –</p> <p>RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-PS2-1)</p> <p>RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-PS2-1)</p> <p>W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-PS2-1)</p>		



## 5-PS3 Energy

5-PS3 Energy		
Students who demonstrate understanding can:		
5-PS3-1. Use models to describe that energy in animals’ food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. <b>[Clarification Statement: Examples of models could include diagrams, and flow charts.]</b>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Developing and Using Models</b></p> <p>Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> <li>Use models to describe phenomena. (5-PS3-1)</li> </ul>	<p><b>PS3.D: Energy in Chemical Processes and Everyday Life</b></p> <ul style="list-style-type: none"> <li>The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1)</li> </ul> <p><b>LS1.C: Organization for Matter and Energy Flow in Organisms</b></p> <ul style="list-style-type: none"> <li>Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. (secondary to 5-PS3-1)</li> </ul>	<p><b>Energy and Matter</b></p> <ul style="list-style-type: none"> <li>§ Energy can be transferred in various ways and between objects. (5-PS3-1)</li> </ul>
Connections to other DCIs in fifth grade: N/A		
Articulation of DCIs across grade-levels: K.LS1.C (5-PS3-1); 2.LS2.A (5-PS3-1); 4.PS3.A (5-PS3-1); 4.PS3.B (5-PS3-1); 4.PS3.D (5-PS3-1); MS.PS3.D (5-PS3-1); MS.PS4.B (5-PS3-1); MS.LS1.C (5-PS3-1); MS.LS2.B (5-PS3-1)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-PS3-1)	
SL.5.5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-PS3-1)	



## 5-LS1 From Molecules to Organisms: Structures and Processes

5-LS1 From Molecules to Organisms: Structures and Processes		
Students who demonstrate understanding can:		
5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water. <span style="color: red;">[Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.]</span>		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). <ul style="list-style-type: none"> <li>Support an argument with evidence, data, or a model. (5-LS1-1)</li> </ul>	LS1.C: Organization for Matter and Energy Flow in Organisms <ul style="list-style-type: none"> <li>Plants acquire their material for growth chiefly from air and water. (5-LS1-1)</li> </ul>	Energy and Matter <ul style="list-style-type: none"> <li>Matter is transported into, out of, and within systems. (5-LS1-1)</li> </ul>
Connections to other DCIs in fifth grade: 5.PS1.A (5-LS1-1)		
Articulation of DCIs across grade-levels: K.LS1.C (5-LS1-1); 2.LS2.A (5-LS1-1); MS.LS1.C (5-LS1-1)		
Common Core State Standards Connections:		
ELA/Literacy – RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-LS1-1) RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-LS1-1) W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-LS1-1) Mathematics – MP.2 Reason abstractly and quantitatively. (5-LS1-1) MP.4 Model with mathematics. (5-LS1-1) MP.5 Use appropriate tools strategically. (5-LS1-1) 5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. (5-LS1-1)		



## 5-LS2 Ecosystems: Interactions, Energy, and Dynamics

5-LS2 Ecosystems: Interactions, Energy, and Dynamics		
Students who demonstrate understanding can:		
5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models</p> <p>Modeling in 3–5 builds on K–2 models and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"><li>Develop a model to describe phenomena. (5-LS2-1)</li></ul> <p>-----</p> <p>Connections to Nature of Science</p> <p>Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena</p> <ul style="list-style-type: none"><li>Science explanations describe the mechanisms for natural events. (5-LS2-1)</li></ul>	<p>LS2.A: Interdependent Relationships in Ecosystems</p> <ul style="list-style-type: none"><li>The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as “decomposers.” Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. (5-LS2-1)</li></ul> <p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p> <ul style="list-style-type: none"><li>Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1)</li></ul>	<p>Systems and System Models</p> <ul style="list-style-type: none"><li>A system can be described in terms of its components and their interactions. (5-LS2-1)</li></ul>
Connections to other DCIs in fifth grade: 5.PS1.A (5-LS2-1); 5.ESS2.A (5-LS2-1)		
Articulation of DCIs across grade-levels: 2.PS1.A (5-LS2-1); 2.LS4.D (5-LS2-1); 4.ESS2.E (5-LS2-1); MS.PS3.D (5-LS2-1); MS.LS1.C (5-LS2-1); MS.LS2.A (5-LS2-1); MS.LS2.B (5-LS2-1)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-LS2-1)	
SL.5.5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-LS2-1)	
Mathematics –		
MP.2	Reason abstractly and quantitatively. (5-LS2-1)	
MP.4	Model with mathematics. (5-LS2-1)	



## 5-ESS1 Earth's Place in the Universe

### 5-ESS1 Earth's Place in the Universe

Students who demonstrate understanding can:

5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. [Assessment Boundary: Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, stage).]

5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. [Clarification Statement: Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months.] [Assessment Boundary: Assessment does not include causes of seasons.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

#### Science and Engineering Practices

##### Analyzing and Interpreting Data

Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

- Represent data in graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships. (5-ESS1-2)

##### Engaging in Argument from Evidence

Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).

- Support an argument with evidence, data, or a model. (5-ESS1-1)

#### Disciplinary Core Ideas

##### ESS1.A: The Universe and its Stars

- The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth. (5-ESS1-1)

##### ESS1.B: Earth and the Solar System

- The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year. (5-ESS1-2)

#### Crosscutting Concepts

##### Patterns

- Similarities and differences in patterns can be used to sort, classify, communicate and analyze simple rates of change for natural phenomena. (5-ESS1-2)

##### Scale, Proportion, and Quantity

- Natural objects exist from the very small to the immensely large. (5-ESS1-1)

Connections to other DCIs in fifth grade: N/A

Articulation of DCIs across grade-levels: 1.ESS1.A (5-ESS1-2); 1.ESS1.B (5-ESS1-2); 3.PS2.A (5-ESS1-2); MS.ESS1.A (5-ESS1-1),(5-ESS1-2); MS.ESS1.B (5-ESS1-1),(5-ESS1-2)

Common Core State Standards Connections:

##### ELA/Literacy–

- RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-ESS1-1)
- RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-ESS1-1)
- RI.5.8 Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s). (5-ESS1-1)
- RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-ESS1-1)
- W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-ESS1-1)
- SL.5.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-ESS1-2)

##### Mathematics–

- MP.2 Reason abstractly and quantitatively. (5-ESS1-1),(5-ESS1-2)
- MP.4 Model with mathematics. (5-ESS1-1),(5-ESS1-2)
- 5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. (5-ESS1-1)
- 5.G.A.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. (5-ESS1-2)



## 5-ESS2 Earth's Systems

5-ESS2 Earth's Systems		
Students who demonstrate understanding can:		
5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. [Clarification Statement: Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.] [Assessment Boundary: Assessment is limited to the interactions of two systems at a time.]		
5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. [Assessment Boundary: Assessment is limited to oceans, lakes, rivers, glaciers, ground water, and polar ice caps, and does not include the atmosphere.]		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Developing and Using Models</b></p> <p>Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"><li>Develop a model using an example to describe a scientific principle. (5-ESS2-1)</li></ul> <p><b>Using Mathematics and Computational Thinking</b></p> <p>Mathematical and computational thinking in 3–5 builds on K–2 experiences and progresses to extending quantitative measurements to a variety of physical properties and using computation and mathematics to analyze data and compare alternative design solutions.</p> <ul style="list-style-type: none"><li>Describe and graph quantities such as area and volume to address scientific questions. (5-ESS2-2)</li></ul>	<p><b>ESS2.A: Earth Materials and Systems</b></p> <ul style="list-style-type: none"><li>Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth's surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather. (5-ESS2-1)</li></ul> <p><b>ESS2.C: The Roles of Water in Earth's Surface Processes</b></p> <ul style="list-style-type: none"><li>Nearly all of Earth's available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere. (5-ESS2-2)</li></ul>	<p><b>Scale, Proportion, and Quantity</b></p> <ul style="list-style-type: none"><li>Standard units are used to measure and describe physical quantities such as weight and volume. (5-ESS2-2)</li></ul> <p><b>Systems and System Models</b></p> <ul style="list-style-type: none"><li>A system can be described in terms of its components and their interactions. (5-ESS2-1)</li></ul>
Connections to other DCIs in fifth grade: N/A		
Articulation of DCIs across grade-levels: 2.ESS2.A (5-ESS2-1); 2.ESS2.C (5-ESS2-2); 3.ESS2.D (5-ESS2-1); 4.ESS2.A (5-ESS2-1); MS.ESS2.A (5-ESS2-1); MS.ESS2.C (5-ESS2-1),(5-ESS2-2); MS.ESS2.D (5-ESS2-1); MS.ESS3.A (5-ESS2-2)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-ESS2-1),(5-ESS2-2)	
W.5.8	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (5-ESS2-2)	
SL.5.5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-ESS2-1),(5-ESS2-2)	
Mathematics –		
MP.2	Reason abstractly and quantitatively. (5-ESS2-1),(5-ESS2-2)	
MP.4	Model with mathematics. (5-ESS2-1),(5-ESS2-2)	
5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. (5-ESS2-1)	



## 5-ESS3 Earth and Human Activity

5-ESS3 Earth and Human Activity		
Students who demonstrate understanding can:		
5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.		
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<b>Science and Engineering Practices</b>  Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluating the merit and accuracy of ideas and methods. <ul style="list-style-type: none"><li>Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem. (5-ESS3-1)</li></ul>	<b>Disciplinary Core Ideas</b>  ESS3.C: Human Impacts on Earth Systems <ul style="list-style-type: none"><li>Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. (5-ESS3-1)</li></ul>	<b>Crosscutting Concepts</b>  Systems and System Models <ul style="list-style-type: none"><li>A system can be described in terms of its components and their interactions. (5-ESS3-1)</li></ul> <hr/> <b>Connections to Nature of Science</b>  Science Addresses Questions About the Natural and Material World. <ul style="list-style-type: none"><li>Science findings are limited to questions that can be answered with empirical evidence. (5-ESS3-1)</li></ul>
Connections to other DCIs in fifth grade: N/A		
Articulation of DCIs across grade-levels: MS.ESS3.A (5-ESS3-1); MS.ESS3.C (5-ESS3-1); MS.ESS3.D (5-ESS3-1)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.5.1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-ESS3-1)	
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.(5-ESS3-1)	
RI.5.9	Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-ESS3-1)	
W.5.8	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (5-ESS3-1)	
W.5.9	Draw evidence from literary or informational texts to support analysis, reflection, and research. (5-ESS3-1)	
Mathematics –		
MP.2	Reason abstractly and quantitatively. (5-ESS3-1)	
MP.4	Model with mathematics. (5-ESS3-1)	



# Middle School Physical Science MS-PS1 Matter and Its Interactions

MS-PS1 Matter and Its Interactions		
Students who demonstrate understanding can:		
MS-PS1-1.	Develop models to describe the atomic composition of simple molecules and extended structures. [Clarification Statement: Emphasis is on developing models of molecules that vary in complexity. Examples of simple molecules could include ammonia and methanol. Examples of extended structures could include sodium chloride or diamonds. Examples of molecular-level models could include drawings, 3D ball and stick structures, or computer representations showing different molecules with different types of atoms.] [Assessment Boundary: Assessment does not include valence electrons and bonding energy, discussing the ionic nature of subunits of complex structures, or a complete depiction of all individual atoms in a complex molecule or extended structure.]	
MS-PS1-2.	Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. [Clarification Statement: Examples of reactions could include burning sugar or steel wool, fat reacting with sodium hydroxide, and mixing zinc with hydrogen chloride.] [Assessment Boundary: Assessment is limited to analysis of the following properties: density, melting point, boiling point, solubility, flammability, and odor.]	
MS-PS1-3.	Gather and make sense of information to describe that synthetic materials come from natural resources and impact society. [Clarification Statement: Emphasis is on natural resources that undergo a chemical process to form the synthetic material. Examples of new materials could include new medicine, foods, and alternative fuels.] [Assessment Boundary: Assessment is limited to qualitative information.]	
MS-PS1-4.	Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed. [Clarification Statement: Emphasis is on qualitative molecular-level models of solids, liquids, and gases to show that adding or removing thermal energy increases or decreases kinetic energy of the particles until a change of state occurs. Examples of models could include drawings and diagrams. Examples of particles could include molecules or inert atoms. Examples of pure substances could include water, carbon dioxide, and helium.]	
MS-PS1-5.	Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved. [Clarification Statement: Emphasis is on law of conservation of matter and on physical models or drawings, including digital forms, that represent atoms.] [Assessment Boundary: Assessment does not include the use of atomic masses, balancing symbolic equations, or intermolecular forces.]	
MS-PS1-6.	Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.* [Clarification Statement: Emphasis is on the design, controlling the transfer of energy to the environment, and modification of a device using factors such as type and concentration of a substance. Examples of designs could involve chemical reactions such as dissolving ammonium chloride or calcium chloride.] [Assessment Boundary: Assessment is limited to the criteria of amount, time, and temperature of substance in testing the device.]	
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<b>Science and Engineering Practices</b> <b>Developing and Using Models</b> Modeling in 6–8 builds on K–5 and progresses to developing, using and revising models to describe, test, and predict more abstract phenomena and design systems. <ul style="list-style-type: none"> <li>Develop a model to predict and/or describe phenomena. (MS-PS1-1), (MS-PS1-4)</li> <li>Develop a model to describe unobservable mechanisms. (MS-PS1-5)</li> </ul> <b>Analyzing and Interpreting Data</b> Analyzing data in 6–8 builds on K–5 and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis. <ul style="list-style-type: none"> <li>Analyze and interpret data to determine similarities and differences in findings. (MS-PS1-2)</li> </ul> <b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific knowledge, principles, and theories. <ul style="list-style-type: none"> <li>Undertake a design project, engaging in the design cycle, to construct and/or implement a solution that meets specific design criteria and constraints. (MS-PS1-6)</li> </ul> <b>Obtaining, Evaluating, and Communicating Information</b> Obtaining, evaluating, and communicating information in 6–8 builds on K–5 and progresses to evaluating the merit and validity of ideas and methods. <ul style="list-style-type: none"> <li>Gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence. (MS-PS1-3)</li> </ul> <hr/> <b>Connections to Nature of Science</b> <b>Scientific Knowledge is Based on Empirical Evidence</b> <ul style="list-style-type: none"> <li>Science knowledge is based upon logical and conceptual connections between evidence and</li> </ul>	<b>Disciplinary Core Ideas</b> <b>PS1.A: Structure and Properties of Matter</b> <ul style="list-style-type: none"> <li>Substances are made from different types of atoms, which combine with one another in various ways. Atoms form molecules that range in size from two to thousands of atoms. (MS-PS1-1)</li> <li>Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it. (MS-PS1-2), (MS-PS1-3)</li> <li>Gases and liquids are made of molecules or inert atoms that are moving about relative to each other. (MS-PS1-4)</li> <li>In a liquid, the molecules are constantly in contact with others; in a gas, they are widely spaced except when they happen to collide. In a solid, atoms are closely spaced and may vibrate in position but do not change relative locations. (MS-PS1-4)</li> <li>Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals). (MS-PS1-1)</li> <li>The changes of state that occur with variations in temperature or pressure can be described and predicted using these models of matter. (MS-PS1-4)</li> </ul> <b>PS1.B: Chemical Reactions</b> <ul style="list-style-type: none"> <li>Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants. (MS-PS1-2), (MS-PS1-3), (MS-PS1-5)</li> <li>The total number of each type of atom is conserved, and thus the mass does not change. (MS-PS1-5)</li> <li>Some chemical reactions release energy, others store energy. (MS-PS1-6)</li> </ul> <b>PS3.A: Definitions of Energy</b> <ul style="list-style-type: none"> <li>The term “heat” as used in everyday language refers both to thermal energy (the motion of atoms or molecules within a substance) and the transfer of that thermal energy from one object to another. In science, heat is used only for this second meaning; it refers to the energy transferred due to the temperature difference between two objects. (secondary to MS-PS1-4)</li> <li>The temperature of a system is proportional to the average internal kinetic energy and potential energy per atom or molecule (whichever is the appropriate building block for the system’s material). The details of that relationship depend on the type of atom or molecule and the interactions among the atoms in the material. Temperature is not a direct measure of a system’s total thermal energy. The total thermal energy (sometimes called the total internal energy) of a system depends</li> </ul>	<b>Crosscutting Concepts</b> <b>Patterns</b> <ul style="list-style-type: none"> <li>Macroscopic patterns are related to the nature of microscopic and atomic-level structure. (MS-PS1-2)</li> </ul> <b>Cause and Effect</b> <ul style="list-style-type: none"> <li>Cause and effect relationships may be used to predict phenomena in natural or designed systems. (MS-PS1-4)</li> </ul> <b>Scale, Proportion, and Quantity</b> <ul style="list-style-type: none"> <li>Time, space, and energy phenomena can be observed at various scales using models to study systems that are too large or too small. (MS-PS1-1)</li> </ul> <b>Energy and Matter</b> <ul style="list-style-type: none"> <li>Matter is conserved because atoms are conserved in physical and chemical processes. (MS-PS1-5)</li> <li>The transfer of energy can be tracked as energy flows through a designed or natural system. (MS-PS1-6)</li> </ul> <b>Structure and Function</b> <ul style="list-style-type: none"> <li>Structures can be designed to serve particular functions by taking into account properties of different materials, and how materials can be shaped and used. (MS-PS1-3)</li> </ul> <hr/> <b>Connections to Engineering, Technology, and Applications of Science</b> <b>Interdependence of Science, Engineering, and Technology</b> <ul style="list-style-type: none"> <li>Engineering advances have led to important discoveries in virtually every field of science, and scientific discoveries have led to the development of entire industries and engineered systems. (MS-PS1-3)</li> </ul> <b>Influence of Science, Engineering and Technology on Society and the Natural World</b> <ul style="list-style-type: none"> <li>The uses of technologies and any limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural</li> </ul>



## Middle School Physical Science MS-PS1 Matter and Its Interactions

<p>explanations. (MS-PS1-2)</p> <p>Science Models, Laws, Mechanisms, and Theories</p> <p>Explain Natural Phenomena</p> <ul style="list-style-type: none"> <li>Laws are regularities or mathematical descriptions of natural phenomena. (MS-PS1-5)</li> </ul>	<p>jointly on the temperature, the total number of atoms in the system, and the state of the material. (secondary to MS-PS1-4)</p> <p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> <li>A solution needs to be tested, and then modified on the basis of the test results, in order to improve it. (secondary to MS-PS1-6)</li> </ul> <p>ETS1.C: Optimizing the Design Solution</p> <ul style="list-style-type: none"> <li>Although one design may not perform the best across all tests, identifying the characteristics of the design that performed the best in each test can provide useful information for the redesign process—that is, some of the characteristics may be incorporated into the new design. (secondary to MS-PS1-6)</li> <li>The iterative process of testing the most promising solutions and modifying what is proposed on the basis of the test results leads to greater refinement and ultimately to an optimal solution. (secondary to MS-PS1-6)</li> </ul>	<p>resources, and economic conditions. Thus technology use varies from region to region and over time. (MS-PS1-3)</p>
<p>Connections to other DCIs in this grade-band: MS.PS3.D (MS-PS1-2),(MS-PS1-6); MS.LS1.C (MS-PS1-2),(MS-PS1-5); MS.LS2.A (MS-PS1-3); MS.LS2.B (MS-PS1-5); MS.LS4.D (MS-PS1-3); MS.ESS2.A (MS-PS1-2),(MS-PS1-5); MS.ESS2.C (MS-PS1-1),(MS-PS1-4); MS.ESS3.A (MS-PS1-3); MS.ESS3.C (MS-PS1-3)</p>		
<p>Articulation across grade-bands: 5.PS1.A (MS-PS1-1); 5.PS1.B (MS-PS1-2),(MS-PS1-5); HS.PS1.A (MS-PS1-1),(MS-PS1-3),(MS-PS1-4),(MS-PS1-6); HS.PS1.B (MS-PS1-2),(MS-PS1-4),(MS-PS1-5),(MS-PS1-6); HS.PS3.A (MS-PS1-4),(MS-PS1-6); HS.PS3.B (MS-PS1-6); HS.PS3.D (MS-PS1-6); HS.LS2.A (MS-PS1-3); HS.LS4.D (MS-PS1-3); HS.ESS1.A (MS-PS1-1); HS.ESS3.A (MS-PS1-3)</p>		
<p>Common Core State Standards Connections:</p> <p>ELA/Literacy –</p> <p>RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions (MS-PS1-2),(MS-PS1-3)</p> <p>RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. (MS-PS1-6)</p> <p>RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). (MS-PS1-1),(MS-PS1-2),(MS-PS1-4),(MS-PS1-5)</p> <p>WHST.6-8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. (MS-PS1-6)</p> <p>WHST.6-8.8 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation. (MS-PS1-3)</p> <p>Mathematics –</p> <p>MP.2 Reason abstractly and quantitatively. (MS-PS1-1),(MS-PS1-2),(MS-PS1-5)</p> <p>MP.4 Model with mathematics. (MS-PS1-1),(MS-PS1-5)</p> <p>6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems. (MS-PS1-1),(MS-PS1-2),(MS-PS1-5)</p> <p>6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. (MS-PS1-4)</p> <p>8.EE.A.3 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. (MS-PS1-1)</p> <p>6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots. (MS-PS1-2)</p> <p>6.SP.B.5 Summarize numerical data sets in relation to their context (MS-PS1-2)</p>		



# Middle School Physical Science MS-PS2 Motion and Stability: Forces and Interactions

## MS-PS2 Motion and Stability: Forces and Interactions

Students who demonstrate understanding can:

- MS-PS2-1.** Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.\*  
[Clarification Statement: Examples of practical problems could include the impact of collisions between two cars, between a car and stationary objects, and between a meteor and a space vehicle.] [Assessment Boundary: Assessment is limited to vertical or horizontal interactions in one dimension.]
- MS-PS2-2.** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. [Clarification Statement: Emphasis is on balanced (Newton's First Law) and unbalanced forces in a system, qualitative comparisons of forces, mass and changes in motion (Newton's Second Law), frame of reference, and specification of units.] [Assessment Boundary: Assessment is limited to forces and changes in motion in one-dimension in an inertial reference frame and to change in one variable at a time. Assessment does not include the use of trigonometry.]
- MS-PS2-3.** Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.  
[Clarification Statement: Examples of devices that use electric and magnetic forces could include electromagnets, electric motors, or generators. Examples of data could include the effect of the number of turns of wire on the strength of an electromagnet, or the effect of increasing the number or strength of magnets on the speed of an electric motor.] [Assessment Boundary: Assessment about questions that require quantitative answers is limited to proportional reasoning and algebraic thinking.]
- MS-PS2-4.** Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects. [Clarification Statement: Examples of evidence for arguments could include data generated from simulations or digital tools; and charts displaying mass, strength of interaction, distance from the Sun, and orbital periods of objects within the solar system.] [Assessment Boundary: Assessment does not include Newton's Law of Gravitation or Kepler's Laws.]
- MS-PS2-5.** Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact. [Clarification Statement: Examples of this phenomenon could include the interactions of magnets, electrically-charged strips of tape, and electrically-charged pith balls. Examples of investigations could include first-hand experiences or simulations.] [Assessment Boundary: Assessment is limited to electric and magnetic fields, and limited to qualitative evidence for the existence of fields.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

### Science and Engineering Practices

#### Asking Questions and Defining Problems

Asking questions and defining problems in grades 6–8 builds from grades K–5 experiences and progresses to specifying relationships between variables, and clarifying arguments and models.

- Ask questions that can be investigated within the scope of the classroom, outdoor environment, and museums and other public facilities with available resources and, when appropriate, frame a hypothesis based on observations and scientific principles. (MS-PS2-3)

#### Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in 6–8 builds on K–5 experiences and progresses to include investigations that use multiple variables and provide evidence to support explanations or design solutions.

- Plan an investigation individually and collaboratively, and in the design: identify independent and dependent variables and controls, what tools are needed to do the gathering, how measurements will be recorded, and how many data are needed to support a claim. (MS-PS2-2)
- Conduct an investigation and evaluate the experimental design to produce data to serve as the basis for evidence that can meet the goals of the investigation. (MS-PS2-5)

#### Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.

- Apply scientific ideas or principles to design an object, tool, process or system. (MS-PS2-1)

#### Engaging in Argument from Evidence

Engaging in argument from evidence in 6–8 builds from K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world.

- Construct and present oral and written arguments supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem. (MS-PS2-4)

### Connections to Nature of Science

#### Scientific Knowledge is Based on Empirical Evidence

- Science knowledge is based upon logical and conceptual connections between evidence and explanations. (MS-PS2-2),(MS-PS2-4)

### Disciplinary Core Ideas

#### PS2.A: Forces and Motion

- For any pair of interacting objects, the force exerted by the first object on the second object is equal in strength to the force that the second object exerts on the first, but in the opposite direction (Newton's third law). (MS-PS2-1)
- The motion of an object is determined by the sum of the forces acting on it; if the total force on the object is not zero, its motion will change. The greater the mass of the object, the greater the force needed to achieve the same change in motion. For any given object, a larger force causes a larger change in motion. (MS-PS2-2)
- All positions of objects and the directions of forces and motions must be described in an arbitrarily chosen reference frame and arbitrarily chosen units of size. In order to share information with other people, these choices must also be shared. (MS-PS2-2)

#### PS2.B: Types of Interactions

- Electric and magnetic (electromagnetic) forces can be attractive or repulsive, and their sizes depend on the magnitudes of the charges, currents, or magnetic strengths involved and on the distances between the interacting objects. (MS-PS2-3)
- Gravitational forces are always attractive. There is a gravitational force between any two masses, but it is very small except when one or both of the objects have large mass—e.g., Earth and the sun. (MS-PS2-4)
- Forces that act at a distance (electric, magnetic, and gravitational) can be explained by fields that extend through space and can be mapped by their effect on a test object (a charged object, or a ball, respectively). (MS-PS2-5)

### Crosscutting Concepts

#### Cause and Effect

- Cause and effect relationships may be used to predict phenomena in natural or designed systems. (MS-PS2-3),(MS-PS2-5)

#### Systems and System Models

- Models can be used to represent systems and their interactions—such as inputs, processes and outputs—and energy and matter flows within systems. (MS-PS2-1),(MS-PS2-4), Stability and Change

- Explanations of stability and change in natural or designed systems can be constructed by examining the changes over time and forces at different scales. (MS-PS2-2)

#### Connections to Engineering, Technology and Applications of Science

#### Influence of Science, Engineering, and Technology on Society and the Natural World

- The uses of technologies and any limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions. (MS-PS2-1)

Connections to other DCIs in this grade-band: MS.PS3.A (MS-PS2-2); MS.PS3.B (MS-PS2-2); MS.PS3.C (MS-PS2-1); MS.ESS1.A (MS-PS2-4); MS.ESS1.B (MS-PS2-4); MS.ESS2.C (MS-PS2-2),(MS-PS2-4)

Articulation across grade-bands: 3.PS2.A (MS-PS2-1),(MS-PS2-2); 3.PS2.B (MS-PS2-3),(MS-PS2-5); 5.PS2.B (MS-PS2-4); HS.PS2.A (MS-PS2-1),(MS-PS2-2); HS.PS2.B (MS-PS2-3),(MS-PS2-4),(MS-PS2-5); HS.PS3.A (MS-PS2-5); HS.PS3.B (MS-PS2-2),(MS-PS2-5); HS.PS3.C (MS-PS2-5); HS.ESS1.B (MS-PS2-2),(MS-PS2-4)

Common Core State Standards Connections:

ELA/Literacy –



## Middle School Physical Science MS-PS2 Motion and Stability: Forces and Interactions

RST.6-8.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions (MS-PS2-1),(MS-PS2-3)
RST.6-8.3	Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. (MS-PS2-1),(MS-PS2-2),(MS-PS2-5)
WHST.6-8.1	Write arguments focused on discipline-specific content. (MS-PS2-4)
WHST.6-8.7	Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. (MS-PS2-1),(MS-PS2-2),(MS-PS2-5)
Mathematics – MP.2	Reason abstractly and quantitatively. (MS-PS2-1),(MS-PS2-2),(MS-PS2-3)
6.NS.C.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. (MS-PS2-1)
6. EE.A.2	Write, read, and evaluate expressions in which letters stand for numbers. (MS-PS2-1),(MS-PS2-2)
7. EE.B.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form, using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. (MS-PS2-1),(MS-PS2-2)
7.EE.B.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. (MS-PS2-1),(MS-PS2-2)



## MS-PS3 Energy

Students who demonstrate understanding can:

- MS-PS3-1. Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object. [Clarification Statement: Emphasis is on descriptive relationships between kinetic energy and mass separately from kinetic energy and speed. Examples could include riding a bicycle at different speeds, rolling different sizes of rocks downhill, and getting hit by a wiffle ball versus a tennis ball.]
- MS-PS3-2. Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system. [Clarification Statement: Emphasis is on relative amounts of potential energy, not on calculations of potential energy. Examples of objects within systems interacting at varying distances could include: the Earth and either a roller coaster cart at varying positions on a hill or objects at varying heights on shelves, changing the direction/orientation of a magnet, and a balloon with static electrical charge being brought closer to a classmate's hair. Examples of models could include representations, diagrams, pictures, and written descriptions of systems.] [Assessment Boundary: Assessment is limited to two objects and electric, magnetic, and gravitational interactions.]
- MS-PS3-3. Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.\* [Clarification Statement: Examples of devices could include an insulated box, a solar cooker, and a Styrofoam cup.] [Assessment Boundary: Assessment does not include calculating the total amount of thermal energy transferred.]
- MS-PS3-4. Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample. [Clarification Statement: Examples of experiments could include comparing final water temperatures after different masses of ice melted in the same volume of water with the same initial temperature, the temperature change of samples of different materials with the same mass as they cool or heat in the environment, or the same material with different masses when a specific amount of energy is added.] [Assessment Boundary: Assessment does not include calculating the total amount of thermal energy transferred.]
- MS-PS3-5. Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object. [Clarification Statement: Examples of empirical evidence used in arguments could include an inventory or other representation of the energy before and after the transfer in the form of temperature changes or motion of object.] [Assessment Boundary: Assessment does not include calculations of energy.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

### Science and Engineering Practices

#### Developing and Using Models

Modeling in 6–8 builds on K–5 and progresses to developing, using and revising models to describe, test, and predict more abstract phenomena and design systems.

- Develop a model to describe unobservable mechanisms. (MS-PS3-2)

#### Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in 6–8 builds on K–5 experiences and progresses to include investigations that use multiple variables and provide evidence to support explanations or design solutions.

- Plan an investigation individually and collaboratively, and in the design: identify independent and dependent variables and controls, what tools are needed to do the gathering, how measurements will be recorded, and how many data are needed to support a claim. (MS-PS3-4)

#### Analyzing and Interpreting Data

Analyzing data in 6–8 builds on K–5 and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.

- Construct and interpret graphical displays of data to identify linear and nonlinear relationships. (MS-PS3-1)

#### Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.

- Apply scientific ideas or principles to design, construct, and test a design of an object, tool, process or system. (MS-PS3-3)

#### Engaging in Argument from Evidence

Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed worlds.

- Construct, use, and present oral and written arguments supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon. (MS-PS3-5)

### Connections to Nature of Science

#### Scientific Knowledge is Based on Empirical Evidence

- Science knowledge is based upon logical and conceptual connections between evidence and explanations (MS-PS3-4), (MS-PS3-5)

### Disciplinary Core Ideas

#### PS3.A: Definitions of Energy

- Motion energy is properly called kinetic energy; it is proportional to the mass of the moving object and grows with the square of its speed. (MS-PS3-1)
- A system of objects may also contain stored (potential) energy, depending on their relative positions. (MS-PS3-2)
- Temperature is a measure of the average kinetic energy of particles of matter. The relationship between the temperature and the total energy of a system depends on the types, states, and amounts of matter present. (MS-PS3-3), (MS-PS3-4)

#### PS3.B: Conservation of Energy and Energy Transfer

- When the motion energy of an object changes, there is inevitably some other change in energy at the same time. (MS-PS3-5)
- The amount of energy transfer needed to change the temperature of a matter sample by a given amount depends on the nature of the matter, the size of the sample, and the environment. (MS-PS3-4)
- Energy is spontaneously transferred out of hotter regions or objects and into colder ones. (MS-PS3-3)

#### PS3.C: Relationship Between Energy and Forces

- When two objects interact, each one exerts a force on the other that can cause energy to be transferred to or from the object. (MS-PS3-2)

#### ETS1.A: Defining and Delimiting an Engineering Problem

- The more precisely a design task's criteria and constraints can be defined, the more likely it is that the designed solution will be successful. Specification of constraints includes consideration of scientific principles and other relevant knowledge that is likely to limit possible solutions. (secondary to MS-PS3-3)

#### ETS1.B: Developing Possible Solutions

- A solution needs to be tested, and then modified on the basis of the test results in order to improve it. There are systematic processes for evaluating solutions with respect to how well they meet criteria and constraints of a problem. (secondary to MS-PS3-3)

### Crosscutting Concepts

#### Scale, Proportion, and Quantity

- Proportional relationships (e.g. speed as the ratio of distance traveled to time taken) among different types of quantities provide information about the magnitude of properties and processes. (MS-PS3-1), (MS-PS3-4)

#### Systems and System Models

- Models can be used to represent systems and their interactions – such as inputs, processes, and outputs – and energy and matter flows within systems. (MS-PS3-2)

#### Energy and Matter

- Energy may take different forms (e.g. energy in fields, thermal energy, energy of motion). (MS-PS3-5)
- The transfer of energy can be tracked as energy flows through a designed or natural system. (MS-PS3-3)

Connections to other DCIs in this grade-band: MS.PS1.A (MS-PS3-4); MS.PS1.B (MS-PS3-3); MS.PS2.A (MS-PS3-1), (MS-PS3-4), (MS-PS3-5); MS.ESS2.A (MS-PS3-3); MS.ESS2.C (MS-PS3-3), (MS-PS3-4); MS.ESS2.D (MS-PS3-3), (MS-PS3-4); MS.ESS3.D (MS-PS3-4)

Articulation across grade-bands: 4.PS3.B (MS-PS3-1), (MS-PS3-3); 4.PS3.C (MS-PS3-4), (MS-PS3-5); HS.PS1.B (MS-PS3-4); HS.PS2.B (MS-PS3-2); HS.PS3.A (MS-PS3-1), (MS-PS3-4), (MS-PS3-5); HS.PS3.B (MS-PS3-1), (MS-PS3-2), (MS-PS3-3), (MS-PS3-4), (MS-PS3-5); HS.PS3.C (MS-PS3-2)

Common Core State Standards Connections:



ELA/Literacy – RST.6-8.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions (MS-PS3-1),(MS-PS3-5)
RST.6-8.3	Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. (MS-PS3-3),(MS-PS3-4)
RST.6-8.7	Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). (MS-PS3-1)
WHST.6-8.1	Write arguments focused on discipline content. (MS-PS3-5)
WHST.6-8.7	Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. (MS-PS3-3),(MS-PS3-4)
SL.8.5	Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest. (MS-PS3-2)
Mathematics – MP.2	Reason abstractly and quantitatively. (MS-PS3-1),(MS-PS3-4),(MS-PS3-5)
6.RP.A.1	Understand the concept of ratio and use ratio language to describe a ratio relationship between two quantities. (MS-PS3-1),(MS-PS3-5)
6.	RP.A.2 Understand the concept of a unit rate $a/b$ associated with a ratio $a:b$ with $b \neq 0$ , and use rate language in the context of a ratio relationship. (MS-PS3-1)
7.	RP.A.2 Recognize and represent proportional relationships between quantities. (MS-PS3-1),(MS-PS3-5)
8.	EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. (MS-PS3-1)
8.EE.A.2	Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$ , where $p$ is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational. (MS-PS3-1)
8.F.A.3	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. (MS-PS3-1),(MS-PS3-5)
6.SP.B.5	Summarize numerical data sets in relation to their context. (MS-PS3-4)



# Middle School Physical Science

## MS-PS4 Waves and Their Applications in Technologies for Information Transfer

MS-PS4 Waves and Their Applications in Technologies for Information Transfer		
Students who demonstrate understanding can:		
MS-PS4-1.	Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave. [Clarification Statement: Emphasis is on describing waves with both qualitative and quantitative thinking.][Assessment Boundary: Assessment does not include electromagnetic waves and is limited to standard repeating waves.]	
MS-PS4-2.	Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials. [Clarification Statement: Emphasis is on both light and mechanical waves. Examples of models could include drawings, simulations, and written descriptions.][Assessment Boundary: Assessment is limited to qualitative applications pertaining to light and mechanical waves.]	
MS-PS4-3.	Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals. [Clarification Statement: Emphasis is on a basic understanding that waves can be used for communication purposes. Examples could include using fiber optic cable to transmit light pulses, radio wave pulses in wifi devices, and conversion of stored binary patterns to make sound or text on a computer screen.][Assessment Boundary: Assessment does not include binary counting. Assessment does not include the specific mechanism of any given device.]	
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<div>Science and Engineering Practices</div> <div>Developing and Using Models Modeling in 6–8 builds on K–5 and progresses to developing, using, and revising models to describe, test, and predict more abstract phenomena and design systems.<ul style="list-style-type: none"><li>Develop and use a model to describe phenomena. (MS-PS4-2)</li></ul>Using Mathematics and Computational Thinking Mathematical and computational thinking at the 6–8 level builds on K–5 and progresses to identifying patterns in large data sets and using mathematical concepts to support explanations and arguments.<ul style="list-style-type: none"><li>Use mathematical representations to describe and/or support scientific conclusions and design solutions. (MS-PS4-1)</li></ul>Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in 6-8 builds on K-5 and progresses to evaluating the merit and validity of ideas and methods.<ul style="list-style-type: none"><li>Integrate qualitative scientific and technical information in written text with that contained in media and visual displays to clarify claims and findings. (MS-PS4-3)</li></ul><div>Connections to Nature of Science</div><div>Scientific Knowledge is Based on Empirical Evidence<ul style="list-style-type: none"><li>Science knowledge is based upon logical and conceptual connections between evidence and explanations. (MS-PS4-1)</li></ul></div></div>	<div>Disciplinary Core Ideas</div> <div>PS4.A: Wave Properties<ul style="list-style-type: none"><li>A simple wave has a repeating pattern with a specific wavelength, frequency, and amplitude. (MS-PS4-1)</li><li>A sound wave needs a medium through which it is transmitted. (MS-PS4-2)</li></ul>PS4.B: Electromagnetic Radiation<ul style="list-style-type: none"><li>When light shines on an object, it is reflected, absorbed, or transmitted through the object, depending on the object’s material and the frequency (color) of the light. (MS-PS4-2)</li><li>The path that light travels can be traced as straight lines, except at surfaces between different transparent materials (e.g., air and water, air and glass) where the light path bends. (MS-PS4-2)</li><li>A wave model of light is useful for explaining brightness, color, and the frequency-dependent bending of light at a surface between media. (MS-PS4-2)</li><li>However, because light can travel through space, it cannot be a matter wave, like sound or water waves. (MS-PS4-2)</li></ul>PS4.C: Information Technologies and Instrumentation<ul style="list-style-type: none"><li>Digitized signals (sent as wave pulses) are a more reliable way to encode and transmit information. (MS-PS4-3)</li></ul></div>	<div>Crosscutting Concepts</div> <div>Patterns<ul style="list-style-type: none"><li>Graphs and charts can be used to identify patterns in data. (MS-PS4-1)</li></ul>Structure and Function<ul style="list-style-type: none"><li>Structures can be designed to serve particular functions by taking into account properties of different materials, and how materials can be shaped and used. (MS-PS4-2)</li><li>Structures can be designed to serve particular functions. (MS-PS4-3)</li></ul><div>Connections to Engineering, Technology, and Applications of Science</div><div>Influence of Science, Engineering, and Technology on Society and the Natural World<ul style="list-style-type: none"><li>Technologies extend the measurement, exploration, modeling, and computational capacity of scientific investigations. (MS-PS4-3)</li></ul><div>Connections to Nature of Science</div><div>Science is a Human Endeavor<ul style="list-style-type: none"><li>Advances in technology influence the progress of science and science has influenced advances in technology. (MS-PS4-3)</li></ul></div></div></div>
Connections to other DCIs in this grade-band: MS.LS1.D (MS-PS4-2)		
Articulation across grade-bands: 4.PS3.A (MS-PS4-1); 4.PS3.B (MS-PS4-1); 4.PS4.A (MS-PS4-1); 4.PS4.B (MS-PS4-2); 4.PS4.C (MS-PS4-3); HS.PS4.A (MS-PS4-1),(MS-PS4-2),(MS-PS4-3); HS.PS4.B (MS-PS4-1),(MS-PS4-2); HS.PS4.C (MS-PS4-3); HS.ESS1.A (MS-PS4-2); HS.ESS2.A (MS-PS4-2); HS.ESS2.C (MS-PS4-2); HS.ESS2.D (MS-PS4-2)		
Common Core State Standards Connections:		
ELA/Literacy –		
RST.6-8.1	Cite specific textual evidence to support analysis of science and technical texts. (MS-PS4-3)	
RST.6-8.2	Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. (MS-PS4-3)	
RST.6-8.9	Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. (MS-PS4-3)	
WHST.6-8.9	Draw evidence from informational texts to support analysis, reflection, and research. (MS-PS4-3)	
SL.8.5	Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest. (MS-PS4-1),(MS-PS4-2)	
Mathematics –		
MP.2	Reason abstractly and quantitatively. (MS-PS4-1)	
MP.4	Model with mathematics. (MS-PS4-1)	
6.RP.A.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. (MS-PS4-1)	
6.	RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems. (MS-PS4-1)	
7.	RP.A.2 Recognize and represent proportional relationships between quantities. (MS-PS4-1)	
8.F.A.3	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. (MS-PS4-1)	



MS-LS1 From Molecules to Organisms: Structures and Processes		
Students who demonstrate understanding can:		
MS-LS1-1.	Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. [Clarification Statement: Emphasis is on developing evidence that living things are made of cells, distinguishing between living and non-living cells, and understanding that living things may be made of one cell or many and varied cells.]	
MS-LS1-2.	Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. [Clarification Statement: Emphasis is on the cell functioning as a whole system and the primary role of identified parts of the cell, specifically the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall.] [Assessment Boundary: Assessment of organelle structure/function relationships is limited to the cell wall and cell membrane. Assessment of the function of the other organelles is limited to their relationship to the whole cell. Assessment does not include the biochemical function of cells or cell parts.]	
MS-LS1-3.	Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. [Clarification Statement: Emphasis is on the conceptual understanding that cells form tissues and tissues form organs specialized for particular body functions. Examples could include the interaction of subsystems within a system and the normal functioning of those systems.] [Assessment Boundary: Assessment does not include the mechanism of one body system independent of others. Assessment is limited to the circulatory, excretory, digestive, respiratory, muscular, and nervous systems.]	
MS-LS1-4.	Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. [Clarification Statement: Examples of behaviors that affect the probability of animal reproduction could include nest building to protect young from cold, herding of animals to protect young from predators, and vocalization of animals and colorful plumage to attract mates for breeding. Examples of animal behaviors that affect the probability of plant reproduction could include transferring pollen or seeds, and creating conditions for seed germination and growth. Examples of plant structures could include bright flowers attracting butterflies that transfer pollen, flower nectar and odors that attract insects that transfer pollen, and hard shells on nuts that squirrels bury.]	
MS-LS1-5.	Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. [Clarification Statement: Examples of local environmental conditions could include availability of food, light, space, and water. Examples of genetic factors could include large breed cattle and species of grass affecting growth of organisms. Examples of evidence could include drought decreasing plant growth, fertilizer increasing plant growth, different varieties of plant seeds growing at different rates in different conditions, and fish growing larger in large ponds than they do in small ponds.] [Assessment Boundary: Assessment does not include genetic mechanisms, gene regulation, or biochemical processes.]	
MS-LS1-6.	Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. [Clarification Statement: Emphasis is on tracing movement of matter and flow of energy.] [Assessment Boundary: Assessment does not include the biochemical mechanisms of photosynthesis.]	
MS-LS1-7.	Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism. [Clarification Statement: Emphasis is on describing that molecules are broken apart and put back together and that in this process, energy is released.] [Assessment Boundary: Assessment does not include details of the chemical reactions for photosynthesis or respiration.]	
MS-LS1-8.	Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories. [Assessment Boundary: Assessment does not include mechanisms for the transmission of this information.]	
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<b>Science and Engineering Practices</b> <b>Developing and Using Models</b> Modeling in 6–8 builds on K–5 experiences and progresses to developing, using, and revising models to describe, test, and predict more abstract phenomena and design systems. <ul style="list-style-type: none"> <li>Develop and use a model to describe phenomena. (MS-LS1-2)</li> <li>Develop a model to describe unobservable mechanisms. (MS-LS1-7)</li> </ul> <b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations in 6–8 builds on K–5 experiences and progresses to include investigations that use multiple variables and provide evidence to support explanations or solutions. <ul style="list-style-type: none"> <li>Conduct an investigation to produce data to serve as the basis for evidence that meet the goals of an investigation. (MS-LS1-1)</li> </ul> <b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific knowledge, principles, and theories. <ul style="list-style-type: none"> <li>Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. (MS-LS1-5), (MS-LS1-6)</li> </ul> <b>Engaging in Argument from Evidence</b> Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing	<b>Disciplinary Core Ideas</b> <b>LS1.A: Structure and Function</b> <ul style="list-style-type: none"> <li>All living things are made up of cells, which is the smallest unit that can be said to be alive. An organism may consist of one single cell (unicellular) or many different numbers and types of cells (multicellular). (MS-LS1-1)</li> <li>Within cells, special structures are responsible for particular functions, and the cell membrane forms the boundary that controls what enters and leaves the cell. (MS-LS1-2)</li> <li>In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions. (MS-LS1-3)</li> </ul> <b>LS1.B: Growth and Development of Organisms</b> <ul style="list-style-type: none"> <li>Animals engage in characteristic behaviors that increase the odds of reproduction. (MS-LS1-4)</li> <li>Plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction. (MS-LS1-4)</li> <li>Genetic factors as well as local conditions affect the growth of the adult plant. (MS-LS1-5)</li> </ul> <b>LS1.C: Organization for Matter and Energy Flow in Organisms</b> <ul style="list-style-type: none"> <li>Plants, algae (including phytoplankton), and many microorganisms use the energy from light to make sugars (food) from carbon dioxide from the atmosphere and water through the process of photosynthesis, which also releases oxygen. These sugars can be used immediately or stored for growth or later use. (MS-LS1-6)</li> </ul>	<b>Crosscutting Concepts</b> <b>Cause and Effect</b> <ul style="list-style-type: none"> <li>Cause and effect relationships may be used to predict phenomena in natural systems. (MS-LS1-8)</li> <li>Phenomena may have more than one cause, and some cause and effect relationships in systems can only be described using probability. (MS-LS1-4), (MS-LS1-5)</li> </ul> <b>Scale, Proportion, and Quantity</b> <ul style="list-style-type: none"> <li>Phenomena that can be observed at one scale may not be observable at another scale. (MS-LS1-1)</li> </ul> <b>Systems and System Models</b> <ul style="list-style-type: none"> <li>Systems may interact with other systems; they may have sub-systems and be a part of larger complex systems. (MS-LS1-3)</li> </ul> <b>Energy and Matter</b> <ul style="list-style-type: none"> <li>Matter is conserved because atoms are conserved in physical and chemical processes. (MS-LS1-7)</li> <li>Within a natural system, the transfer of energy drives the motion and/or cycling of matter. (MS-LS1-6)</li> </ul> <b>Structure and Function</b> <ul style="list-style-type: none"> <li>Complex and microscopic structures and systems can be visualized, modeled, and used to describe how their function depends on the relationships among its parts, therefore complex natural structures/systems can be analyzed to determine how they function. (MS-LS1-2)</li> </ul> <hr/> <b>Connections to Engineering, Technology, and Applications of Science</b>



<p>argument that supports or refutes claims for either explanations or solutions about the natural and designed world(s).</p> <ul style="list-style-type: none"> <li>Use an oral and written argument supported by evidence to support or refute an explanation or a model for a phenomenon. (MS-LS1-3)</li> <li>Use an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem. (MS-LS1-4)</li> </ul> <p><b>Obtaining, Evaluating, and Communicating Information</b></p> <p>Obtaining, evaluating, and communicating information in 6-8 builds on K-5 experiences and progresses to evaluating the merit and validity of ideas and methods.</p> <ul style="list-style-type: none"> <li>Gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence. (MS-LS1-8)</li> </ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge is Based on Empirical Evidence</b></p> <ul style="list-style-type: none"> <li>Science knowledge is based upon logical connections between evidence and explanations. (MS-LS1-6)</li> </ul>	<ul style="list-style-type: none"> <li>Within individual organisms, food moves through a series of chemical reactions in which it is broken down and rearranged to form new molecules, to support growth, or to release energy. (MS-LS1-7)</li> </ul> <p><b>LS1.D: Information Processing</b></p> <ul style="list-style-type: none"> <li>Each sense receptor responds to different inputs (electromagnetic, mechanical, chemical), transmitting them as signals that travel along nerve cells to the brain. The signals are then processed in the brain, resulting in immediate behaviors or memories. (MS-LS1-8)</li> </ul> <p><b>PS3.D: Energy in Chemical Processes and Everyday Life</b></p> <ul style="list-style-type: none"> <li>The chemical reaction by which plants produce complex food molecules (sugars) requires an energy input (i.e., from sunlight) to occur. In this reaction, carbon dioxide and water combine to form carbon-based organic molecules and release oxygen. (secondary to MS-LS1-6)</li> <li>Cellular respiration in plants and animals involve chemical reactions with oxygen that release stored energy. In these processes, complex molecules containing carbon react with oxygen to produce carbon dioxide and other materials. (secondary to MS-LS1-7)</li> </ul>	<p><b>Interdependence of Science, Engineering, and Technology</b></p> <ul style="list-style-type: none"> <li>Engineering advances have led to important discoveries in virtually every field of science, and scientific discoveries have led to the development of entire industries and engineered systems. (MS-LS1-1)</li> </ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Science is a Human Endeavor</b></p> <ul style="list-style-type: none"> <li>Scientists and engineers are guided by habits of mind such as intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas. (MS-LS1-3)</li> </ul>
Connections to other DCIs in this grade-band: MS.PS1.B (MS-LS1-6),(MS-LS1-7); MS.LS2.A (MS-LS1-4),(MS-LS1-5); MS.LS3.A (MS-LS1-2); MS.ESS2.A (MS-LS1-6)		
Articulation to DCIs across grade-bands: 3.LS1.B (MS-LS1-4),(MS-LS1-5); 3.LS3.A (MS-LS1-5); 4.LS1.A (MS-LS1-2); 4.LS1.D (MS-LS1-8); 5.PS3.D (MS-LS1-6),(MS-LS1-7); 5.LS1.C (MS-LS1-6),(MS-LS1-7); 5.LS2.A (MS-LS1-6); 5.LS2.B (MS-LS1-6),(MS-LS1-7); HS.PS1.B (MS-LS1-6),(MS-LS1-7); HS.LS1.A (MS-LS1-1),(MS-LS1-2),(MS-LS1-3),(MS-LS1-8); HS.LS1.C (MS-LS1-6),(MS-LS1-7); HS.LS2.A (MS-LS1-4),(MS-LS1-5); HS.LS2.B (MS-LS1-6),(MS-LS1-7); HS.LS2.D (MS-LS1-4); HS.ESS2.D (MS-LS1-6)		
<p><b>Common Core State Standards Connections:</b></p> <p><b>ELA/Literacy –</b></p> <p>RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts. (MS-LS1-3),(MS-LS1-4),(MS-LS1-5),(MS-LS1-6)</p> <p>RST.6-8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. (MS-LS1-5),(MS-LS1-6)</p> <p>RI.6.8 Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not. (MS-LS1-3),(MS-LS1-4)</p> <p>WHST.6-8.1 Write arguments focused on discipline content. (MS-LS1-3),(MS-LS1-4)</p> <p>WHST.6-8.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. (MS-LS1-5),(MS-LS1-6)</p> <p>WHST.6-8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. (MS-LS1-1)</p> <p>WHST.6-8.8 Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources. (MS-LS1-8)</p> <p>WHST.6-8.9 Draw evidence from informational texts to support analysis, reflection, and research. (MS-LS1-5),(MS-LS1-6)</p> <p><b>SL.8.5</b> Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest. (MS-LS1-2),(MS-LS1-7)</p> <p><b>Mathematics –</b></p> <p>6.EE.C.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. (MS-LS1-1),(MS-LS1-2),(MS-LS1-3),(MS-LS1-6)</p> <p>6.SP.A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. (MS-LS1-4),(MS-LS1-5)</p> <p>6.SP.B.4 Summarize numerical data sets in relation to their context. (MS-LS1-4),(MS-LS1-5)</p>		



# Middle School Life Science MS-LS2 Ecosystems: Interactions, Energy, and Dynamics

MS-LS2 Ecosystems: Interactions, Energy, and Dynamics	
Students who demonstrate understanding can:	
MS-LS2-1.	Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. [Clarification Statement: Emphasis is on cause and effect relationships between resources and growth of individual organisms and the numbers of organisms in ecosystems during periods of abundant and scarce resources.]
MS-LS2-2.	Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. [Clarification Statement: Emphasis is on predicting consistent patterns of interactions in different ecosystems in terms of the relationships among and between organisms and abiotic components of ecosystems. Examples of types of interactions could include competitive, predatory, and mutually beneficial.]
MS-LS2-3.	Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. [Clarification Statement: Emphasis is on describing the conservation of matter and flow of energy into and out of various ecosystems, and on defining the boundaries of the system.] [Assessment Boundary: Assessment does not include the use of chemical reactions to describe the processes.]
MS-LS2-4.	Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. [Clarification Statement: Emphasis is on recognizing patterns in data and making warranted inferences about changes in populations, and on evaluating empirical evidence supporting arguments about changes to ecosystems.]
MS-LS2-5.	Evaluate competing design solutions for maintaining biodiversity and ecosystem services.* [Clarification Statement: Examples of ecosystem services could include water purification, nutrient recycling, and prevention of soil erosion. Examples of design solution constraints could include scientific, economic, and social considerations.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Developing and Using Models</b> Modeling in 6–8 builds on K–5 experiences and progresses to developing, using, and revising models to describe, test, and predict more abstract phenomena and design systems.</p> <ul style="list-style-type: none"> <li>Develop a model to describe phenomena. (MS-LS2-3)</li> </ul> <p><b>Analyzing and Interpreting Data</b> Analyzing data in 6–8 builds on K–5 experiences and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.</p> <ul style="list-style-type: none"> <li>Analyze and interpret data to provide evidence for phenomena. (MS-LS2-1)</li> </ul> <p><b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.</p> <ul style="list-style-type: none"> <li>Construct an explanation that includes qualitative or quantitative relationships between variables that predict phenomena. (MS-LS2-2)</li> </ul> <p><b>Engaging in Argument from Evidence</b> Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world(s).</p> <ul style="list-style-type: none"> <li>Construct an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem. (MS-LS2-4)</li> <li>Evaluate competing design solutions based on jointly developed and agreed-upon design criteria. (MS-LS2-5)</li> </ul>	<p><b>LS2.A: Interdependent Relationships in Ecosystems</b></p> <ul style="list-style-type: none"> <li>Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors. (MS-LS2-1)</li> <li>In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction. (MS-LS2-1)</li> <li>Growth of organisms and population increases are limited by access to resources. (MS-LS2-1)</li> <li>Similarly, predatory interactions may reduce the number of organisms or eliminate whole populations of organisms. Mutually beneficial interactions, in contrast, may become so interdependent that each organism requires the other for survival. Although the species involved in these competitive, predatory, and mutually beneficial interactions vary across ecosystems, the patterns of interactions of organisms with their environments, both living and nonliving, are shared. (MS-LS2-2)</li> </ul> <p><b>LS2.B: Cycle of Matter and Energy Transfer in Ecosystems</b></p> <ul style="list-style-type: none"> <li>Food webs are models that demonstrate how matter and energy is transferred between producers, consumers, and decomposers as the three groups interact within an ecosystem. Transfers of matter into and out of the physical environment occur at every level. Decomposers recycle nutrients from dead plant or animal matter back to the soil in terrestrial environments or to the water in aquatic environments. The atoms that make up the organisms in an ecosystem are cycled repeatedly between the living and nonliving parts of the ecosystem. (MS-LS2-3)</li> </ul> <p><b>LS2.C: Ecosystem Dynamics, Functioning, and Resilience</b></p> <ul style="list-style-type: none"> <li>Ecosystems are dynamic in nature; their characteristics can vary over time. Disruptions to any physical or biological component of an ecosystem can lead to shifts in all its populations. (MS-LS2-4)</li> <li>Biodiversity describes the variety of species found in Earth's terrestrial and oceanic ecosystems. The completeness or integrity of an ecosystem's biodiversity is often used as a measure of its health. (MS-LS2-5)</li> </ul> <p><b>LS4.D: Biodiversity and Humans</b></p> <ul style="list-style-type: none"> <li>Changes in biodiversity can influence humans' resources, such as food, energy, and medicines, as well as ecosystem services that humans rely on—for example, water purification and recycling. (secondary to MS-LS2-5)</li> </ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem. (secondary to MS-LS2-5)</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns can be used to identify cause and effect relationships. (MS-LS2-2)</li> </ul> <p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Cause and effect relationships may be used to predict phenomena in natural or designed systems. (MS-LS2-1)</li> </ul> <p><b>Energy and Matter</b></p> <ul style="list-style-type: none"> <li>The transfer of energy can be tracked as energy flows through a natural system. (MS-LS2-3)</li> </ul> <p><b>Stability and Change</b></p> <ul style="list-style-type: none"> <li>Small changes in one part of a system might cause large changes in another part. (MS-LS2-4), (MS-LS2-5)</li> </ul> <p>-----</p> <p><b>Connections to Engineering, Technology, and Applications of Science</b></p> <p><b>Influence of Science, Engineering, and Technology on Society and the Natural World</b></p> <ul style="list-style-type: none"> <li>The use of technologies and any limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions. Thus technology use varies from region to region and over time. (MS-LS2-5)</li> </ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge Assumes an Order and Consistency in Natural Systems</b></p> <ul style="list-style-type: none"> <li>Science assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation. (MS-LS2-3)</li> </ul> <p><b>Science Addresses Questions About the Natural and Material World</b></p> <ul style="list-style-type: none"> <li>Scientific knowledge can describe the consequences of actions but does not necessarily prescribe the decisions that society takes. (MS-LS2-5)</li> </ul>

Connections to other DCIs in this grade-band: MS.PS1.B (MS-LS2-3); MS.LS1.B (MS-LS2-2); MS.LS4.C (MS-LS2-4); MS.LS4.D (MS-LS2-4); MS.ESS2.A (MS-LS2-3), (MS-LS2-4); MS.ESS3.A (MS-LS2-1), (MS-LS2-4); MS.ESS3.C (MS-LS2-1), (MS-LS2-4), (MS-LS2-5)

Articulation across grade-bands: 1.LS1.B (MS-LS2-2); 3.LS2.C (MS-LS2-1), (MS-LS2-4); 3.LS4.D (MS-LS2-1), (MS-LS2-4); 5.LS2.A (MS-LS2-1), (MS-LS2-3); 5.LS2.B (MS-LS2-3); HS.PS3.B (MS-LS2-3); HS.LS1.C (MS-LS2-3); HS.LS2.A (MS-LS2-1), (MS-LS2-2), (MS-LS2-5); HS.LS2.B (MS-LS2-2), (MS-LS2-3); HS.LS2.C (MS-LS2-4), (MS-LS2-5); HS.LS2.D (MS-LS2-2); HS.LS4.C (MS-LS2-1), (MS-LS2-4); HS.LS4.D (MS-LS2-1), (MS-LS2-4), (MS-LS2-5); HS.ESS2.A (MS-LS2-3); HS.ESS2.E (MS-LS2-4); HS.ESS3.A (MS-LS2-1), (MS-LS2-5);



## Middle School Life Science MS-LS2 Ecosystems: Interactions, Energy, and Dynamics

HS.ESS3.B (MS-LS2-4); HS.ESS3.C (MS-LS2-4),(MS-LS2-5); HS.ESS3.D (MS-LS2-5)	
Common Core State Standards Connections:	
ELA/Literacy –	
RST.6-8.1	Cite specific textual evidence to support analysis of science and technical texts. (MS-LS2-1),(MS-LS2-2),(MS-LS2-4)
RST.6-8.7	Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). (MS-LS2-1)
RST.6-8.8	Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. (MS-LS2-5)
RI.8.8	Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims. (MS-LS-4),(MS-LS2-5)
WHST.6-8.1	Write arguments to support claims with clear reasons and relevant evidence. (MS-LS2-4)
WHST.6-8.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. (MS-LS2-2)
WHST.6-8.9	Draw evidence from literary or informational texts to support analysis, reflection, and research. (MS-LS2-2),(MS-LS2-4)
SL.8.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others’ ideas and expressing their own clearly. (MS-LS2-2)
SL.8.4	Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation. (MS-LS2-2)
SL.8.5	Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. (MS-LS2-3)
Mathematics –	
MP.4	Model with mathematics. (MS-LS2-5)
6.RP.A.3	Use ratio and rate reasoning to solve real-world and mathematical problems. (MS-LS2-5)
6.EE.C.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. (MS-LS2-3)
6.SP.B.5	Summarize numerical data sets in relation to their context. (MS-LS2-2)



# Middle School Life Science MS-LS3 Heredity: Inheritance and Variation of Traits

## MS-LS3 Heredity: Inheritance and Variation of Traits

Students who demonstrate understanding can:

- MS-LS3-1. Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. [Clarification Statement: Emphasis is on conceptual understanding that changes in genetic material may result in making different proteins.] [Assessment Boundary: Assessment does not include specific changes at the molecular level, mechanisms for protein synthesis, or specific types of mutations.]
- MS-LS3-2. Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation. [Clarification Statement: Emphasis is on using models such as Punnett squares, diagrams, and simulations to describe the cause and effect relationship of gene transmission from parent(s) to offspring and resulting genetic variation.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

### Science and Engineering Practices

#### Developing and Using Models

Modeling in 6–8 builds on K–5 experiences and progresses to developing, using, and revising models to describe, test, and predict more abstract phenomena and design systems.

- Develop and use a model to describe phenomena. (MS-LS3-1),(MS-LS3-2)

### Disciplinary Core Ideas

#### LS1.B: Growth and Development of Organisms

- Organisms reproduce, either sexually or asexually, and transfer their genetic information to their offspring. (secondary to MS-LS3-2)

#### LS3.A: Inheritance of Traits

- Genes are located in the chromosomes of cells, with each chromosome pair containing two variants of each of many distinct genes. Each distinct gene chiefly controls the production of specific proteins, which in turn affects the traits of the individual. Changes (mutations) to genes can result in changes to proteins, which can affect the structures and functions of the organism and thereby change traits. (MS-LS3-1)
- Variations of inherited traits between parent and offspring arise from genetic differences that result from the subset of chromosomes (and therefore genes) inherited. (MS-LS3-2)

#### LS3.B: Variation of Traits

- In sexually reproducing organisms, each parent contributes half of the genes acquired (at random) by the offspring. Individuals have two of each chromosome and hence two alleles of each gene, one acquired from each parent. These versions may be identical or may differ from each other. (MS-LS3-2)
- In addition to variations that arise from sexual reproduction, genetic information can be altered because of mutations. Though rare, mutations may result in changes to the structure and function of proteins. Some changes are beneficial, others harmful, and some neutral to the organism. (MS-LS3-1)

### Crosscutting Concepts

#### Cause and Effect

- Cause and effect relationships may be used to predict phenomena in natural systems. (MS-LS3-2)

#### Structure and Function

- Complex and microscopic structures and systems can be visualized, modeled, and used to describe how their function depends on the shapes, composition, and relationships among its parts, therefore complex natural structures/systems can be analyzed to determine how they function. (MS-LS3-1)

Connections to other DCIs in this grade-band: MS.LS1.A (MS-LS3-1); MS.LS4.A (MS-LS3-1)

Articulation across grade-bands: 3.LS3.A (MS-LS3-1),(MS-LS3-2); 3.LS3.B (MS-LS3-1),(MS-LS3-2); HS.LS1.A (MS-LS3-1); HS.LS1.B (MS-LS3-1),(MS-LS3-2); HS.LS3.A (MS-LS3-1),(MS-LS3-2); HS.LS3.B (MS-LS3-1),(MS-LS3-2)

Common Core State Standards Connections:

#### ELA/Literacy –

- RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts. (MS-LS3-1),(MS-LS3-2)
- RST.6-8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics. (MS-LS3-1),(MS-LS3-2)
- RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). (MS-LS3-1),(MS-LS3-2)
- SL.8.5 Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. (MS-LS3-1),(MS-LS3-2)

#### Mathematics –

- MP.4 Model with mathematics. (MS-LS3-2)
- 6.SP.B.5 Summarize numerical data sets in relation to their context. (MS-LS3-2)



# Middle School Life Science MS-LS4 Biological Evolution: Unity and Diversity

MS-LS4 Biological Evolution: Unity and Diversity		
Students who demonstrate understanding can:		
MS-LS4-1.	Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past. [Clarification Statement: Emphasis is on finding patterns of changes in the level of complexity of anatomical structures in organisms and the chronological order of fossil appearance in the rock layers.][Assessment Boundary: Assessment does not include the names of individual species or geological eras in the fossil record.]	
MS-LS4-2.	Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships. [Clarification Statement: Emphasis is on explanations of the evolutionary relationships among organisms in terms of similarity or differences of the gross appearance of anatomical structures.]	
MS-LS4-3.	Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy. [Clarification Statement: Emphasis is on inferring general patterns of relatedness among embryos of different organisms by comparing the macroscopic appearance of diagrams or pictures.][Assessment Boundary: Assessment of comparisons is limited to gross appearance of anatomical structures in embryological development.]	
MS-LS4-4.	Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment. [Clarification Statement: Emphasis is on using simple probability statements and proportional reasoning to construct explanations.]	
MS-LS4-5.	Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms. [Clarification Statement: Emphasis is on synthesizing information from reliable sources about the influence of humans on genetic outcomes in artificial selection (such as genetic modification, animal husbandry, gene therapy); and, on the impacts these technologies have on society as well as the technologies leading to these scientific discoveries.]	
MS-LS4-6.	Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time. [Clarification Statement: Emphasis is on using mathematical models, probability statements, and proportional reasoning to support explanations of trends in changes to populations over time.][Assessment Boundary: Assessment does not include Hardy Weinberg calculations.]	
The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:		
<div>Science and Engineering Practices</div> <div>Analyzing and Interpreting Data Analyzing data in 6–8 builds on K–5 experiences and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.<ul style="list-style-type: none"><li>Analyze displays of data to identify linear and nonlinear relationships. (MS-LS4-3)</li><li>Analyze and interpret data to determine similarities and differences in findings. (MS-LS4-1)</li></ul>Using Mathematics and Computational Thinking Mathematical and computational thinking in 6–8 builds on K–5 experiences and progresses to identifying patterns in large data sets and using mathematical concepts to support explanations and arguments.<ul style="list-style-type: none"><li>Use mathematical representations to support scientific conclusions and design solutions. (MS-LS4-6)</li></ul>Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.<ul style="list-style-type: none"><li>Apply scientific ideas to construct an explanation for real-world phenomena, examples, or events. (MS-LS4-2)</li><li>Construct an explanation that includes qualitative or quantitative relationships between variables that describe phenomena. (MS-LS4-4)</li></ul>Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in 6–8 builds on K–5 experiences and progresses to evaluating the merit and validity of ideas and methods.<ul style="list-style-type: none"><li>Gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence. (MS-LS4-5)</li></ul><div>Connections to Nature of Science</div><div>Scientific Knowledge is Based on Empirical Evidence<ul style="list-style-type: none"><li>Science knowledge is based upon logical and conceptual connections between evidence and explanations. (MS-LS4-1)</li></ul></div></div>	<div>Disciplinary Core Ideas</div> <div>LS4.A: Evidence of Common Ancestry and Diversity<ul style="list-style-type: none"><li>The collection of fossils and their placement in chronological order (e.g., through the location of the sedimentary layers in which they are found or through radioactive dating) is known as the fossil record. It documents the existence, diversity, extinction, and change of many life forms throughout the history of life on Earth. (MS-LS4-1)</li><li>Anatomical similarities and differences between various organisms living today and between them and organisms in the fossil record, enable the reconstruction of evolutionary history and the inference of lines of evolutionary descent. (MS-LS4-2)</li><li>Comparison of the embryological development of different species also reveals similarities that show relationships not evident in the fully-formed anatomy. (MS-LS4-3)</li></ul>LS4.B: Natural Selection<ul style="list-style-type: none"><li>Natural selection leads to the predominance of certain traits in a population, and the suppression of others. (MS-LS4-4)</li><li>In artificial selection, humans have the capacity to influence certain characteristics of organisms by selective breeding. One can choose desired parental traits determined by genes, which are then passed on to offspring. (MS-LS4-5)</li></ul>LS4.C: Adaptation<ul style="list-style-type: none"><li>Adaptation by natural selection acting over generations is one important process by which species change over time in response to changes in environmental conditions. Traits that support successful survival and reproduction in the new environment become more common; those that do not become less common. Thus, the distribution of traits in a population changes. (MS-LS4-6)</li></ul></div>	<div>Crosscutting Concepts</div> <div>Patterns<ul style="list-style-type: none"><li>Patterns can be used to identify cause and effect relationships. (MS-LS4-2)</li><li>Graphs, charts, and images can be used to identify patterns in data. (MS-LS4-1),(MS-LS4-3)</li></ul>Cause and Effect<ul style="list-style-type: none"><li>Phenomena may have more than one cause, and some cause and effect relationships in systems can only be described using probability.(MS-LS4-4),(MS-LS4-5),(MS-LS4-6)</li></ul><div>Connections to Engineering, Technology, and Applications of Science</div><div>Interdependence of Science, Engineering, and Technology<ul style="list-style-type: none"><li>Engineering advances have led to important discoveries in virtually every field of science, and scientific discoveries have led to the development of entire industries and engineered systems. (MS-LS4-5)</li></ul><div>Connections to Nature of Science</div><div>Scientific Knowledge Assumes an Order and Consistency in Natural Systems<ul style="list-style-type: none"><li>Science assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation. (MS-LS4-1),(MS-LS4-2)</li></ul>Science Addresses Questions About the Natural and Material World<ul style="list-style-type: none"><li>Scientific knowledge can describe the consequences of actions but does not necessarily prescribe the decisions that society takes. (MS-LS4-5)</li></ul></div></div></div>
Connections to other DCIs in this grade-band: MS.LS2.A (MS-LS4-4),(MS-LS4-6); MS.LS2.C (MS-LS4-6); MS.LS3.A (MS-LS4-2),(MS-LS4-4); MS.LS3.B (MS-LS4-2),(MS-LS4-4),(MS-LS4-6); MS.ESS1.C (MS-LS4-1),(MS-LS4-2),(MS-LS4-6); MS.ESS2.B (MS-LS4-1)		



# Middle School Life Science MS-LS4 Biological Evolution: Unity and Diversity

Articulation across grade-bands: 3.LS3.B (MS-LS4-4); 3.LS4.A (MS-LS4-1),(MS-LS4-2); 3. LS4.B (MS-LS4-4); 3.LS4.C (MS-LS4-6); HS.LS2.A (MS-LS4-4),(MS-LS4-6); HS.LS2.C (MS-LS4-6); HS.LS3.B (MS-LS4-4),(MS-LS4-5),(MS-LS4-6); HS.LS4.A (MS-LS4-1),(MS-LS4-2),(MS-LS4-3); HS.LS4.B (MS-LS4-4),(MS-LS4-6); HS.LS4.C (MS-LS4-4),(MS-LS4- 5),(MS-LS4-6); HS.ESS1.C (MS-LS4-1),(MS-LS4-2)

Common Core State

Standards Connections:

ELA/Literacy –

RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions (MS-LS4-1),(MS-LS4-2),(MS-LS4-3),(MS-LS4-4),(MS-LS4-5)

RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). (MS-LS4-1),(MS-LS4-3)

RST.6-8.9 Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. (MS-LS4-3),(MS-LS4-4)

WHST.6-8.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. (MS-LS4-2),(MS-LS4-4)

WHST.6-8.8 Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of

others while avoiding plagiarism and providing basic bibliographic information for sources. (MS-LS4-5)

WHST.6-8.9 Draw evidence from informational texts to support analysis, reflection, and research. (MS-LS4-2),(MS-LS4-4)

SL.8.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, teacher-led) with diverse partners on grade 6 topics, texts, and issues,

building on others' ideas and expressing their own clearly. (MS-LS4-2),(MS-LS4-4)

SL.8.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation. (MS-LS4-2),(MS-LS4-4)

Mathematics –

MP.4 Model with mathematics. (MS-LS4-6)

6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. (MS-LS4-4),(MS-LS4-6)

6.SP.B.5 Summarize numerical data sets in relation to their context. (MS-LS4-4),(MS-LS4-6)

6.EE.B.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. (MS-LS4-1),(MS-LS4-2)

7.RP.A.2 Recognize and represent proportional relationships between quantities. (MS-LS4-4),(MS-LS4-6)



# Middle School Earth and Space Science MS-ESS1 Earth's Place in the Universe

## MS-ESS1 Earth's Place in the Universe

Students who demonstrate understanding can:

- MS-ESS1-1.** Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. [Clarification Statement: Examples of models can be physical, graphical, or conceptual.]
- MS-ESS1-2.** Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. [Clarification Statement: Emphasis for the model is on gravity as the force that holds together the solar system and Milky Way galaxy and controls orbital motions within them. Examples of models can be physical (such as the analogy of distance along a football field or computer visualizations of elliptical orbits) or conceptual (such as mathematical proportions relative to the size of familiar objects such as students' school or state).] [Assessment Boundary: Assessment does not include Kepler's Laws of orbital motion or the apparent retrograde motion of the planets as viewed from Earth.]
- MS-ESS1-3.** Analyze and interpret data to determine scale properties of objects in the solar system. [Clarification Statement: Emphasis is on the analysis of data from Earth-based instruments, space-based telescopes, and spacecraft to determine similarities and differences among solar system objects. Examples of scale properties include the sizes of an object's layers (such as crust and atmosphere), surface features (such as volcanoes), and orbital radius. Examples of data include statistical information, drawings and photographs, and models.] [Assessment Boundary: Assessment does not include recalling facts about properties of the planets and other solar system bodies.]
- MS-ESS1-4.** Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history. [Clarification Statement: Emphasis is on how analyses of rock formations and the fossils they contain are used to establish relative ages of major events in Earth's history. Examples of Earth's major events could range from being very recent (such as the last Ice Age or the earliest fossils of homo sapiens) to very old (such as the formation of Earth or the earliest evidence of life). Examples can include the formation of mountain chains and ocean basins, the evolution or extinction of particular living organisms, or significant volcanic eruptions.] [Assessment Boundary: Assessment does not include recalling the names of specific periods or epochs and events within them.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

### Science and Engineering Practices

**Developing and Using Models**  
Modeling in 6–8 builds on K–5 experiences and progresses to developing, using, and revising models to describe, test, and predict more abstract phenomena and design systems.

- Develop and use a model to describe phenomena. (MS-ESS1-1), (MS-ESS1-2)

**Analyzing and Interpreting Data**  
Analyzing data in 6–8 builds on K–5 experiences and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.

- Analyze and interpret data to determine similarities and differences in findings. (MS-ESS1-3)

**Constructing Explanations and Designing Solutions**  
Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.

- Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. (MS-ESS1-4)

### Disciplinary Core Ideas

**ESS1.A: The Universe and Its Stars**

- Patterns of the apparent motion of the sun, the moon, and stars in the sky can be observed, described, predicted, and explained with models. (MS-ESS1-1)
- Earth and its solar system are part of the Milky Way galaxy, which is one of many galaxies in the universe. (MS-ESS1-2)

**ESS1.B: Earth and the Solar System**

- The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them. (MS-ESS1-2), (MS-ESS1-3)
- This model of the solar system can explain eclipses of the sun and the moon. Earth's spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilt and are caused by the differential intensity of sunlight on different areas of Earth across the year. (MS-ESS1-1)
- The solar system appears to have formed from a disk of dust and gas, drawn together by gravity. (MS-ESS1-2)

**ESS1.C: The History of Planet Earth**

- The geologic time scale interpreted from rock strata provides a way to organize Earth's history. Analyses of rock strata and the fossil record provide only relative dates, not an absolute scale. (MS-ESS1-4)

### Crosscutting Concepts

**Patterns**

- Patterns can be used to identify cause-and-effect relationships. (MS-ESS1-1)

**Scale, Proportion, and Quantity**

- Time, space, and energy phenomena can be observed at various scales using models to study systems that are too large or too small. (MS-ESS1-3), (MS-ESS1-4)

**Systems and System Models**

- Models can be used to represent systems and their interactions. (MS-ESS1-2)

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**Connections to Engineering, Technology, and Applications of Science**

**Interdependence of Science, Engineering, and Technology**

- Engineering advances have led to important discoveries in virtually every field of science and scientific discoveries have led to the development of entire industries and engineered systems. (MS-ESS1-3)

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**Connections to Nature of Science**

**Scientific Knowledge Assumes an Order and Consistency in Natural Systems**

- Science assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation. (MS-ESS1-1), (MS-ESS1-2)

Connections to other DCIs in this grade-band: MS.PS2.A (MS-ESS1-1), (MS-ESS1-2); MS.PS2.B (MS-ESS1-1), (MS-ESS1-2); MS.LS4.A (MS-ESS1-4); MS.LS4.C (MS-ESS1-4); MS.ESS2.A (MS-ESS1-3)

Articulation of DCIs across grade-bands: 3.PS2.A (MS-ESS1-1), (MS-ESS1-2); 3.LS4.A (MS-ESS1-4); 3.LS4.C (MS-ESS1-4); 3.LS4.D (MS-ESS1-4); 4.ESS1.C (MS-ESS1-4); 5.PS2.B (MS-ESS1-1), (MS-ESS1-2); 5.ESS1.A (MS-ESS1-2); 5.ESS1.B (MS-ESS1-1), (MS-ESS1-2), (5-ESS1-3); HS.PS1.C (MS-ESS1-4); HS.PS2.A (MS-ESS1-1), (MS-ESS1-2); HS.PS2.B (MS-ESS1-1), (MS-ESS1-2); HS.LS4.A (MS-ESS1-4); HS.LS4.C (MS-ESS1-4); HS.ESS1.A (MS-ESS1-2); HS.ESS1.B (MS-ESS1-1), (MS-ESS1-2), (MS-ESS1-3); HS.ESS1.C (MS-ESS1-4); HS.ESS2.A (MS-ESS1-3), (MS-ESS1-4)

Common Core State Standards Connections:

**ELA/Literacy –**

**RST.6-8.1** Cite specific textual evidence to support analysis of science and technical texts. (MS-ESS1-3), (MS-ESS1-4)

**RST.6-8.7** Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). (MS-ESS1-3)

**WHST.6-8.2** Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. (MS-ESS1-4)

**SL.8.5** Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. (MS-ESS1-1), (MS-ESS1-2)

**Mathematics –**

**MP.2** Reason abstractly and quantitatively. (MS-ESS1-3)

**MP.4** Model with mathematics. (MS-ESS1-1), (MS-ESS1-2)

**6.RP.A.1** Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. (MS-ESS1-1), (MS-ESS1-2), (MS-ESS1-3)



## Middle School Earth and Space Science MS-ESS1 Earth's Place in the Universe

7.RP.A.2	Recognize and represent proportional relationships between quantities. (MS-ESS1-1),(MS-ESS1-2),(MS-ESS1-3)
6.EE.B.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. (MS-ESS1-2),(MS-ESS1-4)
7.EE.B.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. (MS-ESS1-2),(MS-ESS1-4)



# Middle School Earth and Space Science MS-ESS2 Earth's Systems

## MS-ESS2 Earth's Systems

Students who demonstrate understanding can:

- MS-ESS2-1.** Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. [Clarification Statement: Emphasis is on the processes of melting, crystallization, weathering, deformation, and sedimentation, which act together to form minerals and rocks through the cycling of Earth's materials.] [Assessment Boundary: Assessment does not include the identification and naming of minerals.]
- MS-ESS2-2.** Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales. [Clarification Statement: Emphasis is on how processes change Earth's surface at time and spatial scales that can be large (such as slow plate motions or the uplift of large mountain ranges) or small (such as rapid landslides or microscopic geochemical reactions), and how many geoscience processes (such as earthquakes, volcanoes, and meteor impacts) usually behave gradually but are punctuated by catastrophic events. Examples of geoscience processes include surface weathering and deposition by the movements of water, ice, and wind. Emphasis is on geoscience processes that shape local geographic features, where appropriate.]
- MS-ESS2-3.** Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions. [Clarification Statement: Examples of data include similarities of rock and fossil types on different continents, the shapes of the continents (including continental shelves), and the locations of ocean structures (such as ridges, fracture zones, and trenches).] [Assessment Boundary: Paleomagnetic anomalies in oceanic and continental crust are not assessed.]
- MS-ESS2-4.** Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. [Clarification Statement: Emphasis is on the ways water changes its state as it moves through the multiple pathways of the hydrologic cycle. Examples of models can be conceptual or physical.] [Assessment Boundary: A quantitative understanding of the latent heats of vaporization and fusion is not assessed.]
- MS-ESS2-5.** Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. [Clarification Statement: Emphasis is on how air masses flow from regions of high pressure to low pressure, causing weather (defined by temperature, pressure, humidity, precipitation, and wind) at a fixed location to change over time, and how sudden changes in weather can result when different air masses collide. Emphasis is on how weather can be predicted within probabilistic ranges. Examples of data can be provided to students (such as weather maps, diagrams, and visualizations) or obtained through laboratory experiments (such as with condensation).] [Assessment Boundary: Assessment does not include recalling the names of cloud types or weather symbols used on weather maps or the reported diagrams from weather stations.]
- MS-ESS2-6.** Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. [Clarification Statement: Emphasis is on how patterns vary by latitude, altitude, and geographic land distribution. Emphasis of atmospheric circulation is on the sunlight-driven latitudinal banding, the Coriolis effect, and resulting prevailing winds; emphasis of ocean circulation is on the transfer of heat by the global ocean convection cycle, which is constrained by the Coriolis effect and the outlines of continents. Examples of models can be diagrams, maps and globes, or digital representations.] [Assessment Boundary: Assessment does not include the dynamics of the Coriolis effect.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

### Science and Engineering Practices

#### Developing and Using Models

Modeling in 6–8 builds on K–5 experiences and progresses to developing, using, and revising models to describe, test, and predict more abstract phenomena and design systems.

- Develop and use a model to describe phenomena. (MS-ESS2-1), (MS-ESS2-6)
- Develop a model to describe unobservable mechanisms. (MS-ESS2-4)

#### Planning and Carrying Out Investigations

Planning and carrying out investigations in 6–8 builds on K–5 experiences and progresses to include investigations that use multiple variables and provide evidence to support explanations or solutions.

- Collect data to produce data to serve as the basis for evidence to answer scientific questions or test design solutions under a range of conditions. (MS-ESS2-5)

#### Analyzing and Interpreting Data

Analyzing data in 6–8 builds on K–5 experiences and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.

- Analyze and interpret data to provide evidence for phenomena. (MS-ESS2-3)

#### Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.

- Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe nature operate today as they did in the past and will continue to do so in the future. (MS-ESS2-2)

### Connections to Nature of Science

Scientific Knowledge is Open to Revision in Light of New Evidence

### Disciplinary Core Ideas

#### ESS1.C: The History of Planet Earth

- Tectonic processes continually generate new ocean sea floor at ridges and destroy old sea floor at trenches. (HS.ESS1.C GBE) (secondary to MS-ESS2-3)

#### ESS2.A: Earth's Materials and Systems

- All Earth processes are the result of energy flowing and matter cycling within and among the planet's systems. This energy is derived from the sun and Earth's hot interior. The energy that flows and matter that cycles produce chemical and physical changes in Earth's materials and living organisms. (MS-ESS2-1)
- The planet's systems interact over scales that range from microscopic to global in size, and they operate over fractions of a second to billions of years. These interactions have shaped Earth's history and will determine its future. (MS-ESS2-2)

#### ESS2.B: Plate Tectonics and Large-Scale System Interactions

- Maps of ancient land and water patterns, based on investigations of rocks and fossils, make clear how Earth's plates have moved great distances, collided, and spread apart. (MS-ESS2-3)

#### ESS2.C: The Roles of Water in Earth's Surface Processes

- Water continually cycles among land, ocean, and atmosphere via transpiration, evaporation, condensation and crystallization, and precipitation, as well as downhill flows on land. (MS-ESS2-4)
- The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns. (MS-ESS2-5)
- Global movements of water and its changes in form are propelled by sunlight and gravity. (MS-ESS2-4)
- Variations in density due to variations in temperature and salinity drive a global pattern of interconnected ocean currents. (MS-ESS2-6)
- Water's movements—both on the land and underground—cause weathering and erosion, which change the land's surface features and create underground formations. (MS-ESS2-2)

#### ESS2.D: Weather and Climate

- Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns. (MS-ESS2-6)
- Because these patterns are so complex, weather can only be predicted probabilistically. (MS-ESS2-5)
- The ocean exerts a major influence on weather and climate by

### Crosscutting Concepts

#### Patterns

- Patterns in rates of change and other numerical relationships can provide information about natural systems. (MS-ESS2-3)

#### Cause and Effect

- Cause and effect relationships may be used to predict phenomena in natural or designed systems. (MS-ESS2-5)

#### Scale Proportion and Quantity

- Time, space, and energy phenomena can be observed at various scales using models to study systems that are too large or too small. (MS-ESS2-2)

#### Systems and System Models

- Models can be used to represent systems and their interactions—such as inputs, processes and outputs—and energy, matter, and information flows within systems. (MS-ESS2-6)

#### Energy and Matter

- Within a natural or designed system, the transfer of energy drives the motion and/or cycling of matter. (MS-ESS2-4)

#### Stability and Change

- Explanations of stability and change in natural or designed systems can be constructed by examining the changes over time and processes at different scales, including the atomic scale. (MS-ESS2-1)



# Middle School Earth and Space Science MS-ESS2 Earth's Systems

Science findings are frequently revised and/or reinterpreted based on new evidence. (MS-ESS2-3)	absorbing energy from the sun, releasing it over time, and globally redistributing it through ocean currents. (MS-ESS2-6)	
Connections to other DCIs in this grade-band: MS.PS1.A (MS-ESS2-1),(MS-ESS2-4),(MS-ESS2-5); MS.PS1.B (MS-ESS2-1),(MS-ESS2-2); MS.PS2.A (MS-ESS2-5),(MS-ESS2-6); MS.PS2.B (MS-ESS2-4); MS.PS3.A (MS-ESS2-4),(MS-ESS2-5); MS.PS3.B (MS-ESS2-1),(MS-ESS2-5),(MS-ESS2-6); MS.PS3.D (MS-ESS2-4); MS.PS4.B (MS-ESS2-6); MS.LS2.B (MS-ESS2-1),(MS-ESS2-2); MS.LS2.C (MS-ESS2-1); MS.LS4.A (MS-ESS2-3); MS.ESS1.B (MS-ESS2-1); MS.ESS3.C (MS-ESS2-1)		
Articulation of DCIs across grade-bands: 3.PS2.A (MS-ESS2-4),(MS-ESS2-6); 3.LS4.A (MS-ESS2-3); 3.ESS2.D (MS-ESS2-5),(MS-ESS2-6); 3.ESS3.B (MS-ESS2-3); 4.PS3.B (MS-ESS2-1),(MS-ESS2-4); 4.ESS1.C (MS-ESS2-2),(MS-ESS2-3); 4.ESS2.A (MS-ESS2-1),(MS-ESS2-2); 4.ESS2.B (MS-ESS2-3); 4.ESS2.E (MS-ESS2-2); 4.ESS3.B (MS-ESS2-3); 5.PS2.B (MS-ESS2-4); 5.ESS2.A (MS-ESS2-1),(MS-ESS2-2),(MS-ESS2-5),(MS-ESS2-6); 5.ESS2.C (MS-ESS2-4); HS.PS1.B (MS-ESS2-1); HS.PS2.B (MS-ESS2-4),(MS-ESS2-6); HS.PS3.B (MS-ESS2-1),(MS-ESS2-4),(MS-ESS2-6); HS.PS3.D (MS-ESS2-2),(MS-ESS2-6); HS.PS4.B (MS-ESS2-4); HS.LS1.C (MS-ESS2-1); HS.LS2.B (MS-ESS2-1),(MS-ESS2-2); HS.LS4.A (MS-ESS2-3); HS.LS4.C (MS-ESS2-3); HS.ESS1.B (MS-ESS2-6); HS.ESS1.C (MS-ESS2-2),(MS-ESS2-3); HS.ESS2.A (MS-ESS2-1),(MS-ESS2-2),(MS-ESS2-3),(MS-ESS2-4),(MS-ESS2-6); HS.ESS2.B (MS-ESS2-2),(MS-ESS2-3); HS.ESS2.C (MS-ESS2-1),(MS-ESS2-2),(MS-ESS2-4),(MS-ESS2-5); HS.ESS2.D (MS-ESS2-2),(MS-ESS2-4),(MS-ESS2-5),(MS-ESS2-6); HS.ESS2.E (MS-ESS2-1),(MS-ESS2-2); HS.ESS3.D (MS-ESS2-2)		
Common Core State Standards Connections:		
ELA/Literacy –		
RST.6-8.1	Cite specific textual evidence to support analysis of science and technical texts. (MS-ESS2-2),(MS-ESS2-3),(MS-ESS2-5)	
RST.6-8.7	Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). (MS-ESS2-3)	
RST.6-8.9	Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. (MS-ESS2-3),(MS-ESS2-5)	
WHST.6-8.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. (MS-ESS2-2)	
WHST.6-8.8	Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources. (MS-ESS2-5)	
SL.8.5	Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. (MS-ESS2-1),(MS-ESS2-2),(MS-ESS2-6)	
Mathematics –		
MP.2	Reason abstractly and quantitatively. (MS-ESS2-2),(MS-ESS2-3),(MS-ESS2-5)	
6.NS.C.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. (MS-ESS2-5)	
6.EE.B.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. (MS-ESS2-2),(MS-ESS2-3)	
7.EE.B.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. (MS-ESS2-2),(MS-ESS2-3)	



# Middle School Earth and Space Science MS-ESS3 Earth and Human Activity

## MS-ESS3 Earth and Human Activity

Students who demonstrate understanding can:

- MS-ESS3-1.** Construct a scientific explanation based on evidence for how the uneven distributions of Earth’s mineral, energy, and groundwater resources are the result of past and current geoscience processes. [Clarification Statement: Emphasis is on how these resources are limited and typically non-renewable, and how their distributions are significantly changing as a result of removal by humans. Examples of uneven distributions of resources as a result of past processes include but are not limited to petroleum (locations of the burial of organic marine sediments and subsequent geologic traps), metal ores (locations of past volcanic and hydrothermal activity associated with subduction zones), and soil (locations of active weathering and/or deposition of rock).]
- MS-ESS3-2.** Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects. [Clarification Statement: Emphasis is on how some natural hazards, such as volcanic eruptions and severe weather, are preceded by phenomena that allow for reliable predictions, but others, such as earthquakes, occur suddenly and with no notice, and thus are not yet predictable. Examples of natural hazards can be taken from interior processes (such as earthquakes and volcanic eruptions), surface processes (such as mass wasting and tsunamis), or severe weather events (such as hurricanes, tornadoes, and floods). Examples of data can include the locations, magnitudes, and frequencies of the natural hazards. Examples of technologies can be global (such as satellite systems to monitor hurricanes or forest fires) or local (such as building basements in tornado-prone regions or reservoirs to mitigate droughts).]
- MS-ESS3-3.** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.\* [Clarification Statement: Examples of the design process include examining human environmental impacts, assessing the kinds of solutions that are feasible, and designing and evaluating solutions that could reduce that impact. Examples of human impacts can include water usage (such as the withdrawal of water from streams and aquifers or the construction of dams and levees), land usage (such as urban development, agriculture, or the removal of wetlands), and pollution (such as of the air, water, or land).]
- MS-ESS3-4.** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth’s systems. [Clarification Statement: Examples of evidence include grade-appropriate databases on human populations and the rates of consumption of food and natural resources (such as freshwater, mineral, and energy). Examples of impacts can include changes to the appearance, composition, and structure of Earth’s systems as well as the rates at which they change. The consequences of increases in human populations and consumption of natural resources are described by science, but science does not make the decisions for the actions society takes.]
- MS-ESS3-5.** Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century. [Clarification Statement: Examples of factors include human activities (such as fossil fuel combustion, cement production, and agricultural activity) and natural processes (such as changes in incoming solar radiation or volcanic activity). Examples of evidence can include tables, graphs, and maps of global and regional temperatures, atmospheric levels of gases such as carbon dioxide and methane, and the rates of human activities. Emphasis is on the major role that human activities play in causing the rise in global temperatures.]

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p><b>Asking Questions and Defining Problems</b> Asking questions and defining problems in grades 6–8 builds on grades K–5 experiences and progresses to specifying relationships between variables, and clarifying arguments and models.</p> <ul style="list-style-type: none"> <li>Ask questions to identify and clarify evidence of an argument. (MS-ESS3-5)</li> </ul> <p><b>Analyzing and Interpreting Data</b> Analyzing data in 6–8 builds on K–5 and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.</p> <ul style="list-style-type: none"> <li>Analyze and interpret data to determine similarities and differences in findings. (MS-ESS3-2)</li> </ul> <p><b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.</p> <ul style="list-style-type: none"> <li>Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students’ own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. (MS-ESS3-1)</li> <li>Apply scientific principles to design an object, tool, process or system. (MS-ESS3-3)</li> </ul> <p><b>Engaging in Argument from Evidence</b> Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world(s).</p> <ul style="list-style-type: none"> <li>Construct an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem. (MS-ESS3-4)</li> </ul>	<p><b>ESS3.A: Natural Resources</b></p> <ul style="list-style-type: none"> <li>Humans depend on Earth’s land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes. (MS-ESS3-1)</li> </ul> <p><b>ESS3.B: Natural Hazards</b></p> <ul style="list-style-type: none"> <li>Mapping the history of natural hazards in a region, combined with an understanding of related geologic forces can help forecast the locations and likelihoods of future events. (MS-ESS3-2)</li> </ul> <p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to Earth’s environments can have different impacts (negative and positive) for different living things. (MS-ESS3-3)</li> <li>Typically as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise. (MS-ESS3-3), (MS-ESS3-4)</li> </ul> <p><b>ESS3.D: Global Climate Change</b></p> <ul style="list-style-type: none"> <li>Human activities, such as the release of greenhouse gases from burning fossil fuels, are major factors in the current rise in Earth’s mean surface temperature (global warming). Reducing the level of climate change and reducing human vulnerability to whatever climate changes do occur depend on the understanding of climate science, engineering capabilities, and other kinds of knowledge, such as understanding of human behavior and on applying that knowledge wisely in decisions and activities. (MS-ESS3-5)</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Graphs, charts, and images can be used to identify patterns in data. (MS-ESS3-2)</li> </ul> <p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Relationships can be classified as causal or correlational, and correlation does not necessarily imply causation. (MS-ESS3-3)</li> <li>Cause and effect relationships may be used to predict phenomena in natural or designed systems. (MS-ESS3-1), (MS-ESS3-4)</li> </ul> <p><b>Stability and Change</b></p> <ul style="list-style-type: none"> <li>Stability might be disturbed either by sudden events or gradual changes that accumulate over time. (MS-ESS3-5)</li> </ul> <p>-----</p> <p><b>Connections to Engineering, Technology, and Applications of Science</b></p> <p><b>Influence of Science, Engineering, and Technology on Society and the Natural World</b></p> <ul style="list-style-type: none"> <li>All human activity draws on natural resources and has both short and long-term consequences, positive as well as negative, for the health of people and the natural environment. (MS-ESS3-1), (MS-ESS3-4)</li> <li>The uses of technologies and any limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions. Thus technology use varies from region to region and over time. (MS-ESS3-2), (MS-ESS3-3)</li> </ul> <p>-----</p> <p><b>Connections to Nature of Science</b></p> <p><b>Science Addresses Questions About the Natural and Material World</b></p> <ul style="list-style-type: none"> <li>Scientific knowledge can describe the consequences of actions but does not necessarily prescribe the decisions that society takes. (MS-ESS3-4)</li> </ul>

Connections to other DCIs in this grade-band: MS.PS1.A (MS-ESS3-1); MS.PS1.B (MS-ESS3-1); MS.PS3.A (MS-ESS3-5); MS.PS3.C (MS-ESS3-2); MS.LS2.A (MS-ESS3-3), (MS-ESS3-4); MS.LS2.C (MS-ESS3-3), (MS-ESS3-4); MS.LS4.D (MS-ESS3-3), (MS-ESS3-4); MS.ESS2.D (MS-ESS3-1)

Articulation of DCIs across grade-bands: 3.LS2.C (MS-ESS3-3), (MS-ESS3-4); 3.LS4.D (MS-ESS3-3), (MS-ESS3-4); 3.ESS3.B (MS-ESS3-2); 4.PS3.D (MS-ESS3-1); 4.ESS3.A (MS-ESS3-1); 4.ESS3.B (MS-ESS3-2); 5.ESS3.C (MS-ESS3-3), (MS-ESS3-4); HS.PS3.B (MS-ESS3-1), (MS-ESS3-5); HS.PS4.B (MS-ESS3-5); HS.LS1.C (MS-ESS3-1); HS.LS2.A (MS-ESS3-4); HS.LS2.C



# Middle School Earth and Space Science MS-ESS3 Earth and Human Activity

(MS-ESS3-3),(MS-ESS3-4); HS.LS4.C (MS-ESS3-3),(MS-ESS3-4); HS.LS4.D (MS-ESS3-3),(MS-ESS3-4); HS.ESS2.A (MS-ESS3-1),(MS-ESS3-5); HS.ESS2.B (MS-ESS3-1),(MS-ESS3-2); HS.ESS2.C(MS-ESS3-1),(MS-ESS3-3);HS.ESS2.D(MS-ESS3-2),(MS-ESS3-3),(MS-ESS3-5);HS.ESS2.E(MS-ESS3-3),(MS-ESS3-4);HS.ESS3.A(MS-ESS3-1),(MS-ESS3-4); HS.ESS3.B (MS-ESS3-2); HS.ESS3.C (MS-ESS3-3),(MS-ESS3-4),(MS-ESS3-5); HS.ESS3.D (MS-ESS3-2),(MS-ESS3-3),(MS-ESS3-5)

CCSS

– ELA

RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts. (MS-ESS3-1),(MS-ESS3-2),(MS-ESS3-4),(MS-ESS3-5)

RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). (MS-ESS3-2)

WHST.6-8.1 Write arguments focused on discipline content. (MS-ESS3-4)

WHST.6-8.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection,organization, and analysis of relevant content. (MS-ESS3-1)

WHST.6-8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. (MS-ESS3-3)

WHST.6-8.8 Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources. (MS-ESS3-3)

WHST.6-8.9 Draw evidence from informational texts to support analysis, reflection, and research. (MS-ESS3-1),(MS-ESS3-4)

Mathematics –

MP.2 Reason abstractly and quantitatively. (MS-ESS3-2),(MS-ESS3-5)

6. RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. (MS-ESS3-3),(MS-ESS3-4)

7. RP.A.2 Recognize and represent proportional relationships between quantities. (MS-ESS3-3),(MS-ESS3-4)

6.EE.B.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. (MS-ESS3-1),(MS-ESS3-2),(MS-ESS3-3),(MS-ESS3-4),(MS-ESS3-5)

7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. (MS-ESS3-1),(MS-ESS3-2),(MS-ESS3-3),(MS-ESS3-4),(MS-ESS3-5)



## Attachment E

After my Dad drops me off in the morning, I prepare for my shift on the ‘Ohana Team, one of our 5<sup>th</sup> grade clubs. I take my post next to Mr. A at the curb, greeting families as they arrive. I look out for the younger kids and help them out of their cars with their backpacks. Our morning bell signals everyone to meet in the center courtyard. At 8:00 am, teachers begin strumming their ukulele and we sing our morning mele, standing side by side with our classmates. The fourth graders follow up with an oli, a chant their teacher helped them create. As I walk with my class to our 5<sup>th</sup> grade classroom, I am thinking about how much I love school.

Our classroom has a lot of open-space, with community tables on the sides, a big rug area for our active learning work, and several choices for different kinds of chairs like a comfy armchair, floor pillows, a rocking chair and a yoga ball. I think I learn best at a table with about two other classmates, so that is a choice my teacher encourages me to make. My classmates and I do our morning kuleana, our classroom jobs to open up our day. Some are checking in homework assignments, turning on computers, straightening up learning centers, checking in lunch counts, cleaning desks, etc. Mrs. L plays gentle music (this morning it is Jeff Peterson playing slack key guitar) and we transition to the rug. Mrs. L review’s our day’s schedule. Georgie asks a question about our STEAM project, and Kaikou tells a riddle that nobody can solve. Then we play a theatre improv game called “Yes...and...” where we add details onto a story that our whole class is telling, one sentence at a time. We reflect about how saying the “Yes...and...” routine helps us strengthen our sense of belonging (from the HA principles) by helping us be open to each other’s ideas and ways of doing things. In theatre they call this, “accepting offers.”

We jump into our **Arts and Humanities** project. Mrs. L projects our inquiry question on our active board: *Why did Americans of European descent feel so compelled to expand the country westward?* Mrs. L gives each group a text card, short readings on the important events that led to the Westward Expansion. Ms. L does a mini-lesson on main idea by showing us examples and non-examples. My small group reads the text and decides on the main idea of our passage. We create a tableau to show it and compose our narration to explain it. As audience members we share appreciations for each other’s work, and then ask “What if?” questions about each tableau. I asked one group, “What if no gold had been found in the West?” We finish off the project by writing (we get to choose to write either independently or with a partner). We do writing in-role, from the perspective of either a Native American or settler from the 19<sup>th</sup> century. Tomorrow we’ll pick music to match the mood of the writing for when we share. I do a search on my tablet for a few details so I can get the life to sound really authentic.

At lunch time, the 5<sup>th</sup> graders eat with our 2<sup>nd</sup> grade buddies today. It’s our job to help out 2<sup>nd</sup> graders learn manners and have appropriate conversations. They seem to really look up to us. In the afternoon, our **STEAM** work is broken up into stations so that we get more time to talk and work together. One station is about calculating the provisions that settlers would take out West, using an actual provisions list from that time. We have to consider time, distance and space to pack for our move to the West. In another station, we figure out how the disappearance of the buffalo influenced the environment – from the plants to the people. In the last station we work on perspective drawings of the ideal landscape for settlers moving west, including at least three things that are interdependent. We do visual thinking (observe, describe, and interpret) of a famous painting of Western lands, which really inspires me to do my best work. When the bell rings, I can’t believe the day is already over. We clean up, organize, pack and do our gratitude reflections. We each share our ideas and experiences: “How did I do accepting offers today? How did accepting offers help us strengthen our sense of belonging?”



## Attachment F

I love coming to school. It's 6:45 AM and the morning is fresh and the school is quiet. My Social Studies text cards are ready, our informational reading for today. I review the text-card tableaux steps again. We will use the provisions list from the Oregon Trail site to calculate ratio in our math scenario. Our daily math problem is downloaded from the SBAC Digital Library. And lastly, the drawing paper is cut and rulers handy for perspective drawing. Mr. A smiles, "Good morning," as he heads out to the curb and I head to the office, ukulele in hand, to check in. Teachers are zipping around squeezing in "one more thing" before our day starts with our morning mele. As the pū sounds three times, everyone gathers. I glance at Kupuna Kai as she signals teacher and student musicians to play. We sing and move into our day.

My students do their morning jobs efficiently now that we have started the second quarter. I circulate and check in with the flow of my class, then invite a small group to join me. We share planners and write on post-its, one personal challenge and one celebration to share. One child asks for 1-on-1 time, which we schedule at recess. Collaborative learning time follows. Today's inquiry: "Why/How did the colonists decide to move out West"? My facilitation steps are written on a chart to help me. Today's task prepares them for tomorrow's challenge. Armed with content and specific roles to play, students will need to take a position to move out West or stay put, and they'll need to convince me with their opinions based on textual evidence. We move into small group literacy centers right after our collaborative work. I meet with another group of students in literature circles, while others either meet independently following their reading response task or sit at computers to work on essays.

At recess I meet with a student to hear a personal story, one thankfully that has a productive ending. I check in with Mr. G to be sure his class is ready for project Math with me, while my students work on Math skill building with him. He tells me they have more questions regarding important events or westward migration after the morning text cards. We exchange student reflections. Math caused some discomfort from students who want the "right answer" but most enjoyed the challenge of applying Math to their scenarios. I assess which students are having difficulty and follow up with a review of calculating fractions and ratios.

The second grade teacher and I have lunch duty today. Together we supervise lunch and help our students make appropriate social choices. It's amazing how second graders learn from the examples set by their fifth grade buddies. A few students ignore suggestions from a fifth grader and we step in to ask questions, making the problem solving visible for both ages.

Afternoons are filled with skill building in visual arts, music, PE, and Health. My lesson perspective drawing lesson calms most students, as they explore after direct instruction. The day ends in physical fitness teams with the other fifth grade class and then closes with verbal reflections to the prompt, "What was strong in my learning today?"

After school our fifth grade team reviews student work to help decide which concept needs to be retaught and which show levels of mastery. I create a story problem for the assessment, which takes me through the end of the afternoon. I leave school exhausted, with a smile, appreciating the collaboration of both my peers and students.



## Attachment G

# Staffing Chart

Use the appropriate table below to outline the staffing plan for the proposed school. Adjust or add functions and titles and add or delete rows as needed. Include the salary and full-time employee ("FTE") equivalency (*e.g.*, 1.0 FTE, 0.5 FTE, etc.) for each position for each year.

**Elementary School Staffing Model and Rollout**

Title	Salary and FTE Per Position Per Year					
	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	Capacity 20__
School Director	1.0 (\$130,000)	1.0 (\$131,950)	1.0 (\$133,929)	1.0 (\$135,937)	1.0 (\$137,977)	1.0 (\$140,047)
Arts Integration Curriculum Specialist	1.0 (\$55,000)	1.0 (\$55,825)	1.0 (\$56,662)	1.0 (\$57,512)	1.0 (\$58,375)	1.0 (\$59,251)
Classroom Teachers (Core Subjects)	6.0 (\$50,000)	6.0 (\$51,500)	6.0 (\$53,045)	6.0 (\$54,636)	6.0 (\$56,275)	6.0 (\$57,963)
Classroom Teachers (Specials)	1.0 (\$50,000)	1.0 (\$51,500)	1.0 (\$53,045)	1.0 (\$54,636)	1.0 (\$56,275)	1.0 (\$57,964)
Office Manager	1.0 (\$45,000)	1.0 (\$46,350)	1.0 (\$47,740)	1.0 (\$49,172)	1.0 (\$50,647)	1.0 (\$52,166)
Receptionist	0.0	0.0	1.0 (\$20,000)	1.0 (\$20,600)	1.0 (21,218)	1.0 (\$21,854)
Teacher Aides and Assistants	1.0 (\$20,000)	1.0 (\$20,600)	1.0 (\$21,218)	1.0 (\$21,854)	1.0 (\$22,510)	1.0 (\$23,185)
School Operations Support Staff	1.0 (\$25,000)	1.0 (\$25,750)	1.0 (\$26,522)	1.0 (\$27,318)	1.0 (\$28,137)	1.0 (\$28,982)
<b>Total FTEs</b>	<b>12.0</b>	<b>12.0</b>	<b>13.0</b>	<b>13.0</b>	<b>13.0</b>	<b>13.0</b>
<b>Total Salaries</b>	<b>\$625,000</b>	<b>\$640,975</b>	<b>677,386</b>	<b>\$694,845</b>	<b>\$712,789</b>	<b>\$731,226</b>

**Middle School Staffing Model and Rollout**

Title	Salary and FTE Per Position Per Year					
	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	Capacity 20__
Classroom Teachers (Core Subjects)	2.0 (\$50,000)	4.0 (\$50,000- \$51,500)	6.0 (\$50,000- \$53,045)	6.0 (\$51,500- 54,636)	6.0 (\$53,045- \$56,275)	6.0 (\$54,636- \$57,964)
Classroom Teachers (Specials)	1.0 (\$50,000)	2.0 (\$50,000- \$51,500)	2.0 (\$51,500- \$53,045)	2.0 (\$53,045- \$54,636)	2.0 (\$54,636- \$56,275)	2.0 (\$56,275- \$57,964)



		51,500)	53,045)	\$54,636)	\$56,275)	\$57,964)
Total FTEs	3.0	6.0	8.0	8.0	8.0	8.0
Total Salaries	\$150,000	\$304,500	\$413,635	\$426,043	\$438,823	\$451,989



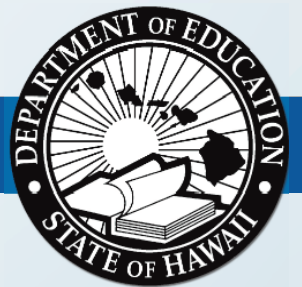
## Attachment H





# CESS manual » SY 2015-16

COMPREHENSIVE EVALUATION SYSTEM FOR SCHOOL ADMINISTRATORS





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## Comprehensive Evaluation System for School Administrators Overview

### Our Beliefs, Our Commitment<sup>1</sup>

In a democratic society, education for all individuals is the great equalizer. Public education is essential to sustain a true democracy. We believe "a democratic society is dependent upon the free, full growth of individuals who will participate in the creation and development of the institutions in that society." (Philosophy of Education – Hawaii Public Schools Policy 2000, Appendix B). The quality of public education today will touch and impact all of our lives in the future.

Through public education, all students can dream and reach their goals regardless of where they come from, their economic status or who their families are. Public education is an opportunity for all students to access programs that insure their acquisition of knowledge relevant to living in the present as well as encouraging skills of inquiry and wonder that will be required for life in the future. It is the collective responsibilities of educators, communities and governing bodies to assure all students have equal access to a quality education that embraces the whole learner with a major emphasis on the General Learner Outcomes (GLOs) that are embedded into the school curriculum. The goal of public education is much more than the sum of test scores, rather, it is building a citizenry who can work and communicate with others, create options through problem solving, become adept at questioning and can formulate answers to questions not yet asked, all within the framework of ethical decision making. Creating students who are college, career and life ready for the 21st Century begins with a strong foundation and balances achievement and adeptness with the ability to live with and alongside of others.

We believe collaboration and effective shared leadership at all levels of our educational organization are essential in a global society of diverse cultures and beliefs. To this end, we are committed as school leaders to provide leadership necessary for all our students to become 21st Century learners. We serve as catalysts in shaping school improvement to build a strong foundation to enhance teacher effectiveness, thus impacting student achievement and growth. The Wallace Foundation's report, *How Leadership Influences Student Learning* boldly asserts, "Leadership is second only to teaching among school influences on student success". This is a belief shared by school leaders. Therefore, we advocate for a comprehensive evaluation system that acknowledges and differentiates support for principals, and takes into consideration the specific contextual needs of individual school leaders and the communities they serve.

NAESP and NASSP in their executive summary of *Rethinking Principal Evaluation* reports that a new paradigm in the redesign of principal evaluation advocates careful consideration to the context of a

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<sup>1</sup> Note: "Our Beliefs, Our Commitment" is the statement created by the working group of principals that contributed to the CESSA design.



school (uniqueness of students, school and community), incorporates standards that improve practice, uses evaluation to build capacity and focuses on multiple measures of performance data.<sup>2</sup> It is our belief that a well-designed comprehensive evaluation system for school administrators will include considerations to all of the above, while strongly emphasizing inclusion of standards and the support requisite for reaching these standards that will affect improved leadership practice.

As school leaders, our commitment is in establishing structures and systems that support teachers and school administrators to maximize student learning at every school. This is accomplished with careful consideration in the management of personnel, facilities, operations and fiscal resources. However, the "Profile of an Effective School Leader" published by the Interstate School Leaders Licensure Consortium (ISLLC) under the Council of Chief of State School Officers best expresses what we believe is at the heart of leadership. It states:

Human relationships and capacity building within students, teachers and the wider school community is at the heart of the school leader's work. The effective school leader is committed, responsible, competent, caring and unwavering in the effort to have students reach high standards. A sense of both moral and professional commitment enables the effective school leader to promote a shared vision of service to students and to focus on the success of every learner as the desired result<sup>3</sup>

A bridge between what has been honored in the past and a paradigm shift to the future recognizes the importance of human relationships and capacity building ("Profile of an Effective School Leader,") with a deliberate focus on enhancing individual principal leadership development. This is the core belief that drives the commitment we as school leaders have in supporting quality public education in Hawaii. Our shared vision is for the success of every learner within the school community from principal to teacher and ultimately to the students we serve. A quality Comprehensive Evaluation System for School Administrators will focus on supporting and equipping every school leader with the necessary instructional leadership practices that build effective schools, assuring all students are college, career and especially, life ready.

#### CESSA Comprehensive System of Support

"While educators have a direct impact on student achievement, a cohesive and effective system of support is necessary to create the conditions in which success is maximized."<sup>4</sup>

The performance contract is part of an entire system of support to improve principal leadership. A

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<sup>2</sup> *Rethinking Principal Evaluation: A New Paradigm Informed by Research and Practice*, Executive Summary NAESP/NAASP, 2012.

<sup>3</sup> Educational Leadership Policy Standards; ISLLC 2008, The Council of Chief State School Officers (CCSSO)

<sup>4</sup> Memorandum of Understanding between Hawaii Government Employee's Association and Hawaii Department of Education, April 10, 2012



comprehensive evaluation system for school administrators requires a comprehensive system of support that is implemented with fidelity.

The single most important piece of the new system of support is the shared belief that, "...the purpose of evaluation is to build a principal's leadership capacity and encourage professional development"s

With a foundation focused on improving the leadership performance and capacity of principals, vice principals, and school administrators, the system of support will be manifested in meaningful and coherent structures supported by time and resources. First and foremost is that a system of support for principals must include the "voice of principals" and a commitment to empowering school leaders. An evaluation system committed to building and growing leadership ability and capacity will include best and next practices of high quality professional development and leadership training. Examples include support in terms of descriptive, specific, and timely feedback that is at first formative and non-evaluative. Such feedback is meaningful when it is provided by supervisors who have the wisdom, experience, respect, and a proven track record of being a leader of leaders and a skilled mentor for leadership growth. Another requirement for a system of support in a large organization such as the Hawaii Department of Education is clear, open, timely, and consistent communication of school related initiatives, programs, compliance requirements - school leaders cannot perform and lead when communication is poor and information is inconsistent or unclear. In addition, support needs to be provided in the form of time and opportunities to learn and implement leadership practices that are contextually appropriate, triangulation of information and feedback to inform changes and enhancing successes. The system of support needs to be guided by research-based studies that clearly indicate, "The quality of how principal evaluations are conducted may be even more important than the content of what the evaluation contains".<sup>6</sup>

The current procedure of end of the year summative evaluation is an obsolete rear view mirror type of practice that must be changed. A comprehensive and systematic evaluation system cannot wait until the end of the year and must include what a school administrator does day in and day out. "A systemic principal evaluation system must include an assessment of principal's practice - their daily work".<sup>7</sup>

Reflective practice and change leadership is a key to an evaluation system that supports professional growth. The structures to support a review of a principal's practice must be part of this system and requires:

- time be provided for a supervisor to observe and monitor the daily leadership practices of a

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<sup>5</sup> *Rethinking Principal Evaluation: A New Paradigm Informed by Research and Practice*, Executive Summary NAESP/NAASP, 2012.p.6.

<sup>6</sup> Ibid, p. 2.

<sup>7</sup> Ibid, p.5.



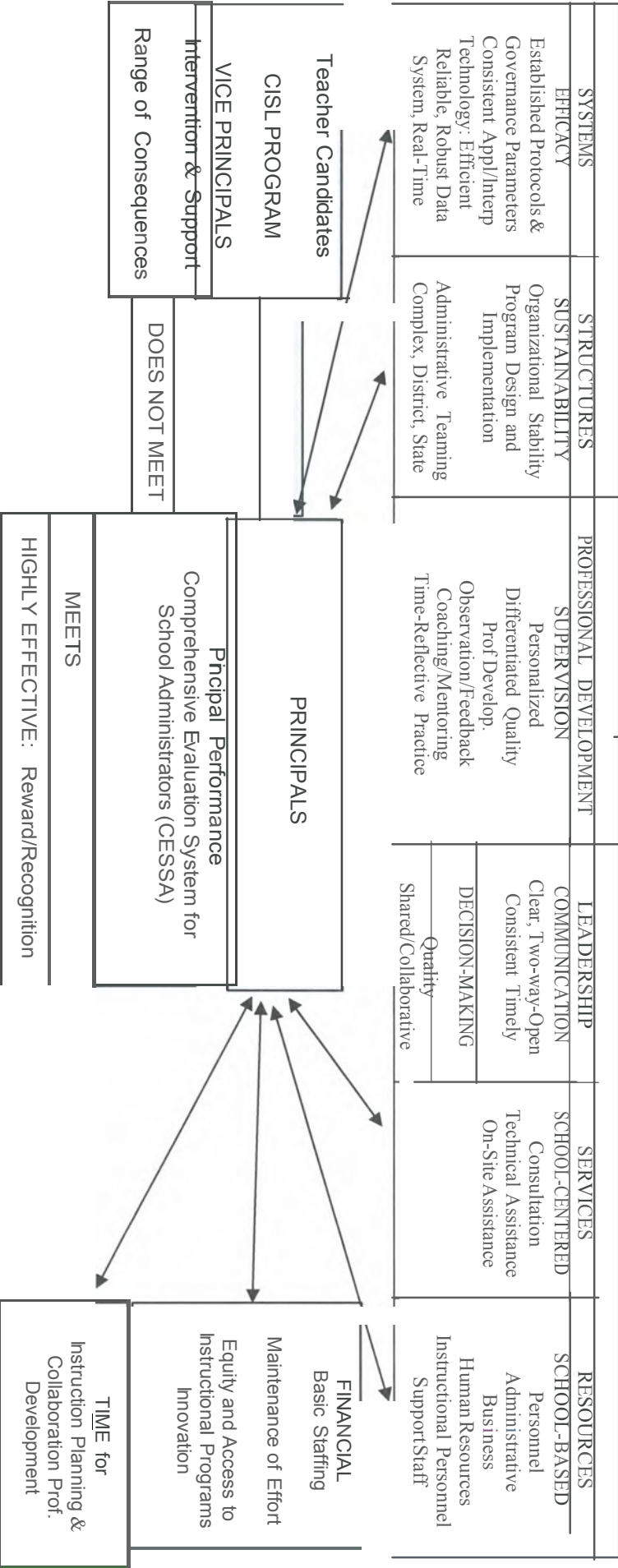
principal (communication, collaboration, capacity building, problem solving, data analysis, planning, and implementation, etc.);

- time be provided for timely reflective practice...time for developing and maintaining a portfolio of documentation and reflection;
- leaders have access to a robust data system that is reliable and has timely data a system designed specifically for and by school principals; and
- systems of support that are designed and implemented only after a careful and collaborative review of a school administrator's daily, weekly, monthly, and yearly workload to assure that system of support structures are realistic and can be included in the already overflowing plate of responsibilities of school principals and vice principals.

Improving principal evaluation is long overdue. School leadership is second only to teaching among school influences on student success. It is essential that a new comprehensive evaluation system for school administrators include a comprehensive, well designed, and carefully implemented comprehensive system of support



**COMPREHENSIVE SYSTEM OF SUPPORT**





CESSA: What will it take for success?

The Principal:

- Understands and accepts the roles and responsibilities of leaders in the Department.
- Is committed to the vision and Philosophy of Education in Hawaii's Public Schools.
- Is committed to a belief that "the moral purpose of the highest order is having a system where all students learn, the gap between high and low performance becomes greatly reduced; and, what people learn enables them to be successful citizens and workers in a morally based knowledge society."<sup>8</sup>
- Focuses on student learning and understands the importance and impact of his/her leadership practices and behaviors on the people in the school.
- Reflects on his/her practices and decision-making and learns from his/her experiences.
- Understands his/her own leadership characteristics and skills, and the leadership skills others in the school.<sup>9</sup>

The Complex Area Superintendent:

- Cares whether the Principal understands the *vision*, direction and values of the organization.
- Believes in the positive intentions of the school administrator.
- Utilizes effective communication and process skills.
- Provides direct and system support to the Principal to enable school success.
- Supports the growth and professional development of the Principal.
- Creates opportunities for continuous improvement.

The CESSA:

- Reaffirms the importance of both Student Educational Growth Outcomes and Principal Leadership Practice,
- Recognizes that what Principals do, indirectly affects Student Educational Growth Outcomes.
- Affirms the need to continue annual evaluation, but creates a multi-tiered cumulative summative rating over five years. The annual evaluation uses a five-point rating scale to evaluate progress each year; and, the summative evaluation uses a five-point rating scale to provide overall performance ratings for the five years.
- Acknowledges and understands the complexities of school improvement planning and implementation processes.
- Acknowledges and understands the need for time to strategically focus change efforts, in order to maximize acceptance, assimilation, success, sustainability and continuous improvement.

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<sup>8</sup> Fullan, M., *The Moral Imperative of School Leadership*, Corwin Press, 2003.

<sup>9</sup> Douglas Reeves, *The Learning Leader*, ASCD, 2006.



- Recognizes that levels of expertise in school leadership is developmental, occurs over time and renews when the context changes.
- Acknowledges the value of the tenured system to Hawaii schools and the organization. The tenured system aids in the recruitment and retention of employees, brings stability to the schools and workforce, supports long-term successive management goals, utilizes time, energy, materials, human and financial resources more effectively and efficiently. The CESSA incorporates a multi-tiered evaluation system to hold both Supervisor and Principal accountable for continuous improvement.



## Domains of Leadership

The Examples of Measurement are not meant to be the entire list of approved measures. The Principal and CAS may choose other measures that more accurately reflect how a descriptor is assessed.

Domains	Descriptors	Examples of Measurement
Domain 1: Student Educational Outcomes	<ul style="list-style-type: none"> <li>Promotes and supports students' progress and performance</li> <li>Provides relevant resources to support and increase student learning</li> <li>Develops strong school- community leadership teams.</li> <li>Builds instructional leadership in teachers</li> <li>Identifies and implements positive changes and practices that influences student achievement</li> <li>Aligns management style to change initiatives</li> <li>Implements and supports rigorous curriculum and instruction that is meaningful and relevant</li> <li>Supports and models research-based assessment and accountability practices</li> </ul>	<ul style="list-style-type: none"> <li>ACT Suite (8th through 11th grade)</li> <li>AP scores</li> <li>Chronic Absenteeism</li> <li>College-Going Rates</li> <li>Discipline</li> <li>Gap Rate</li> <li>Graduation</li> <li>HSA Math Proficiency</li> <li>HSA Reading Proficiency</li> <li>HSA Science Proficiency</li> <li>Median Student Growth Percentile</li> <li>Other</li> </ul>
Domain 2: Professional Growth and Learning	<ul style="list-style-type: none"> <li>Initiates professional development to improve leadership practice</li> <li>Reflects on leadership practices</li> <li>Identifies strengths and areas for improvement</li> <li>Considers feedback from faculty, staff, parents, students and community/university partners in identifying strengths and needs</li> <li>Demonstrates commitment to continuous learning</li> <li>Promotes partnerships and alliances to strengthen leadership skills and practices</li> </ul>	<ul style="list-style-type: none"> <li>Attendance rate</li> <li>Benchmark assessment</li> <li>Conducts and leads staff professional development</li> <li>Formative and summative teacher test data</li> <li>Incorporates new learning in school programs</li> <li>Multiple measures of student learning</li> <li>Personal journal</li> <li>Professional Development Plan (Mandatory, Appendix D)</li> <li>Professional portfolio or artifacts</li> <li>Scholarships</li> <li>Seeks and incorporates new learning in current practices</li> <li>Special recognition and accomplishments</li> <li>Use of scoring/grading rubrics</li> <li>Work Samples and scores</li> <li>Other</li> </ul>



Domains	Descriptors	Examples of Measurement
<p><b>Domain 3:</b> School Planning and Progress</p>	<ul style="list-style-type: none"> <li>Develops an effective school improvement plan that is based on:               <ul style="list-style-type: none"> <li>A well-crafted needs assessment;</li> <li>A clearly defined and inclusive process for creating the plan;</li> <li>A defined implementation process, and</li> <li>An identified monitoring and evaluation system.</li> </ul> </li> <li>Identifies a networking system to actively engage all audiences of the school community and stakeholders in the school improvement process</li> </ul>	<ul style="list-style-type: none"> <li>Academic/Financial Plan</li> <li>Attendance rate</li> <li>Benchmark assessment</li> <li>Formative and summative teacher test data</li> <li>Interviews/questionnaires</li> <li>Multiple measures of student learning</li> <li>Principal's reflection</li> <li>Professional portfolio or artifacts</li> <li>Scholarships</li> <li>School improvement Plan data and outcomes (such as student attendance, behavior, student outcomes)</li> <li>Special recognition and accomplishments</li> <li>Use of scoring/grading rubrics</li> <li>Work samples and scores</li> <li>Other</li> </ul>
	<p><b>Domain 4:</b> School Culture</p> <ul style="list-style-type: none"> <li>Develops and maintains a positive school culture</li> <li>Sets high expectations for all the school community</li> <li>Enables teachers and students to work collaboratively and cooperatively</li> <li>Positively influences teachers and staff working conditions</li> <li>Sets a tone that supports continuous professional learning</li> </ul>	<ul style="list-style-type: none"> <li>Attendance rate</li> <li>Benchmark assessment</li> <li>Exit interviews of employees and students</li> <li>Formative and summative teacher test data</li> <li>Multiple measures of student learning</li> <li>News clippings, media and school publications</li> <li>Observations</li> <li>Participation in school activities</li> <li>Professional portfolio or artifacts</li> <li>Recruitment and retention of faculty and teachers</li> <li>Scholarships</li> <li>School climate surveys of faculty and staff</li> <li>Special recognition and accomplishments</li> <li>Student, parent, teachers, staff and community interviews</li> <li>Use of scoring/grading rubrics</li> <li>Work Samples and scores</li> <li>Other</li> </ul>



Domains	Descriptors	Examples of Measurement
Domain 5: Professional Qualities and Instructional Leadership	<ul style="list-style-type: none"> <li>• Demonstrates a shared responsibility and shared vision and mission</li> <li>• Monitors and continuously improves teaching and learning</li> <li>• Manages the organization and systems effectively and provides resources for a safe and high performing learning environment</li> <li>• Models integrity, fairness and high ethical standards on a consistent basis</li> <li>• Advocates for teachers and students</li> <li>• Promotes civic responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>• Attendance rate</li> <li>• Benchmark assessment</li> <li>• Degree to which a principal achieves benchmark goals in the previous year's professional development plan</li> <li>• Formative and summative teacher test data</li> <li>• Multiple measures of student learning</li> <li>• Observations of principal's practice</li> <li>• Professional portfolio and artifacts aligned to state and district or national professional standards</li> <li>• Self -reflection/analysis</li> <li>• Scholarships</li> <li>• School Community Council evaluation of principal</li> <li>• Special recognition and accomplishments</li> <li>• Use of scoring/grading rubrics</li> <li>• Work Samples and scores</li> <li>• Other</li> </ul>
Domain 6: Stakeholder Support and Engagement	<ul style="list-style-type: none"> <li>• Initiates and facilitates parent and community participation in school-wide activities and initiatives</li> <li>• Engages openly in shared problem-solving and decision making, maintaining a school culture of transparency and trust with in the school community</li> <li>• Promotes open, effective and collaborative modes of communication with staff, families, and the surrounding community</li> <li>• ..._ Builds positive relationships that are culturally responsive to diverse stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Leadership, Team structures</li> <li>• Leadership Team minutes</li> <li>• Letters of continuing support, thank you letters, and letters of appreciation from stakeholders</li> <li>• News releases</li> <li>• Newsletters</li> <li>• Professional portfolio or artifacts</li> <li>• School Accreditation report</li> <li>• School Assessments</li> <li>• School Community Council Principal evaluation</li> <li>• School Status and Improvement Report data</li> <li>• Special recognition and accomplishments</li> <li>• Student, parent, community surveys</li> <li>• Tripod Survey</li> <li>• Other</li> </ul>



## **CESSA: Implementation Guidelines**

### **Basic Premise.**

The purpose and intent of the evaluation program in the system is to support the professional growth and development of Principals in their leadership practice.

### **Evaluation Program Design.**

The evaluation program is differentiated and personalized to meet the developmental and professional needs of Principals.

### **Type A. Annual Summative Evaluation for Probationary and Tenured Transferring Principals**

#### **Duration.**

The Annual Summative Evaluation is conducted for Principals each year the Principal is on probation.

#### **Purpose.**

The purpose and intent of the Annual Summative Evaluation is to ensure the Principal in his/her new position is provided the guidance and other supports necessary for success and continued professional growth. The Principal is required to develop a Professional Development Plan (Appendix C) that is used to guide his/her work during the year.

#### **Applicability.**

The Annual Summative Evaluation applies to new hire Principals; Vice Principals promoted to Principalships, and tenured Principals who are promoted to a new position and/or a new school (lateral transfer or promotion).

#### **Exit Requirements.**

When a tenured Principal transfers to a position prior to the end of a five-year cycle, a summative evaluation for his/her current position is completed by the Complex Area Superintendent (CAS) prior to the effective date of transfer. A conference with the exiting Principal to review evidence, discuss performance must be held prior to the completion of the Summative Evaluation Form. A conference is necessary to validate the performance of the Principal and communicate information on the school's status (e.g. accomplishments, challenges, status of school improvement) and the recommended next steps for the successor Principal.

#### **Evaluation Program Process.**

Determine appropriate evaluation cycle, one year Summative **or** five year Annual Interim/Summative.

#### **Evaluation Conferences each year the Principal is on probation.**



Prior to the beginning of the school year (June or July), discuss the Principal's professional development needs, strategies, and plans to address each area in the domains 2-6. Address domain 1 when the growth scores become available. Discuss and identify the supports that are necessary for his/her success. Complete the Pre-Evaluation Conference section of the CESSA Annual Review form (Appendix F) Period. for probationary principals and tenured principals transferring to a new school.

At the end of the school year for domains 2-6, the CAS discusses the Principals accomplishments, school's current status in school improvement, and student educational growth outcomes. This discussion will occur in the fall of the following school year, contingent on receipt of the previous school year's growth scores for domain 1. The end of year discussion should include a review of measures established

Pre-Evaluation Conference. The CAS informs the Principal of his/her rating for each domain and the rationale for the ratings during the Annual Summative Conference (Appendix F).

#### School Visitations.

Activities include walkthroughs, observations, meetings and/or informal meetings followed by an exit conference with the Principal.

#### Phone conferences (Optional).



## Type B. Annual Interim Evaluation with a Five Year Summative Evaluation for Tenured Principals.

### Duration.

An Annual Interim Evaluation is completed for each year for four (4) years. A Summative Evaluation is completed at the end of the year for the fifth year of a cycle. Tenured Principals are placed on a five-year evaluation cycle and remain on that cycle as long as they are in their appointed position at the school.

### Purpose.

The intent of the Annual Interim Evaluation is to provide the opportunity for professional dialogue between the CAS and Principal on at least one area in each of the six domains (selected by the principal with concurrence by the CAS). The evaluation is also used to assess the school's progress in school improvement, student educational growth outcomes, and identify supports necessary for next steps in the five-year continuum. The Principal is required to develop a five-year Professional Development Plan (Appendix C) that is used to guide his/her work during the year.

The Summative Evaluation is completed for tenured Principals at the end of June or July for domains 2-6 and by the fall of the following school year contingent on receipt of the previous year's growth scores) of the Principal's fifth year. The purpose and intent of the conference is to discuss the Principal's performance and leadership practices over the five-year period. This evaluation is intended to be a summary evaluation that is cumulative of the Principal's accomplishments, progress and growth over the five-year period. Prior year's evaluations and data over the five years must be considered in completing the Summative Evaluation for tenured Principals.

### Applicability.

Only tenured Principals are eligible for the five-year interim/summative evaluation cycle.

### Annual Interim Evaluation Conference.

Prior to the beginning of the school year, (June or July) the CAS must meet with the Principal to discuss his/her performance and practices for the previous school year for domains 2-6. This discussion should occur for domain 1 by the fall of the following school year contingent on receipt of the previous school year's growth and achievement scores. During this time the CAS and Principal should discuss his/her accomplishments, progress on school improvement, and student educational growth outcomes. Review and discuss evidence and measures. Review next steps in the Professional Development Plan. Identify focus areas and supports needed for the new school year. CAS informs the Principal of his/her annual Interim Rating for the year (Appendix F).

### Summative Evaluation Conferences.

During June or July, of the fifth school year, the CAS meets with the Principal to discuss his/her performance and leadership practices for the five years in each of the domains 2-6 (for domain 1, there will be only four years' worth of data pending receipt of year five's growth and achievement scores in the fall.



By the fall of the fifth year, the end of year discussion should include a review of measures established during the Pre-Evaluation Conference for domain 1. CAS informs the Principal of his/her rating for each domain and the rationale for the ratings (F).

At a follow-up meeting, the CAS will inform the Principal of his/her Summative Ratings and the rationale for the ratings. The Principal and CAS will discuss the performance goals that will guide the Principal's leadership practices and serve as a basis for his/her Professional Development Plan for the next five years. The CAS and the Principal will identify the supports that will be provided to the Principal.

#### School Visitations.

Activities include walkthroughs, observations, meetings and/or informal meetings followed by an exit conference with the Principal.

#### Phone conferences (optional).

### **Maintaining Confidentiality**

All matters and documents directly related to the Principal's performance evaluation must be treated as confidential. Examples of confidential documents include evaluation forms, notes and records of CAS/principal conferences, and CAS walk-through or observation notes and forms. In the event Complex or District staff are assigned to provide support services to assist the principal and/or school, discretion must be exercised by the CAS in his/her communications with Complex or District staff. Complex and District staff may not conduct walkthroughs, observations, or school visits for purposes of Principal evaluation.

### **Performance Evaluation Conferences**

The manner in which the CAS conducts a conference is key to establishing rapport, building trust, conveying a message of support, and communicating his/her understanding of the complexities and challenges that the Principal faces. The Principal's performance is to some extent a reflection and indication of the professional development, personalized guidance and differentiated support that has been provided to the Principal by the CAS.

### **Pre-Requisites for all Evaluation Conferences**

1. Strive to understand the unique context, history, climate, and culture of the school and community.



2. Consider the Principal's influence on student achievement to understand "the direct effects of the Principal's Leadership Practice on schools and teachers, and the indirect effects on instruction and learning."<sup>10</sup>

3. Know and understand the basic concepts of Change. (*Assumptions of the Concerns Based Adoption Model, CBAM*)

**CHANGE:**

- Is a PROCESS, not an event
- Is made by INDIVIDUALS first, then institutions
- Is a highly PERSONAL experience
- Entails DEVELOPMENTAL growth in feelings and skills

**INTERVENTIONS MUST BE RELATED TO:**

- The people first
- The innovation second

4. Utilize the "Six Domains of Principal Leadership" in *Rethinking Principal Evaluation*, pages 1-29, as a framework for the Hawaii Comprehensive Evaluation System for School Administrators.<sup>11</sup>

5. Utilize the "Profile of an Effective School Leader" (*Updated Version*); Performance Expectations and Elements from "Performance Expectations and Indicators for Education Leaders" CCSSO, 2008; in relation to the *NAESP/NASSP Six Domains of Principal Leadership* to further define the leadership behaviors and practices that support successful performance in the six domains, including student educational growth outcomes and learning.

**During the Conference consider the following:**

**1. Recognize and identify accomplishments.**

*What stages of leadership planning were completed?*

*What programs, processes, and/or innovations that support high performance and informed decision-making by teachers and students were implemented?*

*What structures or systems were implemented that: increases access to information; improves communication; are inclusive; and, promotes and sustains collaborative and collegial relationships, effective teamwork; and leadership?*

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<sup>10</sup> "The Ripple Effect: A Framework for Principal Impact." *Rethinking Principal Evaluation. A New Paradigm Informed by Research and Practice*. NAESP and NASSP, 2012, pp. 10-11

<sup>11</sup> *Ibid*, pp. 129.



2. Examine and analyze school data in relation to the six domains.  
*What is the Principal's performance goal(s) for each domain?*  
*What are student educational growth outcomes?*  
 (Analysis is: organizing data; summarizing the data; relating data to the performance goals and student outcomes; evaluating the differences between existing and desired conditions.)
3. Discuss the programs, processes, innovations, instructional strategies or leadership strategies that will be/or were implemented to achieve the identified goals.  
*To what extent were the above implemented?*  
*Who are/were the people involved?*  
*What were the reasons for successful implementation?*  
*What; if any are/were the barriers to implementation?*
4. Discuss the Results and Impact on Principal Leadership Performance, teacher responsiveness and student learning.  
*How well did we do?*  
*What did I learn?*

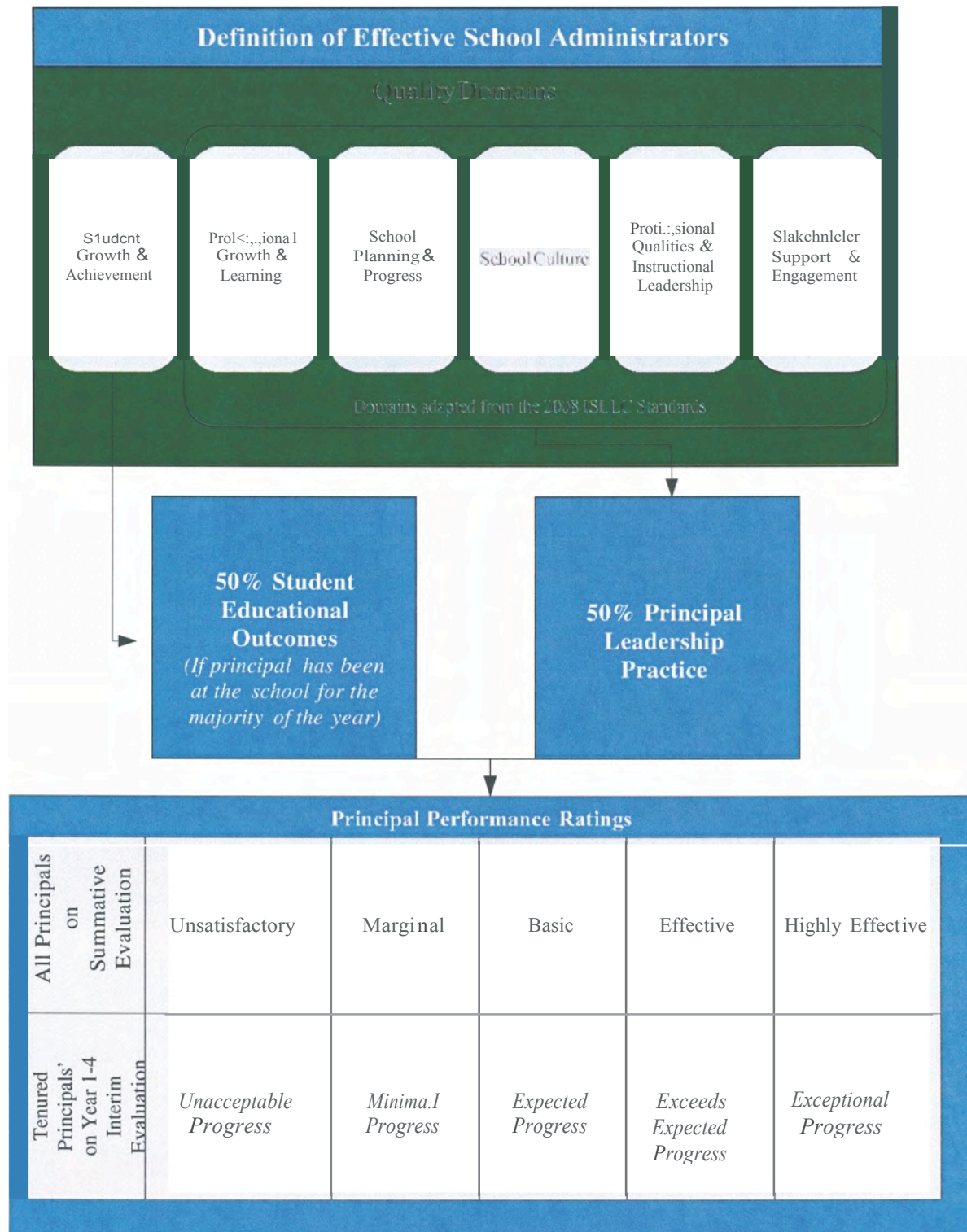
After the Conference consider the following:

- t. Provide the Principal with time for Reflection and Research.  
*What did I learn? What made the difference?*  
*What might be some alternative strategies? Is there another way?*
2. Hold a Follow-up Meeting To Discuss Next Steps and Professional Development Plan.  
*What do I maintain or continue? What do I renew or change?*  
*What supports do I need?*



## CESSA Framework Design

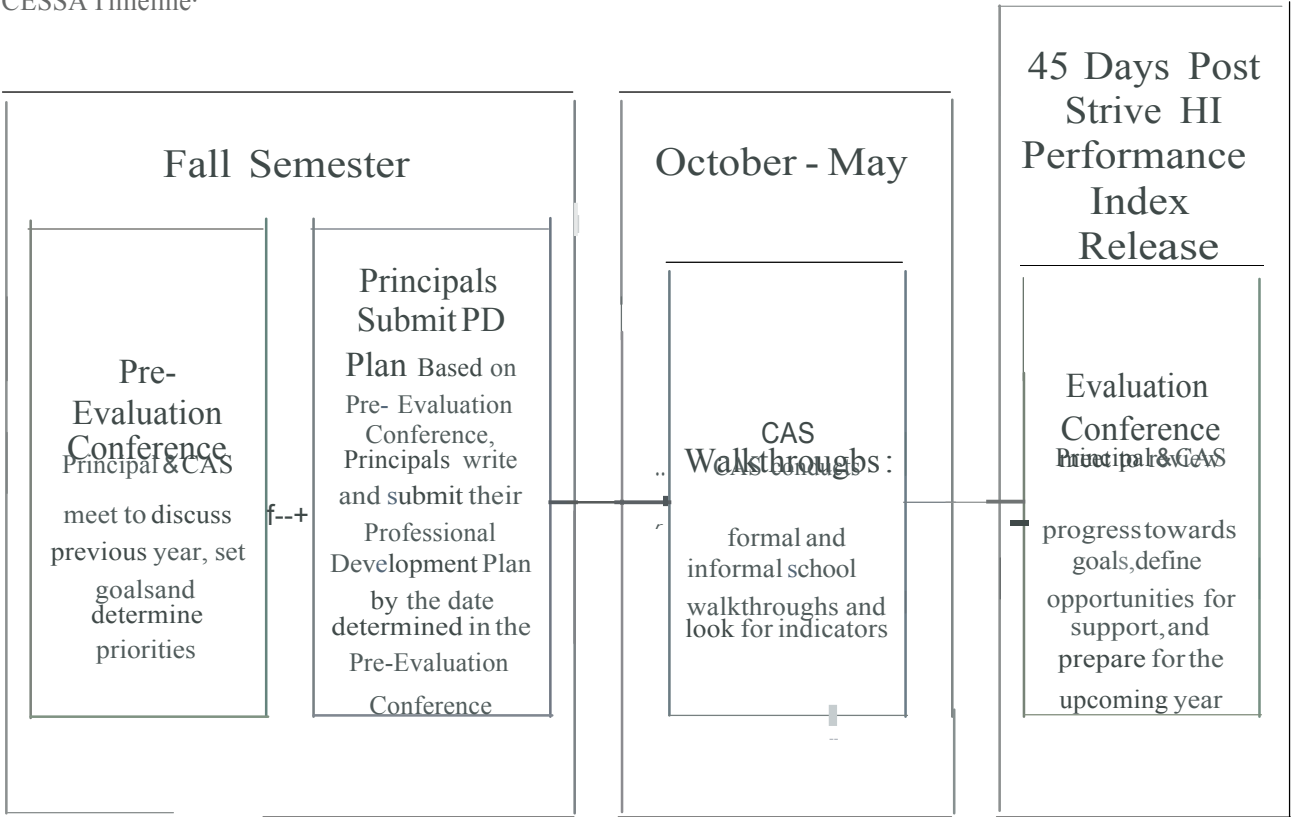
The six CESSA Domains are rooted in the Interstate School Leaders Licensure Consortium (ISLLC) standards. The following visual illustrates the organization of CESSA components and domains:





CESSA Timeline

All Pre-Evaluation Conferences must be completed by the fall of the following school year (to include receipt of domain 1 growth and achievement data from the previous school year). The CAS and Principal should decide the due date for the Professional Development Plan during the Pre-Evaluation Conference. End-of-Year Formative and Summative Evaluation Conferences must be held within 45 days of the Strive HI Performance Index data release. The following visual illustrates the CESSA Timeline:

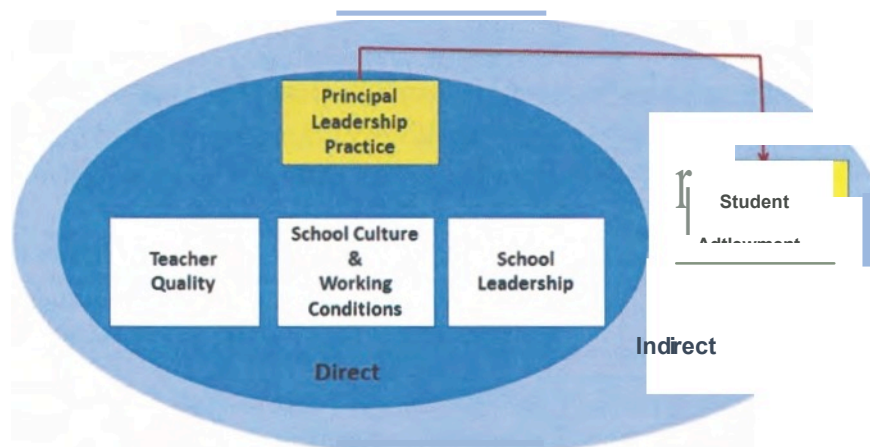




## Student Educational Outcomes, Domain 1

### Overview

The foundational purpose of any school is to increase student performance and achievement. Understanding that Principals have a strong and immediate influence on teacher quality, and directly influence school culture and teacher working conditions, the following pictures depict the theory of action behind Domain 1. Furthermore, it is important to note that Principals are the second most important school-level factor influencing student achievement. This idea is illustrated in the following visual<sup>12</sup>



### Measures

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<sup>12</sup> Clifford, M., Behrstock-Sherratt, E., and Feters, J., *The Ripple Effect: A Synthesis of Research on Principal Influence to Inform Performance Evaluation Design*, American Institutes for Research (AIR), Washington, D.C. 2012.



## School Year 2015-2016 and Beyond

Based on the academic plan, the principal and CAS set targets during the Pre-Evaluation Conference. Two of the targets are based on math and reading proficiency from the statewide test. The remaining three targets are set based on the list of achievement indicators on the following page.

During the Evaluation Conference, the principal and CAS discuss the results of all five targets and apply a met or not met rating. For the reading and math indicators, the met or not met rating is based upon either their math and reading achievement or their math and reading median growth percentile (MGP) band (below), whichever is more favorable.

### Growth Indicators

The Department assigns one of three performance levels for both Math and Reading school MGP. These performance levels are assigned within given ranges and identified in the table below. An unsatisfactory rating results in a not met with a basic and highly effective as met

Unsatisfactory	Basic	Highly Effective
Reading MGP S35 Math MGP S30	Reading MGP 36-65 Math MGP 31-60	Reading MGP > 66 Math MGP > 61

Achievement Indicators (see Appendix E for a glossary of these terms)

Performance on Achievement Indicators is measured against the targets set in the Pre-Evaluation Conference. Targeting setting is a collaborative process between the Principal and CAS and should support the Academic Plan and align to the Strategic Plan. Targets should be set using the previous year's Strive Hi results, which are populated on the CESSA Evaluation Form. Further, selecting Additional Indicators should be decided upon with consideration to a school's community context,

needs, historical challenges, and priorities. The Additional Indicators that can be chosen are:

- ACT Suite (8<sup>th</sup> through 11<sup>th</sup> grade)
- AP Scores
- Chronic Absenteeism
- College-Going Rates
- Discipline
- Gap Rate
- Graduation
- HSA Science Proficiency
- Other

## Principal Leadership and Practice, Domains 2-6

The five remaining domains were aligned with the "Profile of an Effective School Leader" published by the Interstate School Leaders Licensure Consortium (ISLLC) under the Council of Chief of State School Officers and the NAESP/NAESP's *Rethinking Principal Evaluation*. Principal Leadership and Practice will be measured with the CESSA Leadership rubric, which was



developed by HGEA and Unit 6 Principals. The domains focus on Principals' leadership within schools and recognize the role Principals play in fostering human relationships, school and staff capacity-building, and ultimately holding responsibility for overall school success.

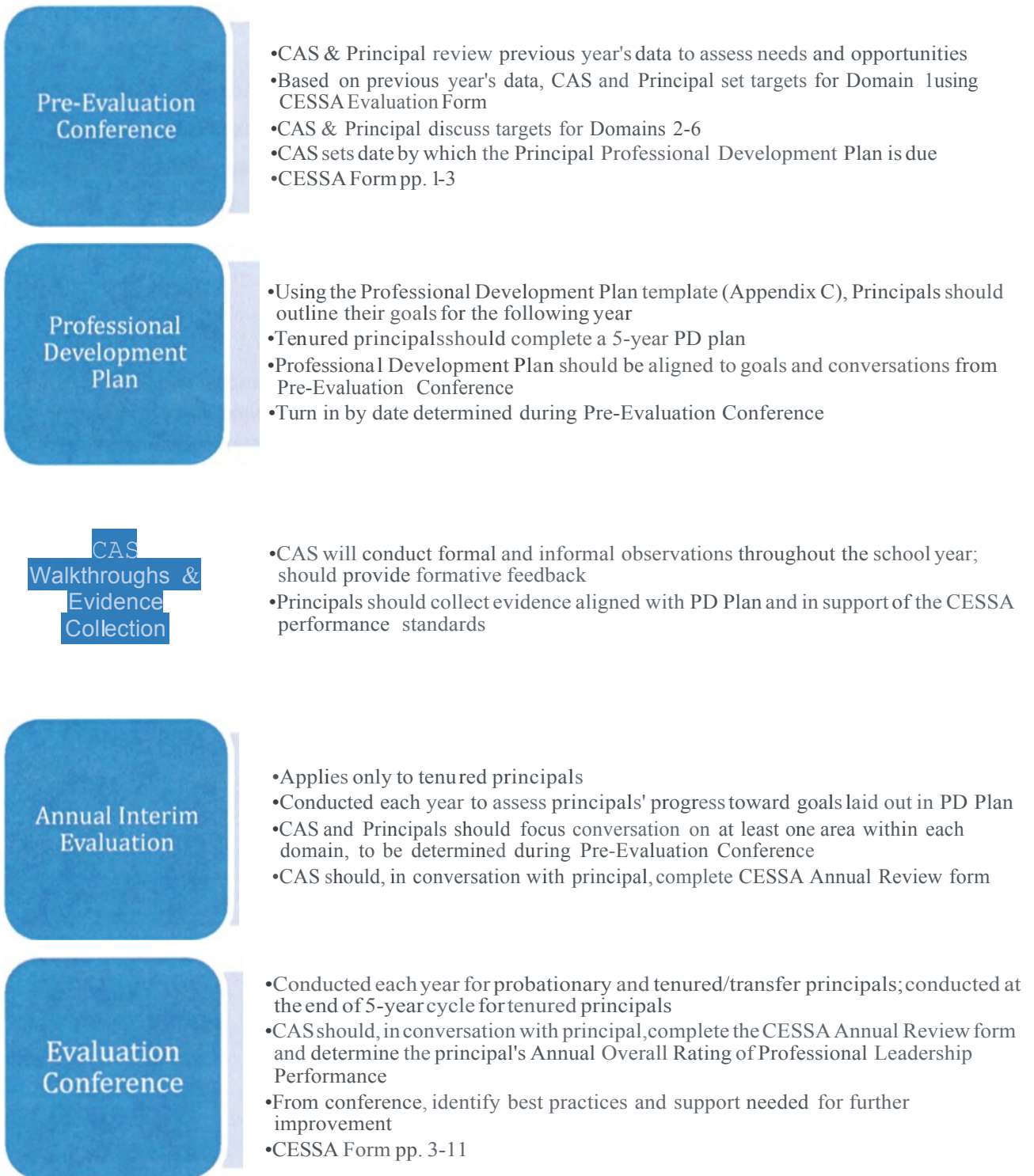
Each of the five domains described on pages 10-12 are followed by the descriptors and examples of evidence that can be used to denote progress. Descriptors are the mindsets and actions that contribute to the qualitative characteristics evocative of each domain; because the remaining domains are qualitative measures of leadership, descriptors are necessary as proxies for each domain. The examples of evidence are what can be used to prove progress within each indicator and, subsequently; each domain.

### **Cycle & Conferences**

There is a cycle of conferences and actions necessary of both CAS and Principal in accordance with the CESSA Timeline on page 20. This includes the Pre-Evaluation Conference; the Professional Development Plan; CAS Walkthroughs and Evidence Collection; Annual Interim Evaluation and Performance Evaluation Conference.



The following visual outlines each step of the CESSA process and the roles and responsibilities therein.





## Evaluating and Assigning Ratings

The assignment of performance levels per domain is a process that requires careful thought and attention to evidence the CAS collects throughout the year. When assigning ratings it is important to identify the length of leadership at the school. For example, if a Principal began second semester, Domain 1, Student Educational Outcomes does not apply - only Domain 2-6.

Additionally, Principals that are being evaluated on the summative schedule have different performance level descriptors than Principals on the all other schedule. This is reflected in the CESSA rubrics and scoring tables and illustrated below:

<b>RATINGS FOR SUMMATIVE EVALUATIONS</b>	<b>RATINGS FOR YR 1-4 INTERIM EVALUATIONS</b>
Unsatisfactory	Unacceptable Progress
Marginal	Minimal Progress
Basic	Expected Progress
Effective	Exceeds Expected Progress
Highly Effective	Exceptional Progress

## Domain 1: Student Educational Outcomes

The school MGP and Proficiency scores from the Strive Hi Performance Index are needed to assign levels of performance for Domain 1. The CAS will identify whether the Principal has met the targets set during the Pre-Conference. The CAS will then assign a rating for Domain 1 as follows:

<b>Domain 1 Student Growth and Achievement</b>				
<b>Unsatisfactory</b>	<b>Marginal</b>	<b>Basic</b>	<b>Effective</b>	<b>Highly Effective</b>
Less than 2 targets met	2 of 5 targets met	3 of 5 targets met	4 of 5 targets met	5 of 5 targets met

## Domains 2-6: Principal Leadership and Practice

Together, the CAS and Principal review the evidence collected throughout the year for Domains 2-6 and provide a performance rating using the rubric. A performance rating is required per Domain and assigned in the CESSA Form on pages 4-9 by using the dropdown menus in each domain section.



After identifying the performance levels for each domain, the CAS will use the selection criteria in the Domain 2-6 scoring rubric below to identify the overall performance for Principal Leadership and Practice.

<b>Domain 2-6: Principal Leadership and Practice</b>				
<b>Unsatisfactory</b>	<b>Marginal</b>	<b>Basic</b>	<b>Effective</b>	<b>Highly Effective</b>
<b>Unacceptable Progress</b>	<b>Minimal Progress</b>	<b>Expected Progress</b>	<b>Exceeds Expected Progress</b>	<b>Exceptional Progress</b>
Unsatisfactory or Unacceptable Progress on at least 3 Domains	Marginal or Minimal Progress on at least 2 Domains AND No more than 1 Unsatisfactory Rating	Basic or Expected Progress on at least 3 Domains AND No Rating below Marginal or Minimal Progress on any Domain	Effective or Exceeds Expected Progress on at least 3 Domains AND No Rating Below Basic or Expected Progress on any Domain	Highly Effective or Exceptional Progress on at least 2 Domains AND No Rating Below Effective or Exceeds Expected Progress on any Domain

Once the overall Principal Leadership and Practice rating is identified using the Domain 2-6 scoring rubric above, the CAS will select the appropriate rating from the dropdown menu on the CESSA Form page 9. The rating previously selected in Domain 1 Student Educational Outcomes will automatically combine with the rating selected for Domains 2-6 Leadership and Practice to provide the final performance rating.



## Overall Performance Matrix

Once principals have performance ratings for Principal Leadership and Practice and Student Growth and Achievement categories, the overall effectiveness rating will then be determined by using the performance matrix below. The performance rating that the principal achieved according to the Domain 1 Rubric (Student Growth and Achievement) will be identified in the vertical columns and will then be matched to the performance rating the principal achieved according to the Domains 2-6 Rubric (Principal Leadership and Practice) identified in the horizontal rows. The summative rating for the principal will be the performance level in the cell that is at the nexus between the two categories of CESSA.

### Student Growth and Achievement

		Basic		Effective	Highly Effective	
Principal Leadership and Practice	Highly Effective	Basic	Effective	Effective	Highly Effective	Highly Effective
	Effective		Basic	Effective	Effective	Highly Effective
	Basic	Marginal	Basic	Basic	Effective	Effective
	Marginal	Unsatisfactory	.....		Basic	Basic
	Unsatisfactory	Unsatisfactory	Unsatisfactory	Marginal	Marginal	Marginal



## Appendices

### Appendix A: PROFILE OF AN EFFECTIVE SCHOOL LEADER (Updated)<sup>13</sup>

The effective school leader is committed, responsible, competent, caring, and unwavering in the effort to have students reach high standards. A sense of both moral and professional commitment enables the effective school leader to promote a shared vision of service to students and to focus on the success of every learner as the desired result.

Human relationships and capacity-building within students, teachers and the wider school community are at the heart of the school leader's work. School leaders promote a school culture focused on professionalism, where school staff is committed to systematically improve their practices and student learning.

The effective school leader holds school professionals accountable for data-driven school and instructional improvement to attain the state performance standards.

The effective school leader is responsible for the following professional expectations and responsibilities:

#### **STANDARD 1                      Facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by all stakeholders**

- );> Collaboratively develop and implement a shared vision and mission.
- );> Collect and use data to identify goals, assess organizational effectiveness, and promote organizational learning.
- );> Create and implement plans to achieve goals.
- » Promote continuous and sustainable improvements.
- );> Monitor and evaluate progress and revise plans.

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<sup>13</sup> Based on the Educational Leadership Policy Standards: ISLLC 2008, CCSSO. The Council of Chief State School Officers



**STANDARD 2**            Advocating, nurturing, and sustaining a school culture and instructional program that is conducive to student learning and staff professional growth

- ) Nurture and sustain a culture of collaboration, trust, learning, and high expectations.
- > Create a comprehensive, rigorous, and coherent curricular program.
- > Create a personalized and motivating learning environment for students.
- > Supervise instruction.
- )- Develop assessment and accountability systems to monitor student progress.
- > Develop the instructional and leadership capacity of staff.
- > Maximize time spent on quality instruction.
- > Promote the use of the most effective and appropriate technologies to support teaching and learning.
- > Monitor and evaluate the impact of the instructional program.

**STANDARD 3**            Ensuring management of the organization, operation, and resources for a safe, efficient, and effective learning environment

- > Monitor and evaluate the management and operational systems.
- > Obtain, allocate, align, and efficiently utilize human, fiscal, and technological resources.
- > Promote and protect the welfare and safety of students and staff.
- > Develop the capacity for distributed leadership.
- > Ensure teacher and organizational time is focused to support quality instruction and student learning.



**STANDARD 4** Collaborating with faculty and community members; responding to diverse community interests and needs; and, mobilizing community resources

- }> Collect and analyze data and information pertinent to the educational environment
- }> Promote understanding, appreciation, and use of the community's diverse cultural, social and intellectual resources.
- ,,, Build and sustain positive relationships with families and caregivers.
- ,,, Build and sustain productive relationships with community partners.

**STANDARD 5** Acting with integrity, fairness, and in an ethical manner

- > Ensure a system of accountability for every student's academic and social success.
- > Model principles of self-awareness, reflective practice, transparency, and ethical behavior.
- }- Safeguard the values of democracy, equity, and diversity.
- ,.. Consider and evaluate the potential moral and legal consequences of decision-making.
- Promote social justice and ensure that individual student needs inform all aspects of schooling.

**STANDARD 6** Understanding, responding to, and influencing the political, social, economic, legal and cultural context

- }> Advocate for children, families, and caregivers.
- ,,, Act to influence local, district, state, and national decisions affecting student learning.
- ,,, Assess, analyze, and anticipate emerging trends and initiatives in order to adapt leadership strategies.



## Appendix B: Philosophy of Education Hawaii's Public Schools Policy 2000

**The Premise.** The Board of Education believes that a democratic society is dependent upon the free, full growth of individuals who will participate in the creation and development of the institutions in that society. The institution of government in this society is founded on a secular base, which allows and encourages the development of a pluralistic society that contains many cultures within that society.

**The Need for Education.** Individuals must develop their personal potentials to participate fully in a democratic, multi-cultural society. Education is the process which allows individuals to become citizens who have positive attitudes toward learning and inquiry, who communicate effectively, who are guided in making choices based on critically determined and commonly shared values, who are successful in the workplace, and who practice civic responsibility. The preservation, promotion, and improvement of a democratic, multi-cultural society require the formal schooling of its children, youth and adults.

**Scope.** The State of Hawaii shall provide a public school system with a scope of curricular, instructional and assessment programs from pre-school to high school for children, youth and adults. These programs shall include traditional programs as well as programs offered through the Department's online and distance learning alternatives, summer school and other non-instructional time programs that support students' learning needs. Such programs shall be simultaneously intellectual, aesthetic, and practical, with instructional practices which insure that learners acquire the knowledge relevant to living in the present as well as the arts and skills required for living in the future. All programs shall derive from a standards-based curriculum and research-based best practices which must include the areas of knowledge of language arts, science, mathematics, social studies, fine arts, health, physical education, world languages, and career and life skills, and *all* other comprehensive support services necessary for implementation.

These programs and services shall enable all public school graduates to realize their goals and aspirations; possess the attitudes, knowledge, and skills to contribute positively to and compete in global society; exercise their rights and responsibilities of citizenship; and pursue post-secondary and/or careers without the need for remediation.

**Equal Educational Opportunity.** Students shall have an equal education opportunity to enroll in programs regardless of race, color, religion, sex, sexual orientation, disabilities, or national origin.

Former Code No.6121  
Former Policy Approved: 09/52  
ReVJewed: 07/60  
Amended: 01/68;09/70; 03/88; 10/94;01/99: 06/23/05:01/24/08



## Appendix C: Professional Development Plan

All Principals must develop a Professional Development (PD) Plan and submit to the Complex Area Superintendent after the initial Pre-Evaluation Conference. The PD plan should be a basis for open dialogue throughout to identify and discuss best practices and supports. The PD plan may be used to measure (evaluate) progress on specific goals for Domain 2-6.

### DURATION —

1. List one or more Professional Development Goal(s): Target Date(s)

---

II. List one or more Strategies/Activities that you will implement to achieve goal(s): Target Date(s)

1.
2.
3.
4.
5.
6.

III. Reflection: Write two or more paragraphs sharing insights about your learning and leadership experiences.

Examples: Summarize impressions, recall supporting information, analyze learning, construct new learning(s).

How does this compare to what you already knew about school improvement?

What made the difference in the outcomes?

What are your thoughts about your next steps?



How will you sustain the change/improvement?

## Professional Development Plan Sample

All Principals must develop a Professional Development (PD) Plan and submit to the Complex Area Superintendent after the initial Pre-Evaluation Conference. The PD Plan should be a basis for open dialogue throughout the process to identify and discuss best practices and support. The PD plan may be used to measure (evaluate) progress on specific goals for Domain 2-6.

DURATION July 2013-June 2018

I. List one or more Professional Development Goal(s):	Target Date(s)
<i>Goal 1. To increase knowledge, understanding, skills and experiences in school improvement planning and processes.</i>	Sy2013-2018

## II. List one or more Strategies/Activities that you will implement to achieve goal(s):

	Target Date(s)
<i>1. Study and read research on school improvement and change.</i>	Sy2013-2014
<i>2. Attend professional development training and conferences relevant to school improvement and the change process.</i>	Sy2013-2014
<i>3. Review and reflect on school improvement plan and processes at my school.</i>	Summer 2014
<i>4. How are they tied in to the school's Academic and Financial plan?</i>	
<i>5. Implement and lead analyses of school improvement planning-systems, structures and processes with teacher leaders at my school.</i>	Sy2014-2015
<i>6. Develop a plan for improving school improvement planning structures and processes with teacher leaders, faculty, students and School Community Council (to include professional development for teacher leaders).</i>	Sy2014-2015 Sy2015-2016
<i>7. Implement plans and processes.</i>	Sy2015-2016 (Phase I) Sy2016-2017 (Phase II) SY2017-2018 (Phase III)
<i>8. Review, monitor and analyze effectiveness of components of systems, structures and processes.</i>	Sy2015-2016 (Phase I) Sy2016-2017 (Phase I) SY2017-2018 (Phase III)



**III. Reflection : Write two or more paragraphs sharing insights about your learning and leadership experiences.**

Examples. Summarize impressions, recall supporting information, analyze learning, construct new learning(s).

How does this compare to what you already knew about school improvement?

What made the difference in the outcomes?

What are your thoughts about your next steps?

How will you sustain the change?

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School Administrator's Signature

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Date

---

CAS Signature

---

Date

**Appendix D: Domains 2-6 Rubrics**

(Beginning on the following page)



## DOMAIN 2- PROFESSIONAL GROWTH AND LEARNING

Descriptors	1	2	3	4	5
	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE	HIGHLY EFFECTIVE
2.1 Initiates professional development to improve leadership practice.	Unwilling participant in professional development or rarely initiates professional development for self.	Participates in professional development, but does not incorporate learning in own practices.	Engages in professional development to develop, expand or refine knowledge, skills and abilities. Makes connections and examines relevance and applications to his/her practices and from different perspectives and ...	Applies knowledge, experiences and learning in new situations and changing contexts. Draws upon internal and external resources to support learning and improvement	Generates professional development opportunities for self and others to build leadership capacity and to affect change in practices. Leads and supports others by coaching, collaborating, presenting consulting and evaluating effectively.
2.2 Reflects on leadership practices.	Does not reflect on his/her leadership practices.	Considers and reviews decisions but does not consider the 2nd and 3rd level effects of his/her decisions on others.	Analyzes and evaluates the effectiveness of his/her thinking, behaviors and decisions. Considers his/her effect on others and impact on the school community.	Seeks and engages in collegial dialogue and professional learning communities	Reflects on next steps and identifies actions for continuous improvement
2.3 Identifies strengths and areas for improvement.	Does not recognize areas for improvement and the need for change.	Recognizes some strengths and areas for improvement, but does not act to bring about needed change.	Clarifies, defines and increases awareness of his/her own thinking and behaviors to identify strengths and areas for improvement.	Plans for self-improvement; identifies the-- what, why, how, when and the support that is needed. Acts on plan.	Continues to self-monitor progress and growth. Pursues ongoing learning.



## DOMAIN 2- PROFESSIONAL GROWTH AND LEARNING

Descriptor s	1	2	3	4	5
	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE <i>All of Basic and...</i>	HIGHLY EFFECTIVE <i>All of Effective and..</i>
2.4 Considers feedback from faculty, staff, parents, students and community/ university partners in identifying strengths	Immediately rejects or disregards feedback from school and community.	Listens and considers feedback, but usually rejects other perspectives.	Recognizes and understands the value of multiple perspectives Views feedback as an opportunity to	Proactively seeks feedback and makes adjustments to Leadership Practice. Uses feedback to support	Proactively seeks feedback about the school's administrators, faculty, staff and the school.
2.5 Demonstrates commitment to continuous learning.	Practices reflect satisfaction with the status quo rather than a commitment to learning and continuous improvement	Verbally expresses a commitment to continuous learning, but this is not evidenced by administrator's decisions and practices.	improve performance and to learn from others.  Demonstrates openness to continuous learning by participating in professional learning communities at the school and complex levels.  Allocates school resources to support continuous learning and improvement for faculty, staff and students.	improvement and learning in a variety of contexts.  Creates the conditions necessary to support a school culture that believes in and advocates continuous learning for all--nurtures collaboration, inquiry, intellectual safety; respect; and, resiliency.	Creates sustainable systems, programs and structures to support continuous learning.



## DOMAIN 2- PROFESSIONAL GROWTH AND LEARNING

Descriptors	1	2	3	4
	UNSATISFACTORY	MARGINAL	BASIC	HIGHLY EFFECTIVE
2.6 Promotes partnerships and alliances to strengthen leadership skills and practices.	Does not participate in professional activities or opportunities to enhance learning or leadership.	Limited interaction with other professional groups, all of which is not self-initiated.	Communicates an interest in establishing partnerships and alliances with professional organizations and/or affiliate organizations.	Seeks and engages in collaborative opportunities with partners and affiliates on a regular basis to deepen his/her understanding and to refine practices.
			Participates in partnership events or activities to develop leadership skills and practices.	Assumes an active leadership role in professional organizations, partnerships and/or affiliate organizations.



## DOMAIN 3-SCHOOL PLANNING AND PROGRESS

Descriptors	1	2	3	4	5
	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE	HIGHLY EFFECTIVE
<p>3.1 Develops an effective school improvement plan that is based on:</p> <ul style="list-style-type: none"> <li>A well-crafted need assessment;</li> <li>A clearly defined and inclusive process for creating the plan;</li> <li>A defined implementation process; and,</li> <li>An identified monitoring and evaluation system.</li> </ul>	<p>Academic/financial plan is written in isolation without collaboration.</p> <p>AFP is not aligned with the school's needs assessment</p> <p>AFP goals do not show measurable outcomes.</p>	<p>AFP is crafted by one individual or a small group within the school community.</p> <p>AFP goals demonstrate limited growth and some measurable outcomes.</p> <p>School's initiatives and outcomes are somewhat aligned to the AFP.</p> <p>AFP is monitored inconsistently without utilizing a systematic process.</p>	<p>AFP is crafted utilizing a collaborative process that includes family, staff and the school community council.</p> <p>AFP goals demonstrate measurable outcomes based on student growth and learning.</p> <p>AFP is implemented fully with fidelity.</p> <p>Administration monitors AFP progress at least quarterly with faculty, staff, and <b>SEC</b>.</p> <p>School administration makes sound data based adjustments as necessary to ensure school improvement and academic achievement</p>	<p>Progress on the AFP and student performance is shared with students, school faculty and staff, parents and community.</p> <p>Input from student leaders, school faculty and staff, parents and community is utilized to establish priorities, goals and a vision for school improvement</p>	<p>Successful programs, instructional approaches and strategies are shared with feeder schools to support and build a continuum of learning for students.</p> <p>School Renewal is an expected outcome of the assessment, planning, implementation, monitoring and evaluation process.</p>



### DOMAIN 3- SCHOOL PLANNING AND PROGRESS

Descriptors	1	2	3	4	5
	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE	HIGHLY EFFECTIVE
3.2.1Identifies a networking system to actively engage all audiences of the school community and stakeholders in the school improvement process.	No identified network of shareholders outside of the immediate school community.	Somewhat identified network of shareholders that sporadically participate in the school improvement process.	Functional networking system that consistently focuses on school improvement efforts.	Broad representation of the school community and stakeholders is present and serves as a system of support.	Members of the networking system contribute their leadership, knowledge and skills to the school improvement process.

### DOMAIN 4- SCHOOL CULTURE

Descriptors	1	2	3	4	5
	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE	HIGHLY EFFECTIVE
4.1Develops and maintains a positive school culture.	Unwillingness to acknowledge results of climate surveys and does not recognize areas of need for maintaining a positive school culture.	Gives little or no attention to needs that are identified in climate surveys (Tripod Student Survey, SQS).	Develops a positive school culture and safe learning environments. Supports curriculum, activities and programs that promote safety in multi-cultural diverse classrooms throughout the school.	Builds and sustains structures, systems and programs that promote a positive school culture. Utilizes CSSS and other data sources to conduct periodic reviews of progress and to identify areas needing adjustments.	Collaborates with all role groups to continuously improve school culture that is multi-dimensional and extends into the K -12 construct



## DOMAIN 4-SCHOOL CULTURE

		1	2	3		\$
Descriptors	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE	HIGHLY EFFECTIVE	
4.2 Sets high expectations for all the school community.	Unwillingness to create or support high academic and behavior expectations as exhibited by frequently accepting poor academic performance and/or student behavior and fails to set high expectations or sets unrealistic goals.	Gives little or no attention to school-wide expectations for student achievement and behavior as evidenced by occasionally failing to hold students to these expectations and/or sets expectations without teacher and stu.de.ntinput.	Sets clear expectations for student achievement and behavior with some teacher and student input	All of Basic and... Empowers teachers, staff and students to set high expectations for learning and behavior in school community and ensures the use of practices that have been proven to promote student success.	All of Effective and... Integrates school community role and partner groups into establishing and sustaining high academic and behavioral expectations for all learners.	
4.3 Enables teachers and students to work collaboratively and cooperatively.	Permits a learning environment that relies on teacher-controlled classroom activities, rote learning, student compliance and learning opportunities that are disconnected from students' experiences, needs or cultures.	Tolerates a learning environment in which students are passive recipients in learning opportunities that are only peripherally connected to their experiences and cultures.	Supports a learning environment that enables teachers and students to work together collaboratively and cooperatively with some consideration to students' experiences and cultures.	Creates a personalized and motivating learning environment where teachers and students collaboratively design meaningful and relevant learning opportunities that students recognize as connected to their experiences, needs and cultures.	Nurtures and sustains a teacher-student centered culture where collaboration, trust, and high expectations create an environment whereby students engage in meaningful, relevant learning that is clearly connected to their experiences, culture and futures.	



## DOMAIN 4-SCHOOL CULTURE

Descriptors	1	2	3	4	5
	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE <i>All of Basic and ...</i>	HIGHLY EFFECTIVE <i>All of Effective and ...</i>
4.4 Positively influences teachers and staff working conditions.	Little or no attention is given to developing systems, structures and processes that promote teachers and staff working conditions.	Attempts to ensure that well-defined routines and procedures are in place that address positive working conditions for teachers and staff, but does not complete the task or does so partially.	Develops and promotes well-defined routines and procedures that lead to positive working conditions.	Applies and sustains well-defined routines and procedures that promote positive working conditions AND monitors the extent to which teachers/staff perception of a positive work	Innovative in creating systems with all role groups that continuously improve teachers/ staff working conditions.
4.5 Sets a tone that supports continuous professional learning.	Displays little or no evidence of new learning or sharing of learning with faculty and/or colleagues.	Applies and shares when required, professional learning practices within school.	Occasionally shares professional learning experiences with staff and/or colleagues but tends to rely on others to take the lead in facilitating professional development.	Personally leads professional development sessions <i>at various times</i> throughout the school year with staff and/or colleagues.	Establishes self as an active professional development presenter with staff and colleagues across the system, demonstrating with a commitment of time and intellect, the belief that continuous professional development begins with the leader.



## DOMAIN 5- PROFESSIONAL QUALITIES AND INSTRUCTIONAL LEADERSHIP

Descriptors	1 UNSATISFACTORY	2 MARGINAL	3 BASIC	4 EFFECTIVE <i>All of Basic and ...</i>	5 HIGHLY EFFECTIVE <i>All of Effective and ...</i>
5.1 Demonstrates a shared responsibility and shared vision and mission	Has a Vision and/or Mission statements that may not necessarily align to the department's Strategic Plan or the school's Academic and Financial Plan.	Writes and updates the Vision and Mission statements but does not involve individuals from a variety of role groups.  Statements are generally stated and do not necessarily reflect the needs of the school or current school initiatives.	Uses a collaborative strategy to review the Vision and Mission at least annually with only a select group of individuals who may not represent a variety of role groups.  Aligns the Vision and Mission statements to the Department's and School's plans and initiatives.	Provides opportunities for rich dialogue among all school role groups to periodically and systematically review and update the Vision and Mission.  Collects and uses data to identify needs that are addressed by the Vision and Mission statements.	Posts the Vision and Mission in the buildings and on planning documents and reports.  Uses the Vision and Mission statements as the basis for all decision making. As there is a sense of "ownership" for the Vision and Mission statements, various role group members can also articulate the Vision and Mission.



## DOMAIN 5- PROFESSIONAL QUALITIES AND INSTRUCTIONAL LEADERSHIP

Descriptors	1 UNSATISFACTORY	2 MARGINAL	3 BASIC	4 EFFECTIVE <i>All of Basic and ...</i>	5 HIGHLY EFFECTIVE <i>All of Effective and ...</i>
S.2 Monitors and continuously improves teaching and learning.	Allows for individual teacher practice and there is no systematic curriculum or instructional practices that meet the unique needs of students.  Is unaware of what is happening in the classroom and in teacher data team meetings.  There is no supervision of instruction.	Writes school curriculum without teacher input or regard to available student performance data.  Visits classrooms and teacher data team meetings occasionally.  Does not promote or expect best practices in all classrooms and teacher data teams.	Provides opportunities for teachers to write curriculum maps but does not systematically update them based on student data.  Often visits classes and participates in conferences with teachers.  Allows for instructional improvement opportunities as requested by individual teachers.	Assures that curriculum maps and related documents are current and reflect instruction in the classroom.  Often visits classes and participates in conferences with teachers to improve instructional practices.  Develops assessment and accountability system to monitor student progress and program effectiveness.  Develops the instructional and leadership of teachers and staff.	Models continuous improvement as a learner and shares current research as appropriate.  Promotes opportunities for teachers and staff to participate in action research and learning to promote best practices that meet the unique needs of students.  Seeks and utilizes most effective and appropriate technologies to support teaching and learning.
S.3 Manages the organization and systems effectively and provides resources for a safe and high performing learning environment	Is unaware of the allocated resources and there is no budget or plan to utilize human, fiscal and technological resources.  There is no planned use of resources to provide a safe and high performing learning environment	Is aware of the allocated resources and although there is no plan for the use of resources, the school is generally safe and high performing learning environment.	Utilizes and is limited to using only allocated resources to manage and operate the daily activities of the school.  The school is a safe and high performing learning environment	Involves teachers and staff members in systematically developing, monitoring and evaluating the management and operational systems.  Obtains, allocates, aligns and efficiently utilizes human, fiscal and technological resources in a planned manner.	Promotes and protects the welfare and safety of students and staff by constant progress monitoring and first hand experiences. environment  Develops the capacity for distributed leadership in teachers and staff.  Ensures teacher and organizational time is focused to support quality instruction and student learning.



## DOMAIN 5- PROFESSIONAL QUALITIES AND INSTRUCTIONAL LEADERSHIP

Descriptors	1 UNSATISFACTORY	2 MARGINAL	3 BASIC	4 EFFECTIVE <i>All of Basic and...</i>	5 HIGHLY EFFECTIVE <i>All of Effective and ...</i>
5.4 Models integrity, fairness and high ethical standards on a consistent basis.	<p>Prefers to use position to reward some people and to withhold favor from those who are not in agreement</p> <p>There is no due process in decision making and people in general do as they wish until reminded otherwise.</p> <p>Takes advantage of ones position to obtain favor from others and gives the attitude of being above the rules.</p>	<p>Does not always have a consistent basis for decision making.</p> <p>Handles issues on a case by case basis which may sometimes be in conflict with stated laws, policies, rules and regulations of the department, school and classroom discipline plans.</p>	<p>Is aware of and complies with laws, policies, rules and regulations and occasionally refers to them to support decision making.</p> <p>Occasionally will make exceptions based on emotions. However, does expect others to comply with school and classroom rules with some exceptions.</p>	<p>Consistently applies the laws, policies, rules and regulations and appropriately balances with understanding and attention to the unique needs of others.</p> <p>Follows the laws, policies, rules and regulations so others expect and accept decisions that are based on fairness and equity.</p>	<p>Ensures a system of accountability for every student's academic success.</p> <p>Models principles of self-awareness, reflective practice, transparency, and ethical behavior.</p> <p>Safe guards the values of democracy, equity and diversity.</p> <p>Considers and evaluates the potential moral and legal consequences of decisions. Promotes social justice and ensures that individual student needs inform all aspects of schooling.</p>



## DOMAIN 5- PROFESSIONAL QUALITIES AND INSTRUCTIONAL LEADERSHIP

Descriptors	1 UNSATISFACTORY	2 MARGINAL	3 BASIC	4 EFFECTIVE <i>All of Basic and ...</i>	5 HIGHLY EFFECTIVE <i>All of Effective and ...</i>
5.5 Advocates for teachers and students.	Chooses not to "interfere" with the work of others and is unaware of what is happening in the school and the classrooms. People generally do not seek administrative support as they know they are "on their own."	Relies on teachers and students to resolve their own issues. Will be involved only if requested or required by others.  Accepts that mediocre teaching and occasional behavior issues will occur.	Establishes program and systems that promote and protect the welfare and safety of students and staff.	Ensures that teacher and organizational time is focused to support teacher success with quality instruction and student learning.  Establishes and monitors a behavior management system for the school and the classrooms.  There is a feeling of security that teachers and students are supported.	Utilizes data to continually set high expectations for teacher and student success.  Recognizes highly effective teachers, staff and students.
5.6 Promotes civic responsibility.	Believes that some people are different and should be treated differently and does not use a standard for decision making.  Does not hold people responsible for their decisions or behaviors, whether right or wrong.  Keeps the school disconnected from the community and its needs.	Relies on teachers to manage their students as they see fit.  Is not involved or does not participate in activities which promote responsibility for the school or classroom or to celebrate the diversity in the school.	Has written school rules to support student responsibility to self and others.  Utilizes these rules as a basis for decisions regarding students.  Expect teachers and students to model and demonstrate responsibility to self and others.	Safeguards the values of democracy, equity and diversity by ensuring that individual student needs inform all aspects of schooling.  Openly advocates for children, families and caregivers.	Acts to influence local, district, state and national decisions affecting student learning.  Supports teachers and student involvement in civic activities.



## DOMAIN 6-STAKEHOLDER SUPPORT AND ENGAGEMENT

Descriptors	1	2	3	4	5
	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE <i>All of Basic and...</i>	HIGHLY EFFECTIVE <i>All of Effective and...</i>
6.1 Initiates and facilitates parent and community participation in school wide activities and initiatives.	Principal demonstrates a pattern of missed opportunities for engagement with parents and community.	Principal and school participate in required school community partnerships but do not seek out additional or optional opportunities.	Principal and school participate in school community partnerships provided by the community, state, and/or district	Principal arranges for and facilitates school community partnerships that support student achievement and school priorities.	Principal initiates and arranges for school-community partnerships that demonstrate highly effective support for student achievement and school, district, and state & federal priorities.
6.2 Engages openly in shared problem-solving and decision making, maintaining a school culture of transparency and trust within the school community.	Principal makes most decisions in isolation. There is no evidence that there is consultation with community or staff.	Principal, faculty leadership team make most decisions, but do not include community. There may be some communication concerning decisions with school community.	Principal, faculty leadership team make most decisions and seeks advice of SEC. There is established, regular communication with school community.	Students and community members are actively consulted in decisions.	Key partner organizations, and representative key community members actively participate in decision-making activities.



## DOMAIN 6-STAKEHOLDER SUPPORT AND ENGAGEMENT

Descriptors	UNSATISFACTORY	MARGINAL	BASIC	EFFECTIVE <i>All of Basic and ...</i>	HIGHLY EFFECTIVE <i>All of Effective and ...</i>
6.3 Promotes open, effective and collaborative modes of communication with staff, families and the surrounding community.	Principal does not understand the importance or engage in open communication with staff, families and community.	Principal understands the importance of open communication with staff, families and community. There is evidence of infrequent communication.	Principal works with others to establish a system of open communication that provides regular, timely information for the school community.  Principal and staff implement communication systems that fosters dialogue and collaboration between the school faculty/ staff and individual students, parents and community members.	Communication systems support networking, collaboration and engagement of stakeholders in making important decisions.  Faculty, staff, students, families and other community members are informed about the communication systems; understand how to access information; and, believe their participation in networking, collaboration and stakeholder gatherings are important and beneficial to the school as well as to themselves.	Information is provided in different formats in multiple ways through different media to engage all members of the school community.
6.4 Builds positive relationships that are culturally responsive to diverse stakeholders.	Principal considers the community and school as separate entities.	Principal acknowledges that school and community are inextricably linked. However, there is limited engagement nurtures with a few components effective teaching and of the school community.	Principal acknowledges that school and community are inextricably linked. There are efforts to engage all components of the school	Principal promotes understanding and use of the community's diverse cultural and social resources through planned activities and events that community.	Plans and implements activities that increase positive connections with people to create an environment that supports and are valued by all components of the success for all students.



## **Appendix E: Glossary of Terms**

### **Attendance Rate**

The attendance rate is the percent of students who are physically present and accounted for on regular school days in a given year.

### **Chronic Absenteeism**

The chronic absenteeism rate is the percentage of students that are absent for 15 or more school days a year (excluding medical emergencies). On the Strive HI Performance System, chronic absenteeism rates fall into one of five quintiles -very low absenteeism, low absenteeism, average absenteeism, high absenteeism, very absenteeism -each of which has been assigned its own respective point value.

### **College-Going Rate**

Consistent with Strive HI, college-going rate is defined as the "total percentage of students who enrolled in any institution of higher education within 16 months of earning a regular high school diploma." The college enrollment is calculated using data provided by the National Student Clearinghouse and analyzed by Hawaii P-20. These data include records on more than 98 percent of all students in public and private U.S. institutions, including the UH system, Chaminade and Hawaii Pacific University.

### **Gap Rate (Current Year)**

The current year gap rate is a comparison between proficiency rates of students in the "High-Needs" (HN) or "Non-High Needs" (NHN) student groups. The current-year gap rate is calculated by dividing the difference between the NHN and HN proficiency rates by the NHN proficiency rate  $((\text{NHN} - \text{HN})/\text{NHN})$ .

### **Graduation Rate**

The graduation rate measures the rate of student 9-12 completion within a four-year cohort. All states, including Hawaii, are required to calculate graduation rates using a four-year adjusted cohort rate as defined in federal 2008 regulations.

The four-year adjusted cohort graduation rate is federally defined as the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class. From the beginning of 9th grade (or the earliest high school grade), students who are entering that grade for the first time form a cohort that is "adjusted" by adding any students who subsequently transfer into the cohort and subtracting any students who subsequently transfer out, emigrate to another country, or die.

### **Median Student Growth Percentile**

Growth is a measure of progress in academic achievement. The Hawaii Growth Model compares the progress of individual students on the State Assessment relative to others with a similar achievement history, known as their academic peers. This comparison is quantified as a Student Growth Percentile or SGP. The Median Student Growth Percentile is calculated by taking the individual SGPs of all the students in the school being analyzed, ordering them from lowest to highest, and identifying the middle score (the median). The Median SGP tells indicates how much growth a school's students are making as a whole.



In general, either the Principal or the CAS should complete all fields labeled in blue. There are data validation rules in those fields that require digits. This will be further explained below.

The Employee Information is completed by the Principal.

1. Enter Principal's last and first name (middle initial optional).
2. Enter Principal's Employee ID, which is an eight digit number higher than 10000000.
3. The School Code is entered by either selecting it from the dropdown menu or keyed in. The School Code will be a 3-digit number starting at 100.
  - a. In the cases in which a school code is not present (examples: new schools or location changes), the CAS should request a Blank CESSA Form from OSR.
4. The Evaluation Cycle years will be identified using the drop down menu. The Evaluation Period will be entered in the mm/dd/year format
5. The Interim year number will be identified as well as whether it is a Summative evaluation.
6. I identify whether the Principal being evaluated is Probationary or Tenured.

It is important to note that only Principals who have been at their campus for the majority of the academic year will be evaluated using all CESSA domains. Those who have not been at their campuses for the majority of the year will not have Domain 1 included in their evaluation.

- 2015-2016 CESSA Manual



- The Growth Indicators should be entered on line 44 using the 2014-2015 Strive HI results which should be used as a benchmark for informing current school year goal setting.

GROWTH INDICATORS														
RIIDC	Enter SID	Enter SID	IL\TB	Enter SID	Enter SID									
	1:0JJ/5 !JG?*	(MGP Performance Level)		rYJ.J.'5 VGP*	(MGP Performance Level)									
<table border="1"> <thead> <tr> <th>Unsatisfactory</th> <th>Basic</th> <th>Highly Effective</th> </tr> </thead> <tbody> <tr> <td>Reading MGP 35</td> <td>Reading MGP 36-65</td> <td>Reading MGP &gt; 66</td> </tr> <tr> <td>Math MGP 30</td> <td>Math MGP 31 – 60</td> <td>Math MGP &gt; 61</td> </tr> </tbody> </table>						Unsatisfactory	Basic	Highly Effective	Reading MGP 35	Reading MGP 36-65	Reading MGP > 66	Math MGP 30	Math MGP 31 – 60	Math MGP > 61
Unsatisfactory	Basic	Highly Effective												
Reading MGP 35	Reading MGP 36-65	Reading MGP > 66												
Math MGP 30	Math MGP 31 – 60	Math MGP > 61												

Note: The scores should pre-populate if "Enter SID" is in the cell, but if the cell is shaded blue then data will need to be entered manually.

- The Achievement Indicators require the previous year's proficiency percentages for Reading and Math on line 50.

ACHIEVEMENT INDICATORS			
2014-2015 READING Proficiency Actual:	Enter SID %	2014-2015 MATH Proficiency Actual:	Enter SID %
2015-2016 READING Proficiency TARGET:	%	2015-2016 MATH Proficiency TARGET:	%

Note: The scores should pre-populate if "Enter SID" is in the cell, but if the cell is shaded blue then data will need to be entered manually.

- The applicable 2014-2015 Strive HI Results will be entered on line 56. These scores are from the previous year and can be used in the lines below for setting targets for Indicators 1-3.

2014-2015 STRIVE HI RESULTS							
Enter SID	Enter SID	Enter SID	Enter SID	Enter SID	Enter SID	Enter SID	Enter SID
1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*
1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*	1:0JJ/5 !JG?*

Note: The scores should pre-populate if "Enter SID" is in the cell, but if the cell is shaded blue then data will need to be entered manually.

- The Principal and CAS will collaborate to select Descriptors and Targets for Indicators 1-3. Below, in line 62, the Principal (in collaboration with the CAS) will identify the Indicator from the dropdown menu, enter the progress from the previous year ("last year") and enter the Target for the current cycle. If "Other" is chosen from the dropdown menu, the selected indicator should be described in line 64.



Indicator 1: \_\_\_\_\_ <choose OI>  
 If "Other" Indicator is chosen, describe here:  
 \_\_\_\_\_  
 \_\_\_\_\_

## Domains 2-6: Principal Leadership Practice (lines 79-111)

The Principal will select a descriptor for each domain as well as the measures for identifying progress per descriptor from the dropdown menus. If the Principal wants to identify other measures not listed in the dropdown menus, this can be done in the space labeled "if Other measure is chosen, describe here."

The Principal and CAS will sign and this can be done electronically by typing signatures into the open cells on line 108. Principal and CAS will identify the date underneath the signature line using the mm/dd/year format.

101	Domain 6 Descriptors	<choose from list>
102	Domain 6 Measure (s)	Builds positive relationships that are culturally responsive to diverse stakeholders Engages openly in shared problem-solving and decision making, maintaining a school culture of transparency and trust v Initiates and facilitates parent and community participation in school-wide activities and initiatives Promotes open, effective and collaborative modes of communication with staff, families and the surrounding community
103	(if "Other" measure is	
104		
105		
106		
107		
108	Principal Signature	Evaluator Signature
109		
110		

111 Date:

Date:

## Evaluation Conference (lines 114-428)

The purpose of the evaluation conference is for the CAS and Principal to meet and collaboratively analyze the evidence collected throughout the year per Domain and agree upon the corresponding performance ratings according to the CESSA Rubrics. Both CAS and Principal should bring additional evidence to conference for the purpose of enhancing and/or supporting the rubric-based conversation. If the CAS and Principal do not agree on performance ratings for certain domains, the CAS will make the final decision.



## Domain 1: Student Educational Outcomes (Lines 114-217)

1. Principal or CAS will enter the date for the Post-Evaluation Conference in the open fields on line 117. The "Interim" and "Summative" fields on line 119 will populate from the "Employee Information" section.
2. It is the responsibility of the Principal to enter the 2015-2016 school Growth Indicators on line 125.
3. The CAS will identify whether the 2015-2016 Growth Indicators meet or do not meet the scoring band targets using the dropdown menu for "Met" or "Not Met" on line 129.

124

125

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127

Growth Indicators

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Math MGP 30	Math MGP 31 - 60	Math MGP > 61

4. The CAS will discuss the evidence provided at the Evaluation Conference with the Principal and identify whether the Principal has met the target(s) for Indicators 1-3 based on the goals set during the Pre-Conference.

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5. The CAS will then complete Commendations and Recommendations on lines 191-213 and assign a rating using the dropdown according to the Domain 1 rubric dropdown menu, lines 215-217:



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## Domains 2-6:Principal Leadership and Practice (lines 219-427)

1. The CAS will discuss the evidence provided at the Evaluation Conference with the Principal and rate the evidence for Domains 2-6 using the rubric (included in Appendix D). To do this, the CAS will select the performance rating from the dropdown menus per Domain (Domain 2: line 255; Domain 3:line 294; Domain 4: line 340; Domain 5: line 386; Domain 6: line 423).

339		
1340	CAS to determine the performance level for Domain 4 using the CESSA Rubric:	INSERT RATING
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2. After collaborating with the Principal to determine the performance level selections for each Domain (2-6), the CAS will use the ratings in combination with the Domain 2-6: Principal Leadership and Practice Rubric to make the determination of the overall performance level and make this selection in lines 425-437 using the dropdown menu.

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## Annual Overall Rating of Professional Leadership Performance

The Overall Rating for CESSA (lines 429-435) will populate according to the CESSA Performance Matrix once the CAS has selected the performance levels for Domain 1:Student Educational Outcomes (lines 215-217) and Domains 2-6: Principal Leadership and Practice (lines 425-427).



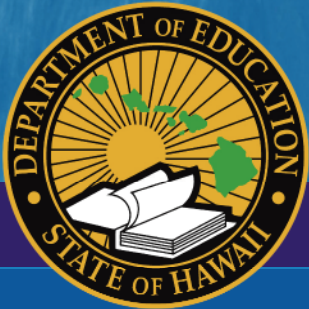
429	<b>ANNUAL OVERALL RATING OF PROFESSIONAL LEADERSHIP PERFORMANCE:</b>		
430			
431	L. STUDENT EDUCATIONAL	ILL. PRINCIPAL SUPERVISOR	Overall Rating:
432	OUTCOMES (J)gmalat):	PRACTICE (I)etubut-6):	
	SERT RAG>	<b>INSERT RATING</b>	<b>INSERT RATINGS ABOVE</b>
435			

1. The CAS should provide overall comments, commendations and recommendations to the Principal in lines 447-520.
2. The Principal should provide comments in lines 524-565.
3. Both the Principal and CAS will sign at the bottom of the form on lines 570 and 574. This can be done electronically by typing the information into the open cells. Principal and CAS will identify the date underneath the signature line using the mm/dd/year format.



## Attachment I





2015-16

MANUAL FOR EVALUATORS AND PARTICIPANTS

# Educator Effectiveness System





## Message from the Superintendent

As we enter the third year of statewide implementation of the Educator Effectiveness System (EES), I congratulate you on the work you've done to enhance professional practice and student instruction to support the success of our keiki. On behalf of the Hawaii State Department of Education (HIDOE), thank you.

Input from teachers, administrators and other stakeholders led to a streamlined EES and differentiated supports based on performance for School Year 2014-15. Those efforts were well received by the field, as revealed in our EES Joint Survey with the Hawaii State Teachers Association (HSTA). (See [bit.ly/DOEHSTAEES15](http://bit.ly/DOEHSTAEES15).) Overall understanding of the EES improved across the board, nearly doubling those who have high understanding and cutting those who understand it poorly in half, according to the Ward Research survey. A majority indicated that setting learning goals and monitoring progress are important for improving teaching practice. We are very encouraged by this progress and will continue to make improvements.

Year Three offers an opportunity to reflect on our work and focus on professional growth. As you know, teaching is much more than imparting knowledge about subjects. Great teaching ignites curiosity, creativity and discovery. Looking at our teaching practices from various perspectives can only help improve our ability to connect with students, and inspire them to apply their knowledge and overcome challenges. We are committed to enhancing the profession and supporting teachers to innovate in their instructional practices.

The Department will continue to collaborate with educators and administrators to further improve the EES and refine the model for the 2016-17 school year. We are grateful for the work of the HSTA-HIDOE Joint Committee and the feedback from our principals and teachers. Mahalo for your commitment to student achievement, quality teaching, and professional growth.

A handwritten signature in black ink, reading "Kathryn S. Matayoshi". The signature is fluid and cursive, with the first name being the most prominent.

KATHRYN S. MATAYOSHI  
Superintendent of Education



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# Key Priorities for Implementing the Educator Effectiveness System

The Educator Effectiveness System (EES) is a comprehensive process that evaluates the performance of teachers in the Hawaii State Department of Education to determine how to best target supports for teacher growth and improvement. The Department developed and refined the EES over the course of 12 months of planning and a two-year pilot. The model has been further refined based on data and input collected from stakeholders during statewide implementation in the 2013-14 and 2014-15 school years. Driven by the Department's beliefs about the value and importance of continuous improvement, the EES provides teachers with constructive feedback and structures of support throughout the school year.

## Design Values

### *Nothing matters more than effective teachers*

Research has shown that highly effective teachers have a greater impact on student achievement than any other school factor. The EES aims to improve student and system outcomes by providing all teachers with the support they need to succeed. When teachers excel, students will thrive.

### *Teachers deserve to be treated like professionals*

Professionals require evaluation systems that provide fair, transparent, equitable, and comprehensive feedback about their performance. The EES uses multiple measures, when possible, to give teachers the best information available and guard against misguided judgments. In order to support and retain effective teachers, the Department needs to recognize excellence. The EES introduces a performance rating system that enhances effective instructional practices.

### *The Educator Effectiveness System is about growth*

To reach its goals, the Department must invest in its teachers. The EES provides tools and data to help teachers become more effective. The EES supports teacher development by:

- **Clarifying Expectations** – To be effective, teachers and administrators must have a clear understanding of what constitutes successful teaching/system improvement. The multiple EES measures and performance rubrics will identify areas of strength and improvement for our teachers.
- **Providing Feedback** – The EES provides sources of regular feedback to teachers. Feedback is essential to learning and improvement. Under the EES, teachers receive feedback and opportunities for collegial discussion about their data multiple times throughout the school year.
- **Driving Professional Development** – The EES data will help leaders determine what support teachers need, the best way to allocate resources, and what instructional approaches/structures work best. Providing specific feedback to teachers allows them to set goals and seek professional development aligned with their needs.
- **Valuing Collaboration** – Collaboration among teachers is critical. It builds common expectations of student and system outcomes and allows teachers to share best practices. The EES helps facilitate collaboration within schools and between schools by providing a common language and data set to use when talking about teacher practice, student achievement, school improvement, and system change. The Department encourages leveraging existing cooperative structures like data teams, professional learning communities, departments, instructional leadership teams, and grade level teams to help teachers interpret EES.



# Supporting the Evaluation Process

Committed to the design values, the Department recognizes the importance of partnering with stakeholders to continuously monitor and improve the process.

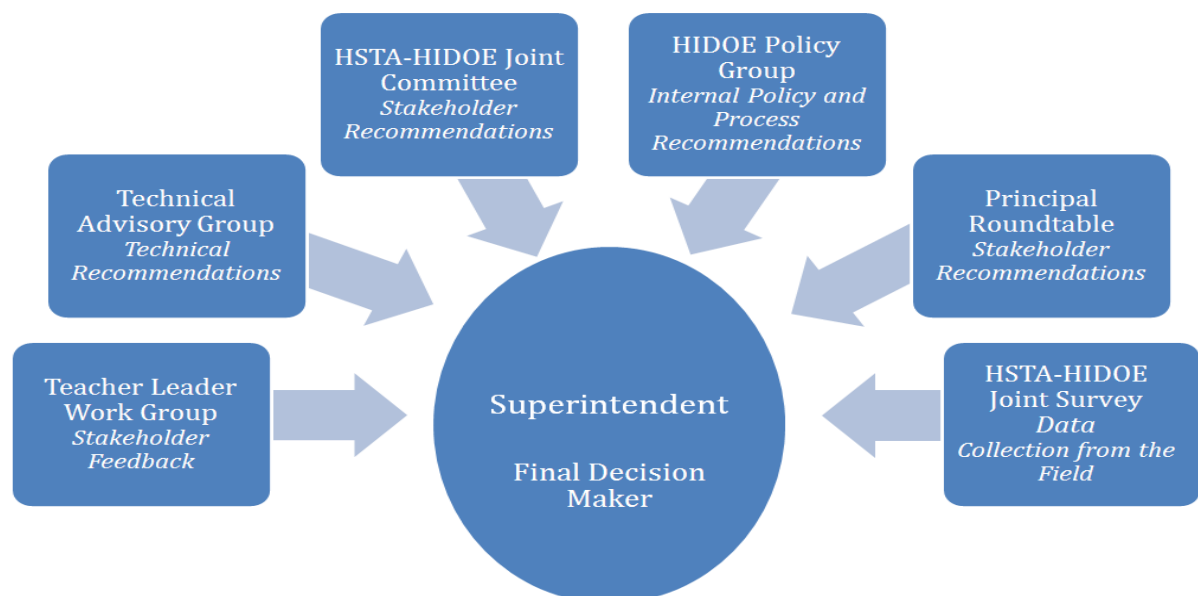
## *State Leads will:*

- monitor the fidelity of the implementation of the evaluation process statewide;
- support the schools and complexes in successfully implementing and understanding the evaluation process;
- refine the EES based on data from the field, state initiatives, and feedback from educators;
- coordinate stakeholder engagement opportunities to gather and synthesize input;
- provide procedural safeguards such as the appeals process.

## *Complex Areas will:*

- train staff and closely monitor implementation of EES in their individual schools, analyze data collected, and evaluate their own needs;
- address teachers' concerns and answer questions to help clarify instructions;
- contribute to shaping and refining the EES process to better meet the needs of teachers and students;
- target professional development needs to impact teacher effectiveness.

## Input and Feedback



The Hawaii State Board and Department of Education's joint Strategic Plan laid the groundwork for the EES, and numerous stakeholders have contributed to system enhancements ever since. The collaboration of teachers, administrators, and other key community members has been essential to the development of the EES. Their efforts have helped to create a system that prioritizes student learning, promotes dialogue between evaluators and teachers, and provides educators with clear guidance on how to improve their teaching practice.



Since the beginning of the pilot in 2011-12 Hawaii educators have had a significant voice in revising the EES. The feedback has come in a variety of forms including survey responses and in-person conversations with both teachers and administrators. Continuous improvement has been based on feedback received from various stakeholders, including the Teacher Leader Workgroup, Technical Advisory Group, HSTA-HIDOE Joint Committee, HIDOE Policy Group, Principal Roundtable, Complex Area Superintendents, and the HSTA-HIDOE Joint Survey.

Feedback and input from educators are critical to informing the ongoing implementation of the EES. For more details on the ways in which the Department collects input, please refer to Appendix C: Stakeholder Input Groups.

## Teacher Classification

The EES applies to all Bargaining Unit 5 (BU5) employees within the Department. BU5 employees fall into two broad categories: 1) Classroom Teachers and 2) Non-Classroom Teachers. The PDE<sup>3</sup> system, which houses the evaluation data and generates a final effectiveness rating, will apply data to teachers depending upon the specified classification of either Classroom Teacher or Non-Classroom Teacher.

### Classroom Teachers

Classroom teachers [CTs] are BU5 employees who plan, deliver and assess instruction for students.

### Non-Classroom Teachers

Non-classroom teachers (NCTs) are BU5 employees who do not plan, deliver, or assess instruction for students as their primary responsibility. NCTs are professionals who may support students, educators, parents, and other members of the educational community either at a school, complex area, or state office. Each NCT function is critical to the overall system of supports required for successful student outcomes. Examples of NCT roles include curriculum coordinator, literacy coach, registrar, resource teacher, librarian, counselor, student services coordinator, student activities coordinator, technology coordinator, and department head or grade level chair.

### Teachers with Multiple Roles

Some teachers may serve in multiple school roles. Teachers who have both classroom and non-classroom responsibilities need to work with their evaluator to decide which teacher classification best applies to their position. Teachers who primarily plan, deliver, and assess instruction for students should generally be classified as CTs. Teachers who perform these tasks on a limited basis but have other primary job responsibilities should be classified as NCTs. If teachers switch roles mid-year, a conference should be initiated by the evaluator to discuss the implications on their evaluation.

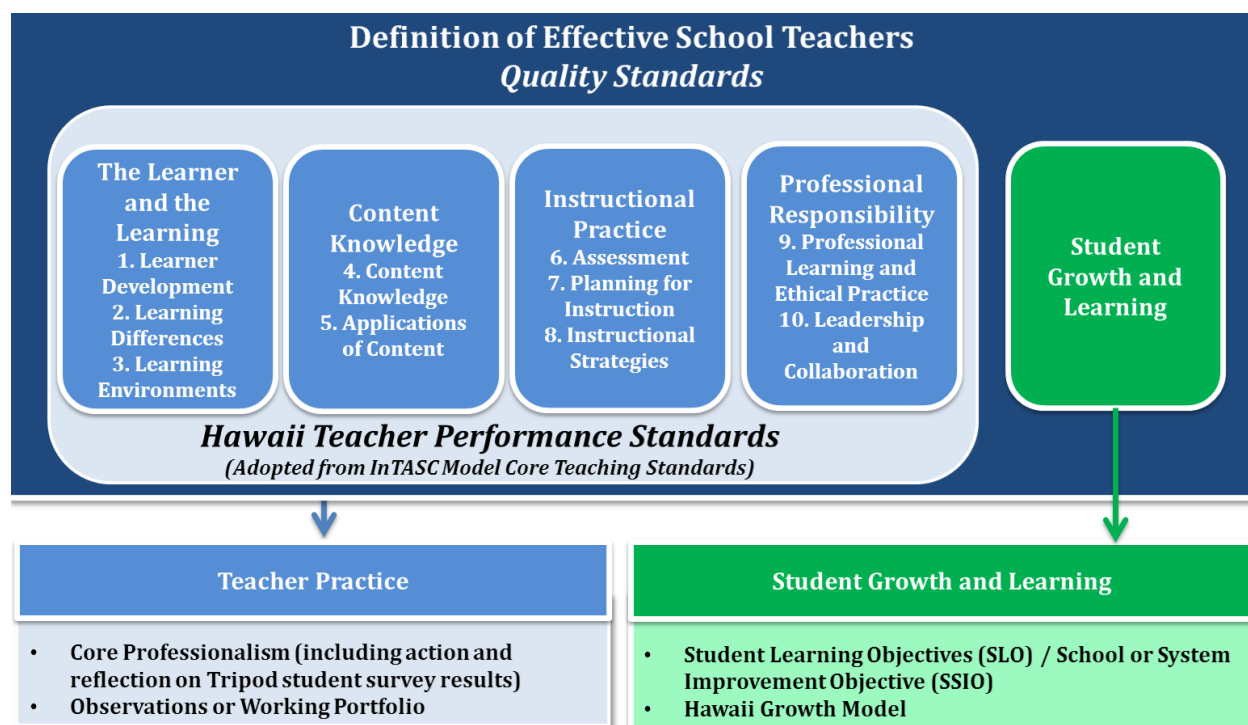
## EES Measures

The EES measures are rooted in the Hawaii Teacher Performance Standards, which are based on the Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards. The EES measures are organized under two categories:

1. Teacher Practice
2. Student Growth and Learning



Hawaii State Board of Education Policy 2055 requires measures of Teacher Practice to account for 50 percent of a teacher’s annual effectiveness rating, with measures of Student Growth and Learning to account for the other 50 percent.



The specific combination and weighting of EES measures used to determine evaluation ratings differ depending on each teacher’s job classification. This is because different data are available for different teaching assignments.

The combination of measures will result in an annual Final Effectiveness rating of Highly Effective, Effective, Marginal, or Unsatisfactory.

**Highly Effective** - Demonstrates excellence in teacher practice and student/system outcomes that exceed expectations.

**Effective** - Demonstrates effective teacher practice and student/system outcomes that meet expectations.

**Marginal** - Needs improvement to demonstrate effective teacher practice and/or expected student/system outcomes.

**Unsatisfactory** - Does not show evidence of effective teacher practice or expected student/system outcomes.

Individual component ratings do not equate to the final effectiveness rating. Individual component ratings use different terminology (i.e. Distinguished, Proficient, Basic, etc.) because they are indicators of specific levels of performance on unique rubrics. The final effectiveness rating represents the combined performance on multiple measures.

PDE<sup>3</sup> will be used to document all evaluation dates, component ratings, and generate a final effectiveness rating.



# Differentiating EES to Meet Teachers' Needs

The differentiated process reflects the belief that teachers at different performance levels deserve and require different types of feedback, support, and opportunities to grow as professionals. The EES applies differentiated evaluation measures and support based on teachers' final effectiveness rating from the previous year to help administrators manage time to coach and observe, and for teachers to prepare and reflect. All teachers will continue to set learning objectives, engage in data team processes, implement best practices in alignment with the Framework for Teaching, and participate in walk-throughs, which are all part of school improvement processes.

Every teacher will receive an annual performance rating based on a Comprehensive Evaluation. Teachers will generally fall into one of the following two categories:

## *Non-tenured teachers and teachers rated as less than Effective*

Teachers rated this way in the previous year's evaluation participate in an Enhanced Comprehensive Evaluation.

## *Tenured teachers who received a rating of Effective or better in the previous year's evaluation*

Teachers rated this way participate in alternating years of a Standard Evaluation and a Streamlined Evaluation. During the year in which tenured teachers participate in a Streamlined Evaluation, their previous year's final rating can be carried-over. If a tenured teacher does not have a final EES rating from the previous year, the teacher will participate in a Standard Evaluation (i.e. teachers that were on leave, finishing the former PEP-T evaluation, or other special circumstances).



# Annual Comprehensive Evaluations

		Comprehensive Evaluations		
		Enhanced	Standard	Streamlined
		<ul style="list-style-type: none"> <li>Any <b>Overall Marginal Rating</b> Teacher</li> <li>Any <b>Non-Tenured</b> Teacher regardless of previous year rating</li> </ul>	<ul style="list-style-type: none"> <li><b>Tenured</b> teacher with <b>NO EES Rating</b> from previous year</li> </ul>	<ul style="list-style-type: none"> <li><b>Tenured</b> teacher with <b>Overall Effective</b> or <b>Overall Highly Effective Rating</b></li> </ul>
Teacher Practice	Core Professionalism	Domain 4, and reflection and action on student survey results	Domain, 4 and reflection and action on student survey results	Reflection on student survey results during IPDP conference.
	Observation -OR- Working Portfolio	Two or more formal observations, or a Working Portfolio for Non-Classroom Teachers	One or more formal observations, or a Working Portfolio for Non-Classroom Teachers	Not required in PDE <sup>3*</sup>
Student Growth and Learning	Student Learning Objectives -OR- School or System Improvement Objectives	One SLO or SSIO	One SLO or SSIO	Not required in PDE <sup>3*</sup>
	Hawaii Growth Model	Teacher MGP or Schoolwide MGP if available	Teacher MGP or Schoolwide MGP if available	Reflection on MGP results during IPDP conference
Final Rating		New rating received	New rating received	Rating of Effective or better carried over from prior year

*\* Teachers will continue to set learning objectives, engage in data team processes, implement best practices in alignment with the Framework for Teaching, and participate in walkthroughs, which are all part of school improvement processes. However, documentation of SLOs/SSIOs and formal observations in PDE<sup>3</sup> is not required for Streamlined Evaluation. See Appendix F: Comprehensive Evaluation Tracks 2015-16*

While a minimum of one observation will be required in the year of a Standard Evaluation, educators are encouraged to engage in multiple observation cycles to improve practice and determine an accurate picture of what is truly happening in the classroom. Administrators can approve or deny additional requests by teachers to conduct additional observations.

If a teacher participating in a Streamlined Evaluation demonstrates a documented performance deficiency (including, but not limited to concerning results in student surveys, Hawaii Growth Model, practices aligned with the Framework for Teaching, or their professional development plan), their administrator can move them to a Standard Evaluation immediately. Streamlined Evaluation does not mean a year off from evaluation.



In determining a final rating for a given year, nothing shall preclude HDOE from using information and data from the previous year. For example, a teacher's professional development plan in a Streamlined Evaluation can be used as ongoing evidence of growing and developing professionally for Core Professionalism the following year.

## Schedule for Transitioning to Differentiated Comprehensive Evaluations

Non-tenured teachers and teachers rated as less than Effective will participate in an Enhanced Comprehensive Evaluation annually.

Tenured teachers who achieved a rating of Effective or better in the prior year's evaluation will participate in a Standard Comprehensive Evaluation and a Streamlined Comprehensive Evaluation in alternating years.

OHR will publish additional specifics on the transition schedule for teachers who are tenured and received a rating of Effective or better in 2014-15, but it will generally follow the chart below. For 2015-16, these teachers will all participate in the Streamlined Evaluation.

### Example Transition Chart : Tenured Teachers with Effective or Better EES Rating in 2014-15

	2015-16	2016-17	2017-18
"Group A"	Streamlined evaluation	Standard evaluation	Streamlined evaluation
"Group B"	Streamlined evaluation	Streamlined evaluation	Standard evaluation

## Professional Development Plans

All teachers will develop and maintain a Professional Development Plan that identifies areas for targeted growth and learning. Completion of the learning opportunities within the plan will be considered a matter of professional responsibility. The plan can include a varied amount of conferences with an administrator depending on the type of plan.

**For teachers rated as Effective or better:** A teacher's Individual Professional Development Plan (IPDP) can take shape in many different formats, but should include concrete goal(s) for targeted growth and learning. The plan should be based on data such as the teacher's past performance, student survey results, Hawaii Growth Model results, school goals, self-assessments of strengths and weaknesses, practices aligned with the Framework for Teaching, and any other sources of professional data. Examples of IPDPs could include the Highly Qualified Professional Development Plan, the Induction and Mentoring Growth Plan, or school-designed PD plan, among others.

Teachers will bring their IPDP to their Beginning-of-the-Year conference with their evaluator for discussion and approval. A Progress Check Conference can offer a formal opportunity to make any needed adjustments to the plan if necessary or establish an intervention plan if concerns arise. In addition to supporting quality reflective professional practice and improvement, the IPDP and related conferences can be used to validate the "carried over" rating or trigger intervention.

**For teachers rated as less than Effective:** In this case the development of the plan will be led by the principal or evaluator. This Principal Directed Professional Development Plan (PDPDP) must be approved within 30 instructional days from the start of the school year. The plan should include specific interventions and teacher expectations, as well as a timeline for improvements to occur.



## Example Timeline of Professional Development Plans

	By end of 1 <sup>st</sup> Quarter Beginning Conference	By 1 <sup>st</sup> week of 2 <sup>nd</sup> Semester Progress Check (optional)	By middle of 4 <sup>th</sup> Quarter Ending Conference
<b>Individual Professional Development Plan (IPDP)</b>	<ul style="list-style-type: none"> <li>Identify how the plan will be documented</li> <li>Review data</li> <li>Identify area(s) for targeted growth and learning</li> <li><b>Plan should be approved by the end of the first quarter</b></li> </ul>	<ul style="list-style-type: none"> <li>Implement the plan and document the impact on teacher practice and/or student learning</li> <li>Deficiencies can trigger an intervention</li> </ul>	<ul style="list-style-type: none"> <li>Completion of the plan is a matter of professional responsibility</li> <li>Submit evidence for completion before Ending Conference</li> <li>Discuss results and next steps of professional growth at Ending Conference</li> </ul>
<b>Principal Directed Professional Development Plan (PDPDP)</b>	<ul style="list-style-type: none"> <li>Identify which template will be used</li> <li>Use previous EES data to identify area(s) of targeted growth and learning as directed by evaluator</li> <li><b>Plan must be approved within 30 instructional days from the start of the school year</b> (Single track schools: 9/10)</li> </ul>	<ul style="list-style-type: none"> <li>Progress Check conference suggested to be completed by the first week of January but the principal may need to increase frequency of review based on individual teacher needs</li> </ul>	<ul style="list-style-type: none"> <li>Teacher submits evidence for completion of plan prior to Ending Conference</li> <li>Progress on plan is used as evidence in the Core Professionalism measure</li> <li>Discuss results and next steps of professional growth at Ending Conference</li> </ul>

## Evaluation Conferences

Every teacher is unique, therefore support and development should not look exactly the same for everyone. It is imperative that teachers and administrators have opportunities for honest, data-driven conversations focused on promoting continuous improvement. Instead of meeting about each evaluation component separately, it is recommended that teachers and evaluators work together to schedule combined conferences for as many components as possible. While observation cycles typically require their own conferencing schedule, most of the other components in the EES can be discussed during a Beginning Conference, Progress Check Conference, and Ending Conference as described here.

**Beginning Conference:** This is a collaborative discussion about the teacher's past performance and plan for the year ahead. It is recommended that the topics of conversation include a teacher's professional development plan, Core Professionalism, Working Portfolio, Observation schedule, and SLO/SSIO plan as applicable. It is recommended to hold Beginning Conferences before the end of the first quarter.

**Progress Check Conference (optional):** If necessary or desired, a meeting can be arranged to discuss progress on all aspects of the teacher's performance. New sources of information about the teacher's practice such as Tripod Student Survey Results, walk-through data, Hawaii Growth Model data, or a change in the teacher's role could trigger a need to meet. Topics could also include the impact of new students on an SLO, progress on a Working Portfolio, or a needed adjustment to a teacher's professional



development plan. Additionally, concerns could be discussed if the teacher has documented deficiencies and an intervention is necessary.

**Ending Conference:** Teacher and evaluator review the summative feedback for Teacher Practice and Student Growth and Learning at the Ending Conference. Progress made with the teacher’s professional development plan should be discussed along with the teacher’s Final Effectiveness Rating for the school year.

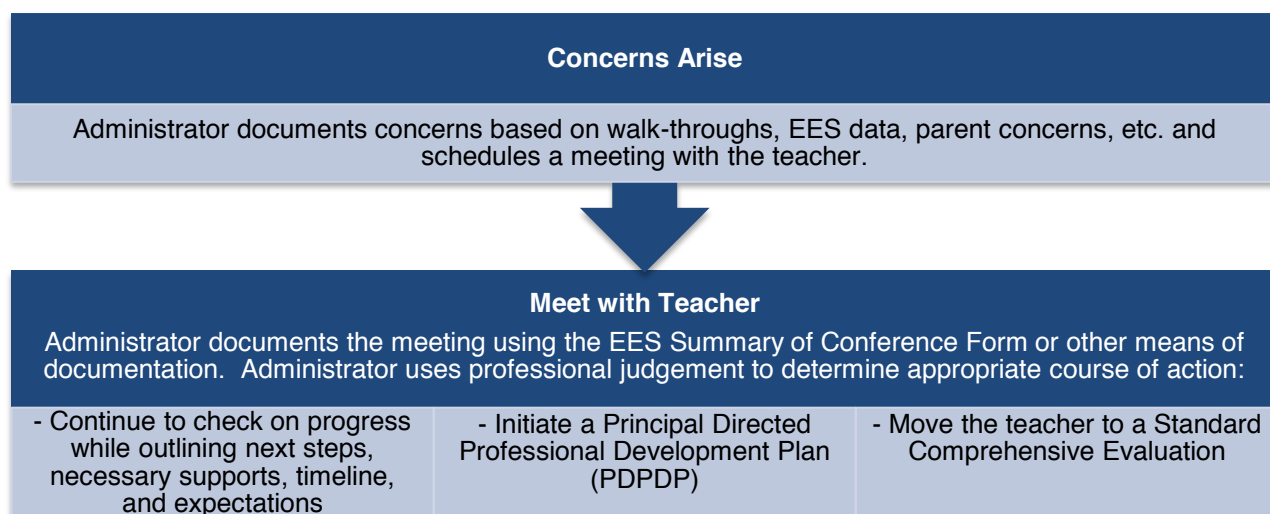
## Supporting Teachers with Documented Deficiencies

The differentiated evaluation measures, which are based on a teachers’ prior effectiveness rating, reflect the belief that teachers at different performance levels deserve and require different types of feedback and support. However, in some cases, teachers may demonstrate documented deficiencies that can trigger an intervention for more support. Triggers for initiating an intervention can include, but are not limited to, observations, poor quality SLOs, low Tripod scores, poor student outcomes, parent concerns, or walk-through data. Administrators should document concerns as they arise and schedule a meeting with the teacher to discuss next steps.

One way to trigger more support is to initiate a Principal Directed Professional Development Plan that outlines supports and goals for improving a teacher practice. If a PDPDP is triggered in the middle of the school year, the plan needs to be approved within 30 days of being initiated. The placement of a teacher on a PDPDP should be documented in the Summary of Conference form. See Appendix G: EES Summary of Conference Form.

If a teacher participating in a Streamlined Evaluation demonstrates a documented deficiency, the administrator has the option to move them to a Standard Evaluation immediately. The final date to trigger a teacher to a Standard Comprehensive Evaluation will be the 23rd day of the Second Semester (Feb. 8, 2016).

The administrator should use their professional judgment to assess whether to initiate a PDPDP, a Standard Comprehensive Evaluation, or continue to check on the progress of the teacher while outlining next steps and expectations. The meeting and resulting decision should be documented using the Summary of Conference form. See Appendix G: EES Summary of Conference Form.





# EES Training for All Teachers

Attendance for all required training sessions must be recorded in PDE<sup>3</sup>. Training and support should not be limited to the overviews, but rather ongoing and targeted to support individual needs.

All teachers must participate in an EES Orientation annually.

Topic	Provider	Purpose and Outcomes	Due Date
<b>EES Orientation for SY2015-16</b>	Administrator (or State Office Director)	Watch the EES Orientation Video and provide an overview of the performance evaluation system. Inform teachers about access to the tools, process, performance criteria, guidance manual, method of calculating the annual evaluation rating, and timelines	Must be conducted on an Administrative Directed day prior to the first day of instruction with students*

\*With late-hires, training should be conducted as soon as possible, and prior to the teacher's engagement in evaluation components.

## EES Overview Trainings for Teachers New to EES

New participants of the EES must participate in the following basic training requirements.

Topic	Provider	Purpose and Outcomes	Due Dates
<b>EES Teacher Practice Overview: Intro to the Framework for Classroom Observations/ Working Portfolios, Core Professionalism, and Tripod Student Surveys</b>	Participant of the Trainer-of-Trainers for "Introduction to the Framework for Teaching" OR certified in the Observation Protocol	Provide teachers with a basic understanding of the components within Teacher Practice, including but not limited to: <ul style="list-style-type: none"> <li>How the framework may enhance teaching and learning and support teachers' professional growth</li> <li>Themes within the levels of performance and the focus components</li> </ul>	8/31 or prior to the teacher's first classroom observation
<b>EES Student Growth and Learning Overview: Hawaii Growth Model and Writing Quality SLO/ SSIO</b>	School level or Complex Area trainer	Provide teachers a basic understanding of the components within Student Growth and Learning, including but not limited to: <ul style="list-style-type: none"> <li>A meaningful learning goal;</li> <li>An aligned assessment plan;</li> <li>Rigorous expected targets;</li> <li>Evidence-based, specific, and differentiated instructional strategies</li> <li>Understanding Hawaii Growth Model</li> </ul>	8/31 or prior to the Beginning of Term approval date for SLOs/SSIOs



# Implementation Deadlines

While many evaluation components have fixed dates, the ideal timing of classroom observations and conferences will vary for each teacher and each school. Teachers and evaluators should collaborate to complete all EES requirements given the constraints applicable to their school and situation. The deadlines shown here are for single-track schools. Multi-track schools need to consult the Complex Area EES contact person for adjusted implementation deadlines. The contact list is available on the HDOE Intranet's EES site.

Deadline	Component	July
7/29 (or prior to the first day of instruction)	<b>Training</b>	EES Orientation SY2015-16 Training for all teachers during Admin Day
Deadline	Component	August
8/31 (or prior to starting EES evaluation)	<b>Training</b>	Overview Trainings for Teachers New to the Educator Effectiveness System
9/15-9/25	<b>Tripod RV</b>	Teachers in Grades 3-12 verify roster for Tripod Student Survey administration (see details in Appendix D: 2015-16 Tripod Student Survey Calendar)
Deadline	Component	September
9/4	<b>SLO/SSIO</b>	Evaluators approve First Semester SLO/SSIO in PDE <sup>3</sup>
9/10 (30 instructional days from the 1 <sup>st</sup> day of school)	<b>PDPDP</b>	Evaluators approve PDPDP for 2014-15 Less than Effective
Deadline	Component	October
10/2 or last day of 1 <sup>st</sup> Quarter	<b>SGP, IPDP, Core Professionalism, IPDP</b> <b>Working Portfolio</b> <b>SLO/SSIO</b>	Discuss applicable MGP scores during IPDP and Core Professionalism Beginning Conferences Teachers complete development of IPDP Working Portfolio Beginning Conference completed Evaluators approve Year-long SLO/SSIO in PDE <sup>3</sup>
10/23	<b>SLO/SSIO</b>	Evaluators approve MidTerm First Semester SLO/SSIO (if applicable) in PDE <sup>3</sup>
Deadline	Component	November
11/9-11/20	<b>Tripod</b>	Tripod Survey Window (see more details in Appendix D: 2015-16 Tripod Student Survey Calendar)



Deadline	Component	December
12/3	<b>SLO/SSIO</b>	Teachers close implementation of First Semester SLO/SSIO
12/18 or day following end of Semester 1	<b>SLO/SSIO</b> <b>Observations</b>	Evaluators finalize First Semester rating for observations and First Semester SLO/SSIO End-of-Term rating in PDE <sup>3</sup>
Deadline	Component	January
1/26	<b>SLO/SSIO</b>	Evaluators approve MidTerm Year-long SLO/SSIO in PDE <sup>3</sup>
Deadline	Component	February
2/8	<b>EES Track</b>	Evaluator deadline for moving a teacher from Streamlined to Standard Evaluation
2/19	<b>SLO/SSIO</b>	Evaluators approve Second Semester SLO or SSIO in PDE <sup>3</sup>
2/25	<b>Tripod</b>	Teachers receive results for Tripod Student Survey, review the results, conduct reflection, and select actions for improvement. See more details in Appendix D: 2015-16 Tripod Student Survey Calendar
Deadline	Component	March
3/24	<b>SLO/SSIO</b>	Evaluators approve MidTerm Second Semester SLO/SSIO in PDE <sup>3</sup>
Deadline	Component	April
4/11-5/6	<b>SGP RV</b>	Teachers in Grades 4-8 ELA and Math complete roster verification for the Hawaii Growth Model. See more details in Appendix E: 2015-16 SGP Calendar
Deadline	Component	May
5/6	<b>Obs, WP, CP</b> <b>SLO/SSIO</b>	Second Semester observations completed. Teachers close implementation for Working Portfolio, Core Professionalism, and 2 <sup>nd</sup> Semester or Year-long SLO/SSIO
	<b>IPDP, PDPDP</b>	Teachers submit end-of-year reflection for PDPDP or IPDP
5/10	<b>Obs, WP,</b> <b>SLO/SSIO, CP,</b> <b>IPDP, PDPDP</b>	All Ending Conferences completed
5/20 (Single and Y tracks) 6/17 (R/B/G tracks)	<b>Final Ratings for ALL COMPONENTS</b>	Evaluators finalize and lock all relevant components in PDE <sup>3</sup> , including SLO/SSIO End-of-Term ratings, Observation ratings, Working Portfolio ratings, Core Professionalism ratings, and Final EES ratings. <b>Teachers receiving Marginal or Unsatisfactory ratings must be notified by the principal by the 3rd Friday in May, 5/20 (for Single and Y tracks), or 3rd Friday in June, 6/17 (for Blue, Red, and Green tracks).</b>

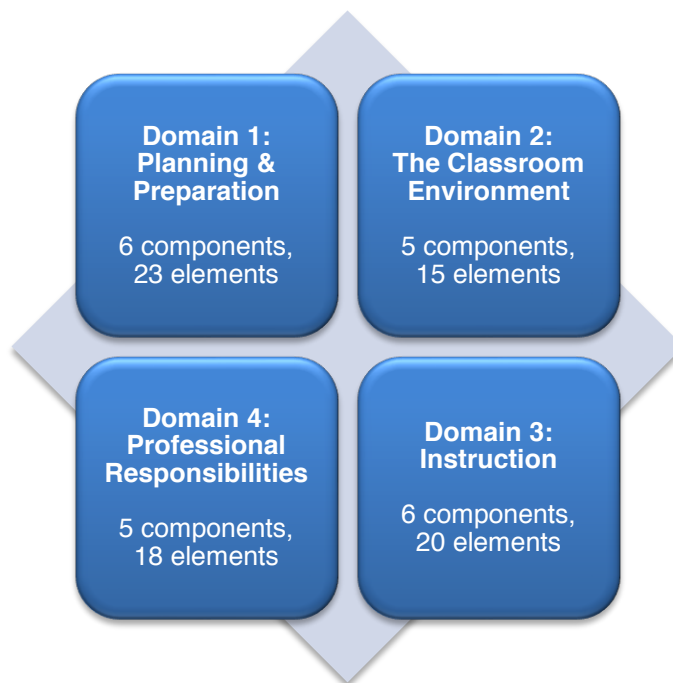
Multi-track schools need to consult the Complex Area EES contact person for adjusted implementation deadlines.



# Teacher Practice Measures

The EES measures are organized into two halves: Teacher Practice measures and the Student Growth and Learning measures.

The Teacher Practice measures are based on The Framework for Teaching developed by Charlotte Danielson, which organizes the complex work of teaching into 4 domains, 22 components, and 76 elements.



The Teacher Practice measures of the EES draw upon different Domains and Components of the Danielson Framework for Teaching depending on the purpose of the measure and the teacher classification. Teachers should have access to Charlotte Danielson's book, *Enhancing Professional Practice: A Framework for Teaching*. The element-level rubrics found in the book's 2007 edition and the component-level rubrics found in the 2013 *The Framework for Teaching Evaluation Instrument* were consolidated into the Hawaii Adapted Framework for Teaching as a guide for evidence collection and evaluation within the EES.

## Core Professionalism and Tripod Student Survey Reflection

Core Professionalism encompasses the range of responsibilities and activities a teacher handles that are critical to students and schools. Throughout the school year, teachers engage in professional activities that positively contribute to the school culture.

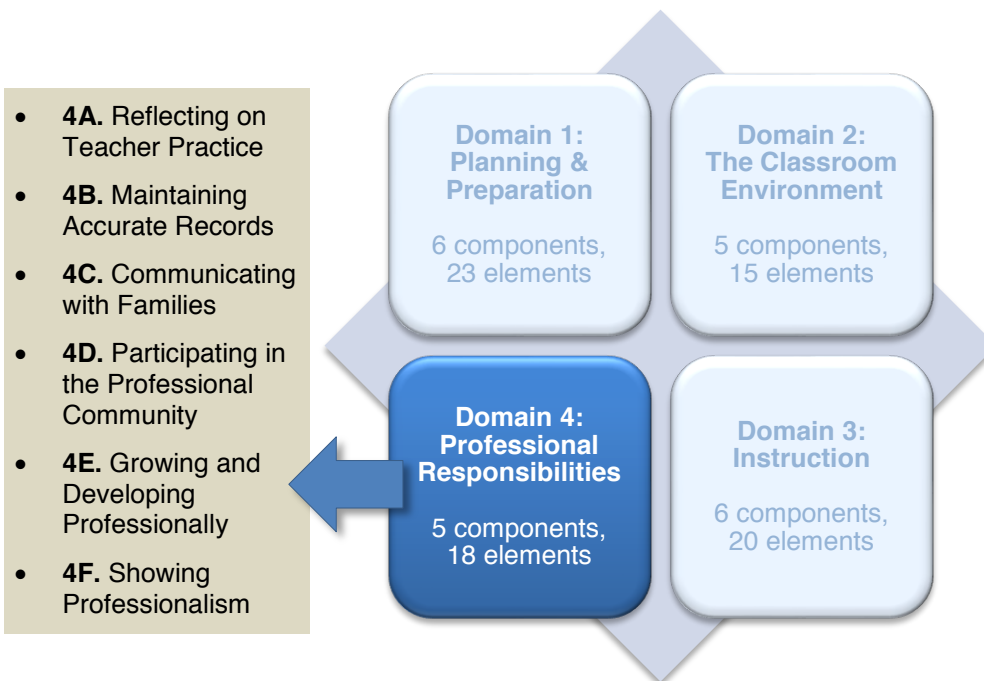
### Indicators for Core Professionalism

Core Professionalism consists of two primary indicators: (1) Domain 4 of the Framework for Teaching and (2) reflection and action to improve on Tripod Student Survey results.

#### 1. Domain 4 of the Framework

The criteria and expectations for Core Professionalism are articulated in the Domain 4 rubric from the Hawaii Adapted Framework for Teaching. The domain level rubric provides more of a holistic picture of teachers' professional responsibilities.





## 2. Reflection and action to improve on Tripod Student Survey results

The Tripod Student Survey collects student perspectives about teaching and learning pertaining to a specific classroom. Teachers will verify one of their classes in grades 3-12 with a minimum of five students to be administered the survey during the roster verification process. Teachers who teach very small classes may need to survey multiple classes to reach this minimum. The survey instrument uses a suite of indicators that capture students' academic and social behaviors, as well as goals, beliefs and feelings on a Likert scale. The constructs are organized into the 7Cs described below. The 7Cs reinforce and provide additional information about teacher practice aligned with the Framework for Teaching.

Tripod 7 Cs	Example Indicators	Framework for Teaching Alignment
<b>Captivate</b>	"I make lessons intellectually relevant and stimulating because they are important."	<b>2b, 3b, 3c</b>
<b>Care</b>	"Your <i>success and well-being</i> really matter to me in a serious way."	<b>2b, 2d, 3b</b>
<b>Challenge</b>	"I insist upon rigor— <i>understanding, not just memorization</i> —and your best effort."	<b>2b, 3b 3c</b>
<b>Clarify</b>	"I have multiple good explanations; when you are confused <i>I will help</i> you understand."	<b>3b, 3c, 3d</b>
<b>Confer</b>	"You must talk with me to help me understand your ideas and support your learning."	<b>2b, 3b, 3c, 3d</b>
<b>Consolidate</b>	"I summarize lessons and check for understanding to make learning coherent."	<b>2b, 3b, 3c, 3d</b>
<b>Control</b>	"Our <i>class is orderly, on task and respectful, with learning</i> as our first priority."	<b>2b, 2c, 2d</b>

## Process and Requirements

Teachers require different types of feedback, support and opportunities to grow as professionals, therefore the Core Professionalism process is expected to be individualized for each teacher. A Beginning-of-the-Year conference between the evaluator and teachers can help to clarify expectations and provide examples of evidence sources specific to individual schools or office contexts. Teachers should collect quality evidence



over the course of the year that demonstrates their performance in alignment with the various components of Domain 4.

The evidence collected should be focused on quality over quantity, and should reflect a sampling of professional practice throughout the year. Evidence collection should be *differentiated* to provide flexibility and options that reflect each teacher's job responsibilities while supporting school, complex area and state priorities. The teacher and the evaluator can use the self-assessment sheet to determine a focus for evidence collection depending on the teacher's individual areas of strengths and areas that indicate a need for growth.

Evaluators may also contribute to the pool of evidence (e.g. following school policies and procedures, participation in professional development, etc.) and must notify teachers when it is going to be used for evaluation purposes. Evaluators are responsible for clearly communicating submission of Core Professionalism evidence deadlines and clarifying expectations to their teachers.

### ***Understanding Tripod Results***

Tripod Student Survey results can be used as an opportunity for classroom teachers and evaluators to engage in professional dialogue about continuous efforts to improve teacher practice. The results from the Tripod Student Survey are shared with teachers in two primary formats: (1) a Favorability Report and (2) a Normal Curve Equivalent (NCE) score.

#### **Favorability Report**

After the survey results are processed, teachers will receive a favorability report through an email link sent directly from the vendor with instructions for online access. A minimum of five valid completed surveys is necessary to generate a report. To understand the Favorability Report it is essential to understand that when the students complete the surveys they mark one of five response options for each item.

The favorability percentage is the percentage of favorable responses to any 7C's item within that construct. Neutral or unfavorable responses are not included in the percentage calculation. The percentage of favorable responses for each of the 7Cs is averaged to produce a Composite Favorability Percentage.

#### **Normal Curve Equivalent (NCE) Score**

Teachers will receive a Tripod scaled score through PDE<sup>3</sup>, also known as the Normal Curve Equivalent (NCE) score. The NCE score is an added facet for teacher reflection. All responses, not just the favorable responses are used to create the NCE score. The NCE score communicates how a set of results compared to other results from the same survey level across the state on a standardized metric from 1- 99.

### ***Reflecting and Taking Action on Tripod Results***

Once the teacher receives both a Favorability Report to understand how their students responded in alignment with the 7Cs, as well as their NCE score to understand how their scores compared relative to the typical responses within that grade span, the teacher should spend time reflecting on those results. Teachers are asked to identify one or more of the 7Cs as an area of focus and select a course of action to improve practice in alignment with that focus area. The teacher will present their evidence of reflection and action as one source of evidence for the Core Professionalism measure.

### **Key Deadlines for Core Professionalism**

<b>Key Deadlines</b>		
<b>9/15-9/25</b>	<b>Tripod RV</b>	Teachers in grades 3-12 verify rosters for Tripod Student Survey administration (see Appendix D: 2015-16 Tripod Student Survey Calendar)
<b>10/2</b>	<b>Core Professionalism</b>	Beginning Conferences completed for all teachers



11/9-11/20	Tripod	<b>Tripod Survey Window (See Appendix D: 2015-16 Tripod Student Survey Calendar)</b>
2/25	<b>Tripod</b>	Teachers receive results for Tripod Student Survey, review the results, conduct reflection, and select actions for improvement. See more details in Appendix D: 2015-16 Tripod Student Survey Calendar
5/10	<b>Core Professionalism</b>	Ending Conference completed
5/20	<b>Final Ratings for all components</b>	Evaluators finalize and lock all relevant components for Core Professionalism in PDE <sup>3</sup> .

Multi-track schools need to consult the Complex Area EES Contact person for adjusted implementation deadlines.

## Rating Calculation for Core Professionalism

Core Professionalism is viewed and rated holistically using the Domain 4 *Hawaii Adapted Framework for Teaching* rubric. Indicators are not rated individually and then averaged, but rather it is the evaluator's judgment of the preponderance of evidence. A single indicator may be important enough to influence the final Core Professionalism rating.

The level of performance assigned by an evaluator on the rubric is quantified using the following ratings:



## Additional Resources for Core Professionalism

Login to the HDOE Intranet EES website's Core Professionalism link:  
<https://intranet.hawaiipublicschools.org/sixstrategies/EESCP> for the following resources:

- Core Professionalism Overview
- Hawaii Adapted Framework for Teaching Core Professionalism Domain 4 Rubric
- Core Professionalism Training
- Tripod Administration Resources
- Unpacking Tripod Results
- Additional Resources for Roster Verification



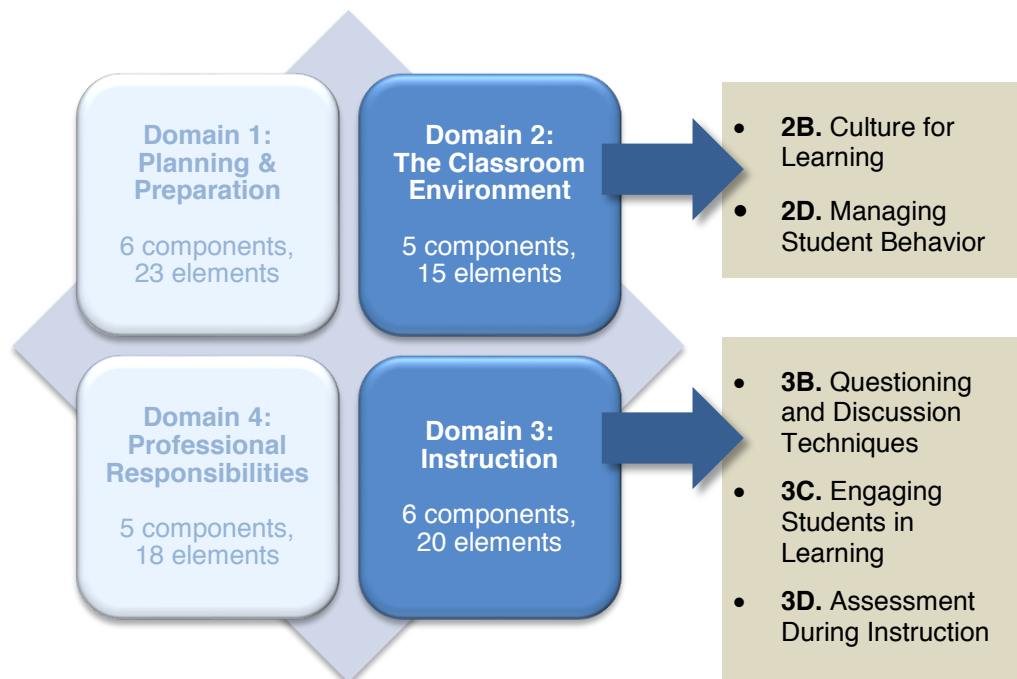
## Observations

Observations and collaborative conferencing are critical to understanding and developing teacher practice.

### Indicators for Classroom Teacher Observations

There are 11 observable components within Domain 2 (Classroom Environment) and Domain 3 (Instruction) of the Framework for Teaching. HDOE has decided to focus on five observable components for classroom observations based on their alignment with our statewide priorities. The *Hawaii Adapted Framework for Teaching Rubrics* will be used to guide evidence collection and evaluations of these focus components.





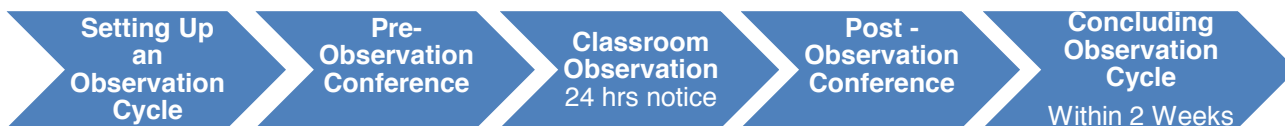
## Indicators for Non-Classroom Teacher Observations

With administrator approval, NCTs can participate in observation cycles instead of the Working Portfolio. The NCT and evaluator should work collaboratively when identifying the five most appropriate components for observations from the *Hawaii Adapted Framework for Teaching* rubrics that pertain to Instructional Specialists, School Counselors, Library/Media, Classroom Teacher, etc. The five selected components must come from the observable Domains of the Framework, Domain 2 and Domain 3.

## Process and Requirements for Observations

The observation cycle consists of five key steps, which must be completed by the same observer. The lengths of conferences and observations will vary depending on the context.

### Sample Observation Cycle:



The expectation is that the evaluator and teacher work together to schedule dates and times for the entire observation cycle. The evaluator may select the most appropriate dates and times if the teacher and evaluator cannot agree. In this situation, a minimum of a 24-hour notice must be provided to the teacher prior to conducting an observation. If a cancellation is necessary, teacher and evaluator should give as much notice as possible. A new cycle will be necessary if the rescheduled observation is covering a new lesson.

Observers must be Educational Officers certified by the Department to conduct observations. Evaluators have the authority to determine the number of classroom observation cycles beyond the minimal observation requirement based on their professional judgment. If a teacher would like to request additional observations, the evaluator can approve or deny additional requests by the teacher to conduct additional observations. The following table shows the Classroom Observation Process,



Classroom Observation Process		
<b>Setting up an Observation Cycle</b>	The goal is to work together to establish mutually agreed upon conference dates and times, format of the pre-conference and necessary information that will be provided for the entire observation cycle. Dates must be documented in PDE <sup>3</sup> .	
	<b>Teacher</b> <ul style="list-style-type: none"> <li>Address the pre-conference questions in PDE<sup>3</sup> and attach relevant lesson materials to provide context for the upcoming lesson</li> <li>Use an alternate set of questions or format with administrator approval.</li> </ul>	<b>Evaluator</b> <ul style="list-style-type: none"> <li>May select the most appropriate date and time, if the teacher and administrator cannot agree upon a date and time</li> <li>Provide a minimum of a 24-hour notice to the teacher.</li> </ul>
<b>Pre-Observation Conference</b>	The purpose of the pre-observation conference is for the teacher to share lesson objectives and activities along with helpful information that provides context for the observation. Pre-observation conference may occur through email, WebEx, PDE <sup>3</sup> and/or other electronic formats. In situations where the teacher and administrator do not agree on the format, the pre-observation conference will default to face-to-face.	
	<b>Teacher</b> <ul style="list-style-type: none"> <li>Share lesson objectives and activities along with helpful information that will assist the observer, such as student characteristics</li> <li>Ask observer to collect specific data, if desired (e.g., "Can you track how many times I call on the boys compared to the girls in my class?").</li> </ul>	<b>Evaluator</b> <ul style="list-style-type: none"> <li>Review the pre-conference materials submitted by the teacher in order to better understand the goals of the upcoming lesson</li> <li>Meet with the teacher face-to-face to ask questions rooted in the rubric and to discuss what will be used as evidence of learning.</li> </ul>
<b>Classroom Observation</b>	The purpose of the classroom observation is to provide clear, timely, and useful feedback that supports teachers' professional learning. The observation should last as long as it takes to observe the lesson discussed. After the observation, both teacher and observer should match evidence with components and analyze how the evidence aligns with the rubric.	
	<b>Teacher</b> <ul style="list-style-type: none"> <li>Carry out the lesson discussed</li> <li>Collect additional artifacts, such as student work samples, to bring to the post-observation conference.</li> </ul>	<b>Evaluator</b> <ul style="list-style-type: none"> <li>Collect objective evidence noting both student and teacher actions</li> <li>Speak with students during the lesson to gather additional evidence about their learning or typical classroom practice</li> <li>Share the evidence with the teacher, after the observation.</li> </ul>
<b>Post Observation Conference</b>	The purpose of the post-observation conference is to engage teachers and administrators in professional conversations that promote quality teaching and learning. Post-observation conferences must occur face-to-face. Administrators must provide a copy of the observation notes to the teacher at least a day prior to the post-observation conference.	
	<b>Teacher</b> <ul style="list-style-type: none"> <li>Participate in collaborative analysis about how evidence corresponds to component rubrics</li> <li>Submit additional artifacts to the administrator as evidence if a specific component from the lesson was not observable during the scheduled observation.</li> </ul>	<b>Evaluator</b> <ul style="list-style-type: none"> <li>Facilitate an evidence-based discussion rooted in aligning evidence to the Hawaii Adapted Framework for Teaching</li> <li>Discuss areas of strength and weakness and performance level demonstrated for each component.</li> <li>Record main points of collaborative analysis in PDE<sup>3</sup> and select the most appropriate performance rating.</li> </ul>
<b>Concluding Observation Cycle</b>	The purpose of concluding the observation cycle is to finalize and reflect.	
	<b>Teacher</b> <ul style="list-style-type: none"> <li>Log in to PDE<sup>3</sup> and complete the Teacher Post-Observation Conference Summary form</li> <li>Use form to reflect on the observation, the post-observation conference, identify strengths and weaknesses, and next steps.</li> <li>Document any concerns or additional information.</li> </ul>	<b>Evaluator</b> <ul style="list-style-type: none"> <li>Review the Teacher Post-Observation Conference Summary form after the teacher completes it</li> <li>Add additional comments as needed</li> <li>Finalize the observation cycle in PDE<sup>3</sup> after the teacher has had a reasonable amount of time to reflect on the observation and feedback.</li> </ul>



## Key Deadlines for Observations

Key Deadlines		
12/18	Observations	Evaluators finalize First Semester Observation ratings ( <i>when a teacher is participating in more than one observation cycle, the first observation cycle should be completed in the first semester to allow time for teacher growth in response to feedback.</i> )
5/6	Observations	Second Semester Observations completed. ( <i>Late hires and other special circumstances might require both to be completed in the same semester.</i> )
5/20	Final Ratings for all components	Evaluators finalize and lock all relevant components for Classroom Observation Cycles in PDE <sup>3</sup> .

Multi-track schools need to consult the Complex Area EES Contact person for adjusted implementation deadlines.

## Rating Calculation for Observations

During a post-observation conference for each observation cycle, the observer assigns a final performance level rating for each of the applicable Framework for Teaching components. After all observation cycles are completed, the individual component ratings (five from each observation) will be averaged and quantified using the performance level scoring scale. The final observation rating will be a number from zero to four that is produced by averaging the scores from all of the component level ratings.



## Additional Resources for Observations

Login to the HIDOE intranet EES website's Classroom Observations link:

<https://intranet.hawaiipublicschools.org/sixstrategies/EESCO> for the following resources:

- Framework for Teaching Smart Card
- Hawaii Adapted Framework for Rubrics
- Overview Training
- Observation Process Videos



## Working Portfolio

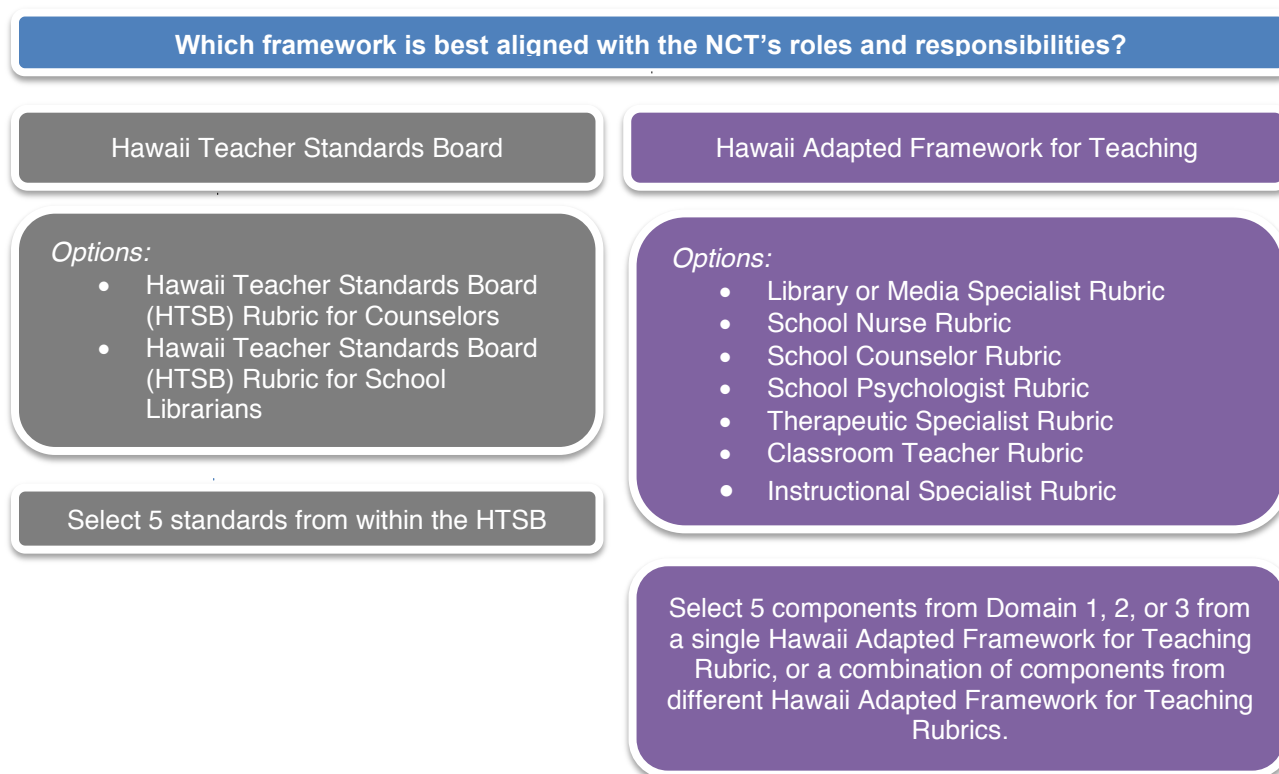
Non-Classroom Teachers (NCTs), in collaboration with their evaluator, will have the option to complete a Working Portfolio (WP) in place of Observations. WPs provide a method of documenting a teacher's practice by collecting and presenting quality evidence of meeting performance standards articulated by the *Hawaii Adapted Framework for Teaching* or the Hawaii Teacher Standards Board's (HTSB) Performance Standards for School Librarians and School Counselors. The collection of evidence is the responsibility of the NCT. The evaluator may participate in collecting evidence. The evidence may be compiled in physical or electronic formats as agreed upon by the evaluator.



## Indicators for Working Portfolios

NCTs should work with their evaluators to first select either the *Hawaii Adapted Framework for Teaching* or the HTSB-approved professional standards for Librarians and Counselors. NCTs are recommended to choose the framework that best aligns to their job roles and responsibilities. Use of multiple frameworks is not recommended unless the NCT has multiple job responsibilities that are not captured by a single framework. When using the *Hawaii Adapted Framework for Teaching*, the NCT and evaluator may compile a combination of components from Domains 1, 2, or 3 from different rubrics if necessary to best reflect the NCT's primary job responsibilities. It is not appropriate to combine some components from the *Hawaii Adapted Framework for Teaching* and some standards from the HTSB because the two frameworks employ different organizational structures. If the NCT and the evaluator cannot agree, the evaluator will select the most appropriate rubric and components.

### Decision Making Chart for Selecting Working Portfolio Components:





## Process and Requirements for Working Portfolio

Working Portfolio Process		
<b>Beginning Conference</b>  Complete by the end of the 1st Quarter. If NCT assumes position after 1 <sup>st</sup> quarter, conduct Beginning Conference as soon as possible.	The purpose of the Beginning Conference is to select and approve the five components in a collaborative process between the evaluator and NCT, confirm that the rubric and components meet the Framework and Component Selection Criteria, and discuss and set clear expectations for what types and sources of evidence will be considered high quality and in alignment with the Evidence Selection Criteria.	
	Teacher	Evaluator
	<ul style="list-style-type: none"> <li>In preparation for the Beginning Conference, download the appropriate WP rubric from the HIDEOE intranet site (see Additional Resources), complete the Beginning Conference questions in PDE<sup>3</sup>, and identify the proposed framework, components, and sources of evidence.</li> </ul>	<ul style="list-style-type: none"> <li>In preparation for the Beginning Conference, confirm NCT roles/responsibilities and review the NCT's responses to the beginning conference questions.</li> <li>Document approved framework and components for evidence collection on PDE<sup>3</sup>.</li> <li>Document date of Beginning Conference in PDE<sup>3</sup>.</li> </ul>
<b>Evidence Collection</b>	The purpose of the Evidence Collection is to gather and document quality evidence connected to the components that demonstrate the typical practice of the NCT over the course of the year.	
	Teacher	Evaluator
	<ul style="list-style-type: none"> <li>Implement strategies to gather multiple types of evidence for each component.</li> <li>Document evidence in PDE<sup>3</sup> or use the Evidence Submission Form to document hard copy evidence.</li> </ul>	<ul style="list-style-type: none"> <li>If needed, collect supplemental evidence and share with the teacher.</li> </ul>
<b>Progress Check Conference (Optional)</b>	The purpose of the optional Progress Check is to review the progress made, verify if revisions are necessary, and repeat Beginning Conference process for any revisions to the components or types of evidence collected.	
	Teacher	Evaluator
	<ul style="list-style-type: none"> <li>Conference with evaluator as needed.</li> <li>Share evidence/justification for revisions.</li> </ul>	<ul style="list-style-type: none"> <li>Review progress and provide feedback.</li> <li>Document conference, ensure changes are reflected and approved in PDE<sup>3</sup>.</li> </ul>
<b>Ending Conference</b>	The purpose of the Ending Conference is to discuss the submitted evidence for the Working Portfolio and discuss areas of strength, identified areas for growth, and next steps.	
	Teacher	Evaluator
	<ul style="list-style-type: none"> <li>Organize and submit evidence for evaluator's review prior to the Ending Conference.</li> <li>If physical evidences are used, attach the Teacher Evidence Submission Forms. If PDE<sup>3</sup> is used, submit descriptions online.</li> <li>Explain evidence alignment to rubric.</li> </ul>	<ul style="list-style-type: none"> <li>Schedule conference date and time with NCT and document in PDE<sup>3</sup>.</li> <li>Review the evidence collected prior to the Ending Conference.</li> <li>Document Evidence and Ending Conference Collaborative Analysis steps in PDE<sup>3</sup> as appropriate.</li> <li>Determine ratings for each component.</li> </ul>
<b>Final Summary</b>	The purpose of the Final Summary is to document reflections of the WP process within the Ending Conference Summary in PDE <sup>3</sup> .	
	Teacher	Evaluator
	<ul style="list-style-type: none"> <li>Respond to the Ending Conference Summary prompts within PDE<sup>3</sup>.</li> </ul>	<ul style="list-style-type: none"> <li>Review and respond to the NCT's reflection, as necessary, in PDE<sup>3</sup>.</li> <li>Lock rating in PDE<sup>3</sup>.</li> </ul>



## ***Framework and Component Selection Criteria***

The selection of a Framework and five components should be based on the criteria below:

- **Reflective of the NCT's primary role and responsibilities**  
Although many components or standards in a framework are important, selection of components or standards should reflect significant work required to successfully accomplish the NCT's primary responsibilities.
- **Measureable by multiple types of evidence**  
NCT's performance for each component and standard can be captured by more than one type of evidence.
- **Reflect variety**  
The components may be derived from Domains 1, 2 and/or 3. Do not include Domain 4 because it is captured in Core Professionalism. Librarians and Counselors using HTSB approved Professional Standards are to select five standards from the framework.

## ***Evidence Selection Criteria***

The selection of evidence is based on the following criteria:

- **Clearly connected to one or more of the components**  
The evidence reflects the results of at least one of the selected components. (The Danielson Group has suggested that all evidence has a component of "best fit" and might be used as evidence for up to two components.)
- **Use of multiple types of evidence**  
It is best practice to provide more than one type of evidence to support the NCT's performance for each component.
- **Evidence demonstrates the typical practice of the NCT**  
Evidence of performance is captured over the course of the year and not just in an isolated instance.
- **Quality versus Quantity**  
Purposely select evidences of high quality aligned to the component as compared to an overabundance of mediocre-quality evidences to yield the best evaluation result.

## ***Observations as a type of evidence for the Working Portfolio***

The evaluator and NCT may choose to supplement the WP with observation data of the NCT. These observations:

- Are not formal observation cycles since the evaluator merely chooses to supplement the WP evidence, not replace it.
- Do not require a formal pre- or post- observation conference.
- Require 24-hour notice prior to the observation.
- Require feedback provided to the NCT within two weeks.
- May include verbatim scripting of comments, statements of observed behavior, numeric information, and/or descriptions of the environment.



## Key Deadlines for Working Portfolio

Working Portfolio Key Deadlines		
10/2	Working Portfolio	Working Portfolio Beginning Conferences completed by the end of 1 <sup>st</sup> Quarter. If NCT assumes position after 1 <sup>st</sup> Quarter, conduct Beginning Conference as soon as possible.
5/6	Working Portfolio	Teachers close implementation of Working Portfolio
5/20	Final Ratings for all components	Evaluators finalize and lock all relevant components for Working Portfolios in PDE <sup>3</sup> .

Multi-track schools need to consult the Complex Area EES contact person for adjusted implementation deadlines.

## Rating Calculation for Working Portfolio

The levels of performance described by the various rubrics are: Unsatisfactory, Basic, Proficient, and Distinguished.

During the Ending Conference, the evaluator assigns a performance level rating for each of the applicable components incorporated into the WP. The individual component ratings are then quantified using the performance level scoring scale. The final WP rating is a number from 0 to 4 that is produced by averaging the scores from all five-component ratings.



## Additional Resources for Working Portfolios

Login to the HDOE Intranet EES website's Working Portfolio link:

<https://intranet.hawaiipublicschools.org/sixstrategies/EESWP> for the following resources:

- Frequently Asked Questions (FAQs)
- Hawaii Adapted Framework for Teaching Rubrics
- Hawaii Teacher Standards Board (HTSB) Professional Standards for Librarians and Counselors
- Help Document on Formatting an Individualized Rubric
- Teacher Evidence Submission Form
- Overview PowerPoint
- WP Beginning Conference Questions





# Student Growth and Learning

## Student Learning Objective and School or System Improvement Objective

SLOs contain long-term academic goals that teachers set for students at the start of a course or semester. These targets shall be specific, measurable, informed by initial readiness evidence, aligned to state or national standards, and specific to the grade level, department or discipline taught. Thus, SLOs should reflect the most important learning specific to the course or subject and grade for the semester or year.

The School or System Improvement Objective (SSIO) is similar to SLOs and serves as an alternate option for non classroom teachers (NCTs). All classroom teachers (CTs) must complete an SLO. An NCT may complete an SLO or an SSIO. An NCT who works directly with students or teachers on acquiring new or improved learning should complete an SLO. An NCT who might not work directly with students but instead work toward school or system improvements may choose to complete the SSIO instead of the SLO. The evaluator and teacher collaborate to determine if an SLO or SSIO is most appropriate. However, if an agreement cannot be reached, the evaluator may select the most appropriate process. Development of the SSIO is an opportunity to set clear goals targeted for school or system improvement and should be approached as a process that engages the NCT in creative problem solving, monitoring of school/school systems, and having rich dialogue with teachers and evaluators.

### Indicators for SLOs and SSIOs

An SLO/SSIO is comprised of four key components, outlined in the template and in the Rubric for Rating the Quality of SLO/SSIO.

1. **Learning Goal:** In an SLO, a Learning Goal is a description of what a student should know or be able to do at the end of the instructional term, based on the appropriate instructional standards and curriculum. In an SSIO, the Learning Goal will be based on the appropriate professional standards and will describe what is to be achieved by the end of the semester/year.
2. **Assessments:** In an SLO, the Assessment(s) should be a standards-based, high quality measure using clear criteria or rubrics to evaluate student achievement. In an SSIO, the assessment should be based on high quality measures using clear criteria or rubrics to evaluate the degree to which the expected target was achieved.
3. **Expected Targets:** Expected Targets should identify the expected outcome by the end of the term. CTs will document the readiness level, expectations, and end result for individual students on the Expected Target Record Sheet. NCTs will document the starting point and end results. In an SSIO, targets should be SMART (Specific, Measurable, Attainable, Relevant and Time Bound) and described with data sources for identifying baseline, progress, and end point.
4. **Instructional Strategies:** In an SLO, Instructional Strategies are appropriate and evidence-based, comprehensive in addressing all learner needs, and specific to different aspects of the Learning Goal.

### Process and Requirements for SLOs and SSIOs

The SLO/SSIO process is integrated into existing efforts to analyze data, set goals, and implement formative instructional cycles. Teachers must complete one SLO/SSIO for approval and implementation. Failure to complete an SLO/SSIO shall result in a “0” rating. ONLY an approved SLO/SSIO shall be implemented. All NCTs will have the option of using either an SLO template or a parallel SSIO template. The following chart details both processes.



<b>SLO/SSIO Process</b>		
<b>Writing the SLO/SSIO</b>	The purpose of writing the SLO/SSIO is to identify prioritized needs for instructional planning, progress monitoring and rigorous goal setting that impact student growth.	
	<b>Teacher</b>	<b>Evaluator</b>
	<ul style="list-style-type: none"> <li>Reference the SLO/SSIO Technical Guidance and Planning Document.</li> <li>Determine priority curricular area for setting Learning Goal, choosing Assessments, determining Expected Targets and Instructional Strategies.</li> <li>Use baseline data to determine readiness level.</li> <li>Develop teacher-generated success indicators for SSIOs.</li> <li>Submit the SLO (with the Expected Target Record Sheet) or SSIO for approval.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure SLO/SSIO processes and expectations are implemented by teachers in preparation for the approval deadline.</li> <li>Assist teachers in collecting data, analyzing it, and identifying priority area(s).</li> <li>Set schedule for Beginning-of-Term Conference.</li> <li>Review submitted SLO with the Expected Target Record Sheet, or SSIO.</li> </ul>
<b>Beginning of Term Conference</b>	The purpose of the Beginning of Term Conference is to review and discuss the SLO/SSIO as submitted.	
	<b>Teacher</b>	<b>Evaluator</b>
	<ul style="list-style-type: none"> <li>Share rationale for the Expected Targets using the prepared SLO/SSIO documents and the Rubric for Rating the Quality of SLO/SSIO.</li> </ul>	<ul style="list-style-type: none"> <li>Facilitate discussion using the Rubric for Rating the Quality of SLO/SSIO and provide feedback.</li> <li>Establish next steps and due dates for any required changes.</li> <li>Document Beginning of Term Conference in PDE<sup>3</sup>.</li> </ul>
<b>SLO/SSIO Approval</b> All components must be acceptable for approval <b>Only Approved SLOs may be implemented</b> Incomplete SLOs will result in zero ratings		
<b>Implement and progress monitor SLO/SSIO</b>	<b>Teacher</b>	<b>Evaluator</b>
	<ul style="list-style-type: none"> <li>Implement appropriate strategies of the approved SLO/SSIO.</li> <li>Monitor student learning and progress towards goal.</li> <li>Collect and organize data.</li> <li>If adjustments to SLO/SSIO and Expected Target Record Sheet is needed: <ul style="list-style-type: none"> <li>schedule a Middle-of-Term Conference with the evaluator</li> <li>resubmit SLO with Expected Target Record Sheet or SSIO for approval. (i.e. include new students and exited students).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Monitor and support teachers during implementation.</li> <li>If necessary collaborate with teacher to schedule a Middle-of-Term Conference.</li> <li>Review any requested revisions on the submitted SLO with the Expected Target Record Sheet, or SSIO.</li> </ul>
<b>Middle of Term Conference (if applicable)</b>	The purpose of the optional Middle of Term Conference is to discuss changes to the original SLO/SSIO due to extenuating circumstances, new/exited students, and the data collected to gauge the current level of progress for the SLO/SSIO.	
	<b>Teacher</b>	<b>Evaluator</b>
	<ul style="list-style-type: none"> <li>Collaborate with evaluator to make adjustments to the SLO/SSIO.</li> <li>Make necessary adjustments for approval.</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with teacher to review and make adjustments to the SLO/SSIO.</li> <li>Approve the SLO/SSIO revisions.</li> <li>Document Middle-of-Term Conference in PDE<sup>3</sup>.</li> </ul>



<b>SLO/SSIO Middle-of-Term Approval</b> All components must be acceptable for approval <b>Only Approved SLOs may be implemented</b>		
<b>Compile and reflect on Outcomes</b>	Teacher	Evaluator
	<ul style="list-style-type: none"> <li>Continue to implement appropriate strategies, refine practice, and reflect on performance.</li> <li>Collect, compile and analyze assessment data and target information.</li> <li>Complete End-of-Term reflection questions.</li> <li>Submit final evidence including record sheet and reflection along with other supporting documents.</li> </ul>	<ul style="list-style-type: none"> <li>Monitor and support teachers with implementation.</li> <li>Schedule End-of-Term Conference with teacher.</li> <li>Review SLO/SSIO, Expected Targets Record Sheet, End-of-Term reflection questions and any supporting documents.</li> </ul>
<b>End of Term Conference</b>	The purpose of the End-of-Term Conference is to discuss the data collected, supporting documents, attainment percentage, and rating based on the SLO/SSIO Rubric.	
	Teacher	Evaluator
	<ul style="list-style-type: none"> <li>Discuss the data collected using the SLO/SSIO Rubric for Rating the Quality of SLO/SSIO.</li> <li>Reflect on practice to determine next steps.</li> </ul>	<ul style="list-style-type: none"> <li>Facilitate discussion about the data, supporting documents, attainment percentage, and rating based on the SLO/SSIO Rubric.</li> <li>Document End-of-Term Conference in PDE<sup>3</sup>.</li> <li>Lock rating in PDE<sup>3</sup>.</li> </ul>

### *Special Considerations*

Teachers who teach students in an alternative learning setting, both on or off-campus (e.g. High Core, Kapolei Complex Alternative Center, Hale O Ulu), may consider NCT options. The teacher and evaluator work together to determine if an SLO or SSIO is most appropriate. If the teacher and evaluator cannot agree, the evaluator may select the most appropriate focus. In cases where the applicability of the type of SLO is in question, consider the following guiding questions:

- Is the teacher responsible for instructing a group of students?
- Does the teacher have a consistent group of students within an interval of instruction (at least a quarter)?
- Does the teacher have adequate contact time or instructional minutes for a group of students?
- If the replies to the above questions are “no,” then the teacher and evaluator may consider setting goals related to job responsibilities (NCT). Under special consideration, certain provisions may be added to cover teachers who have students that are intellectually disabled, medically fragile, or non-verbal.
- In cases where teachers have a very small class size (e.g. less than 10) that addresses drastically individualized student needs (e.g. medically fragile), teachers and evaluators have options to consider depending on the context of the class:
  - Create different SLOs for each student, upload one in PDE<sup>3</sup>, and keep the rest electronically or as a hard copy. SLOs may integrate Individualized Education Plan goals and objectives.
  - Create a common Learning Goal such as: Students will apply knowledge and skills of verbal and nonverbal language to communicate effectively in various situations, one-to-one, in groups, and for a variety of purposes. The Expected Targets will vary for each student.



## Key Deadlines for SLOs and SSIOs

Semester 1 SLO/SSIO Key Deadlines		
9/4	SLO/SSIO	Evaluators approve First Semester SLO/SSIO in PDE <sup>3</sup>
10/23	SLO/SSIO	Evaluators approve Middle-of-Term First Semester SLO/SSIO in PDE <sup>3</sup>
12/3	SLO/SSIO	Teachers close implementation of First Semester SLO/SSIO
12/18	Final Rating	Evaluators finalize First Semester SLO/SSIOs End of Term rating in PDE <sup>3</sup>

Semester 2 SLO/SSIO Key Deadlines		
2/19	SLO/SSIO	Evaluators approve Second Semester SLO or SSIO in PDE <sup>3</sup>
3/24	SLO/SSIO	Evaluators approve Middle-of-Term Second Semester SLO/SSIO in PDE <sup>3</sup>
5/6	SLO/SSIO	Teachers close implementation of Second Semester SLO/SSIO
5/20	Final Ratings for All Components	Evaluators finalize and lock all relevant components for Second Semester SLOs/SSIOs in PDE <sup>3</sup>

Year-long SLO/SSIO Key Deadlines		
10/2	SLO/SSIO	Evaluators approve Year-long SLO/SSIO in PDE <sup>3</sup>
1/26	SLO/SSIO	Evaluators approve Middle-of-Term Year-long SLO/SSIO in PDE <sup>3</sup>
5/6	SLO/SSIO	Teachers close implementation of Yearlong SLO/SSIO
5/20	Final Ratings for All Components	Evaluators finalize and lock all relevant components for Year-long SLOs/SSIOs in PDE <sup>3</sup>

Multi-track schools need to consult the Complex Area EES Contact person for adjusted implementation deadlines.

## Rating Calculation for SLOs and SSIOs

During the End-of-Term Conference, the evaluator assigns a final rating for each SLO/SSIO. An incomplete SLO/SSIO will result in a zero rating. Some possible reasons for an incomplete SLO/SSIO may include failure to revise the SLO/SSIO to meet the acceptable indicators of quality, or not completing an SLO/SSIO. Teachers who have an incomplete SLO/SSIO due to an approved leave or a change in position in the middle of the year will not be penalized.

SLO/SSIO ratings are quantified as follows:

**Highly Effective:** 4

**Effective:** 3

**Developing:** 2

**Ineffective:** 1

**Incomplete:** 0



## Additional Resources for SLOs and SSIOs

Login to the HIDOE intranet EES website's SLO/SSIO link:

<https://intranet.hawaiipublicschools.org/sixstrategies/EESSLO> for the following resources:

- SLO and SSIO Overview including Frequently Asked Questions (FAQs)
- SLO and SSIO Rubrics
- CT and NCT Training Resources
- SLO Calibration Module
- CT and NCT Documents
- Teacher Evidence Submission Form
- SLO Supporting Resources
- Acceptable Quality Sample Bank



## Hawaii Growth Model

The Hawaii Growth Model makes up one of the two EES measures designed to capture student growth and learning for classroom teachers and school-level NCTs. In the 2014-15 school year Hawaii transitioned to the Smarter Balanced Assessment (SBA) for calculating Student Growth Percentile (SGP) scores. Teacher Median Growth Percentile (MGP) and School wide English Language Arts (ELA) MGP will be posted in PDE<sup>3</sup> during the Fall Semester. Because of the timing for scoring the SBA and calculating SGP results, the scores are incorporated into EES one year after they are calculated. The 2014-15 SBA results will be used in a teacher's 2015-16 EES.

### Indicators for the Hawaii Growth Model

#### *Student Growth Percentile (SGP)*

Student Growth Percentile (SGP) indicate how well a student has progressed compared to others that have demonstrated similar academic performance in the past. This allows all students to have the same chance of attaining high or low SGP scores each year, regardless of their prior performance.

The Hawaii Growth Model is a normative model that ranks each student's state assessment score within a content area against students with similar score histories (academic peers). The SGP resulting from this analysis helps to determine how much a student has progressed within a given year compared to other students with a similar scoring history. An SGP will be generated only if the student has a minimum of two state assessment scale scores from consecutive grade levels in the given subject area. SGPs are not produced for students who repeat a grade, skip a grade, or take alternative assessments.

#### *Median Growth Percentile (MGP)*

Median growth percentiles (MGPs) are used to summarize the growth performance for groups of students. MGPs are calculated by finding the midpoint SGP value for all the students in a specific group. For the Hawaii Growth Model, groups of students are defined as either a classroom or an entire school. Medians (middle) are more appropriate than means (average) because medians are less affected by outliers.

### Process and Procedures for the Hawaii Growth Model

All school-level teachers will receive a student growth score from the Hawaii Growth Model. Teachers in grade 4-8 English Language Arts (ELA) and Math will receive a Teacher MGP that accounts for 25% of their rating, while the rest of school level teachers will receive a School-wide ELA MGP that accounts for 5% of their rating.



The School wide ELA MGP is used because all educators support student literacy and language development. The School wide ELA MGP only takes students at the school for a full school year and plots them on the line. Then the middle student growth percentile is selected for the School wide ELA MGP.

### **Roster Verification for Student Growth**

The roster verification process will measure individual student enrollment in ELA and math classes over the course of the year guided by inclusion rules for each month (students must be enrolled for 10 or more school days). Weighting is applied to the amount of time students are roster verified for.

Principals are responsible for designating someone to serve as the school's roster verification lead. The roster verification lead will work closely with teachers to ensure student rosters used for SGP reporting and teacher evaluation are accurate.

If a teacher provides and assesses direct instruction in ELA and Math, then they need to verify and submit two different rosters, one roster for each content area.

### ***Teachers in Grades 4-8 ELA and Math – Teacher MGP***

- Teacher MGPs will be computed for teachers of ELA and Math in grades 4-8 based on student enrollment information captured through the fourth quarter roster verification process. Students will be counted and weighted based on the length of enrollment using minimum terms that approximate an academic quarter.
- A minimum of 20 SGPs is required to calculate an MGP.
- If a teacher does not have 20 SGPs within one school year, the SGPs can be pooled utilizing up to two prior years of SGP scores. Pooling to meet the minimum SGP count of 20 will begin in SY 2015-16, utilizing 2014-15 results.
- Weighting is applied if a student has multiple teachers contributing to his/her SGP. Each teacher gets credit for the student's outcome depending on how long the student was with each teacher and how many teachers the student had contributing to his/her outcome.

### ***Teachers Not in Grades 4-8 ELA and Math – School wide ELA MGP***

- School level teachers in all other assignments, including non-classroom teachers at school-level, will receive a School wide ELA MGP as 5% of their final evaluation rating. It is not possible to calculate a Teacher MGP for teachers outside of grades 4-8 ELA and Math.
- School wide MGPs follow the conventions from the Strive HI Performance System, the state's school accountability system.
- Students must be at the school for one full academic year to be included in the school-wide ELA MGP.
- Teachers do not have to participate in the Roster Verification process for the School wide ELA MGP.
- Teachers must be active employees for at least two quarters to receive a School wide ELA MGP.



## Key Deadlines for the Hawaii Growth Model

Key Deadlines		
<b>10/2</b>	<b>SGP</b>	Discuss applicable MGP scores during Beginning Conferences
<b>4/11-6/1</b>	<b>SGP RV</b>	Teachers in Grades 4-8 ELA and Math complete roster verification for the Hawaii Growth Model. See details in Appendix E: 2015-16 SGP Calendar.

Multi-track schools need to consult the Complex Area EES contact person for adjusted implementation deadlines.

## Rating Calculation for the Hawaii Growth Model

Growth calculations are performed shortly after state assessment scores are validated and finalized. Teacher MGPs are calculated in the fall. Due to the time required for this process, MGPs used for evaluation within the EES will lag by one school year.

Hawaii Growth Model ratings of 1-4 for teachers with an available Teacher MGP are based on the scoring bands described below. The bands are based on the belief that effective teachers provide a year's worth of learning to the majority of their students. Teachers meeting this standard are considered Effective, those doing more are considered Highly Effective, and those not meeting this standard are considered Marginal or Unsatisfactory. An SGP of 50 can be considered a year's worth of growth, and this value plus a small cushion provide the anchor to the cut scores.

EES Rating	Teacher MGP Range
<b>1</b>	1 - 30
<b>2</b>	31 - 39
<b>3</b>	40 - 60
<b>4</b>	61 - 99

Hawaii Growth Model ratings of 1-4 for teachers with an available Schoolwide ELA MGPs are based on the following scoring bands described below.

EES Rating	Schoolwide ELA MGP Range
<b>1</b>	1 - 39
<b>2</b>	40 - 43
<b>3</b>	44 - 57
<b>4</b>	58 - 99

Teachers without prior year's growth data will not have a Teacher MGP or School wide ELA MGP factored into their evaluations.



## Additional Resources

- **SchoolView**

SchoolView is a visualization tool that displays student growth percentiles for math and reading from the state assessment. Users are provided different levels of access to student, school, and Complex Area data based on permissions in the Department's Longitudinal Data System. The public has access to school and district summaries at <http://growthmodel.hawaiipublicschools.org/> while teachers see specific student scores based on roster verification from the previous spring. Teachers can log in to SchoolView through the DOE's single sign-on (<https://www.doesso.k12.hi.us>) to access class data and individual student histories.



- **Longitudinal Data System (LDS)**

The Longitudinal Data System (<https://staff.hawaiidoe.net/lds>) collects data from various sources over time. As with SchoolView, teachers log in to LDS through the DOE's single sign-on. Student growth trends of current students can be located by teachers and administrators on the LDS and triangulated with other data sources such as attendance records. Summaries of school wide data are available on LDS, including the percentage of students that are catching up and keeping up with expected growth targets school wide.

- **HIDOE Intranet EES Page:**

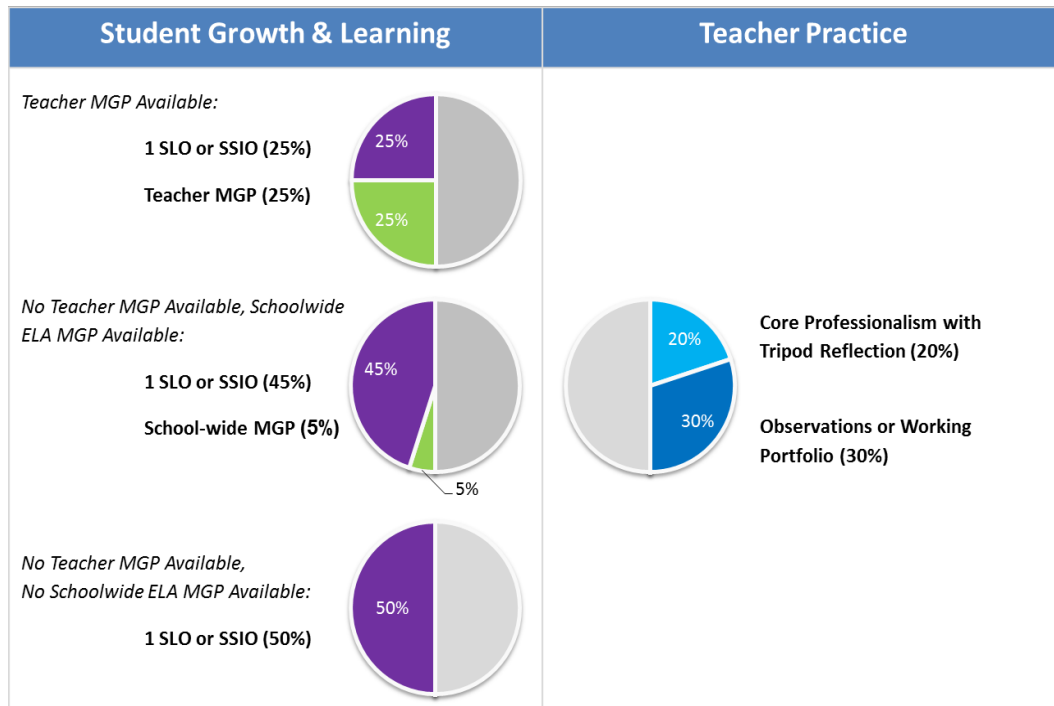
- Login to the HIDOE Intranet EES website's Hawaii Growth Model link: <https://intranet.hawaiipublicschools.org/sixstrategies/EESHGM> for the following resources:
  - Frequently Asked Questions (FAQs)
  - Technical documents
  - "Measuring and Calculating Student Growth" - Prezi Presentation
  - Growth Model website tutorial: Tutorial for the public level views of the Hawaii Growth Model Website to look at school wide scores.
  - Growth Model tutorial for private level views: Tutorial for the Private Level Views of the Hawaii Growth Model Website to look at individual student.
- Login to the HIDOE Intranet EES website's Roster Verification link: <https://intranet.hawaiipublicschools.org/sixstrategies/ees/Pages/EESRV.aspx> for the following resources:
  - Student Growth RV
  - Roster Verification Steps: SGP



# Final Effectiveness Rating

A teacher's Final Effectiveness Rating is based on combined ratings from the two measures of Student Growth and Learning and the Teacher Practice.

The Teacher Practice Rating and Student Growth and Learning Rating are determined by calculating a weighted average, based on weightings for each EES measure. The weighting of each measure will vary depending on each teacher's classification and the data available from that evaluation year. Ultimately the ratings for Teacher Practice and Student Growth and Learning will be combined into one Final Effectiveness Rating. Within PDE<sup>3</sup>, teachers will be able to see annual rating data, as well as historical data about their performance. No teacher shall be rated less than Effective without proper documentation.



Once teachers have a rating for Teacher Practice and Student Growth and Learning, this value is rounded to the nearest whole number. Each teacher's Final Effectiveness Rating can then be determined by matching the teacher's rating on Student Growth and Learning with the teacher's rating on Teacher Practice using the matrix shown.

Student Growth and Learning				Teacher Practice
Unsatisfactory 0-1	Marginal 2	Effective 3	Highly Effective 4	
Marginal	Effective	Effective	Highly Effective	
Marginal	Effective	Effective	Effective	
Marginal	Marginal	Effective	Effective	
Unsatisfactory	Marginal	Marginal	Marginal	Unsatisfactory 0-1



# Impact of Final Rating on Employment Action(s)

Employment action (tenure, extension of probation, termination, non-renewal, etc.) are based on the Final Rating.

Impact of School Year 2015-2016 EES Final Rating on Employment Actions and Pay Increase			
TEACHER STATUS	FINAL RATING	EMPLOYMENT ACTION(S) for School Year 2016-17	PAY INCREASE for SY 2016-17
<ul style="list-style-type: none"> <li>All</li> </ul>	Effective/ Highly Effective	Continuation of employment	Eligible
<ul style="list-style-type: none"> <li>Tenured</li> <li>Probationary first annual rating</li> <li>Temporary Teaching Assignment Agreement</li> </ul>	Marginal	Continuation of employment. Principal Directed Professional Development Plan (PDPDP)	Ineligible
<ul style="list-style-type: none"> <li>Probationary second annual rating</li> <li>Temporary Teaching Assignment Agreement</li> </ul>	Marginal SY2015-16 with prior Effective rating in SY2014-15	Extension of probation. Principal Directed Professional Development Plan (PDPDP)	Ineligible
<ul style="list-style-type: none"> <li>Probationary 2nd Annual Rating</li> </ul>	Marginal SY2015-16 with prior Marginal rating in SY2014-15.	Non-renewal of employment	Not Applicable
<ul style="list-style-type: none"> <li>All</li> </ul>	Unsatisfactory	Termination of employment	Not Applicable

## Expedited Appeals Process

An Expedited Appeals procedure for tenured teachers rated Marginal shall be used instead of Steps 1 and 2 of the grievance procedure, Article V, for performance evaluations only. An appeal may only be made for the final effectiveness rating of Marginal. This appeals process will be in place for evaluation ratings based on the 2014-15 school year, and thereafter. Expedited Appeals forms and instructions are posted in Appendix H: Teacher Evaluation Expedited Appeals Form-Instructions and Appendix I: Teacher Evaluation Expedited Appeals Form.

The forms can also be accessed by logging on to the HDOE Intranet and accessing the OHR Forms Library at <https://intranet.hawaiipublicschools.org/offices/ohr/>:

- Teacher Evaluation Expedited Appeal Form:  
<https://intranet.hawaiipublicschools.org/offices/ohr/OHR%20Forms/Teacher%20Evaluation%20Expedited%20Appeals%20Form.pdf>
- Teacher Evaluation Expedited Appeal Process Instructions:  
<https://intranet.hawaiipublicschools.org/offices/ohr/OHR%20Forms/Teacher%20Evaluation%20Expedited%20Appeals%20Form%20-%20Instructions.pdf>





# Appendix

## A. Key Terms

### *Classroom Teacher (CT)*

A Bargaining Unit 5 (BU5) employee within the Department who plans, delivers and assesses instruction for students.

### *Educator Evaluation System (EES)*

The evaluation system for BU5 members employed as teachers within the Department.

### *HIDOE Intranet* (<https://intranet.hawaiipublicschools.org/sixstrategies/ees>)

The Intranet is an internal website for HIDOE staff. It includes a site devoted to the EES that connects users to videos, presentations, reference documents, Frequently Asked Questions and other communications materials.

### *Individual Professional Development Plan (IPDP)*

A professional development plan developed by all teachers rated as Effective or better. The plan will be collaboratively developed based on a review of data including, but not limited to, results in student surveys, Hawaii Growth Model, and practices aligned with the Framework for Teaching. In addition to supporting quality reflective professional practice and improvement, the IPDP and the conferences with the administrator about the plan can be used to validate the “Carried over” rating or trigger intervention.

### *Median Growth Percentile (MGP)*

An aggregate measure calculated by finding the median score for a group of SGP scores.

### *Non-Classroom Teacher (NCT)*

A BU5 employee within the Department who does not teach any class, or is not primarily responsible for planning, delivering and assessing instruction for students.

### *Principal Directed Professional Development Plan (PDPDP)*

A professional development plan for teachers rated Less than Effective. The PDPDP will be directed by the principal or evaluator.

### *PDE<sup>3</sup>* (<https://pde3.k12.hi.us>)

PDE<sup>3</sup> stands for Professional Development Experiences that Educate and Empower. PDE<sup>3</sup> is a platform for transparent documentation between teachers and evaluators for the EES, as well as a platform to search for professional development opportunities.

### *Roster Verification* (<https://rosteronline.k12.hi.us>)

A process to record and validate instructional relationships between students and teachers. The online tool captures data from the Electronic Student Information System (eSIS) to help schools build rosters for teachers to verify. While the same online tool may be used for Tripod and Hawaii Growth Model, the roster verification administrations are distinct due to differences in what type of information needs to be collected for each metric.



Roster verification administrations involve a) school teams and administrators preparing the system, b) classroom teachers verifying student roster data, and c) school administrators approving the data at two points in a school year. All classroom teachers in grades 3-12 who are responsible for delivering instruction and assigning or collaborating in the assignment of grades or monitoring student progress will verify rosters during the designated Tripod roster verification window. Only teachers who are responsible for delivering instruction for mathematics and ELA in grades 4-8 will verify rosters for SGP attribution purposes.

### ***School or System Improvement Objective (SSIO)***

SSIOs provide the opportunity for non-classroom teachers to set targets for school or system improvement; plan for prioritized needs or focus area of the school, complex, or state; focus on areas of need within the scope of the individual role and responsibilities; backward plan for a successful outcome of reaching the goal; align to professional standards when applicable; and reflect on outcomes based on data.

### ***School wide ELA MGP***

The median of all student growth percentiles achieved in English Language Arts across a school.

### ***Smarter Balanced Assessment (SBA)***

The Smarter Balanced Assessment (SBA) is an assessment system developed by a state-led consortium (including Hawaii) to accurately measure student progress toward college and career readiness. SBA replaced the Hawaii State Assessment in the 2014-2015 school year.

### ***State Assessment***

Up until 2013-14 this was the Hawaii State Assessment (HSA), which measured proficiency in reading and mathematics relative to the Hawaii Content Performance Standards. Beginning in 2014-15, the State Assessments became the Smarter Balanced Assessment (SBA) which measures proficiency in English language arts and literacy and mathematics relative to the Hawaii Common Core Standards.

### ***Strive HI Performance System***

Hawaii's school accountability and improvement system that was approved by the U.S. Department of Education in May 2013. It replaces many of the federal No Child Left Behind Act's most outdated and ineffective requirements with a system better designed to meet the needs of Hawaii's students, educators and schools.

### ***Student Growth Percentile (SGP)***

A rank from 1 to 99 relative to students with similar achievement histories.

### ***Student Learning Objective (SLO)***

SLOs provide the opportunity for teachers to set an academic goal for specific students; plan for the most important learning of the year (or semester); determine specific and measurable learning targets based on initial evidence of student readiness levels; align goals to Common Core, state, or national standards, as well as any other school or complex priorities; use data to monitor student learning, differentiate instruction based on student needs; and compile, organize, rate, and reflect on outcomes.

### ***Teacher ELA MGP***

The median, or middle value, summarizing the growth performance of students linked to an individual teacher instructing grades 4-8 English Language Arts classes.



### ***Teacher Math MGP***

The median, or middle value, summarizing the growth performance of students linked to an individual teacher instructing grades 4-8 math classes.

### ***Teacher Median Growth Percentile (MGP)***

The median growth percentile summarizing the complete set of student growth scores, both English Language Arts and mathematics, linked to an individual teacher.

### ***Tripod Student Survey (Tripod)***

Surveys administered to students and treated as formal assessments capturing students' perceptions of their classroom experiences. Teachers are provided with feedback about how to improve their teaching practice.

## **B. Recommended Resources**

### ***Complex Area Support Team***

Each complex area will have at least one lead educator who will serve as the EES facilitator and trainer. A list of these contacts is available on the HDOE Intranet EES website.

### ***EES Help Desk***

The EES Help Desk will provide callers with knowledge, awareness, and understanding of the EES components. In addition, the Help Desk documents caller feedback to improve overall EES training and implementation planning.

Phone Number: 808-586-4072

Hours of Operation: 7:30 A.M. - 3:30 P.M.

Days: Monday-Friday, except state and federal holidays and the winter break period

### ***Hawaii Adapted Framework for Teaching***

#### ***Enhancing Professional Practice: A Framework for Teaching***

This is the foundational book for the Framework for Teaching. It includes the complete description of all components and elements, with levels of performance written at the element level. In addition, there are frameworks for non-classroom specialist positions, such as school librarians, nurses, psychologists, etc. The research foundation is included as an appendix.

#### ***Hawaii Adapted Framework for Teaching***

This rubric combines the element level rubrics for each component along with the component level rubrics from the 2013 Framework for Teaching Evaluation Instrument. Instead of displaying the entire rubric, this has been adapted to only display the focus components of Hawaii's Educator Effectiveness System.

#### ***Implementing the Framework for Teaching in Enhancing Professional Practice: An ASCD Action Tool***

Charlotte Danielson and six members of the Danielson Group collaborated to create this book. It contains specific examples for each component and element of the Framework for Teaching, for proficient and distinguished levels of performance.



A book written by Charlotte Danielson to help school leaders understand the value of reflective, informal, professional conversations in promoting a positive environment of inquiry, support, and teacher development. Organized around the “big ideas” of successful teaching and ongoing teacher learning, it explores the unique interaction of power structures in schools.

*You Don't Have to be Bad to Get Better*

A book written by a senior Danielson Group member about the attributes of strong instructional leaders. The author explores how leaders are able to develop, support, and sustain quality teaching in any school environment. School leaders at all levels will develop strategies for transitioning from a culture of fear and criticism to a culture of learning.

## **C. Stakeholder Input Groups**

Since the inception of the EES, many educators and community leaders have given input to help design the EES and to make the EES stronger each year of implementation. Some of the important stakeholder groups who have influenced this work are:

*Teacher Leader Workgroup*

Since 2010, the Teacher Leader Workgroup (TLW) has met regularly to inform the EES design and implementation. In school year 2014-2015, the TLW expanded to over 50 people from all 15 complex areas. This group provided formal recommendations to the Deputy Superintendent and the Joint Committee.

*HSTA-HIDOE Joint Committee*

The HSTA-HIDOE Joint Committee of four HSTA and four Department members provides formal recommendations to the Superintendent.

*Technical Advisory Group*

The EES Technical Advisory Group (TAG) is comprised of national, regional, and local experts who provide recommendations to the HSTA-HIDOE Joint Committee to ensure EES fairly assesses the effectiveness of educators. Based on a review of existing HIDOE policies and practices, data, and other state and complex area policies and practices, the TAG provided recommendations to the Joint Committee on EES design modifications for school year 2014-15.

*HSTA-HIDOE Joint Survey*

In addition, HIDOE received feedback via the HSTA-HIDOE joint survey of teachers, the 48 principals who participated in the EES Principal Working Group, and the Hawaii Government Employees Association's elected Board of Directors for Unit 6.

*Hawaii's Educators*

Informally, HIDOE received significant feedback through the complex areas. HIDOE bolstered Complex Area Superintendents' (CASs) capacity to support schools and obtain feedback with the investment of a dedicated EES Educational Officer (EO) for each complex area. CASs, along with EES EOs, provided many opportunities for information, training, and feedback. These opportunities included monthly principals' meetings, dedicated trainings, and complex area surveys.



## D. 2015-16 Tripod Student Survey Calendar

	OITS	SBT	OITS	Teachers	Administrators	State	State	Schools	OHR/TNL/CE
RV Track	Data Snapshot	School Setup	Soft Delete	Teacher RV	Review & Approve	Data Quality Check	Send Data to vendor	Survey Window	Teacher Favorability and NCE Reports & Scores Available
Yellow	8/20	8/24-28	8/28 4:00 p.m.	8/31-9/4	9/22-25	9/28-10/2	10/2 by 12:00 (noon)	11/9-20	2/25/16
Red, Green, & Single Track	9/3	9/8-14	9/14 4:00 p.m.	9/15-21	9/22-25	9/28-10/2	10/2 by 12:00 (noon)	11/9-20	2/25/16
Blue	9/3	9/8-14	9/14 4:00 p.m.	9/15-21	9/22-25	9/28-10/2	10/2 by 12:00 (noon)	12/1-11	2/25/16

## E. 2015-16 SGP Calendar

	OITS	SBT	OITS	Teachers	School Administrators	State Office	State Office	Schools	Schools
	Data Snapshot	School Setup	Soft Delete	Teacher Roster Verification	Review and Approve	Data Quality Check	Send Data to Vendor	Survey Window	Results
Single, Yellow, and Blue Track Schools	3/22/2016	4/1 – 4/8		4/11 – 4/29	5/2 – 5/6*	5/9 – 5/13	6/8		2016 Fall Semester
Red Track Schools	3/22/2016	4/1 – 4/8		4/14 – 4/20 and 5/11 – 5/24	5/25 – 6/1	6/2 – 6/7	6/8		2016 Fall Semester
Green Track Schools	3/22/2016	4/1 – 4/8		5/2 – 5/20	5/23 – 5/27	5/31 – 6/6	6/8		2016 Fall Semester
* This date could be extended to May 10 for Yellow and Blue track schools depending on the impact of school-specific student activities.									



## F. Comprehensive Evaluation Tracks for 2015-16

ENHANCED CYCLE Classroom Teacher (CT)	
Core Professionalism	CT will document Domain 4 evidence, verify roster for Tripod Student Survey, and include required reflection on student survey results.
Classroom Observations	CT will complete two or more formal, full cycle observation (once in fall semester and once in spring semester).
Student Learning Objective (SLO)	CT will complete one SLO.
Hawaii Growth Model	CT in Grades 4-8 ELA and Math will receive 2014-15 Teacher MGP, and verify rosters for SGP for their 2015-16 MGP.  CT not in Grades 4-8 ELA and Math will receive 2014-15 School wide ELA MGP.
Principal Directed Professional Development Plan (PDPDP) OR Individual Professional Development Plan (IPDP)	The <i>2014-15 Less than Effective</i> CT will complete a PDPDP.  The <i>Non-Tenured 2014-15 Effective/Highly-Effective</i> CT will complete an IPDP.
Final Rating	CT will receive a new rating.

ENHANCED CYCLE Non Classroom Teacher (NCT)	
Core Professionalism	NCT will document Domain 4 evidence.
Working Portfolio OR Classroom Observations	NCT will complete a working portfolio using components from the Framework for Teaching or other approved HTSB standards, or select to do observations  If selecting observations in lieu of a working portfolio, two or more formal, full cycle observations are required.
School or System Improvement Objective (SSIO) OR Student Learning Objective (SLO)	NCT will complete one SLO or one SSIO.
Hawaii Growth Model	School-level NCT will receive 2014-15 School wide ELA MGP.
Principal Directed Professional Development Plan (PDPDP) OR Individual Professional Development Plan (IPDP)	The <i>2014-15 Less than Effective</i> NCT will complete a PDPDP.  The <i>Non-Tenured 2014-15 Effective/Highly-Effective</i> NCT will complete an IPDP.
Final Rating	NCT will receive a new rating.



## STANDARD CYCLE Classroom Teacher (CT)

<b>Core Professionalism</b>	CT will document Domain 4 evidence, verify roster for Tripod Student Survey, and include required reflection on student survey results.
<b>Classroom Observation(s)</b>	CT will complete one or more formal, full cycle observations.
<b>Student Learning Objective</b>	Teacher will complete one SLO.
<b>Hawaii Growth Model</b>	CT in Grades 4-8 ELA and Math will receive 2014-15 Teacher MGP, and verify rosters for SGP for 2015-16 Teacher MGP.  CT not in Grades 4-8 ELA and Math will receive 2014-15 School wide ELA MGP.
<b>Individual Professional Development Plan (IPDP)</b>	CT will complete an IPDP.
<b>Final Rating</b>	CT will receive a new rating.

## STANDARD CYCLE Non Classroom Teacher (NCT)

<b>Core Professionalism</b>	NCT will document Domain 4 evidence.
<b>Working Portfolio OR Classroom Observation(s)</b>	NCT will complete a working portfolio using components from the Framework for Teaching or other approved HTSB standards, or select to do observations.  If selecting observations in lieu of a working portfolio, one formal observation is required
<b>School or System Improvement Objective (SSIO) OR Student Learning Objective (SLO)</b>	Teacher will complete one SLO or one SSIO.
<b>Hawaii Growth Model</b>	School-level NCT will receive 2014-15 School wide ELA MGP.
<b>Individual Professional Development Plan (IPDP)</b>	Teacher will complete an IPDP.
<b>Final Rating</b>	Teacher will receive a new rating.



## STREAMLINED CYCLE Classroom Teacher (CT)\*

<b>Core Professionalism</b>	CT will verify roster for Tripod Student Survey and reflect on Student Survey results during the IPDP conference.
<b>Classroom Observation</b>	Not required, but CT is expected to continue to set learning objectives, engage in the data team process, implement best practices and participate in walk-throughs, which are all part of the school improvement process.
<b>Student Learning Objective</b>	Not required, but CT is expected to continue to set learning objectives, engage in the data team process, implement best practices and participate in walk-throughs, which are all part of the school improvement process.
<b>Hawaii Growth Model</b>	CT in Grades 4-8 ELA and Math will receive 2014-15 Teacher MGP, reflect on results during the IPDP conference, and verify rosters for SGP for 2015-16 Teacher MGP.  CT not in Grades 4-8 ELA and Math will receive 2014-15 School wide ELA MGP and reflect on results during the IPDP conference.
<b>Individual Professional Development Plan (IPDP)</b>	CT will complete an IPDP.
<b>Final Rating</b>	CT will receive the rating of Effective or better carried over from prior year.

- *If a STREAMLINED teacher demonstrates a documented performance deficiency, the administrator may place them on a STANDARD evaluation no later than Feb 8, 2016.*

## STREAMLINED CYCLE Non Classroom Teachers (NCT) \*

<b>Core Professionalism</b>	NCT will reflect on school wide data Tripod and Hawaii Growth Model results during the IPDP conference.
<b>Working Portfolio OR Observation(s)</b>	Not required, but NCT is expected to continue to set learning objectives, engage in the data team process, implement best practices and participate in walk-throughs, which are all part of the school improvement process.
<b>School or System Improvement Objective (SSIO) OR Student Learning Objective (SLO)</b>	Not required, but NCT is expected to continue to set learning objectives, engage in the data team process, implement best practices and participate in walk-throughs, which are all part of the school improvement process.
<b>Hawaii Growth Model</b>	School-level NCT will receive 2014-15 School wide ELA MGP and reflect on results during the IPDP conference.
<b>Individual Professional Development Plan (IPDP)</b>	NCT will complete an IPDP
<b>Final Rating</b>	NCT will receive the rating of Effective or better carried over from prior year

- *\*If a STREAMLINED teacher demonstrates a documented performance deficiency, the administrator may place them on a STANDARD evaluation no later than Feb 8, 2016.*



# G. EES Summary of Conference Form



## EDUCATOR EFFECTIVENESS SYSTEM (EES) SUMMARY OF CONFERENCE

DOE OHR 500-006  
Last Revised: 04/02/2015  
Former DOE Form(s): N/A  
DEPARTMENT OF EDUCATION  
Office of Human Resources  
Performance Management Section  
P.O. Box 2360 Honolulu, HI 96804

DATE: \_\_\_\_\_  
MM/DD/YYYY

TO: Teacher Name: \_\_\_\_\_  
Last First M.I.

Teacher School/Office: \_\_\_\_\_

FROM: Evaluator Name: \_\_\_\_\_  
Last First M.I.

Evaluator Position: \_\_\_\_\_

Evaluator School/Office: \_\_\_\_\_

Evaluator Signature: \_\_\_\_\_

SUBJECT Summary of Conference Held on \_\_\_\_\_  
MM/DD/YYYY

Re: \_\_\_\_\_  
(Subject matter and Duty(ies) Discussed)

CONFERENCE PARTICIPANTS: \_\_\_\_\_

The following is my understanding of what we discussed on \_\_\_\_\_ at \_\_\_\_\_.  
(date of conference) (time of day)

**Part I:** State the specific EES measure(s), data point(s), and indicators; subject matter, deficiency(ies) discussed, and concerns of both parties; as applicable.



Part II: If applicable, state directive(s) or suggestions given, follow-up activities, expectations, etc.

Part III: If applicable, state failure to comply with the items in Part II above, may result in a less than proficient/effective component rating of the component(s) identified in Part I and/or disciplinary action.

If there are any corrections, additions, or deletions to the above, please do so in writing. You may also attach any additional comments, if you wish. Please affix your signature below and return the document with any corrections, additions/deletions and/or comments by \_\_\_\_\_.  
(date reasonably determined) The copy is for your own files.

Teacher Signature: \_\_\_\_\_

Date: \_\_\_\_\_  
MM/DD/YYYY

Teacher's signature does not necessarily indicate concurrence but merely indicates knowledge and receipt of this Summary of Conference.

Distribution: 1. Original - School/Office; 2. Copy 1 - Employee

(Page 2 of 2)



# H. Teacher Evaluation Expedited Appeals Form - Instructions



## Teacher Evaluation Expedited Appeal Process Instructions

DOE OHR 500-007Ins

Last Revised: 04/29/2015

Former DOE Form(s): N/A

DEPARTMENT OF EDUCATION  
Office of Human Resources  
Performance Management Section  
P.O. Box 2360 Honolulu, HI 96804

Pursuant to the Hawaii State Teachers Association (HSTA) collective bargaining agreement, Appendix VII- Expedited Appeals Process, beginning in school year 2014-15, the purpose is to:

1. review the case to determine if the evaluation procedures were properly applied and administered, and
2. review the case to determine if there is sufficient documentation to support the evaluation rating. The panel may consider additional evidence, as it deems appropriate.

Hawaii Department of Education (DOE) tenured teachers who are rated marginal have two bases for the appeal of their overall annual evaluation rating under the Educator Evaluation System (EES). The first basis is if a teacher believes that the correct and appropriate evaluation procedures were not properly applied and administered. The second basis is if a teacher believes that there is insufficient documentation to support the annual rating. The section below will describe the process for teachers.

### Steps in the Teacher Evaluation Expedited Appeals Process

If you are a tenured DOE teacher receiving an overall marginal rating and you believe the evaluation procedures were not properly applied and administered, or that there is insufficient documentation, then you must take the following steps:

**Step 1** - Complete the Teacher Evaluation Expedited Appeals Form DOE OHR 500-007 and indicate whether (a) procedures were not properly applied and administered, and/or (b) whether there was insufficient documentation to support evaluation rating.

**Step 2** - Identify if "procedural violation" and/or "insufficient documentation."

For procedural violations: Document the procedural errors in detail:

- What procedure was violated? (i.e. EES Manual, page \_\_\_\_).
- Violations committed by whom?
- When violation occurred?
- Explain any steps you took to remedy the issue or engage your administrator in resolving the issue.

For insufficient documentation: Describe in detail why the documentation is insufficient to support the marginal rating:

- What evidence/documentation is in dispute?
- Related to which measure of the EES?
- Summarize the mistake or error in rating. Describe as clearly and as briefly as possible.
- Any steps you took to remedy the issue or engage your administrator in resolving the issue.

Compile any other evidence to support your appeal (e.g., statements from colleagues, emails and/or memos to or from your administrator).

**Step 3** - Submit completed Teacher Evaluation Expedited Appeals Form DOE OHR 500-007 to your respective Complex Area Superintendent (CAS) with a copy to District Personnel Regional Officer (PRO). Contact info on pages #4-5.

Form must be submitted no later than fifteen (15) calendar days after receipt of Marginal annual evaluation rating, unless extended by mutual agreement between the Department and Association. If the 15th calendar day falls on a Saturday, Sunday, or State Holiday, the form may be submitted by the next working day.

Electronic copy may be submitted via Lotus Notes by submission due date, however, a signed hard-copy must follow via mail or inter-office courier.

(Page 1 of 4)



**Step 4 - Appeals Panel Review Hearing.**

- Teacher shall be notified of hearing date, time, and place.
- 4-member panel shall hold hearing.
- Only the Teacher and Evaluator may present their positions to the Panel (however, advanced preparation may be provided by an Association or Department representative, respectively).
- It takes three (3) panel members to reverse the rating (i.e., uphold the appeal).
- Panel shall deliberate and render a decision no later than fifteen (15) calendar days after the date of hearing. If the 15th day falls on a Saturday, Sunday, or State Holiday, the decision may be rendered on the next working day.

**Step 5 - Arbitration (subject to the Association's approval).**

- Should the panel not uphold the appeal, ONLY the Association (and not the individual teacher) may appeal the panel's decision to arbitration within ten (10) calendar days after receipt of the panel's decision.
- The Association or Department may not present different allegations, facts, evidence or arguments in arbitration than those presented to the panel.

These steps are outlined in the attached flow chart - Steps in Expedited Appeals Process.



## Steps in Expedited Appeals Process

(for Tenured Teachers rated as Marginal)

### Step 1- Complete Form

Complete Appeals form, and indicate:

- Procedures not properly applied or administered; and/or
- Insufficient documentation to support evaluation rating.



### STEP 2 – Procedural Violations (complete pages #1-2)

Document the procedural errors in detail.

- What procedure was violated (i.e. EES Manual, page \_\_, etc.)
- Violations by whom?
- When occurred?
- Describe any steps you took to remedy the issue or engage your administrator in resolving the issue.

### STEP 2 – Insufficient Documentation (complete pages #1, 3-4)

Describe in detail why the documentation is insufficient to support the marginal rating.

- What evidence/documentation is in dispute? Related to which measure of the EES?
- Summarize the mistake or error in rating. Describe as clearly and succinctly as possible.
- Describe any steps you took to remedy the issue or engage your administrator in resolving the issue.



### STEP 3 – Submit to CAS with copy to PRO (the form and evidence/documentation).

Form 500-007 must be submitted no later than fifteen (15) calendar days after receipt of annual evaluation rating, unless extended by mutual agreement between DOE and HSTA.



### STEP 4 – Appeals Panel Review Hearing

- Teacher shall be notified of hearing date, time, and place.
- 4-member Panel shall hold hearing.
- Only the Teacher and Evaluator may present their positions (with assistance from HSTA or DOE, respectively.)
- It takes 3 panel members to uphold the appeal.
- Panel shall deliberate and render decision within fifteen (15) calendar days after hearing.



### STEP 5 – Arbitration (if HSTA approves)

- Should the panel not uphold the appeal, ONLY the HSTA (not the individual teacher) may take the panel's decision to arbitration, with 10 calendar day notice given to DOE after the panel's decision.
- The parties may not present different allegations, facts, evidence or arguments in arbitration than those presented to appeal panel.

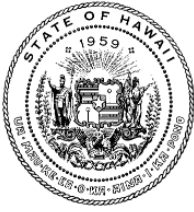


Send Form OHR 500-007 to your district's Certificated PRO and Complex Area Superintendent.

Honolulu District 4967 Kilauea Ave. Honolulu, HI 96816	Farrington-Kaiser-Kalani
	Kaimuki-McKinley-Roosevelt
Central District 1122 Mapunapuna St., Suite 200 Honolulu, HI 96819	Aiea-Moanalua-Radford
	Leilehua-Mililani-Waialua
Leeward District 601 Kamokila Blvd. Kapolei, HI 96707	Campbell-Kapolei
	Pearl City-Waipahu
	Nanakuli-Waianae
Windward District 46-169 Kamehameha Hwy. Kaneohe, HI 96744	Castle-Kahuku
	Kailua-Kalaheo
Hawaii District 75 Aupuni St., Room 203 Hilo, HI 96720	Hilo-Waiakea 75 Aupuni St., Room 203 Hilo, HI 96720
	Kau-Keaau-Pahoa 16-588 Keaau-Pahoa Rd., Hale E Keaau, HI 96749
	Honokaa-Kealakehe-Kohala-Konawaena 75-140 Hualalai Rd. Kailua-Kona, HI 96740
Maui District 54 High St., 4th Floor Wailuku, HI 96793	Baldwin-Kekaulike-Maui
	Hana-Lahainaluna-Lanai-Molokai
Kauai District 3060 Eiwa St. Lihue, HI 96766	Kapaa-Kauai-Waimea



# I. Teacher Expedited Appeals Form



## TEACHER EVALUATION EXPEDITED APPEALS FORM

DOE OHR 500-007

Last Revised: 04/29/2015

Former DOE Forms: N/A

DEPARTMENT OF EDUCATION  
Office of Human Resources  
Performance Management Section  
P.O. Box 2360 Honolulu, HI 96804

### EMPLOYEE INFORMATION

Name: \_\_\_\_\_ Employee ID: \_\_\_\_\_  
Last First M.I. (Employee ID# can be located on the front of the DOE ID Badge)

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

School/Work Location: \_\_\_\_\_ Teacher Classification: ☐ Classroom ☐ Non-Classroom

I have received an annual overall rating of "Marginal" and I wish to appeal my rating. Pursuant to the collective bargaining agreement (CBA, Appendix VII), I have two grounds upon which I can file an appeal: 1) if the evaluation procedures were not properly applied and administered in accordance with the EES Manual, and/or 2) if there is not sufficient documentation to support the evaluation rating.

My reason for submission of appeal is (check all that apply):

☐ Evaluation procedures were not properly applied and administered (complete page #2-3):

☐ Insufficient documentation to support the evaluation rating (complete page #4):

Attached you will find documentation to support this appeal. This documentation must include copies of your summative rating, along with:

Basis for appeal	Evaluation procedures were not properly applied and administered (page #2)	Insufficient documentation to support the evaluation rating (pages #3-4)
Documentation Required	<ul style="list-style-type: none"><li>What procedure as articulated in the EES Manual was violated? Include the page number(s).</li><li>By whom?</li><li>When?</li><li>Describe any steps you took to remedy the issue or engage your administrator in resolving the issue.</li></ul>	<ul style="list-style-type: none"><li>What evidence/documentation is in dispute? Related to which measure of the EES?</li><li>Summarize the mistake or error in rating. Describe clearly and as briefly as possible.</li><li>Describe any steps you took to remedy the issue or engage administrator in resolving the issue.</li></ul>

Teacher Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
MM/DD/YYYY

### Office use only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_  
MM/DD/YYYY

Distribution: 1. Original - Complex Area Superintendent; 2. Copy 1 - District Personnel Regional Officer

(Page 1 of 4)



**Evaluation Procedures were not properly applied and administered:**

1. What procedure as articulated in the EES Manual was violated? Include the page number(s), summary of citation, and by whom/when.

Page #s of EES Manual	Procedural Violation(s) Cited	By Whom/When

2. Please note any steps you took to remedy the issue or engage your administrator in resolving the issue.

☐ Check if more pages are attached.



**Insufficient documentation to support the evaluation rating:**

1. Which measure of the EES is in dispute and what evidence/documentation do you have? Summarize the mistake or error in rating. Describe clearly and as briefly as possible.

EES Measure in Dispute	Evidence/Documentation	Provide Summary of Mistake or Error in Rating
Classroom Observation(s)		
Core Professionalism		
Working Portfolio or Formal Observation(s) (NCTs)		

☐ Check if more pages are attached.



**Insufficient documentation to support the evaluation rating (continued):**

Hawaii Growth Model		
Student Learning Objective or School/System Improvement Objective (NCTs)		

2. Please note any steps you took to remedy the issue or engage your administrator in resolving the issue.

☐ Check if more pages attached.



# Charlotte Danielson's FRAMEWORK FOR TEACHING

## DOMAIN 1: Planning and Preparation

- 1a Demonstrating Knowledge of Content and Pedagogy**
  - Content knowledge • Prerequisite relationships • Content pedagogy
- 1b Demonstrating Knowledge of Students**
  - Child development • Learning process • Special needs
  - Student skills, knowledge, and proficiency
  - Interests and cultural heritage
- 1c Setting Instructional Outcomes**
  - Value, sequence, and alignment • Clarity • Balance
  - Suitability for diverse learners
- 1d Demonstrating Knowledge of Resources**
  - For classroom • To extend content knowledge • For students
- 1e Designing Coherent Instruction**
  - Learning activities • Instructional materials and resources
  - Instructional groups • Lesson and unit structure
- 1f Designing Student Assessments**
  - Congruence with outcomes • Criteria and standards
  - Formative assessments • Use for planning

## DOMAIN 2: The Classroom Environment

- 2a Creating an Environment of Respect and Rapport**
  - Teacher interaction with students • Student interaction with students
- 2b Establishing a Culture for Learning**
  - Importance of content • Expectations for learning and behavior
  - Student pride in work
- 2c Managing Classroom Procedures**
  - Instructional groups • Transitions
  - Materials and supplies • Non-instructional duties
  - Supervision of volunteers and paraprofessionals
- 2d Managing Student Behavior**
  - Expectations • Monitoring behavior • Response to misbehavior
- 2e Organizing Physical Space**
  - Safety and accessibility • Arrangement of furniture and resources

## DOMAIN 4: Professional Responsibilities

- 4a Reflecting on Teaching**
  - Accuracy • Use in future teaching
- 4b Maintaining Accurate Records**
  - Student completion of assignments
  - Student progress in learning • Non-instructional records
- 4c Communicating with Families**
  - About instructional program • About individual students
  - Engagement of families in instructional program
- 4d Participating in a Professional Community**
  - Relationships with colleagues • Participation in school projects
  - Involvement in culture of professional inquiry • Service to school
- 4e Growing and Developing Professionally**
  - Enhancement of content knowledge and pedagogical skill
  - Service to the profession
- 4f Showing Professionalism**
  - Integrity/ethical conduct • Service to students • Advocacy
  - Decision-making • Compliance with school/district regulations

## DOMAIN 3: Instruction

- 3a Communicating With Students**
  - Expectations for learning • Directions and procedures
  - Explanations of content • Use of oral and written language
- 3b Using Questioning and Discussion Techniques**
  - Quality of questions • Discussion techniques • Student participation
- 3c Engaging Students in Learning**
  - Activities and assignments • Student groups
  - Instructional materials and resources • Structure and pacing
- 3d Using Assessment in Instruction**
  - Assessment criteria • Monitoring of student learning
  - Feedback to students • Student self-assessment and monitoring
- 3e Demonstrating Flexibility and Responsiveness**
  - Lesson adjustment • Response to students • Persistence

[www.danielsongroup.org](http://www.danielsongroup.org)



# OBSERVATION TOOL

(This document is based on the current form being used at  
Doral Academy of Nevada in alliance with the Charlotte Danielson model.)

Name

Date:

Grade Level/Content:

School Year:

## DOMAIN 2: THE CLASSROOM ENVIRONMENT

	Unsatisfactory	Basic	Proficient	Highly Proficient	Distinguished
<b>2a) Creating an Environment of Respect and Rapport</b> •Teacher interaction with students •Student interaction with students					
<b>2b) Establishing a Culture for Learning</b> •Importance of content •Expectations for learning and achievement •Student pride in work					
<b>2c) Managing Classroom Procedures</b> •Instructional Groups •Transitions •Materials and supplies •Non-instructional duties •Supervision of volunteers and paraprofessionals					
<b>2d) Managing Student Behavior</b> •Expectations •Monitoring behavior •Responses to misbehavior					
<b>2e) Organizing Physical Space</b> •Safety and accessibility •Arrangement of furniture and resources					
<b>Evidence:</b>					

## DOMAIN 3: INSTRUCTION

	Unsatisfactory	Basic	Proficient	Highly Proficient	Distinguished
<b>3a) Communicating With Students</b> •Expectations for learning •Directions and procedures •Explanations of content •Use of oral and written language					
<b>3b) Using Questioning and Discussion Techniques</b> •Quality of questions •Discussion techniques •Student participation					
<b>3c) Engaging Students in Learning</b> •Activities and assignments •Student groups •Instructional materials and resources •Structure and pacing					
<b>3d) Using Assessment in Instruction</b> •Assessment criteria •Monitoring of student learning •Feedback to students •Student self-assessment and monitoring					
<b>3e) Demonstrating Flexibility and Responsiveness</b> •Lesson adjustment •Response to students •Persistence					
<b>Evidence:</b>					



Observation Tool

NAME

School Year:

**PERFORMANCE SUMMARY:**

**TEACHER INITIATED IMPROVEMENT GOALS/DIRECTIONS:**



## Charlotte Danielson Framework for Teaching Rubric

### Domain 2: The Classroom Environment

	Unsatisfactory	Basic	Proficient	Excellent
<b>2a: Creating an environment of respect and rapport</b>	Patterns of classroom interactions, both between the teacher and students and among students, are mostly negative, inappropriate, or insensitive to students' ages, cultural backgrounds, and developmental levels. Interactions are characterized by sarcasm, put-downs, or conflict. Teacher does not deal with disrespectful behavior.	Patterns of classroom interactions, both between the teacher and students and among students, are generally appropriate but may reflect occasional inconsistencies, favoritism, and disregard for students' ages, cultures, and developmental levels. Students rarely demonstrate respect for one another. Teacher attempts to respond to disrespectful behavior, with uneven results. The net result of the interactions is neutral: conveying neither warmth nor conflict.	Teacher-student interactions are friendly and demonstrate general caring and respect. Such interactions are appropriate to the ages, of the students. Students exhibit respect for the teacher. Interactions among students are generally polite and respectful. Teacher responds successfully to disrespectful behavior among students. The net result of the interactions is polite and respectful, but business-like.	Classroom interactions among the teacher and individual students are highly respectful, reflecting genuine warmth and caring and sensitivity to students as individuals. Students exhibit respect for the teacher and contribute to high levels of civility among all members of the class. The net result of interactions is that of connections with students as individuals
<b>2b: Establishing a culture for learning</b>	The classroom culture is characterized by a lack of teacher or student commitment to learning, and/or little or no investment of student energy into the task at hand. Hard work is not expected or valued. Medium to low expectations for student achievement are the norm with high expectations for learning reserved for only one or two students.	The classroom culture is characterized by little commitment to learning by teacher or students. The teacher appears to be only "going through the motions, and students indicate that they are interested in completion of a task, rather than quality." The teacher conveys that student success is the result of natural ability rather than hard work; high expectations for learning are reserved for those students thought to have a natural aptitude for the subject.	The classroom culture is a cognitively busy place where learning is valued by all with high expectations for learning the norm for most students. The teacher conveys that with hard work students can be successful; students understand their role as learners and consistently expend effort to learn. Classroom interactions support learning and hard work.	The classroom culture is a cognitively vibrant place, characterized by a shared belief in the importance of learning. The teacher conveys high expectations for learning by all students and insists on hard work; students assume responsibility for high quality by initiating improvements, making revisions, adding detail and/or helping peers.
<b>2c: Managing Classroom Procedures</b>	Much instructional time is lost due to inefficient classroom routines and procedures. There is little or no evidence of the teacher managing instructional groups, transitions, and/or the handling of materials and supplies effectively. There is little evidence that students know or follow established routines.	Some instructional time is lost due to only partially effective classroom routines and procedures. The teacher's management of instructional groups, transitions, and/or the handling of materials and supplies is inconsistent, leading to some disruption of learning. With regular guidance and prompting, students follow established routines.	There is little loss of instructional time due to effective classroom routines and procedures. The teacher's management of instructional groups and/or the handling of materials and supplies are consistently successful. With minimal guidance and prompting, students follow established classroom routines.	Instructional time is maximized due to efficient classroom routines and procedures. Students contribute to the management of instructional groups, transitions, and/or the handling of materials and supplies. Routines are well understood and may be initiated by students.



	Unsatisfactory	Basic	Proficient	Excellent
<b>2d Managing Student Behavior</b>	There appear to be no established standards of conduct, and little or no teacher monitoring of student behavior. Students challenge the standards of conduct. Response to students' misbehavior is repressive, or disrespectful of student dignity.	Standards of conduct appear to have been established, but their implementation is inconsistent. Teacher tries, with uneven results, to monitor student behavior and respond to student misbehavior. There is inconsistent implementation of the standards of conduct.	Student behavior is generally appropriate. The teacher monitors student behavior against established standards of conduct. Teacher response to student misbehavior is consistent, proportionate and respectful to students and is effective.	Student behavior is entirely appropriate. Students take an active role in monitoring their own behavior and that of other students against standards of conduct. Teachers' monitoring of student behavior is subtle and preventive. Teacher's response to student misbehavior is sensitive to individual student needs, respects students' dignity.
<b>2e: Organizing physical space</b>	The physical environment is unsafe, or many students don't have access to learning. There is poor alignment between the arrangement of furniture and resources, including computer technology, and the lesson activities.	The classroom is safe, and essential learning is accessible to most students. The teacher's use of physical resources, including computer technology, is moderately effective. Teacher may attempt to modify the physical arrangement to suit learning activities, with partial success.	The classroom is safe, and learning is accessible to all students; teacher ensures that the physical arrangement is appropriate to the learning activities. Teacher makes effective use of physical resources, including computer technology.	The classroom is safe, and learning is accessible to all students including those with special needs. Teacher makes effective use of physical resources, including computer technology. The teacher ensures that the physical arrangement is appropriate to the learning activities. Students contribute to the use or adaptation of the physical environment to advance learning.

### Domain 3: Instruction

	Unsatisfactory	Basic	Proficient	Distinguished
<b>3a: Communicating with students</b>	The instructional purpose of the lesson is unclear to students and the directions and procedures are confusing. Teacher's explanation of the content contains major errors. The teacher's spoken or written language contains errors of grammar or syntax. Vocabulary is inappropriate, vague, or used incorrectly, leaving students confused.	Teacher's attempt to explain the instructional purpose has only limited success, and/or directions and procedures must be clarified after initial student confusion. Teacher's explanation of the content may contain minor errors; some portions are clear, other portions are difficult to follow. Teacher's explanation consists of a monologue, with no invitation to the students for intellectual engagement. Teacher's spoken language is correct; however, vocabulary is limited, or not fully appropriate to the students' ages or backgrounds.	The instructional purpose of the lesson is clearly communicated to students, including where it is situated within broader learning; directions and procedures are explained clearly. Teacher's explanation of content is well scaffolded, clear and accurate, and connects with students' knowledge and experience. During the explanation of content, the teacher invites student intellectual engagement. Teacher's spoken and written language is clear and correct. Vocabulary is appropriate to the students' ages and interests.	The teacher links the instructional purpose of the lesson to student interests; the directions and procedures are clear and anticipate possible student misunderstanding. Teacher's explanation of content is thorough and clear, developing conceptual understanding through artful scaffolding and connecting with students' interests. Students contribute to extending the content, and in explaining concepts to their classmates. Teacher's spoken and written language is expressive, and the teacher finds opportunities to extend students' vocabularies.
<b>3b: Using Questioning / Prompts and Discussion</b>	Teacher's questions are of low cognitive challenge, single correct responses, and asked in rapid succession. Interaction between teacher and students is predominantly recitation style, with the teacher mediating all questions and answers. A few students dominate the discussion.	Teacher's questions lead students through a single path of inquiry, with answers seemingly determined in advance. Alternatively the teacher attempts to frame some questions designed to promote student thinking and understanding, but only a few students are involved. Teacher attempts to engage all students in the discussion and to encourage them to respond to one another, with uneven results.	While the teacher may use some low-level questions, he or she poses questions to students designed to promote student thinking and understanding. Teacher creates a genuine discussion among students, providing adequate time for students to respond, and stepping aside when appropriate. Teacher successfully engages most students in the discussion, employing a range of strategies to ensure that most students are heard.	Teacher uses a variety or series of questions or prompts to challenge students cognitively, advance high level thinking and discourse, and promote meta-cognition. Students formulate many questions, initiate topics and make unsolicited contributions. Students themselves ensure that all voices are heard in the discussion.



	Unsatisfactory	Basic	Proficient	Distinguished
<b>3c: Engaging Students in Learning</b>	The learning tasks and activities, materials, resources, instructional groups and technology are poorly aligned with the instructional outcomes, or require only rote responses. The pace of the lesson is too slow or rushed. Few students are intellectually engaged or interested.	The learning tasks and activities are partially aligned with the instructional outcomes but require only minimal thinking by students, allowing most students to be passive or merely compliant. The pacing of the lesson may not provide students the time needed to be intellectually engaged.	The learning tasks and activities are aligned with the instructional outcomes and are designed to challenge student thinking, resulting in active intellectual engagement by most students with important and challenging content, and with teacher scaffolding to support that engagement. The pacing of the lesson is appropriate, providing most students the time needed to be intellectually engaged.	Virtually all students are intellectually engaged in challenging content through well-designed learning tasks and suitable scaffolding by the teacher. Learning tasks and activities are fully aligned with the instructional outcomes. In addition, there is evidence of some student initiation of inquiry, and student contributions to the exploration of important content. The pacing of the lesson provides students the time needed to intellectually engage with and reflect upon their learning, and to consolidate their understanding. Students may have some choice in how they complete tasks and may serve as resources for one another.
<b>3d: Using Assessment in Instruction</b>	There is little or no assessment or monitoring of student learning; feedback is absent, or of poor quality. Students do not appear to be aware of the assessment criteria and do not engage in self-assessment.	Assessment is used sporadically to support instruction, through some monitoring of progress of learning by teacher and/or students. Feedback to students is general, and students appear to be only partially aware of the assessment criteria; few assess their own work. Questions/prompts/ assessments are rarely used to diagnose evidence of learning.	Assessment is regularly used during instruction, through monitoring of progress of learning by teacher and/or students, resulting in accurate, specific feedback that advances learning. Students appear to be aware of the assessment criteria; some of them engage in self-assessment. Questions/prompts / assessments are used to diagnose evidence of learning.	Assessment is fully integrated into instruction, through extensive use of formative assessment. Students appear to be aware of, and there is some evidence that they have contributed to, the assessment criteria. Students self-assess and monitor their progress. A variety of feedback, from both the teacher and peers, is accurate, specific, and advances learning. Questions / prompts / assessments are used regularly to diagnose evidence of learning by individual students.
<b>3e: Demonstrating flexibility and responsiveness</b>	Teacher adheres to the instruction plan in spite of evidence of poor student understanding or students' lack of interest. Teacher ignores student questions; when students experience difficulty, the teacher blames the students or their home environment.	Teacher attempts to modify the lesson when needed and to respond to student questions and interests, with moderate success. Teacher accepts responsibility for student success, but has only a limited repertoire of strategies to draw upon.	Teacher promotes the successful learning of all students, making minor adjustments as needed to instruction plans and accommodating student questions, needs and interests. The teacher persists in seeking approaches for students who have difficulty learning, drawing on a broad repertoire of strategies.	Teacher seizes an opportunity to enhance learning, building on a spontaneous event or student interests or successfully adjusts and differentiates instruction to address individual student misunderstandings. Teacher persists in seeking effective approaches for students who need help, using an extensive repertoire of instructional strategies and soliciting additional resources from the school or community.



## **Attachment J**

Kamalani Academy will develop an employee manual based upon state and federal laws, collective bargaining agreements, BOE policies and regulations, and DOE personnel policies.



# Attachment K Kamalani Academy 2017 -2018 Official School Calendar

Week	Student Days	Teacher Days		Su	M	T	W	Th	F	Sa	1 <sup>st</sup> SEMESTER 89 Student Days (Ends Dec. 22)
	0	0	July 2017	23	24	25	26	27	28	29	
1	0	4		30	31	1	2	3	4	5	August 1: Teachers First Day
2	5	9	August	6	7	8	9	10	11	12	August 1 – 4: Tchr. Work Days (no students)
3	9	13		13	14	15	16	17	18	19	August 7: Students' First Day
4	14	18		20	21	22	23	24	25	26	August 18: Statehood Day
5	19	23		27	28	29	30	31	1	2	
6	23	27	September	3	4	5	6	7	8	9	September 4: Labor Day
7	28	32		10	11	12	13	14	15	16	<b>Q1</b> 43 days Ends October 6
8	33	37		17	18	19	20	21	22	23	
9	38	42		24	25	26	27	28	29	30	
10	43	47	October	1	2	3	4	5	6	7	
11				8	9	10	11	12	13	14	October 9 - 13: Fall Break
12	48	52		15	16	17	18	19	20	21	<b>Q2</b> 46 days Ends December 21
13	53	57		22	23	24	25	26	27	28	
14	58	62		29	30	31	1	2	3	4	
15	62	66	November	5	6	7	8	9	10	11	November 10: Veterans' Day
16	67	71		12	13	14	15	16	17	18	
17	70	74		19	20	21	22	23	24	25	November 23: Thanksgiving
18	75	79		26	27	28	29	30	1	2	November 24: School Holiday
19	80	84	December	3	4	5	6	7	8	9	
20	85	89		10	11	12	13	14	15	16	
21	89	93		17	18	19	20	21	22	23	<b>December 22: End of 1<sup>st</sup> Semester</b>
22				24	25	26	27	28	29	30	December 23 – January 5: Winter Break
23		94	January 2018	31	1	2	3	4	5	6	<b>2<sup>nd</sup> SEMESTER – 93 Student Days</b>
24	94	99		7	8	9	10	11	12	13	January 5: Tchr. Work Days (no students)
25	98	103		14	15	16	17	18	19	20	January 15: Dr. Martin Luther King Jr. Day
26	103	108		21	22	23	24	25	26	27	
27	108	113		28	29	30	31	1	2	3	
28	113	118	February	4	5	6	7	8	9	10	
29	117	123		11	12	13	14	15	16	17	February 12 – 16: Institute Day (TBA)
30	121	127		18	19	20	21	22	23	24	February 19: Presidents' Day
31	126	132		25	26	27	28	1	2	3	<b>Q3</b> 47 days Ends March 16
32	131	137	March	4	5	6	7	8	9	10	
33	136	142		11	12	13	14	15	16	17	
34				18	19	20	21	22	23	24	March 19 – 23: Spring Break***
35	139	145		25	26	27	28	29	30	31	March 26: Kuhio Day
36	144	150	April	1	2	3	4	5	6	7	March 30: Good Friday
37	149	155		8	9	10	11	12	13	14	
38	154	160		15	16	17	18	19	20	21	
39	159	165		22	23	24	25	26	27	28	
40	164	170		29	30	1	2	3	4	5	<b>Q4</b> 46 days Ends May 31
41	169	175	May	6	7	8	9	10	11	12	
42	174	180		13	14	15	16	17	18	19	
43	179	185		20	21	22	23	24	25	26	May 28: Memorial Day
44	182	189		27	28	29	30	31	1	2	May 31: Last Day for Students
June	-2^	+1^^	June	3	4	5	6	7	8	9	<b>End of Second Semester</b>
	180	190									June 1: Last Day for Teachers

Calendar contingent on granting of charter, funding and collective bargaining agreements

## OFFICIAL STATE HOLIDAYS 2017 – 2018 SCHOOL YEAR

OFFICIAL STATE HOLIDAYS 2017 – 2018 SCHOOL YEAR			
^2 Instructional days shall be converted to a non-student day for school planning and collaboration	^^The employer may assign up to 6 additional hours, in half-hour blocks (an "equivalent day") for training and meetings beyond the teacher's regular work day	Statehood Day	August 18, 2017
		Labor Day	September 4, 2017
		Veterans' Day (observed)	November 11, 2017
		Thanksgiving Day	November 23, 2017
		Christmas Day	November 23, 2017
		New Year's Day	January 1, 2018
		Dr. Martin Luther King, Jr. Day	January 15, 2018
		Presidents' Day	February 19, 2018
		Prince Kuhio Day	March 26, 2018
		Good Friday	March 30, 2018
		Memorial Day	May 28, 2019



## Attachment L

### SY 2017 – 2018 Kamalani Academy – Grades K – 8 Bell Schedule

		<b>Mon., Tues, Thurs., Fri.</b>				<b>Wednesday</b>	
	<b>Time</b>	<b>Instructional</b>	<b>Non-Instr.</b>		<b>Time</b>	<b>Instructional</b>	<b>Non-Instr.</b>
Opening	7:45 – 8:00		15		Opening	7:45 – 8:00	15
Block 1	8:00 – 9:15	75			Block 1	8:00 – 8:54	54
Recess	9:15 – 9:30		15		Passing	8:54 – 8:59	5
Block 2	9:30 – 10:45	75			Block 2	8:59 – 9:53	54
Recess	10:45 – 11:00		15		Passing	9:53 -9:58	5
Lunch	11:00 – 11:30		30		Block 3	9:58 – 10:52	54
Block 3	11:30– 12:45	75			Recess	10:52 – 11:07	15
Block 4	12:45 –2:00	75			Lunch	11:07 – 11:37	30
Dismissal	2:00				Block 4	11:37 – 12:30	53
Teacher Prep	2:00 – 2:45		45		Study Hall/ Activity	2:30 – 1:15	45
					Dismissal	1:15	
					Teacher Prep	1:15 – 2:00	45
					Meetings	2:00 – 2:45	45
<b>Total</b>		<b>300</b>	<b>120</b>			<b>215</b>	<b>205</b>

Student day begins at 7:45 and ends at 2:00 daily except Wednesday (1:15). This schedule provides 2100 weekly minutes of instructional time (1415) and non-instructional time (685). As the Department issues additional regulations and/or policies, the school day will be adjusted to reflect those changes.



**SY 2017 – 2018 Kamalani Academy – Grades K – 8 Bell Schedule  
Option 2  
1525 Instructional Minutes**

		<b>Mon., Tues, Thurs., Fri.</b>				<b>Wednesday</b>	
	<b>Time</b>	<b>Instructional</b>	<b>Non-Instr.</b>		<b>Time</b>	<b>Instructional</b>	<b>Non-Instr.</b>
Opening	7:45 – 7:50		5		Opening	7:45 – 7:50	5
Block 1	7:50 – 9:10	80			Block 1	7:50 – 9:02	72
Recess	9:10 – 9:25		15		Block 2	9:02 – 10:13	71
Block 2	9:25 – 10:45	80			Recess	10:13 – 10:28	15
Recess	10:45 – 11:00		15		Block 3	10:28 – 11:39	71
Lunch	11:00 – 11:30		30		Lunch	11:39 – 12:09	30
Block 3	11:30– 12:45	75			Block 4	12:09 – 1:20	71
Block 4	12:45 –2:00	75			Dismissal	1:20	
Dismissal	2:00				Teacher Prep	1:20– 2:05	45
Teacher Prep	2:00 – 2:45		45		Meetings*	2:05 – 2:45	40
<b>Total</b>		<b>310</b>	<b>110</b>			<b>285</b>	<b>135</b>

\* Wednesday meeting time adjusted to allow for instructional minutes as required by Act 167 as well as to honor the Teacher Prep time as required by collective bargaining.

Per Act 167, schools are required to implement a 180-day school year that includes 1080 hours beginning with the 2016-2017 school year. “Those hours include all times that students are on campus, including recess and lunch, and absorbing the [General Learner Outcomes](#)”. There appears to not be agreement on this definition.

The following chart depicts instructional time requirements pursuant to changes made by Act 21:

School Year	Elementary Schools	Secondary Schools
2015-2016	<p><b>A minimum of 915</b> student hours (302A-251(b)(2), HRS)</p> <p><b>180 days</b>, excluding professional development days and other non-instructional days negotiated pursuant to chapter 89, HRS (302A-251(a), HRS)</p>	<p><b>A minimum of 990</b> student hours (302A-251(c), HRS)</p> <p><b>180 days</b>, excluding professional development days and other non-instructional days negotiated pursuant to chapter 89, HRS (302A-251(a), HRS)</p>



2016-2017 and forward	<p><b>A minimum of 1080</b> student hours (302A-251(d), HRS)</p> <p><b>180 days</b>, excluding professional development days and other non-instructional days negotiated pursuant to chapter 89, HRS (302A-251(d), HRS)</p>	<p><b>A minimum of 1080</b> student hours (302A-251(d), HRS)</p> <p><b>180 days</b>, excluding professional development days and other non-instructional days negotiated pursuant to chapter 89, HRS (302A-251(d), HRS)</p>
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Please note: The hour requirements as listed in the law represent the **minimum** number of required hours. Schools may include more hours, provided that the total amount of time does not violate the relevant Collective Bargaining Agreement.



# Attachment M Academic Track Record

Somerset Academy			
School	Year	Grade	Location
Somerset Academy Charter	2013-14	B	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	B	
	2007-08	A	
	2006-07	A	
	2005-06	A	
Somerset Academy Charter Elementary School (South Homestead)	2013-14	B	Florida
	2012-13	B	
	2011-12	B	
	2010-11	A	
	2009-10	D	
Somerset Academy Elementary School South Miami Campus	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	N/A	
Somerset Arts Academy	2013-14	C	Florida
	2012-13	C	
	2011-12	B	
	2010-11	A	
	2009-10	N/A	
Somerset Academy-Elementary, Eagle Campus	2013-14	C	Florida
	2012-13	B	
	2011-12	A	
	2010-11	N/A	
Somerset Academy	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	B	
	2008-09	A	
	2007-08	A	
	2006-07	A	
	2005-06	A	
	2004-05	A	
	2003-04	A	
	2002-03	B	
Somerset Academy Davie Charter	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
Somerset Academy East Preparatory	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	C	
Somerset Academy Elementary (Miramar Campus)	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	B	
	2013-14	B	
	2012-13	C	

Mater Academy			
School	Year	Grade	Location
Mater Academy	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	A	
	2005-06	A	
	2004-05	A	
	2003-04	A	
	2002-03	A	
	2001-02	B	
Mater Academy East	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	A	
	2005-06	A	
	2004-05	A	
	2003-04	A	
Mater Gardens Academy	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
Mater Brickell Preparatory Academy	2013-14	C	Florida
	2011-12	**	
Mater Academy of International Studies	2013-14	A	Florida
	2012-13	D	
	2011-12	C	
	2010-11	C	
	2009-10	B	
Mater Academy Miami Beach	2013-14	B	Florida
	2012-13	B	
	2011-12	A	
	2010-11	B	
Mater Grove Academy	2012-13	B	Florida
	2011-12	**	
iMatter Academy	2013-14	B	Florida
Mater Academy Charter Middle School	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	B	
	2005-06	A	
	2004-05	A	
Mater Gardens Academy Middle School	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	B	

Doral Academy			
School	Year	Grade	Location
Doral Academy	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	A	
	2005-06	A	
	2004-05	A	
	2003-04	A	
	1998-99		
Just Arts and Mangement Charter Middle School	2013-14	A	Florida
	2012-13	B	
Doral Academy Charter Middle School	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	A	
	2005-06	A	
	2004-05	A	
	2003-04	A	
Doral Academy of Technology	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
Doral Academy Charter High School	2013-14	B	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	A	
	2005-06	B	
	2004-05	B	
	2003-04	C	
	2002-03	A	
	1998-99		
Doral Performing Arts and Entertainment Academy	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2005-06	A	
Doral Academy of Nevada (Elementary)	2013-14	5 Star	Nevada
	2014-15	Pending	
Doral Academy of Nevada (Middle School)	2013-14	3 Start	Nevada
	2014-15	Pending	

Pinecrest Academy			
School	Year	Grade	Location
Pinecrest Preparatory Academy	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	B	
	2006-07	A	
	2005-06	A	
	2004-05	A	
	2003-04	A	
Pinecrest Academy (South Campus)	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
Pinecrest Academy (North Campus)	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
Pinecrest Cove Academy	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
Pinecrest Preparatory Charter School (Orlando)	2013-14	A	Florida
	2012-13	A	
	2011-12	B	
	2010-11	N/A	
Pinecrest Creek Charter	2013-14	F	Florida
Pinecrest Academy Middle School (North Campus)	2013-14	A	Florida
	2012-13	N/A	
	2011-12	N/A	
Pinecrest Academy Charter Middle School	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	B	
	2008-09	A	
	2007-08	A	
	2006-07	A	
	2005-06	A	
	2004-05	A	
	2003-04	A	
Pinecrest Preparatory Academy Charter High School	2013-14	A	Florida
	2012-13	A	
	2011-12	C	
	2010-11	B	
	2009-10	D	
Pinecrest Academy of Nevada (Elementary School)	2014-15	Pending	Nevada
	2013-14	3 Star	
	2012-13	3 Star	
Pinecrest Academy of Nevada (Middle School)	2014-15	Pending	Nevada
	2013-14	4 Star	
	2012-13	3 Star	



Somerset Academy			
School	Year	Grade	Location
Somerset Pines Academy	2011-12	C	Florida
	2010-11	C	
Somerset Preparatory Academy Charter School at North Lauderdale	2013-14	D	Florida
	2012-13	C	
	2011-12	C	
	2010-11	D	
Somerset Village Academy	2013-14	C	Florida
	2012-13	C	
	2011-12	C	
	2010-11	C	
Somerset Academy (Silver Palms)	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
Somerset Preparatory Academy at Silver Palms	2013-14	A	Florida
	2012-13	B	
	2011-12	A	
Somerset Grace Academy	2013-14	A	Florida
	2012-13	N/A	
Somerset Academy (Pompano)	2013-14	F	Florida
Somerset Neighborhood School	2013-14	A	Florida
	2012-13	B	
	2011-12	A	
	2010-11		
	2009-10	N/A	
Somerset Academy Pompano	2013-14	F	Florida
	2012-13	N/A	
Somerset Preparatory Academy	2013-14	F	Florida
Somerset Academy Boca East	2013-14	B	Florida
Somerset Academy Bay	2013-14	A	Florida
Somerset Academy Middle (Miramar Campus)	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
Somerset Academy Middle School	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	A	
	2005-06	A	
	2004-05	B	
Somerset Academy Village Charter Middle School	2013-14	C	Florida
	2012-13	D	
	2011-12	C	
	2010-11	C	
	2009-14	A	
Somerset Preparatory Charter Middle School	2013-14	C	Florida
	2012-13	C	
	2011-12	B	
	2010-11	A	
	2013-14	A	
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	

Mater Academy			
School	Year	Grade	Location
Middle School	2009-10	A	
	2008-09	A	
	2007-08	C	
	2006-07	C	
Mater Academy Lakes Middle School	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	B	
	2009-10	A	
	2008-09	A	
	2007-08	B	
	2006-07	C	
Mater Academy East Charter Middle School	2013-14	C	Florida
	2012-13	C	
	2011-12	C	
	2010-11	C	
	2009-10	B	
	2008-09	C	
	2007-08	A	
	2006-07	A	
Mater Academy Middle School of International Studies	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2010-09	A	
	2008-09	**	
Sports Leadership and Management Charter Middle School			Florida
	2013-14	C	
iMater Academy Middle School			Florida
Mater Academy Charter High School	2013-14	C	Florida
	2013-14	A	
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	C	
	2005-06	B	
	2004-05	B	
	2003-04	C	
Mater Academy East Charter High School	2013-14	B	Florida
	2012-13	A	
	2011-12	B	
	2010-11	B	
	2009-10	B	
	2008-09	C	
	2007-08	B	
	2006-07	B	
Mater Academy High School International Studies	2013-14	B	Florida
	2012-13	A	
	2011-12	A	
	2010-11	**	
	2009-10	C	
	2008-09	**	
Mater Academy Lakes High School	2013-14	A	Florida
	2012-13	A	
	2011-12	B	
	2010-11	B	
	2009-10	B	

Doral Academy			
School	Year	Grade	Location

Pinecrest Academy			
School	Year	Grade	Location



Somerset Academy			
School	Year	Grade	Location
Somerset Academy Charter Middle School	2010-11	A	Florida
	2009-10	A	
	2008-09	A	
	2007-08	A	
	2006-07	B	
	2005-06	A	
	2004-05	D	
	1998-99		
Somerset Academy Charter Middle School (South Homestead)	2013-14	A	Florida
	2012-13	A	
	2011-12	B	
	2010-11	A	
	2009-10	A	
	2008-09	N/A	
Somerset Academy Middle Country Palms	2013-14	A	Florida
	2012-13	C	
	2011-12	N/A	
	2010-11		
	2009-10	N/A	
	2008-09	N/A	
Somerset Academy Charter Middle School South Miami	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	N/A	
Somerset Academy-Middle, Eagle Campus	2013-14	B	Florida
	2012-13	A	
	2011-12	B	
	2010-11	A	
Somerset Preparatory Academy at Silver Palms	2013-14	B	Florida
	2012-13	B	
	2011-12	A	
Somerset Academy Boca Middle School	2013-14	A	Florida
Somerset Academy Hollywood Middle School	2013-14	A	Florida
Somerset Academy Pomapano Middle	2013-14	B	Florida
Somerset Academy Bay Middle School	2013-14	A	Florida
Somerset Academy Charter High	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	A	
	2007-08	B	
	2006-07	C	
	2005-06	B	
	2004-05	C	
	2003-04	N/A	
Somerset Arts Conservatory	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	
	2008-09	N/A	
Somerset Academy Charter High School	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	A	

Mater Academy			
School	Year	Grade	Location
	2008-09	B	
	2007-08	C	
	2006-07	D	
	2005-06		
Mater Performing Arts & Entertainment Academy	2013-14	A	Florida
	2012-13	A	
	2011-12	A	
	2010-11	A	
	2009-10	B	
	2008-09	A	
	2007-08	A	
	2006-07	D	
Mater Brickell Preparatory Academy High School	2013-14	C	Florida
	2012-13	**	
	2011-12	**	
	2010-11		
Sports Leadership of Miami Charter High	2013-14	C	Florida
	2012-13	**	
iMater Preparatory Academy High School			Florida
	2013-14	C	
Mater Academy of Nevada	2014-15	Pending	Nevada

Doral Academy			
School	Year	Grade	Location

Pinecrest Academy			
School	Year	Grade	Location



Somerset Academy			
School	Year	Grade	Location
	2008-09	B	
	2007-08		
	2006-07	A	
Somerset Academy Charter High School (Miramar Campus)	2013-14	B	Florida
	2012-13	B	
	2011-12	A	
Somerset Preparatory Academy Charter High at North Lauderdale	2013-14	F	Florida
	2012-13	B	
	2011-12	F	
Somerset Academy Charter High School (South Homestead)	2013-14	C	Florida
	2012-13	N/A	
	2011-12	N/A	
Somerset Academy Charter High	2013-14	A	Florida
	2012-13		
	2011-12		
	2010-11		
	2009-10	N/A	
Somerset Eagle High School	2013-14	F	Florida
	2012-13	N/A	
Somerset Academy Canyons High School	2013-14	B	Florida
College Preparatory Academy of the Treasure	2013-14	A	Florida
	2012-13	C	
	2014-15	Pending	Nevada
Somerset Academy of Las Vegas (Elementary)	2013-14	5 Star	
	2012-13	4 Star	
	2011-12	Adequate	
Somerset Academy of Las Vegas (Middle/High)	2014-15	Pending	Nevada
	2013-14	5 Star	
	2012-13	4 Star	
	2011-12	n/a	

Mater Academy			
School	Year	Grade	Location

Doral Academy			
School	Year	Grade	Location

Pinecrest Academy			
School	Year	Grade	Location



## **Attachment N**

Below is a list of all charter schools serviced by Academica Nevada. The authorizer for these schools is the Nevada State Public Charter School Authority, 1749 North Stewart Street, Suite 40, Carson City, NV 89706, 775-687-9174



# Our Clients

## THE FOLLOWING SCHOOLS USE THE SERVICES OF ACADEMICA NEVADA:



### SOMERSET ACADEMY OF LAS VEGAS

#### NORTH LAS VEGAS CAMPUS

385 W Centennial Parkway  
North Las Vegas, NV 89084  
Phone: 702.663.5616  
FAX: 702.633.5628  
Email: [nlv.info@somersestnv.org](mailto:nlv.info@somersestnv.org)  
Website: <http://www.somersestnlv.org>

#### SKY POINTE CAMPUS - EL

7038 Sky Pointe Drive  
Las Vegas, NV 89131  
Phone: 702.478.8888  
Fax: 702.478.8844  
Email: [skypointe.info@somersestnv.org](mailto:skypointe.info@somersestnv.org)  
Website: <http://www.somersestskypointe.org>

#### LONE MOUNTAIN CAMPUS

4491 North Rainbow  
Las Vegas, NV 89108  
Phone: 702.685.9150  
Email: [Lonemountain.info@somersestnv.org](mailto:Lonemountain.info@somersestnv.org)  
Website: <http://www.somersestlonemountain.org>



### PINECREST ACADEMY OF NEVADA

#### HORIZON CAMPUS

1360 S Boulder Highway  
Henderson, NV 89015  
Phone: 702.749.3500  
Fax: 702.749.9995  
Email: [horizon.info@pinecrestnv.org](mailto:horizon.info@pinecrestnv.org)  
Website: <http://www.pinecrestnv.org>

#### INSPIRADA CAMPUS

2840 Via Contessa  
Henderson, NV 89044  
Phone: 702.473.5777  
Email: [Inspirada.info@pinecrestnv.org](mailto:Inspirada.info@pinecrestnv.org)  
Website: <http://www.pinecrestinspirada.org>



### DORAL ACADEMY OF NEVADA

#### SADDLE CAMPUS

9625 West Saddle Avenue  
Las Vegas, NV 89147  
Phone: 702.776.6491  
Fax: 702.802.2638  
Email: [saddle.info@doralacademynv.org](mailto:saddle.info@doralacademynv.org)  
Website: <http://www.doralsaddle.org>

#### FIRE MESA CAMPUS

2568 Fire Mesa,  
Las Vegas, NV 89128  
Phone: 702.901.4950  
Fax: 702.534.7990  
Email: [FireMesa.info@doralacademynv.org](mailto:FireMesa.info@doralacademynv.org)  
Website: <http://doralfiremesa.org>



### MATER ACADEMY OF NEVADA

#### MOUNTAIN VISTA CAMPUS

3445 Mountain Vista St.  
Las Vegas, NV 89121  
P: 702-485-2400  
F: 702-485-3322  
Email: [info@materacademynv.org](mailto:info@materacademynv.org)  
Website: <http://www.materacademynv.org>

#### LOSEE CAMPUS

4650 Losee Road  
North Las Vegas, NV 89081  
EL Phone: 702.902.5466  
Sec Phone: 702-826-4373  
El Fax:: 702.902.5444  
Sec Fax: 702.527.7999  
Email: [losee.info@somersestnv.org](mailto:losee.info@somersestnv.org)  
Website: <http://www.somersestlosee.org>

#### SKY POINTE CAMPUS - M/H

7058 Sky Pointe Drive  
Las Vegas, NV 89131  
Phone: 702-478-8888  
Fax: 702.478.527-6163  
Email: [skypointe.info@somersestnv.org](mailto:skypointe.info@somersestnv.org)  
Website: <http://www.somersestskypointe.org>

#### STEPHANIE CAMPUS

50 N Stephanie St.  
Henderson, NV 8970  
Phone: 702.998.0500  
Fax: 702.998.0503  
Email: [stephanie.info@somersestnv.org](mailto:stephanie.info@somersestnv.org)  
Website: <http://somerseststephanie.org>

#### ST. ROSE CAMPUS

1385 E. Cactus Ave.  
Las Vegas, NV 89183  
Phone: 702.750.9150  
Email: [St.Rose.info@pinecrestnv.org](mailto:St.Rose.info@pinecrestnv.org)  
Website: <http://www.pinecreststrose.org>

#### CACTUS CAMPUS

9025 W Cactus Road  
Las Vegas, NV 89178  
Phone: 702.960.7500  
Fax: 702.960.7960  
Email: [cactus.info@doralacademynv.org](mailto:cactus.info@doralacademynv.org)  
Website: <http://www.doralcactus.org>



## **Attachment O**

Accredited schools serviced by Academica Nevada

Doral Academy of Nevada

Somerset Academy-Aliante

Somerset Academy of Las Vegas-Losee

Somerset Academy of Las Vegas-Sky Pointe Campus M/H

Somerset Academy of Las Vegas-Sky Pointe Campus EL

Somerset Academy of Las Vegas-Stephanie

All of these schools are accredited by AdvancED.



**Report of the  
External Review Team  
for  
Doral Academy, Inc.**

11100 NW 27th St  
Doral  
FL 33172-5001  
US

**Mr. Douglas Rodriguez  
Headmaster**

**Date: January 25, 2015 - January 28, 2015**





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# Introduction

The External Review is an integral component of AdvancED Performance Accreditation and provides the institution with a comprehensive evaluation guided by the results of diagnostic instruments, in-depth review of data and documentation, and the professional judgment of a team of qualified and highly trained evaluators. A series of diagnostic instruments examines the impact of teaching and learning on student performance, the capacity of leadership to effect continuous improvement, and the degree to which the institution optimizes its use of available resources to facilitate and support student success. The results of this evaluation are represented in the Index of Education Quality (IEQ™) and through critical observations, namely, Powerful Practices, Opportunities for Improvement, and Improvement Priorities.

Accreditation is a voluntary method of quality assurance developed more than 100 years ago by American universities and secondary schools and designed primarily to distinguish schools adhering to a set of educational standards. Today the accreditation process is used at all levels of education and is recognized for its ability to effectively drive student performance and continuous improvement in education.

Institutions seeking to gain or retain accreditation must meet AdvancED Standards specific to their institution type, demonstrate acceptable levels of student performance and the continuous improvement of student performance, and provide evidence of stakeholder engagement and satisfaction. The power of AdvancED Performance Accreditation lies in the connections and linkages between and among the conditions, processes, and practices within a system that impact student performance and organizational effectiveness.

Standards help to delineate what matters. They provide a common language through which an education community can engage in conversations about educational improvement, system effectiveness, and achievement. They serve as a foundation for planning and implementing improvement strategies and activities and for measuring success. AdvancED Standards were developed by a committee comprised of talented educators and leaders from the fields of practice, research, and policy who applied professional wisdom, deep knowledge of effective practice, and the best available research to craft a set of robust standards that define institutional quality and guide continuous improvement. Prior to implementation, an internationally recognized panel of experts in testing and measurement, teacher quality, and education research reviewed the standards and provided feedback, guidance and endorsement.

The AdvancED External Review Team uses AdvancED Standards, associated indicators and criteria related to student performance and stakeholder engagement to guide its evaluation. The Team examines adherence to standards as well as how the institution functions as a whole and embodies the practices and characteristics expected of an accredited institution. The Standards, indicators and related criteria are evaluated using indicator-specific performance levels. The Team rates each indicator and criterion on a scale of 1 to 4. The final scores assigned to the indicators and criteria represent the average of the External Review Team members' individual ratings.

The External Review is the hallmark of AdvancED Performance Accreditation. It energizes and equips the institution's leadership and stakeholders to achieve higher levels of performance and address those areas that



may be hindering efforts to reach desired performance levels. External Review is a rigorous process that includes the in-depth examination of evidence and relevant data, interviews with all stakeholder groups, and extensive observations of learning, instruction, and operations.

## Use of Diagnostic Tools

A key to examining the institution is the design and use of diagnostic tools that reveal the effectiveness with which an institution creates conditions and implements processes and practices that impact student performance and success. In preparation for the External Review the institution conducted a Self Assessment that applied the standards and criteria for accreditation. The institution provided evidence to support its conclusions vis a vis organizational effectiveness in ensuring acceptable and improving levels of student performance.

- an indicator-based tool that connects the specific elements of the criteria to evidence gathered by the team;
- a student performance analytic that examines the quality of assessment instruments used by the institution, the integrity of the administration of the assessment to students, the quality of the learning results including the impact of instruction on student learning at all levels of performance, and the equity of learning that examines the results of student learning across all demographics;
- a stakeholder engagement instrument that examines the fidelity of administration and results of perception surveys seeking the perspective of students, parents, and teachers;
- a state-of-the-art, learner-centric observation instrument, the Effective Learning Environments Observation Tool (eleot™) that quantifies students' engagement, attitudes and dispositions organized in 7 environments: Equitable Learning, High Expectations, Supportive Learning, Active Learning, Progress Monitoring and Feedback, Well-Managed Learning, and Digital Learning. All evaluators must be trained, reach acceptable levels of inter-rater reliability, and certified to use this research-based and validated instrument.

The External Review Team's findings and critical observations are shared in this report through the IEQ™ results as well as through the identification of Powerful Practices, Opportunities for Improvement, and Improvement Priorities.

## Index of Education Quality

In the past, accreditation reviews resulted in an accreditation recommendation on status. Labels such as advised, warned, probation, or all clear were used to describe the status of a school relative to the AdvancED Standards and other evaluative criteria. Beginning in the 2013-14 school year, AdvancED introduced a new framework to describe the results of an accreditation review. Consistent with the modern focus of accreditation on continuous improvement with an emphasis on student success, AdvancED introduced an innovative and state-of-the-art framework for diagnosing and revealing institutional performance called the Index of Education Quality (IEQ™). The IEQ™ comprises three domains of performance: 1) the impact of teaching and learning on student performance; 2) the capacity of leadership to guide the institution toward the achievement of its



vision and strategic priorities; and 3) use of resources to support and optimize learning. Therefore, your institution will no longer receive an accreditation status. Instead, your institution will be accredited with an IEQ™ score. In the case where an institution is failing to meet established criteria, the accreditation will be under review thereby requiring frequent monitoring and demonstrated improvement.

The three domains of performance are derived from the AdvancED Standards and associated indicators, the analysis of student performance, and the engagement and feedback of stakeholders. Within each domain institutions can connect to the individual performance levels that are applied in support of the AdvancED Standards and evaluative criteria. Within the performance levels are detailed descriptors that serve as a valuable source of guidance for continuous improvement. Upon review of the findings in this report and building on their Powerful Practices, institutional leaders should work with their staff to review and understand the evidence and rationale for each Opportunity for Improvement and Improvement Priority as well as the corresponding pathway to improvement described in the performance levels of the selected indicator(s).

The IEQ™ provides a new framework that recognizes and supports the journey of continuous improvement. An institution's IEQ™ is the starting point for continuous improvement. Subsequent actions for improvement and evidence that these have had a positive impact will raise the institution's IEQ™ score.

## Benchmark Data

Throughout this report, AdvancED provides benchmark data for each indicator and for each component of the evaluative criteria. These benchmark data represent the overall averages across the entire AdvancED Network for your institution type. Thus, the AdvancED Network average provides an extraordinary opportunity for institutions to understand their context on a global scale rather than simply compared to a state, region, or country.

It is important to understand that the AdvancED Network averages are provided primarily to serve as a tool for continuous improvement and not as a measure of quality in and of itself. Benchmark data, when wisely employed, have a unique capacity to help institutions identify and leverage their strengths and areas of improvement to significantly impact student learning.

## Powerful Practices

A key to continuous improvement is the institution's ability to learn from and build upon its most effective and impactful practices. Such practices serve as critical leverage points necessary to guide, support and ensure continuous improvement. A hallmark of the accreditation process is its commitment to identifying with evidence, the conditions, processes and practices that are having the most significant impact on student performance and institutional effectiveness. Throughout this report, the External Review Team has captured and defined Powerful Practices. These noteworthy practices are essential to the institution's effort to continue its journey of improvement.



## Opportunities for Improvement

Every institution can and must improve no matter what levels of performance it has achieved in its past. During the process of the review, the External Review Team identified areas of improvement where the institution is meeting the expectations for accreditation but in the professional judgment of the Team these are Opportunities for Improvement that should be considered by the institution. Using the criteria described in the corresponding rubric(s) to the Opportunity for Improvement, the institution can identify what elements of practice must be addressed to guide the improvement.

## Improvement Priorities

The expectations for accreditation are clearly defined in a series of the rubric-based AdvancED Standards, indicators and evaluative criteria focused on the impact of teaching and learning on student performance, the capacity of the institution to be guided by effective leadership, and the allocation and use of resources to support student learning. As such, the External Review Team reviewed, analyzed and deliberated over significant bodies of evidence provided by the institution and gathered by the Team during the process. In the professional judgment of the Team as well as the results of the diagnostic process, the Team defined, with rationale, Improvement Priorities. The priorities must be addressed in a timely manner by the institution to retain and improve their accreditation performance as represented by the IEQ™. Improvement Priorities serve as the basis for the follow-up and monitoring process that will begin upon conclusion of the External Review. The institution must complete and submit an Accreditation Progress Report within two years of the External Review. The report must include actions taken by the institution to address the Improvement Priorities along with the corresponding evidence and results. The IEQ™ will be recalculated by AdvancED upon review of the evidence and results associated with the Improvement Priorities.

## The Review

The Lead Evaluator visited Doral Academy, Inc. corporation headquarters on September 23-24, 2014 to provide school officials with pre-planning guidance regarding the corporation and school self-assessments. She met with the Head of Schools and Administrator's Coalition over the two day visit and observed four classrooms on the second day of the visit.

The External Review Team gathered for the first time virtually on December 17, 2015 to discuss the corporation visit protocol and preparations for the on-site review. They continued to communicate via e-mail exchanges leading up to the visit. Team members reviewed self-assessment documents and evidence provided in support of the corporation's assessments of its adherence to standards. Further, the Lead Evaluator had two lengthy conference calls with the Head of Schools and other administrators on December 2, 2014 and January 14, 2015 to discuss logistics and to elaborate on requirements related to the corporation's initial presentations to the External Review Team on the first full day of the review. The Lead Evaluator also had numerous e-mail exchanges with the corporation regarding logistics surrounding the review and the evidence provided by the corporation supporting its self-assessment ratings. The Associate Lead Evaluator visited the Doral Academy of Nevada, Saddle Campus, on January 8, 2015 during which time he observed six classes and met with two board members and the school principal, and spoke with a number of students and



teachers.

The five-member External Review Team arrived in Doral, the location of the corporation's headquarters, on Saturday and Sunday, January 24 and 25, 2015, and stayed through January 29, 2015 to conduct the corporation review of Doral Academy, Inc. The Team met on Sunday, January 25th, to prepare for the first day of meetings with corporation officials. On Sunday evening the team had dinner with corporation leadership. On Monday, January 26th, the team listened to presentations by the Head of Schools and administrators involved in determining adherence to the Standards, and interviewed the Administrator's Coalition, the three-member governing authority, and a group of parents. On Tuesday, January 27, 2015, team members spent the day visiting classes at the six Doral schools located in Doral. They also met with two groups of students, one at the elementary level and one at the secondary level.

The External Review Team wishes to acknowledge the warm hospitality demonstrated by the entire Doral community in both Florida and Nevada. In the team's professional judgment the self-assessments at the school and corporation levels were extremely thorough and forthright. All teachers and administrators participated in the various self-assessments which were further informed by input from students, parents, and both governing boards. Every effort was made to provide evidence in support of corporation judgments regarding adherence to Standards indicators. All required surveys were conducted and analyzed and all required self-assessment documents were submitted in ample time to enable the External Review Team to prepare for the on-site visit. The External Review Team was unanimous in its assessment that Doral Academy, Inc. corporation and school officials are sincere in their commitment to the AdvancED improvement process.

Stakeholders were interviewed by members of the External Review Team to gain their perspectives on topics relevant to the institution's effectiveness and student performance. The feedback gained through the stakeholder interviews was considered with other evidences and data to support the findings of the External Review. The following chart depicts the numbers of persons interviewed representative of various stakeholder groups.

Stakeholder Interviewed	Number
Board Members	6
Chief Executive Officer/President	1
Administrators	20
Instructional Staff	37
Support Staff	3
Students	39
Parents/Community/Business Leaders	10
<b>Total</b>	<b>116</b>



# Results

## Teaching and Learning Impact

The impact of teaching and learning on student achievement is the primary expectation of every institution. The relationship between teacher and learner must be productive and effective for student success. The impact of teaching and learning includes an analysis of student performance results, instructional quality, learner and family engagement, support services for student learning, curriculum quality and efficacy, and college and career readiness data. These are all key indicators of an institution's impact on teaching and learning.

A high-quality and effective educational system has services, practices, and curriculum that ensure teacher effectiveness. Research has shown that an effective teacher is a key factor for learners to achieve their highest potential and be prepared for a successful future. The positive influence an effective educator has on learning is a combination of "student motivation, parental involvement" and the "quality of leadership" (Ding & Sherman, 2006). Research also suggests that quality educators must have a variety of quantifiable and intangible characteristics that include strong communication skills, knowledge of content, and knowledge of how to teach the content. The institution's curriculum and instructional program should develop learners' skills that lead them to think about the world in complex ways (Conley, 2007) and prepare them to have knowledge that extends beyond the academic areas. In order to achieve these goals, teachers must have pedagogical skills as well as content knowledge (Baumert, J., Kunter, M., Blum, W., Brunner, M., Voxx, T., Jordan, A., Klusmann, U., Krauss, S., Nuebrand, M., & Tsai, Y., 2010). The acquisition and refinement of teachers' pedagogical skills occur most effectively through collaboration and professional development. These are a "necessary approach to improving teacher quality" (Colbert, J., Brown, R., Choi, S., & Thomas, S., 2008). According to Marks, Louis, and Printy (2002), staff members who engage in "active organizational learning also have higher achieving students in contrast to those that do not." Likewise, a study conducted by Horng, Klasik, and Loeb (2010), concluded that leadership in effective institutions "supports teachers by creating collaborative work environments." Institutional leaders have a responsibility to provide experiences, resources, and time for educators to engage in meaningful professional learning that promotes student learning and educator quality.

AdvancED has found that a successful institution implements a curriculum based on clear and measurable expectations for student learning. The curriculum provides opportunities for all students to acquire requisite knowledge, skills, and attitudes. Teachers use proven instructional practices that actively engage students in the learning process. Teachers provide opportunities for students to apply their knowledge and skills to real world situations. Teachers give students feedback to improve their performance.

Institutions with strong improvement processes move beyond anxiety about the current reality and focus on priorities and initiatives for the future. Using results, i.e., data and other information, to guide continuous improvement is key to an institution's success. A study conducted by Datnow, Park, and Wohlstetter (2007) from the Center on Educational Governance at the University of Southern California indicated that data can shed light on existing areas of strength and weakness and also guide improvement strategies in a systematic and strategic manner (Dembosky, J., Pane, J., Barney, H., & Christina, R., 2005). The study also identified six



key strategies that performance-driven systems use: (1) building a foundation for data-driven decision making, (2) establishing a culture of data use and continuous improvement, (3) investing in an information management system, (4) selecting the right data, (5) building institutional capacity for data-driven decision making, and (6) analyzing and acting on data to improve performance. Other research studies, though largely without comparison groups, suggested that data-driven decision-making has the potential to increase student performance (Alwin, 2002; Doyle, 2003; Lafee, 2002; McIntire, 2002).

Through ongoing evaluation of educational institutions, AdvancED has found that a successful institution uses a comprehensive assessment system based on clearly defined performance measures. The system is used to assess student performance on expectations for student learning, evaluate the effectiveness of curriculum and instruction, and determine strategies to improve student performance. The institution implements a collaborative and ongoing process for improvement that aligns the functions of the school with the expectations for student learning. Improvement efforts are sustained, and the institution demonstrates progress in improving student performance and institution effectiveness.

### Standard 3 - Teaching and Assessing for Learning

The corporation's curriculum, instructional design, support services, assessment practices, and proprietary practices guide and ensure teacher effectiveness and student learning across all programs.

Indicator	Description	Review Team Score	AdvancED Network Average
3.1	The corporation's approved curriculum provides equitable and challenging learning experiences that ensure all students have sufficient opportunities to develop learning, thinking, and life skills that lead to success at the next level.	3.00	3.00
3.2	Curriculum, instruction, and assessment throughout the corporation are monitored and adjusted systematically in response to data from multiple assessments of student learning and an examination of professional practice.	3.20	2.67
3.3	Teachers in each school throughout the corporation engage students in their learning through instructional strategies that ensure achievement of learning expectations.	3.00	2.75
3.4	Corporation and school leaders monitor and support the improvement of instructional practices of teachers to ensure student success.	3.00	2.75
3.5	The corporation operates as a collaborative learning organization through structures that support improved instruction and student learning across the corporation.	3.00	2.75
3.6	Teachers implement the corporation's approved instructional processes in support of student learning.	3.00	2.67
3.7	Mentoring, coaching, and orientation programs support instructional improvement consistent with the corporation's values and beliefs about teaching and learning.	3.00	2.67



Indicator	Description	Review Team Score	AdvancED Network Average
3.8	The corporation and all of its schools engage families in meaningful ways in their children's education and keep them informed of their children's learning progress. In the case of adult students, the student is informed of his/her learning progress rather than the family.	3.00	2.83
3.9	The corporation designs and evaluates structures in all schools whereby each student is well known by at least one adult in the student's school who supports that student's educational experience.	2.20	3.25
3.10	Grading and reporting are based on clearly defined criteria that represent the attainment of content knowledge and skills and are consistent across programs, grade levels and courses.	3.00	2.58
3.11	All corporation and school staff members participate in a continuous program of professional learning.	3.00	2.67
3.12	The corporation ensures that each school provides and coordinates learning support services to meet the unique learning needs of students.	3.00	2.92

## Standard 5 - Using Results for Continuous Improvement

The corporation implements a comprehensive assessment system that generates a range of data about student learning and corporation and school effectiveness and uses the results to guide continuous improvement.

Indicator	Description	Review Team Score	AdvancED Network Average
5.1	The corporation establishes and maintains a clearly defined and comprehensive student assessment system.	3.00	2.25
5.2	Professional and support staff continuously collect, analyze and apply learning from a range of data sources, including comparison and trend data about student learning, instruction, program evaluation, and organizational systems that support learning.	3.60	2.42
5.3	Throughout the corporation and each school, professional and support staff are trained in the interpretation and use of data.	3.80	2.17
5.4	The corporation ensures that each school engages in a continuous process to determine verifiable improvement in student learning, including readiness for and success at the next level.	3.00	2.50
5.5	Corporation and school leaders monitor and communicate comprehensive information about student learning, corporation and school effectiveness, and the achievement of corporation and school improvement goals to stakeholder groups.	3.00	2.58



## Student Performance Diagnostic

The quality of assessments used to measure student learning, assurance that assessments are administered with procedural fidelity and appropriate accommodations, assessment results that reflect the quality of learning, and closing gaps in achievement among subpopulations of students are all important indicators for evaluating overall student performance.

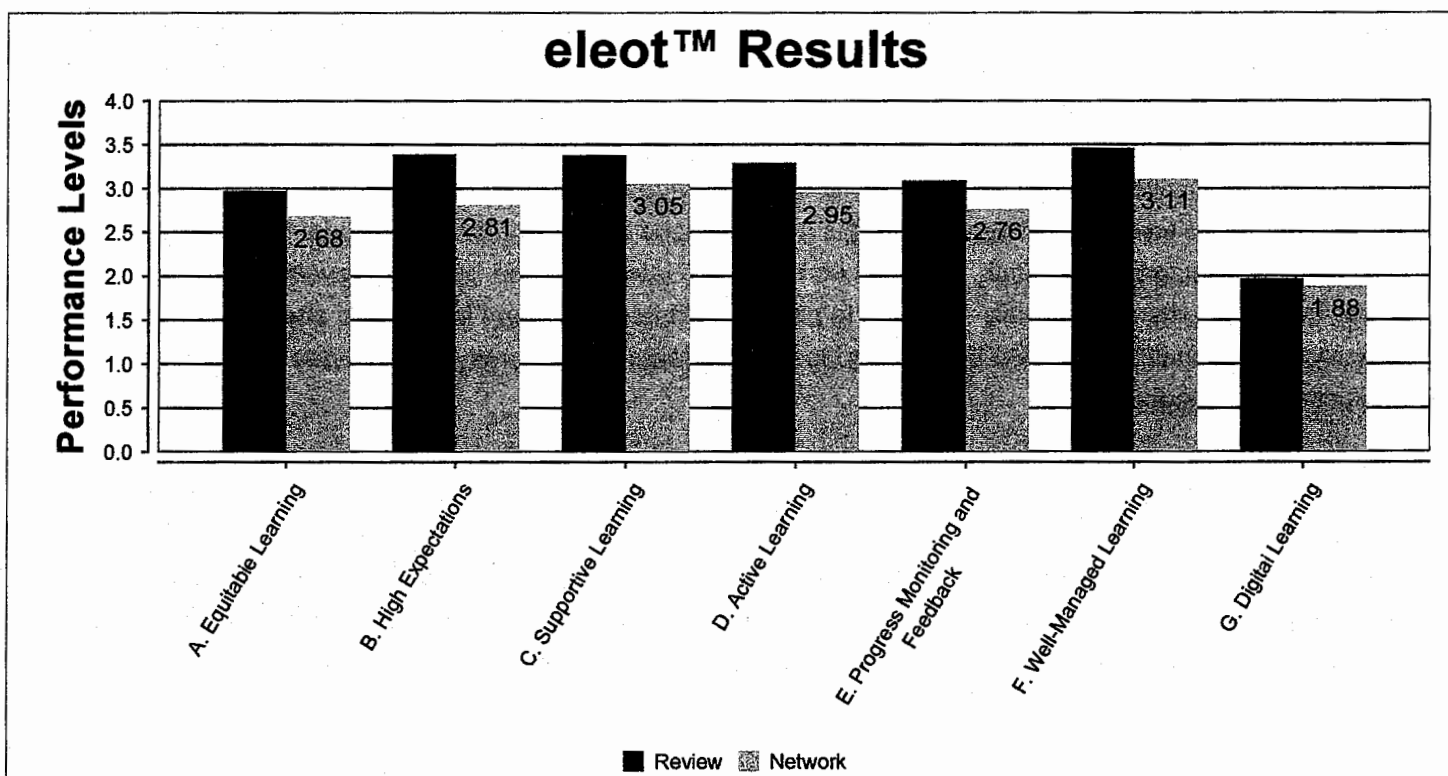
Evaluative Criteria	Review Team Score	AdvancED Network Average
Assessment Quality	4.00	2.57
Test Administration	4.00	3.00
Equity of Learning	3.40	2.43
Quality of Learning	4.00	2.86



## Effective Learning Environments Observation Tool (eleot™)

Every learner should have access to an effective learning environment in which she/he has multiple opportunities to be successful. The Effective Learning Environments Observation Tool (eleot™) measures the extent to which learners are in an environment that is equitable, supportive, and well-managed. An environment where high expectations are the norm and active learning takes place. It measures whether learners' progress is monitored and feedback is provided and the extent to which technology is leveraged for learning.

Observations of classrooms or other learning venues are conducted for a minimum of 20 minutes per observation. Every member of the External Review Team is required to be trained and pass a certification exam that establishes inter-rater reliability. Team members conduct multiple observations during the review process and provide ratings on 30 items based on a four-point scale (4=very evident; 3=evident; 2=somewhat evident; and 1=not observed). The following provides the aggregate average score across multiple observations for each of the seven learning environments included in eleot™ as well as benchmark results across the AdvancED Network.



The External Review team conducted a total of 62 classroom observations, 6 in the Nevada Saddle campus and 56 in the six Miami Doral Schools. Across the board the Doral classroom visits yielded higher scores than AdvancED Network scores. The environments that received the highest averages were Well-Managed Learning Environment which scored 3.46 as compared to the AEN average of 3.09 and High Expectations Environment which received a score of 3.39 in comparison to the AEN average of 2.78. Doral schools scored



similarly higher in the category of Supportive Learning Environment with a rating of 3.38, .35 higher than the AEN average and a score of 3.29 for Active Learning Environment which was .35 higher than the network average. Though still higher than the network averages, the three lowest scoring domains were Progress Monitoring and Feedback Environment which came in at 3.09 in comparison to the AEN average of 2.73, Equitable Learning Environment which had a score of 2.97 as compared to the network average of 2.66, and Digital Learning Environment which received a score of 1.97 in comparison to the network average of 1.88.

The External Review Team noted that high expectations were particularly evident in elementary classes where students were engaged in challenging but attainable activities with objectives and tasks that students were expected to know and do. For example, one third grade classroom working on figurative language had students discussing idioms, hyperboles, personifications, similes, metaphors, and alliteration. Students were engaged in collaboration discussions both with the teacher and peers. In another classroom, sixth grade students were discussing literal and abstract analysis of point of view. Students were highly engaged in discussions of examples of literary analysis, with all students providing both literal and abstract examples related to a question selected by the teacher.

The External Review Team noted a preponderance of traditional teacher-led instruction. One of the lowest scores received was the subcategory under the domain of Equitable Learning Environment which received a 2.47 for "has differentiated learning opportunities and activities that meet her/his needs." Although students were clearly intent on meeting teachers' high expectations (a score of 3.71), demonstrated positive attitudes about their classes and learning (a score of 3.61), and were actively engaged in learning activities (a score of 3.69), there was limited evidence that students were "provided additional/alternative instruction and feedback at the appropriate level of challenge for her/his needs" based on the score of 2.84 under the domain of Supportive Learning Environments. It should be noted that interviews with students revealed their pervasive sense that all teachers are readily available to provide assistance to them before and after school. Still, classroom observations revealed that during classes students are generally not provided with alternative instruction and feedback.

Doral Academy, Inc. cites in its guiding documents that teachers will use multi-media delivery methods. Consistent with this expectation, the classroom observations by the External Review Team revealed that teachers frequently used technology to inform. Students, on the other hand, were not frequently observed using digital tools/technology to conduct research, solve problems (score of 1.84), and/or create original works for learning or to communicate and work collaboratively (score of 1.95).

Doral schools have a demonstrable history of high performance as evidenced by numerous awards and high test scores. Classroom observations during the External Review revealed that the dispositions of students are conducive to high achievement. Such dispositions, in sum, include striving to meet teachers' high expectations (3.71), being actively engaged in learning activities (3.69), following classroom rules (3.90), speaking and interacting respectfully with teachers and peer (3.81), and knowing classroom routines and behavioral



expectations (3.81).

To ensure that instructional practices are consistent with defining Doral priorities, the corporation may wish to use the findings of the External Review Team's observations to inform improvements planned by corporation leadership who frequently referenced Doral schools' strong intention to systematically meet students where they are and to differentiate accordingly. Certainly all Doral teachers are expected to know where students are in their learning and to use data to inform lesson planning. ~~Based on the corporation's stated priorities, more concerted work needs to be done to ensure differentiated instruction.~~

Finally, although Doral teachers are expected to use technology to support instruction, ~~the guiding documents of Doral Academy, Inc. make no mention of expectations regarding the use of technology to support and enhance learning by students. This is an area which the corporation might wish to clarify for all stakeholders.~~



# eleot™ Data Summary

A. Equitable Learning			%			
Item	Average	Description	Very Evident	Evident	Somewhat Evident	Not Observed
1.	2.47	Has differentiated learning opportunities and activities that meet her/his needs	17.74%	32.26%	29.03%	20.97%
2.	3.76	Has equal access to classroom discussions, activities, resources, technology, and support	75.81%	24.19%	0.00%	0.00%
3.	3.73	Knows that rules and consequences are fair, clear, and consistently applied	77.42%	19.35%	1.61%	1.61%
4.	1.92	Has ongoing opportunities to learn about their own and other's backgrounds/cultures/differences	19.35%	8.06%	17.74%	54.84%
Overall rating on a 4 point scale: 2.97						

B. High Expectations			%			
Item	Average	Description	Very Evident	Evident	Somewhat Evident	Not Observed
1.	3.71	Knows and strives to meet the high expectations established by the teacher	72.58%	25.81%	1.61%	0.00%
2.	3.53	Is tasked with activities and learning that are challenging but attainable	56.45%	40.32%	3.23%	0.00%
3.	3.16	Is provided exemplars of high quality work	46.77%	30.65%	14.52%	8.06%
4.	3.31	Is engaged in rigorous coursework, discussions, and/or tasks	45.16%	40.32%	14.52%	0.00%
5.	3.24	Is asked and responds to questions that require higher order thinking (e.g., applying, evaluating, synthesizing)	50.00%	27.42%	19.35%	3.23%
Overall rating on a 4 point scale: 3.39						



C. Supportive Learning			%			
Item	Average	Description	Very Evident	Evident	Somewhat Evident	Not Observed
1.	3.58	Demonstrates or expresses that learning experiences are positive	64.52%	29.03%	6.45%	0.00%
2.	3.61	Demonstrates positive attitude about the classroom and learning	64.52%	32.26%	3.23%	0.00%
3.	3.45	Takes risks in learning (without fear of negative feedback)	53.23%	40.32%	4.84%	1.61%
4.	3.42	Is provided support and assistance to understand content and accomplish tasks	58.06%	30.65%	6.45%	4.84%
5.	2.84	Is provided additional/alternative instruction and feedback at the appropriate level of challenge for her/his needs	30.65%	35.48%	20.97%	12.90%
Overall rating on a 4 point scale: 3.38						

D. Active Learning			%			
Item	Average	Description	Very Evident	Evident	Somewhat Evident	Not Observed
1.	3.31	Has several opportunities to engage in discussions with teacher and other students	46.77%	40.32%	9.68%	3.23%
2.	2.87	Makes connections from content to real-life experiences	30.65%	37.10%	20.97%	11.29%
3.	3.69	Is actively engaged in the learning activities	70.97%	27.42%	1.61%	0.00%
Overall rating on a 4 point scale: 3.29						



E. Progress Monitoring and Feedback			%			
Item	Average	Description	Very Evident	Evident	Somewhat Evident	Not Observed
1.	3.26	Is asked and/or quizzed about individual progress/learning	41.94%	43.55%	12.90%	1.61%
2.	3.24	Responds to teacher feedback to improve understanding	41.94%	43.55%	11.29%	3.23%
3.	3.44	Demonstrates or verbalizes understanding of the lesson/content	48.39%	46.77%	4.84%	0.00%
4.	2.63	Understands how her/his work is assessed	32.26%	29.03%	8.06%	30.65%
5.	2.89	Has opportunities to revise/improve work based on feedback	32.26%	37.10%	17.74%	12.90%
Overall rating on a 4 point scale: 3.09						

F. Well-Managed Learning			%			
Item	Average	Description	Very Evident	Evident	Somewhat Evident	Not Observed
1.	3.81	Speaks and interacts respectfully with teacher(s) and peers	80.65%	19.35%	0.00%	0.00%
2.	3.90	Follows classroom rules and works well with others	90.32%	9.68%	0.00%	0.00%
3.	3.06	Transitions smoothly and efficiently to activities	53.23%	16.13%	14.52%	16.13%
4.	2.73	Collaborates with other students during student-centered activities	45.16%	16.13%	4.84%	33.87%
5.	3.81	Knows classroom routines, behavioral expectations and consequences	80.65%	19.35%	0.00%	0.00%
Overall rating on a 4 point scale: 3.46						



G. Digital Learning			%			
Item	Average	Description	Very Evident	Evident	Somewhat Evident	Not Observed
1.	2.11	Uses digital tools/technology to gather, evaluate, and/or use information for learning	29.03%	6.45%	11.29%	53.23%
2.	1.84	Uses digital tools/technology to conduct research, solve problems, and/or create original works for learning	17.74%	9.68%	11.29%	61.29%
3.	1.95	Uses digital tools/technology to communicate and work collaboratively for learning	25.81%	3.23%	11.29%	59.68%
Overall rating on a 4 point scale: 1.97						

## Findings

### Improvement Priority

Design, implement, and evaluate a formal structure in all schools whereby each student has one identified adult advocate with whom the student can build a strong relationship over time.

(Indicators 3.9)

#### Evidence and Rationale

Doral schools in Nevada offer an advocate class in which all students are enrolled. In Miami Doral students reported they do not have an assigned advocate, but that administrators, teachers, counselors, club sponsors and coaches function as informal student advocates and all students have an assigned counselor. Students in Miami further reported feeling comfortable going to faculty and staff members to talk, express a concern, and ask a question. One student commented of teachers, "We all feel like favorites." They further indicated that faculty know them by name. A number of students reported that the Head of Schools and other administrators are accessible as demonstrated by their willingness to respond to individual student emails. Parents also expressed that their children are comfortable talking with faculty about individual concerns. Nevertheless, the lack of a formal structure in all Doral schools means that the corporation can not ensure that every student in every Doral school is well known by at least one adult in the student's school who builds a relationship with the student over time, and supports the student's educational experience. Such structures in all schools will benefit all Doral students personally, emotionally and educationally.

### Opportunity for Improvement

Develop, implement, and evaluate a formal, structured professional development plan that provides systemic, systematic, and sustainable support in all Doral Schools for targeted curricular and instructional practices.

(Indicators 3.11)



### Evidence and Rationale

There is a considerable amount of staff development taking place throughout the corporation's schools. The External Review Team reviewed a list of professional development opportunities that will be offered this year and individual schools are expected to provide needed professional development. Further, the Team examined school requests for professional development focused on needs informed by the analysis of data and observations. Individual staff in Doral's Miami schools can also request a wide variety of learning experiences from the Miami-Dade County Public Schools professional development portal. The External Review Team was provided no evidence, however, that the corporation's professional development offerings were based on a prioritized list of professional development opportunities developed from an analysis of data across schools and accompanied by a timeline for the completion of such activities, a budget amount and the source of funds, expectations about how the information gained would be used and by whom, or further accompanied by monitoring and evaluation procedures to determine the effectiveness of the learning experience. To illustrate, the corporation has stated that differentiated instruction is a Doral priority that requires improvement. The External Review Team was provided with no clear professional development plan to closely monitor the provision and evaluation of the effectiveness of efforts to improve differentiated instruction through training and then follow-up.

A formal, organized corporation professional development plan will ensure alignment between curricular and instructional priorities and practice. Thorough, data-driven professional development planning and evaluation will ensure that priority practices are successfully implemented.

### **Powerful Practice**

The Doral Academy corporation successfully implements a data use system that ensures all school operations are data driven. (also 5.3)

(Indicators 5.2)

### Evidence and Rationale

The focus on the use of data to drive the educational program at Doral Academy, Inc. was clearly evident to the External Review Team. The leadership and teachers in all Doral schools track student performance data and use the data to drive improvements and adjustments in curriculum and instruction through the use of the corporation's proprietary 5 Step Data Student Performance Success Wheel. This Wheel is used at all levels of operation from informing strategic planning to planning teaching at the beginning of the year, establishing instructional focus calendars, examining test results throughout the year, engaging in subject area and grade level data chats as well as data chats with students, and sharing student performance with parents. Teachers are trained annually in the interpretation and use of data. Data is continuously reviewed by the administrative team, instruction departments, individual teachers, and shared with students. Results are communicated with parents and stakeholders. Data analysis connects teachers to students and their learning, enables reflection on instruction, and enhances and engages dialogue with colleagues, students, and parents. Implementing strategies designed to increase student assessment performance is the focus of successful schools such as those of Doral Academy, Inc.

### **Powerful Practice**



The corporation has effectively established structures and practices that guide the systematic use of data in classrooms to inform and adjust curricula, instruction, and assessment and to inform student learning. (Indicators 3.2)

### Evidence and Rationale

Various guiding documents of Doral Academy, Inc. assert that schools in the corporation distinguish themselves by using data to drive teaching and learning. To support this priority, the corporation has developed several structures that support data-driven decision-making in the classroom. Specifically, Doral has established a Student Dashboard, a data base that houses student data from multiple data sources. The Student Dashboard is used to guide and inform instruction and to keep stakeholders informed of student performance. Information from Thinkgate, an interim assessment program that is used to assess how each student performs in the classroom, is included in the data base as are Florida State Assessments and the Florida Competency Assessments for Doral's Miami schools. All Doral teachers also use Data Binders, referred to as "The Bible," which are visible in every classroom and contain individual, classroom and grade level data, lesson plans, and other resources. Teachers are expected to constantly reference student data for each of their classes and for individual students as a way to inform their planning. New teachers are given additional training in the design and use of data binders. Teachers conduct data chats with students so that each student understands and knows his/her data performance on a quarterly basis and views mastered benchmarks for each interim assessment. Administrators check teacher use of Data Binders to measure the success that teachers have in delivering instruction and track student achievement over time. A comprehensive data base that tracks individual student progress and measures and support teacher effectiveness enhances and increases the probability of student success in meeting identified learning goals.



# Leadership Capacity

The capacity of leadership to ensure an institution's progress towards its stated objectives is an essential element of organizational effectiveness. An institution's leadership capacity includes the fidelity and commitment to its institutional purpose and direction, the effectiveness of governance and leadership to enable the institution to realize its stated objectives, the ability to engage and involve stakeholders in meaningful and productive ways, and the capacity to enact strategies to improve results of student learning.

Purpose and direction are critical to successful institutions. A study conducted in 2010 by the London-based Chartered Institute of Personnel and Development (CIPD) reported that "in addition to improving performance, the research indicates that having a sense of shared purpose also improves employee engagement" and that "lack of understanding around purpose can lead to demotivation and emotional detachment, which in turn lead to a disengaged and dissatisfied workforce."

AdvancED has found through its evaluation of best practices in more than 32,000 institutions around the world that a successful institution commits to a shared purpose and direction and establishes expectations for student learning that are aligned with the institutions' vision and supported by internal and external stakeholders. These expectations serve as the focus for assessing student performance and overall institution effectiveness.

Governance and leadership are key factors in raising institutional quality. Leaders, both local administrators and governing boards/authorities, are responsible for ensuring all learners achieve while also managing many other facets of an institution. Institutions that function effectively do so without tension between the governing board/authority, administrators, and educators and have established relationships of mutual respect and a shared vision (Feuerstein & Opfer, 1998). In a meta-analysis of educational institution leadership research, Leithwood and Sun (2012) found that leaders (school and governing boards/authority) can significantly "influence school conditions through their achievement of a shared vision and agreed-on goals for the organization, their high expectations and support of organizational members, and their practices that strengthen school culture and foster collaboration within the organization." With the increasing demands of accountability placed on institutional leaders, leaders who empower others need considerable autonomy and involve their communities to attain continuous improvement goals. Leaders who engage in such practices experience a greater level of success (Fink & Brayman, 2006). Similarly, governing boards/authorities that focus on policy-making are more likely to allow institutional leaders the autonomy to make decisions that impact teachers and students and are less responsive to politicization than boards/authorities that respond to vocal citizens (Greene, 1992).

AdvancED's experience, gained through evaluation of best practices, has indicated that a successful institution has leaders who are advocates for the institution's vision and improvement efforts. The leaders provide direction and allocate resources to implement curricular and co-curricular programs that enable students to achieve expectations for their learning. Leaders encourage collaboration and shared responsibility for school improvement among stakeholders. The institution's policies, procedures, and organizational conditions ensure equity of learning opportunities and support for innovation.



## Standard 1 - Purpose and Direction

The corporation maintains and communicates at all levels of the organization a purpose and direction for ethical business practices, corporation effectiveness, and continuous improvement that commits to high expectations for learning as well as shared values and beliefs about teaching and learning.

Indicator	Description	Review Team Score	AdvancED Network Average
1.1	The corporation engages in a systematic, inclusive, and comprehensive process to review, revise, and communicate a corporation-wide purpose for student success and corporation effectiveness.	3.00	3.00
1.2	The corporation ensures that each school engages in a systematic, inclusive, and comprehensive process to review and communicate a school purpose for student success that is aligned to the corporation purpose.	3.20	3.08
1.3	The corporation, school leadership, and staff at all levels of the corporation commit to a culture that is based on shared values, beliefs and innovation about teaching and learning; ethical business and professional practices; and corporation and school effectiveness. This culture supports challenging educational programs and equitable learning experiences that enable students to achieve learning, thinking, and life skills.	3.00	3.42
1.4	Leadership at all levels of the corporation implement a continuous improvement process that provides clear direction for improving systems that support student learning and corporation effectiveness.	2.80	3.00

## Standard 2 - Governance and Leadership

The corporation operates under governance and leadership that promote and support student performance and corporation effectiveness.

Indicator	Description	Review Team Score	AdvancED Network Average
2.1	The corporation's policies, practices, and agreements ensure effective administration of the corporation and its schools.	3.00	2.75
2.2	The governing authority member(s) operates responsibly and functions effectively.	3.00	3.00
2.3	The governing authority ensures that the leadership at all levels has the autonomy to meet goals for achievement and instruction and to manage day-to-day operations effectively.	3.60	3.33
2.4	Leadership and staff at all levels of the corporation foster a culture consistent with the corporation's purpose and direction.	3.20	3.42



Indicator	Description	Review Team Score	AdvancED Network Average
2.5	Leadership engages defined stakeholder groups effectively in support of the corporation's purpose and direction.	3.00	2.67
2.6	Corporation quality assurance processes and leadership and staff supervision and evaluation processes result in improved professional practice in all areas of the corporation and improved student success and corporation effectiveness.	3.00	2.67

## Stakeholder Feedback Diagnostic

Stakeholder Feedback is the third of three primary areas of evaluation in AdvancED's Performance Accreditation model. The AdvancED surveys (student, parent, and teacher) are directly correlated to the AdvancED Standards and indicators. They provide not only direct information about stakeholder satisfaction but also become a source of data for triangulation by the External Review Team as it evaluates indicators.

Institutions are asked to collect and analyze stakeholder feedback data, then submit the data and the analyses to the External Review Team for review. The External Review Team evaluates the quality of the administration of the surveys by institution, survey results, and the degree to which the institution analyzed and acted on the results.

Evaluative Criteria	Review Team Score	AdvancED Network Average
Questionnaire Administration	4.00	2.71
Stakeholder Feedback Results and Analysis	3.80	2.86

## Findings

### Improvement Priority

Define, formalize, and regularly evaluate policies, practices, systems, and structures that specify defining aspects and operational procedures for all Doral schools.

(Indicators 2.1)

### Evidence and Rationale

Interviews, classroom observations and a review of the artifacts validated that all Doral schools receive guidance informally and formally related to aspects of the curriculum and instruction, data practices, collaborative professional practices, and other procedures. To support such guidance Doral Academy, Inc. has a number of manuals and handbooks developed over time as well as recently to inform the work of leadership, departments, various functions and operations. The Head of Schools and administrators from the Florida Doral schools enhance written guidance by providing training and guidance through school visits. Independently, and in concert, the guidance provided verbally and in writing has resulted in stakeholders reporting that all Doral schools "feel like" Doral schools.



Nevertheless, the External Review Team was provided no evidence of overarching, written, comprehensive corporation standard operating procedures used by all of its schools, affiliates, contracted service providers, and board members identifying specific and defining attributes and practices of all Doral schools related to such things as curriculum and instruction, capital improvements, facilities and maintenance, budgeting and finance, student support services, and student and teacher conduct. In its Standards presentation to the External Review Team the corporation affirmed this deficiency by identifying the need to formalize the corporation's quality assurance procedures and to more clearly define a corporation operations manual that "specifically outlines the strategies for replication and growth including the process for acquiring financial, human, and physical resources to achieve performance goals." Florida Board members commented that one of their biggest challenges is to "clone Doug [Rodriguez]."

Doral Academy, Inc. has only recently committed to a corporation structure that will inform the development and maintenance of all Doral schools. As the number of Doral School increases in Florida and Nevada, the ability of the Head of Schools and Florida administrators to personally guide the development of new Doral schools will be challenged. Clear and comprehensive standard operations and procedures integrating the defining aspects of Doral Academy, Inc. will go a long way in providing guidance for the staff and the function of its partnerships, and service providers in the seamless implementation of the unique and defining characteristics of all Doral programs, initiatives, functions and activities in an orderly, effective and aligned manner.

### **Improvement Priority**

Ensure that all corporate strategic goals have measurable performance targets supported by clear objectives, action steps, resources, and timelines.

(Indicators 1.4)

### **Evidence and Rationale**

All Doral schools are expected to develop and implement school improvement plans which meet state requirements and focus on the improvement of student learning. School improvement plans articulate specific goals, timelines, persons responsible, and other criteria consistent with state requirements.

The 2014-2019 Doral Academy, Inc. Academic Strategic Plan is the first formal, written improvement plan for the corporation as a whole. The Plan includes five goals related to (1) focusing education on proficiency in all state tested areas, (2) operating effectively with the governing board, (3) enhancing educational programs through STEM and Arts Integration curriculum, (4) increasing student literacy in all curricula, and (5) making educational decisions using data analysis and monitoring student progress on formal and summative assessments. The five strategic goals are directly tied to specific best practice indicators from the AdvancED Standards of Quality for Corporations.

The corporate Strategic Plan is accompanied by a System Strategic Five-Year Action Plan with bulleted Action Steps and the titles of the evaluators responsible. The Action Plan and Action Steps do not consistently or clearly connect to the AdvancED Indicators and defining subcategories of the Strategic Plan's five goals. No



information was provided to the External Review Team related to objectives, activities and strategies, resources needed, or timelines that would support the implementation or monitoring of progress completing the corporation's five strategic goals.

The lack of clear connections between the five broad corporation strategic goals and sub-goals in the Strategic Plan and the Action Steps in the Action Plan, to include clear connections and responsibilities at the school level, means that stakeholders cannot effectively monitor progress meeting priority improvements for the corporation. A corporation strategic plan with fully fleshed out implementation components will guarantee that both broad and sub-goals will be met in a satisfactory and timely manner.

### **Opportunity for Improvement**

Refine the corporation's Guiding Principles and Beliefs Statement to include expectations of students in Doral schools

(Indicators 1.3)

#### Evidence and Rationale

Doral Academy, Inc. has articulated Guiding Principles which describe characteristics of instruction in Doral schools and a school environment conducive to learning. In the fall of 2014 the corporation expanded these characteristics by identifying specific values, beliefs, expectations, and practices in Doral schools in the form of a Beliefs Statement which addresses not only the practices of teachers, but also those of parents, administrators, and the governing board. Beliefs include, among many, expecting parents to engage as partners in the education of their children, teachers using data to guide instruction and improve academic outcomes, administrators meeting the needs of parents through an open door policy, and the board believing in creating quality assurance structures to support expansion plans.

While the Beliefs Statement and Guiding Principles refer to students as being afforded opportunities to use different learning styles and being given various academic opportunities, they do not articulate what is actually expected of students in Doral schools, the most important stakeholders in the Doral community. Clarifying expectations of students beyond what will be given to them will complete and clarify the commitment of the range of stakeholders in the Doral community. Such clarity will further provide the corporation with an expanded roadmap to guide the development and assessment of the unique culture and learning experiences provided by Doral schools.

### **Powerful Practice**

The Doral Academy corporation successfully implements a data use system that ensures all school operations are data driven. (also 5.3)

(Indicators 5.2)

#### Evidence and Rationale

The focus on the use of data to drive the educational program at Doral Academy, Inc. was clearly evident to the External Review Team. The leadership and teachers in all Doral schools track student performance data and use the data to drive improvements and adjustments in curriculum and instruction through the use of the



corporation's proprietary 5 Step Data Student Performance Success Wheel. This Wheel is used at all levels of operation from informing strategic planning to planning teaching at the beginning of the year, establishing instructional focus calendars, examining test results throughout the year, engaging in subject area and grade level data chats as well as data chats with students, and sharing student performance with parents. Teachers are trained annually in the interpretation and use of data. Data is continuously reviewed by the administrative team, instruction departments, individual teachers, and shared with students. Results are communicated with parents and stakeholders. Data analysis connects teachers to students and their learning, enables reflection on instruction, and enhances and engages dialogue with colleagues, students, and parents. Implementing strategies designed to increase student assessment performance is the focus of successful schools such as those of Doral Academy, Inc.

### **Powerful Practice**

The culture of the Doral corporation and its schools reflects a passion for high achievement and rigorous learning in a supportive and respectful environment.

(Indicators 2.4)

#### *Evidence and Rationale*

The Doral Academy Vision and Mission statements call for a learning community where all stakeholders as a cohesive group are dedicated to promoting an exceptional educational experience that prepares all Doral students for college in a respectful environment. Interviews with students, professional staff, and parents revealed that the culture of the Doral schools reflects such focused dedication and respect.

First, students are actively engaged in core courses and a broad range of electives in the Miami Doral schools which in combination enable them to pursue fields of study that excite and interest them from the arts to the sciences and technology. The curriculum in the Miami schools provides students with depth and breadth of learning through a curriculum informed by state standards aligned to the Common Core, and which includes Pre-Advanced Placement courses, multiple Advanced Placement courses, and early college opportunities. Interviews with parents in both Miami and Nevada confirmed that students are challenged in their learning and encouraged to take advantage of the academic opportunities available to them. Students reported that they are encouraged and supported to strive to do better through engagement in academic competitions and to push to take courses with increased levels of rigor. One student commented that the effect of the rigorous and supportive environment was to bring out strengths that were never envisioned. He referred to teachers as students' partners in improving performance,

Teachers and administrators are similarly expected to perform at high levels as evidenced External Review Team interviews with stakeholders. Teachers reported that without question they are expected to improve student performance and that continuing to do so is tied to continuance of their one year contracts. Administrators reported as well the strong sense of being and functioning as part of a team and being given multiple responsibilities, including opportunities for leadership, accompanied by high expectations for performance. Many administrators made special mention of the leadership of the Head of Schools who they described as encouraging learning through new leadership experiences.



Finally, parents reported feeling respected and listened to consistent with their formal responsibility to participate in the school and to have a voice in maintaining and improving school effectiveness through their contributions to parent organizations such as the Educational Excellence School Advisory Council (EESAC) in each school.

The alignment of practices with the corporation's stated values means that Doral Academy, Inc. is meeting the obligation of its guiding documents to function as a contributing and supportive learning community.



# Resource Utilization

The use and distribution of resources must be aligned and supportive of the needs of an institution and the students served. Institutions must ensure that resources are aligned with the stated mission and are distributed equitably so that the needs of students are adequately and effectively addressed. The utilization of resources includes an examination of the allocation and use of resources, the equity of resource distribution to need, the ability of the institution to ensure appropriate levels of funding and sustainability of resources, as well as evidence of long-range capital and resource planning effectiveness.

Institutions, regardless of their size, need access to sufficient resources and systems of support to be able to engage in sustained and meaningful efforts that result in a continuous improvement cycle. Indeed, a study conducted by the Southwest Educational Development Laboratory (Pan, D., Rudo, Z., Schneider, C., & Smith-Hansen, L., 2003) "demonstrated a strong relationship between resources and student success... both the level of resources and their explicit allocation seem to affect educational outcomes."

AdvancED has found through its own evaluation of best practices in the more than 32,000 institutions in the AdvancED Network that a successful institution has sufficient human, material, and fiscal resources to implement a curriculum that enables students to achieve expectations for student learning, meets special needs, and complies with applicable regulations. The institution employs and allocates staff members who are well qualified for their assignments. The institution provides a safe learning environment for students and staff. The institution provides ongoing learning opportunities for all staff members to improve their effectiveness and ensures compliance with applicable governmental regulations.

## Standard 4 - Resources and Support Systems

The corporation ensures that all schools provide services that support the corporation purpose and direction to ensure success for all students.

Indicator	Description	Review Team Score	AdvancED Network Average
4.1	The corporation engages in a systematic process to recruit, employ, and retain a sufficient number of qualified professional and support staff to fulfill their roles and responsibilities and support the purpose and direction of the corporation, individual schools, and educational programs.	3.00	3.08
4.2	Instructional time, material resources, and fiscal resources are sufficient to support the purpose and direction of the corporation, individual schools, educational programs, and operations.	3.00	3.08
4.3	The corporation has clearly defined expectations that each school maintains facilities, services, and equipment to provide a safe, clean, and healthy environment for all students and staff.	3.00	3.25
4.4	The corporation demonstrates strategic resource management that includes long-range planning in support of the purpose and direction of the corporation and its schools.	4.00	3.25



Indicator	Description	Review Team Score	AdvancED Network Average
4.5	The corporation provides, coordinates, and evaluates the effectiveness of information resources and related personnel to support educational programs throughout the corporation and its schools.	3.00	2.92
4.6	The corporation ensures a technology infrastructure and equipment to support the corporation's and each school's business, teaching, learning, and operational needs.	3.00	2.92
4.7	The corporation ensures, coordinates, and evaluates the effectiveness of support systems to meet the physical, social, and emotional needs of the student population being served.	3.00	2.92
4.8	The corporation ensures the existence and evaluates the effectiveness of services that support the counseling, assessment, referral, educational, and career planning needs of all students.	3.00	2.83

## Findings

### Powerful Practice

Doral Academy, Inc. practices exemplary fiscal and resource management.

(Indicators 4.4)

#### Evidence and Rationale

During the External Review process, team members reviewed artifacts, listened to a presentation by the Head of Schools and Administrators' Coalition, and conducted interviews, and determined from an abundance of information that fiscal and resource management is exemplary. Contributing factors for this success include, but are not limited to: the corporation's decision to focus on the educational operations and to outsource other operations to Academica, a nationally known company that serves charter schools in areas as fiscal management, human resources and to Civica for architectural, engineering, and facilities maintenance; the corporation's decision to waive the financial percentage described in the Affiliation Agreement to provide funds to support the needs of the two Nevada schools as they become established and grow; the corporation's submission for focused grants; the corporation's decision to reserve five percent of revenue each year (this reserve is now over twenty million dollars); the corporation's mission and purpose to continually increase Advanced Placement courses and student success on Advanced Placement tests paid for by the corporation; the corporation's support of schools successfully receiving A grades in Florida and Five Star recognition in Nevada; and its decision to disperse monies gained from state recognitions and passing scores on Advanced Placement tests as stipends to the teachers who helped achieve these successes. By strategically and purposefully managing resources, short term and long term, in concert with the Doral Academy, Inc. governing boards of both states, the corporation has assured its solvency.



# Conclusion

The schools of Doral Academy, Inc. are deeply committed to the demonstration of improved learning particularly as measured by performance on state standardized tests, Advanced Placement tests, the SAT and the ACT. There is strong evidence that the Doral schools have been successful in improving student learning as evidenced by enviable state recognition with Florida Accountability Schools grades of A and two, soon three, national recognitions as Blue Ribbon schools, among others. During the External Review Process team members observed and learned about the style of corporation leadership and concluded that it has contributed to the success of the Doral schools. Leadership practices include nurturing a cohesive administrative team whose members are visible and involved in the daily life of the six schools in Miami, four of which are located on one site, and the two schools in Nevada. The highly respected Head of Schools has also fostered a reputation of being accessible to students and parents consistent with a philosophy which he summarized with the comment, "we are servants to them [students and parents]." Though Doral schools have steadily grown from their beginnings in 1999 as two schools with a student population of 600 to eight schools with over 6,000 students on campuses in Miami and Las Vegas, the style and activities of the corporation leadership have maintained a small school feeling. Leadership has clearly been hands-on in all Doral schools.

In 2013 the corporation submitted its Self-Assessment of Readiness for Accreditation and hosted a Readiness Visit in April of 2014 led by a member of the 2015 External Review Team. Corporation leadership shared with the External Review Team a recognition that the number of Doral schools has not only increased, but also is expected to continue to increase in the next five years. The corporation has immediate plans to add two schools in Nevada opening in the next two years, and one school in Tamarac, Florida opening in 2016-17. The increase has prompted a desire for corporation accreditation, not only for its practical value, but also as a means to ensure that the corporation's practices will help ensure replication of the "Doral way" of doing things so that all future schools function and are as successful as existing Doral schools. Corporation officials demonstrated that they are not interested in sitting on their laurels; rather, they conveyed a productive attitude toward making continuous improvement, viewing the accreditation process as critical to both their reputation and their practice.

Consistent with the AdvancED protocol, the External Review Team examined the corporation by focusing its inquiry on the Domains of Impact of Teaching and Learning, Leadership Capacity, and Resource Utilization. The conclusions of the External Review Team affirmed many strengths of Doral Academy, Inc. identified through Powerful Practices and also identified Improvement Priorities and Opportunities for Improvement that have the potential guide the corporation's improvement efforts as it expands the number of Doral schools in coming years.

One of Doral Academy, Inc.'s greatest strengths lies in its system of data use which ultimately ensures that all school operations are data driven. Doral schools promise in their mission that students have opportunities to learn by taking into account student needs identified through the analysis of data. While many institutions talk about using data, Doral walks the talk. Teachers are trained to analyze student performance results. Students themselves are kept informed of their performances meeting state standards via data chats with teachers. All school leadership and teachers track student performance and across the board use the corporation's 5 Step



Data Student Performance Success Wheel to examine student performance in a systematic and structured fashion. Teachers extend their use of data in comprehensive Data Binders which help them organize and track data, and also demonstrate to school leadership that improvements are being made in student learning as a result of the use of data about individual student learning. The External Review Team cited Doral's tracking, analysis, and use of student data as a Powerful Practice because school practices are pervasively data driven.

The commitment to stated beliefs and values is also evident through the culture of all schools. The External Review Team noted a passion for high achievement and rigorous learning in a supportive and respectful environment that is modeled by corporation leadership; the Team cited it as a Powerful Practice. Like the corporation's pervasive use of data, the culture results from a deliberate and systematic attention to inculcating specific beliefs and values that inform practices at Doral.

The corporation's systematic and systemic approach to analyzing and using data to improve student learning and its careful nurturing of particular practices that support the use of data to inform curriculum, instruction, and assessment can serve as examples of approaches which can inform improvements in other areas. For example, Doral schools are informed and guided by a myriad of handbooks, policies, structures, and practices which in the aggregate define many of the unique practices of Doral. Such handbooks, policies, structures, and practices have evolved organically over time to meet the growing demands of Doral schools, in some cases being recently pulled together. To support the information in these various documents new schools in Las Vegas have received personal guidance and training from the Head of Schools and other Miami administrators. As the number of Doral schools increases the ability to provide such personal guidance will be challenged. The development and systematic implementation and evaluation of a comprehensive corporation manual identifying and formalizing the critical and defining aspects and operational procedures for all Doral schools will support and ensure close and deliberate replication of Doral schools. The External Review Team identified it as an Improvement Priority for the corporation.

Similarly, the corporation lacks a formal, structured professional development plan. This is not to say that there isn't professional development because there is. In fact, the affiliation agreement with the two schools in Nevada even includes the provision of professional development as a requirement. Nonetheless, the structures and processes around identifying and providing professional development are loose. Doral Academy, Inc. will be strengthened by putting into place a formal and structured approach to identifying, implementing, and evaluating the professional development it provides so that it can ensure that the defining aspects of Doral Schools are ever present and sustainable. The External Review Team identified the development of such a structured approach as an Opportunity for Improvement for the corporation.

The lack of structure in the provision of professional development was apparent as well in the corporation's first strategic plan. Though the corporation should be commended for developing such a plan and for connecting it to best practices in AdvancED standards, the External Review Team determined that the five-year plan was weakened because it lacked full implementation components. Accordingly, the External Review Team identified this as an Improvement Priority moving forward.



Finally, the External Review Team observed that Doral Academy, Inc. successfully identifies what adults will do and provide for students in all Doral schools. Its corporate guiding documents are clear in explaining what types of opportunities students should have, the rigorous courses that need to be made available and encouraged, the contributions that parents should make to the school, and the practices of teachers, particularly around the use of data. The adults in the Doral community clearly act on these expectations; however, the External Review Team noted that expectations for the most important stakeholders, students, lack clarity. For example, the corporation's mission statement calls for students to be given rigorous learning opportunities that will not only help them strive for academic achievement, but also encourage a desire to be lifelong learners and successful leaders. The corporation self-assessment (page 4) stated that students will learn about the "importance of communication, conflict resolution, ethics, reason, and the application of what they have learned and researched." The corporation would benefit from clarifying what students will do and achieve as a result of attending a Doral school. The corporation would be further strengthened by identifying and monitoring the achievement of such the skills that students need to be lifelong learners and successful leaders as well as demonstrating the extent to which students are successfully doing and achieving valued skills such as communication, conflict resolution, ethics, reasoning, or the application of knowledge. Doral Academy, Inc. is data rich regarding standardized tests. It could be richer by expanding the data it gathers and analyzes related to other highly valued Doral skills.

An expanded focus on expectations of students should also include ensuring that each school has a formal structure that guarantees that each student in each school is well-known by an adult in the school. Although Doral students and parents feel strongly that student report feeling comfortable going to teachers, the lack of a formal structure allows some students to fall through the cracks.

Doral Academy, Inc. operates highly effective schools, the result of a pervasive commitment on the part of the entire community to prepare all students for post-secondary education. Although there are no plans to expand enormously or quickly, as stated earlier, the corporation has plans in place to expand over the next few years. It also has two schools in Nevada that are so new that they will need continued guidance in their development and connection to the Doral way of being. In the judgment of the External Review Team the greatest challenge to the corporation will be its addressing the need to codify and crystallize the beliefs, values, and practices that absolutely define a Doral school. To date, Doral schools have evolved through exceptionally careful management. Growth and expansion will necessitate a different kind of management that will depend less on the personal touch of corporation leadership and more on carefully crafted structures and systems that are implemented systematically and systemically. The challenge will be to hone down the practices to those that are essential and defining for Doral schools. Such is particularly the case because Doral encourages schools to have their own missions and purposes which, while staying aligned to the corporation's purpose, must uniquely meet the needs of the student populations that they serve. Further, as charter schools they are by definition required to meet differing state mandates. The expansion and clarification of the support systems that are in place, informed by a heightened focus on what is expected of students in Doral schools, will help ensure that Doral Academy, Inc.'s growth will result in a continuation of Doral schools everywhere having the same Doral characteristics.



The careful review of the corporation's Self-Assessment, examination of a myriad of evidences, interviews with stakeholders, and observations of classrooms informed the conclusions of the External Review Team. It is the hope of the Team that the Improvement Priorities cited related to the use of data and the Opportunities for Improvement related to developing a structured professional development plan, establishing formal structures in schools that ensure all students are known well, fully developing and implementing strategic goals, formalizing Doral operational procedures, and expanding guiding documents to include expectations for students will help Doral Academy, Inc. replicate and improve as it grows. There is no doubt that the corporation is deeply committed to helping students achieve at high levels. Such a pervasive commitment will serve as a grounded foundation for improvement efforts.

## Improvement Priorities

The institution should use the findings from this review to guide the continuous improvement process. The institution must address the Improvement Priorities listed below:

- Define, formalize, and regularly evaluate policies, practices, systems, and structures that specify defining aspects and operational procedures for all Doral schools.
- Design, implement, and evaluate a formal structure in all schools whereby each student has one identified adult advocate with whom the student can build a strong relationship over time.
- Ensure that all corporate strategic goals have measurable performance targets supported by clear objectives, action steps, resources, and timelines.



# Accreditation Recommendation

## Index of Education Quality

The Index of Education Quality (IEQ™) provides a holistic measure of overall performance based on a comprehensive set of indicators and evaluative criteria. A formative tool for improvement, it identifies areas of success as well as areas in need of focus.

The IEQ™ comprises three domains: 1) the impact of teaching and learning on student performance; 2) the leadership capacity to govern; and 3) the use of resources and data to support and optimize learning.

The overall and domain scores can range from 100-400. The domain scores are derived from: the AdvancED Standards and indicators ratings; results of the Analysis of Student Performance; and data from Stakeholder Feedback Surveys (students, parents, and staff).

	External Review IEQ Score	AdvancED Network Average
Overall Score	319.02	282.79
Teaching and Learning Impact	320.00	274.14
Leadership Capacity	321.67	296.08
Resource Utilization	312.50	286.32

The IEQ™ results include information about how the institution is performing compared to expected criteria as well as to other institutions in the AdvancED Network. The institution should use the information in this report, including the corresponding performance rubrics, to identify specific areas of improvement.

Consequently, the External Review Team recommends to the AdvancED Accreditation Commission that the institution earn the distinction of accreditation for a five-year term. AdvancED will review the results of the External Review to make a final determination including the appropriate next steps for the institution in response to these findings.



# Addenda

## Individual Institution Results (Self-reported)

Institution Name	Teaching and Learning Impact	Leadership Capacity	Resource Utilization	Overall IEQ Score
Doral Academy Charter High School	357.14	345.45	314.29	346.15
Doral Academy Charter Middle School	361.90	345.45	314.29	348.72
Doral Academy Elementary School	333.33	327.27	371.43	338.46
Doral Academy of Nevada	300.00	290.91	300.00	297.44
Doral Academy of Technology	361.90	345.45	314.29	348.72
Doral Performing Arts and Entertainment Academy	357.14	345.45	314.29	346.15
Just Arts and Management Middle School	333.33	318.18	371.43	335.90



# Team Roster

Member	Brief Biography
Dr. Pamela Gray Prescott	Dr. Prescott has served AdvancED for over five years first as Director of the Next Generation of Standards Project, then Director of Quality Assurance Review and Evaluation, Senior Researcher, and now Senior Advisor where most recently she led the development of AdvancED STEM Standards. Prior to her work at AdvancED Dr. Prescott was Director of the Commission on Public Secondary Schools at the New England Association of Schools and Colleges (NEASC), a regional accrediting association, where she also worked with its commission on international schools leading school visits and presenting at conferences in multiple countries in Europe, including Eastern Europe, the Middle East, Far East, and Africa. She has served as an educational consultant to the Ministry of Education in the post-Soviet country of Georgia in the development of a national accreditation system. Her background further includes 16 years as a teacher of English and secondary school administrator, and as Visiting Assistant Professor at two state universities in Massachusetts specializing in effective instruction and school evaluation and accountability, most recently teaching on-line. Dr. Prescott holds a B.A. from Simmons College, an M.A. from Rutgers University, and an Ed.D. from Boston University. She lives in Marshfield, Massachusetts and Little Deer Isle, Maine.
Leonard D. Paul	Leonard Paul is the Vice President, Northwest Region for AdvancED. Prior to this assignment he served as the Associate Director for the Northwest Accreditation Commission. Prior to the accreditation positions, he served with the Clark County School District as Region Superintendent, Assistant Superintendent Secondary Schools, High School Principal, Curriculum Specialist, and teacher. He was named the Nevada Principal of the year in 1991, received the Las Vegas Chamber of Commerce Community Achievement in Education Award in 2001 and received the Northwest Accreditation Distinguished Service award in 2004. His early career experience was a scene designer and scenic artist for the Las Vegas entertainment industry. He received degrees from Northeastern College, Colorado State University and an advanced degree from the University of Nevada, Las Vegas.
Dr. Patricia S. Golding	Dr. Patricia S. Golding, (Virginia) retired as the Associate State Director for AdvancED Virginia. She previously served as a member of the Virginia State Council for SACS CASI and as a state specialist. She currently serves as an independent contractor and educational consultant for the Virginia Department of Education. She has served as an adjunct faculty member for Old Dominion University and Radford University. Dr. Golding holds thirteen Virginia certifications in teaching and all levels of administration including a superintendent license. Some of her prior experiences include elementary teacher, teacher for all grades in special education; assistant principal, principal, co-ordinator of Gifted and Talented, English and verbal studies instructor for Wytheville Community College; Elementary Supervisor, Director of Curriculum and Instruction, and Assistant Superintendent for Carroll County Public Schools (VA).



Member	Brief Biography
Dr. George M Koonce	<p><b>Personal and Professional</b></p> <p>Dr. Koonce is married to Geraldine Hill Koonce and has one son, George Koonce III, a lawyer who lives and works in Miami. With over 41 years in education Dr. Koonce served as a classroom teacher, assistant principal, principal, director, region superintendent, and associate superintendent in the Miami-Dade County Public Schools system (with the exception of 4 years as a classroom teacher in Washington High School, Early County, Georgia).</p> <p>Dr. Koonce has served as Chair of the SACS Florida Council and as President of the Southern Association of Colleges and Schools. He is also an AdvancED SACS CASI Florida Field Consultant, and a member of the AdvancED Distance and Corporation Council.</p> <p><b>Education</b>  Seminole County Training School, Seminole County, GA  B.S. in French, Fort Valley State  M.A.T., Indiana University, Bloomington, IN  University of Toulouse, Toulouse, France  Institut Catholique, Paris, France  M.Ed., University of Miami, Coral Gables, FL  Ph.D., University of Miami, Coral Gables, FL</p>
Ms. Valerie Sommerville	<p>Valerie Sommerville serves as a South Central Regional Trainer for AdvancED; serves as a lead evaluator or team member for AdvancED school External Reviews; serves as a team member for AdvancED system External Reviews; and serves as a team leader or member for the Council on Occupational Education postsecondary school or college accreditation teams. Valerie holds a Master in Education degree from the University of Central Florida with additional coursework for Vocational Director and a Bachelors degree in Home Economics with a minor in Mathematics from Montclair University, NJ. She has forty-four years of educational experience teaching at an inner city middle school, a suburban high school, an adult special education program, and postsecondary continuing education and serving as a district Senior Administrator and as an Assistant Director of a technical center.</p>



## Next Steps

1. Review and discuss the findings from this report with stakeholders.
2. Ensure that plans are in place to embed and sustain the strengths noted in the Powerful Practices section to maximize their impact on the institution.
3. Consider the Opportunities for Improvement identified throughout the report that are provided by the team in the spirit of continuous improvement and the institution's commitment to improving its capacity to improve student learning.
4. Develop action plans to address the Improvement Priorities identified by the team. Include methods for monitoring progress toward addressing the Improvement Priorities.
5. Use the report to guide and strengthen the institution's efforts to improve student performance and system effectiveness.
6. Following the External Review, submit the Accreditation Progress Report detailing progress made toward addressing the Improvement Priorities. Institutions are required to respond to all Improvement Priorities. The report will be reviewed at the appropriate state, national, and/or international levels to monitor and ensure that the system has implemented the necessary actions to address the Improvement Priorities. The accreditation status will be reviewed and acted upon based on the responses to the Improvement Priorities and the resulting improvement.
7. Continue to meet the AdvancED Standards, submit required reports, engage in continuous improvement, and document results.



## About AdvancED

AdvancED is the world leader in providing improvement and accreditation services to education providers of all types in their pursuit of excellence in serving students. AdvancED serves as a trusted partner to more than 32,000 public and private schools and school systems – enrolling more than 20 million students - across the United States and 70 countries.

In 2006, the North Central Association Commission on Accreditation and School Improvement (NCA CASI), the Southern Association of Colleges and Schools Council on Accreditation and School Improvement (SACS CASI), both founded in 1895, and the National Study of School Evaluation (NSSE) came together to form AdvancED: one strong, unified organization dedicated to education quality. In 2011, the Northwest Accreditation Commission (NWAC) that was founded in 1917 became part of AdvancED.

Today, NCA CASI, NWAC and SACS CASI serve as accreditation divisions of AdvancED. The Accreditation Divisions of AdvancED share research-based quality standards that cross school system, state, regional, national, and international boundaries. Accompanying these standards is a unified and consistent process designed to engage educational institutions in continuous improvement.



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#### **Attachment P**

This is not applicable. The school governing board does not intend to enter into any type of lease, lease-purchase agreement, or any other facility or financing relationships with the Service Provider.



## Attachment Q

### CHARTER SCHOOL SERVICES AND SUPPORT AGREEMENT

#### BETWEEN

#### THE BOARD OF DIRECTORS FOR

#### KAMALANI ACADEMY, A HAWAII PUBLIC CHARTER SCHOOL

#### AND

#### ACADEMICA HAWAII, LLC

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## **CHARTER SCHOOL SERVICES AND SUPPORT AGREEMENT**

This is an Agreement to provide services and support to a Charter School by and between the Kamalani Academy Board of Directors (“Board”) and Academica Hawaii LLC (“Service Provider”)

**WHEREAS**, Kamalani Academy (the “School” or “Kamalani”) may have a contract (“the Charter”) with the Hawaii State Public Charter School Commission (the “State”) to operate a charter school;

**WHEREAS**, the School is governed by the Board;

**WHEREAS**, academic control and freedom are integral to the success of the School and the Board must have complete autonomy and control over its academic program, staffing needs, and curriculum;

**WHEREAS**, the Board desires to ensure that its School is professionally operated in accordance with the requirements of its Charter and the requirements of all State and Federal



laws as well as the requirements of local municipal and or county ordinances which may be applicable to the operation of the School or its facilities;

**WHEREAS**, Service Provider has been established to provide professional services and support to public charter schools;

**WHEREAS**, it is Service Provider's mission to ensure that the vision of the School's Board of Directors is faithfully and effectively implemented;

**WHEREAS**, Service Provider's officials are familiar with the governmental agencies and requirements needed to establish and operate a public charter school as well as the requirements of the Charter, all State and Federal authorities, and the local municipal and or county government which may be applicable to the operation of the School or its facilities;

**WHEREAS**, Service Provider's officials are familiar with the various local, state and federal funding sources for charter school programs and have successfully obtained grants, other forms of revenue and financing for other charter school programs;

**WHEREAS**, Service Provider's officials have attended and will continue to attend local, state, and federal meetings and conferences for charter school operators and consultants;

**WHEREAS**, Service Provider and its affiliate companies provides services and supports a national network of charter schools and believes that there are benefits to having combined



purchasing power and a wide variety of employment opportunities and options available to the employees of public charter schools serviced by Service Provider;

**WHEREAS**, it is Service Provider's duty to implement the vision of the Board of Directors, ensuring the autonomy and governing authority of the Board of Directors of Kamalani, and the Board of Director's duty to make all decisions and direct Service Provider to act accordingly on the Board's behalf.

**WHEREAS**, Kamalani and Service Provider desire to enter into this agreement for the purpose of having Service Provider provide services and support to the School at the direction and to the extent instructed by the Board of Directors;

**NOW THEREFORE**, the parties to this Agreement agree as follows:

**DUTIES OF SERVICE PROVIDER:**

**1. Recitals**

The forgoing recitals are true, correct and incorporated herein.

**2. Engagement**

**KAMALANI** engages Service Provider to provide administrative services and support to the School as more fully set forth herein. Service Provider accepts such engagement pursuant to the terms of this Agreement.

**3. Duties**

At the direction of the Board, Service Provider will coordinate the services required to support the School. In connection with this, Service Provider will report to the Board and advise



it of the systems established for administrative duties, including those related to initial setup and the ongoing operational budget. In providing services, Service Provider will comply with all Board and School policies and procedures, the Charter, and with all applicable state and federal rules and regulations. If instructed by the Board, Service Provider's services may include, but not be limited to: identification, design and procurement of facilities; staffing recommendations, human resource coordination, regulatory compliance, legal and corporate upkeep, and the maintenance of the books and records of the Schools as well as bookkeeping, budgeting and financial forecasting. The provider assures the Board that all uniform, system-wide reporting, record keeping, and accountability systems will be compliant with Hawaii requirements. The Board will review any recommendations made by Service Provider and act upon them in the manner the Board decides.

**4. Board of Directors Meetings**

Service Provider will attend the meetings of the Board and the staff of the School. Unless otherwise instructed by the Board, Service Provider shall maintain the minutes and records of those meetings and ensure that the School complies with the requirements of HRS 302D-12 regarding such meetings and record keeping.

**5. Record Keeping**

Service Provider will maintain the records of the School at the location designated by the Board. Service Provider will ensure compliance with all legal requirements for record keeping. In addition, Service Provider will ensure that designated on site staff receives proper training by the **State's** appropriate departments for student school record keeping through its designated programs.



**6. Bookkeeping**

Service Provider will coordinate with the accounting firms selected by the Board (“the accounting firm”), and serve as liaison with them to ensure the accuracy and timeliness of financial reporting and record keeping as may be required by the Charter and State law.

**7. Staff Administration**

If instructed by the Board, Service Provider may coordinate with the Board or the Hiring Committee established by the Board to identify, recruit and select individuals for School-based positions. The Board will make all hiring decisions in its discretion and in accordance with law. All employees selected by the Board shall be **KAMALANI** employees or employees leased to **KAMALANI**, and will not be employees of Service Provider. At the Boards direction, Service Provider may prepare employment contracts for approval by the Board that are to be used for the purpose of hiring employees. At the request of the Board, Service Provider may propose a professional employee management company to the Board which can perform the human resource services for the School. Once the Board approves a human resource provider Service Provider will coordinate such services. The Board will have complete discretion to decide which professional employee management company and its method of human resource management to use, if any. Service Provider agrees to act as the liaison for the School vis-à-vis the human resource services provider. All School-based employees will be assigned to the School and may only be removed, dismissed, or transferred by Board approval.

**8. Financial Projections and Financial Statements**

Service Provider will prepare annual budgets and financial forecasts for the School to present to the Board for review and approval or disapproval. The Service Provider will prepare and maintain all financial records at the direction of the Board and in compliance with Hawaii public accounting standards and regulations, as a means of codifying all transactions pertaining



to its operations. The Board shall annually adopt and maintain an operating budget. The Board, based on recommendations made by the accounting firm, will adopt accounting policies and procedures. Service Provider will prepare, with the review and approval of the Board, regular unaudited financial statements as required to be delivered to the State which will include a statement of revenues and expenditures and changes in fund balances in accordance with generally accepted accounting principles. These statements will be provided in advance of the deadline for submission of such reports to the State. KAMALANI will provide the State with annual audited financial reports as required by the Charter. These reports will be prepared by a qualified independent, certified public accounting firm. Service Provider will provide the regular unaudited financial statements, books and records to the auditor for review in connection with the preparation of the reports. The reports shall include a complete set of financial statements and notes thereto prepared in accordance with the Charter and generally accepted accounting principles for inclusion into the School's financial statements annually, formatted by revenue source and expenditures and detailed by function and object.

#### **9. Designated Contact Person**

The designated contact person of Service Provider shall be the Manager of Academica Hawaii, LLC Robert B. Howell.

#### **10. Grant Solicitation**

At the request of the Board, Service Provider may solicit grants available for the funding of the School from the various government and private and institutional sources that may be available. Such grants will include, but are not limited to federal grants programs and various continuation grants for charter schools.



### **11. Financing Solicitation and Coordination**

If directed by the Board, Service Provider may coordinate obtaining financing from private and public sources for loans desired by the Board.

### **12. Other Funding Sources**

At the request of the Board, Service Provider may coordinate the solicitation of School Improvement Grant funds, if available, from the appropriate state or local agencies. Similarly, Service Provider will coordinate the solicitation of other state, federal, or local government funds earmarked for school facilities development, improvement, or acquisition as well as other sources of funding that may become available to charter schools from time to time.

### **13. Annual Reporting**

Service Provider will coordinate the preparation of the Annual Report for the School. The Report will be submitted to the Board for approval, and Service Provider will coordinate the delivery and review process established by the State and Charter School legislation for the Annual Report.

### **14. Student Assessment**

If instructed by the Board, Service Provider may coordinate a student assessment methodology and retain on behalf of **KAMALANI**, professionals to administer and evaluate results. Service Provider will provide the Board with proposals from professionals offering to provide assessment and student evaluation services for the Board either to approve or reject.

### **15. School Board Representation**

The Board President will serve as primary liaison with the State Public Charter School Commission and its officials on behalf of the School. If instructed by the Board, Service Provider may also serve as a liaison of the Board to the State and its officials. In connection therewith, Service Provider's representatives will attend required meetings and public hearings.



#### **16. Governmental Compliance**

If requested by the Board, Service Provider will advise the Board on compliance with state regulations and reporting requirements of the Charter School. Service Provider may also advise the Board on compliance with the School's Charter with the State. The School's Charter with the State is incorporated herein by reference.

#### **17. Charter Renewal Coordination**

At the direction of the Board, Service Provider may assist the Board with renewal of the School's Charter on a timely basis. If instructed by the Board, may negotiate the terms of the renewal Charter with the State on behalf of the Board and provide the Board with notice and seek Board approval of any renewal provisions which modify or alter the terms of the original Charter between the School and the State.

#### **18. Curriculum Development**

If requested by the Board, Service Provider may identify and or develop curricula in connection with the operations of the School and the vision of the Board in a manner that complies with applicable federal, state and local laws and regulations. All proposed curricula shall be approved by the Board prior to use.

#### **19. Facilities Identification Expansion, Design and Development**

At the direction of the Board, Service Provider may coordinate with the Board for the purpose of identifying the facilities needs of the School from year to year. In connection therewith, Service Provider shall advise the Board and assist the School in identifying, procuring and planning the design of new facilities or in the expansion of existing ones. Service Provider may identify and solicit investors to acquire and develop facilities for lease or use by the school. Where such investors are related to Service Provider or its principles, that relationship will be disclosed to the Board. Further, Service Provider shall recommend and retain on behalf of the



School qualified professionals in the fields of school design and architecture and engineering as well as in the area of development and construction for the expansion, design, development, and construction of new or existing facilities.

## **20. Systems Development**

If requested by the Board, Service Provider may identify and develop a Hawaii based and state compliant school information system to be used in connection with the administration and reporting system for the School. This includes, but is not limited to, accounting documentation filing systems, student records systems, computer systems, and telecommunications services.

## **TERM OF AGREEMENT**

### **21. Initial Term**

The Initial term of the Agreement shall commence on July 1, 2017 and continue for two (2) years, through June 30, 2019.

### **22. Renewal**

Absent notice of termination pursuant to Section 23(a), this Agreement shall automatically renew for the full term of the initial Charter Agreement. Thereafter, this Agreement shall automatically renew for the term of each successive renewal of the Charter Agreement by the School's sponsor unless and until either party delivers to the other, no more than 180 days nor less than 30-days prior to the expiration of any Charter Agreement, written notice that this Agreement shall be cancelled at the expiration of the term of the then-current Charter Agreement.

### **23. Termination**

(a) During the Initial Term of the Agreement, either party may terminate this Agreement at any time, with or without cause, by giving thirty (30) days written notice to the other party.

(b) Following the Initial Term of the Agreement, either party may terminate this



Agreement immediately for cause. Termination for cause shall be defined, for purposes of this Agreement, as the breach of any material term of this Agreement, when such breach continues for a period of thirty (30) days after written notice, or is cured and recurs within thirty (30) days following the cure, and following written notice to the other party describing the breach. Notwithstanding the above, in the event of a significant event, **Kamalani** may terminate this Agreement immediately without providing Service Provider with thirty (30) days to cure the defect. For the purposes of this Agreement, a “significant event” shall be defined as an act or omission by the Service Provider which results in a breach of the School’s Charter such that the Charter is subject to immediate termination without chance for cure, interrupts the School’s operations and/or results in a threat to the School’s viability. Upon notice of termination under this Section, **KAMALANI** shall only be required to pay Service Provider for services rendered through the date of the notice of termination for cause.

(c) Duties upon termination. In the event this Agreement is terminated, the parties shall work cooperatively to ensure that the School’s operations continue without interruption. Service Provider shall immediately and peaceably deliver to **KAMALANI** any and all books, documents, electronic data or records of any kind or nature pertaining to the operation of the School or any transactions involving the School. This Section shall survive the termination of this Agreement.

## **COMPENSATION**

### **24. Base Compensation**

**KAMALANI** shall pay Service Provider a services and support fee of \$450 per student Full Time Equivalent (FTE) per annum during the term of this Agreement, unless terminated, provided that **KAMALANI** receives such funds. The fee shall be payable in equal monthly



installments, provided that **KAMALANI** shall have no obligation to pay such fee before receiving its FTE funding from the State of Hawaii, such funding does not include funds for special services or federal dollars, in which event the monthly installments shall accrue until funding is received. The fee may be adjusted annually at each anniversary of this Agreement based on the change in the prior year's Consumer Price Index or on the basis of the year-to-year percentage change in the per student Full Time Equivalent (FTE) funding provided to the school under the law, whichever is less. In the event that funding is decreased in future years to an amount less than the 2017-2018 state funding, either party may request review of the base compensation amount. Based upon this review, the Service provider may lower the fee should the school experience severe financial distress.

#### **25. Additional Services**

Service Provider will provide additional services not covered under this Agreement to the Board as requested by the Board by proposal to Board and subject to Board approval. This may include services that are not within the regular course of running the School, including but not limited to special projects, litigation coordination, and land use coordination. Such projects may include the engagement, at the expense of **KAMALANI**, of other professionals or consultants who may be independent from Service Provider or part of Service Provider's network of consulting professionals.

#### **26. Incurred Expenses**

Pursuant to the agreement of the Board and Service Provider, Service Provider may defer some or all of the services and support fees and/or costs for additional services and/or reimbursements due hereunder from one fiscal year to the next, which will be duly noted in the schools financial records.



## **OTHER MATTERS**

### **27. Conflicts of Interest**

No officer, shareholder, employee or director of Service Provider may serve on the Board. Service Provider will comply with the Conflicts of Interest rules set out in the Charter. In addition, if there exists some relationship between Service Provider, its officers, directors, employees, principals or agents and any other person or entity providing goods or services to the School, Service Provider agrees to disclose the relationship to the Board.

### **28. Insurance and Indemnification**

Service Provider shall carry liability insurance and indemnify the School for acts or omissions of Service Provider. Service Provider agrees to provide, upon request of the Board, certificates of insurance with carriers, in amounts and for terms reasonably acceptable to the Board. Service Provider hereby agrees to indemnify, hold harmless and protect **KAMALANI** the Board, the School and their successors and assigns, from and against any and all liabilities, claims, forfeitures, suits, penalties, punitive, liquidated, or exemplary damages, fines, losses, causes of action, or voluntary settlement payments, of whatever kind and nature, and the cost and expenses incident thereto (including the costs of defense and settlement and reasonable attorney's fees) (hereinafter collectively referred to as "claims") which such party may incur, become responsible for, or pay out as a result of claims connected to the acts, services, conduct or omissions of Service Provider, its employees or agents.

### **29. Miscellaneous**

(1) Neither party shall be considered in default of this Agreement if the performance of any part or all of this Agreement is prevented, delayed, hindered or otherwise made impracticable or impossible by reason of any strike, flood, hurricane, riot, fire, explosion, war, act of God, sabotage, accident or any other casualty or cause beyond either party's control, and



which cannot be overcome by reasonable diligence and without unusual expense.

(2) This Agreement shall constitute the full, entire and complete agreement between the parties hereto. All prior representations, understandings and agreements are superseded and replaced by this Agreement. This Agreement may be altered, changed, added to, deleted from or modified only through the voluntary, mutual consent of the parties in writing, and said written modification(s) shall be executed by both parties. Any amendment to this Agreement shall require approval of the Board.

(3) Neither party shall assign this Agreement without the written consent of the other party;

(4) No waiver of any provision of or default under this Agreement shall be deemed or shall constitute a waiver of any other provision or default unless expressly stated in writing.

(5) If any provision or any part of this Agreement is determined to be unlawful, void or invalid, that determination shall not affect any other provision or any part of any other provision of this Agreement and all such provisions shall remain in full force and effect.

(6) This Agreement is not intended to create any rights of a third party beneficiary.

(7) This Agreement is made and entered into in the State of Hawaii and shall be interpreted according to and governed by the laws of that state. Any action arising from this Agreement, shall be brought in a court in Hawaii.

(8) In the event of a dispute arising from this Agreement, the prevailing party shall be awarded reasonable attorneys' fees and costs.

(9) Every notice, approval, consent or other communication authorized or required by this Agreement shall not be effective unless same shall be in writing and sent postage prepaid by United States mail, directed to the other party at its address hereinafter provided or at such other



address as either party may designate by notice from time to time in accordance herewith:

If to Service Provider: **Academica Hawaii, LLC**  
**1378 Paseo Verde Pkwy**  
**Henderson, NV 89012**  
**Attention: Robert Howell**

If to **Board**: Kamalani Academy  
246 Panepo'o Place  
Wahiawa, HI 96786  
**Attention: Board Chair**

(10) The headings in the Agreement are for convenience and reference only and in no way define, limit or describe the scope of the Agreement and shall not be considered in the interpretation of the Agreement or any provision hereof.

(11) This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one Agreement.

(12) Each of the persons executing this Agreement warrants that such person has the full power and authority to execute the Agreement on behalf of the party for whom he or she signs.

THIS AGREEMENT was approved at a meeting of the Board of Directors of KAMALANI held on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_. At that meeting, the undersigned Chair of KAMALANI was authorized by the Board to execute a copy of this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written.



**KAMALANI ACADEMY**

By: \_\_\_\_\_  
\_\_\_\_\_, Board President

Date: \_\_\_\_\_

**ACADEMICA HAWAII LLC**

By: \_\_\_\_\_  
**Robert Howell, CEO**

Date: \_\_\_\_\_



## **Attachment R**

### **The Kamalani Vision**

“A space where children become leaders, prepared for a Twenty First Century we cannot even imagine.”

### **The Kamalani Mission**

“Kamalani School believes that each of our students is born with great abilities. We use the arts to release those talents. The arts enhance the learning of core academic subjects and, also, provide students with vital skills such as creativity, communication, leadership, and collaboration.”

### **Governing Philosophy**

The Kamalani Academy Governing Board has given much thought to the school Vision and Mission and will operate under these, as well.

The Governing Board understands that we live in a time of rapid change and that it is impossible to predict with much precision the future in which our students will live. Thus, in addition to the traditional academic subjects, we believe that it will be necessary for our students to possess such skills as flexibility, creativity, goal setting, perseverance, collaboration, and leadership. Equipped with these, they will be able to master whatever opportunities present themselves.

We believe that arts integration provides a means to nurture these skills. The successful artist must be able to vision, to set goals, to adapt, and to create. In addition, the arts present an excellent medium for engaging students with traditional academic subjects.



The Kamalani Governing Board will not micro-manage the professionals it hires. It is the role of the Board to provide the long-term Vision and the Mission for the school. At the same time, the Board recognizes that it is responsible for overseeing all aspects of the Academic, Organizational, and Financial success of the Academy. Thus, it is the responsibility of the Board to create, implement, and maintain systems to monitor, maintain, and continuously improve all aspects of the school's operation.

It is important to the Board that everything that is done at Kamalani involves integration of the wonderful Hawaiian culture.

Finally, the Board appreciates the importance of involving all stakeholders; students, parents, the community, the DOE, and the Commission in the success of Kamalani.

## **BYLAWS OF KAMALANI ACADEMY**

### **ARTICLE I INTRODUCTION; LEGAL STATUS**

Section 1. Name and Location. The name of the charter school is Kamalani Academy (hereinafter referred to as the "School"). The School, is located in the State of Hawaii.

Section 2. Legal Status. The School is a charter school pursuant to Hawaii Revised Statute 302D authorized by the Hawaii State Public Charter School Commission. The Governing Board of the School is an independent body under the authorization of the State Public Charter School Commission.

Section 3. Statutes. The School shall operate in accordance with Hawaii Revised Statutes, Chapter 302D, and all other applicable state and federal laws and regulations, including reporting requirements.

### **ARTICLE II PURPOSE AND MISSION**

Section 1. Purpose and Mission. The purpose of Kamalani Academy (the "School") is to improve the academic achievement of students through encouraging the use of innovative and effective teaching techniques. The mission of Kamalani Academy is to provide an



education that nurtures the whole child, celebrates the uniqueness of each child, and provides an innovative arts integrated education to increase academic achievement. Arts integration actively engages and challenges students in meaningful curriculum that will increase their literacy skills and overall academic achievement. The positive learning environment embraces cultural diversity and nurtures the child's self-esteem and love of learning. The Kamalani Academy strives to actively involve families and the community in our learning process.

Section 2. Non-Discrimination. The School shall not discriminate on the basis race, color, religion, age, sex, national origin, marital status, disability, or other reason prohibited by the law in hiring or other employment practices. Further, the School shall be open to all students in its authorized geographic area on a space available basis and shall not discriminate in its admission policies or practices on the basis of race, color, religion, age, sex, national origin, marital status, disability, or other reason prohibited by the law. The School shall conduct all of its activities in accordance with all applicable local, state and federal anti-discrimination laws, as well as in accordance with all other laws and regulations applicable to the operation of the charter public schools in the State of Hawaii.

### **ARTICLE III GOVERNING BODY**

Section 1. Powers and Duties. The business, affairs, and property of the School shall be managed by a Governing Board of Directors. The founding committee to form the school will become the first governing body of the School. Without limiting the general powers conferred by these Bylaws and provided by law, the Board shall have, in addition to such powers, the following powers:

- (a) Ratifying the School's mission and vision statements, and any modification thereof;
- (b) Approve any management, operational, and service contracts;
- (c) To enter into agreements and contracts with individuals, groups of individuals, corporations, or governments for any lawful purpose which supports the School's mission and operation;
- (d) Authorizing the broad curricular guidelines and the delegation and oversight of specific program implementation.
- (e) To lease, purchase, or otherwise acquire, in any lawful manner, for and in the name of the School, any and all real and personal property, rights, or privileges deemed necessary or convenient for the conduct of the School's purpose and mission.
- (f) Establish and approve all major educational and operational policies;



- (g) To hire, supervise and direct an administrator who will be responsible for the day-to-day operations of the School;
- (h) To develop and approve the annual budget and financial plan which shall be monitored and adjusted as necessary throughout the year;
- (i) To cause to be kept a complete record of all the minutes, acts and proceedings of the Board;
- (j) To cause an annual inspection or audit of the accounts of the School pursuant to HRS 302D-32, as well as any other audits required by law, to be made by an accountant to be selected by the Board, showing in reasonable detail all of the assets, liabilities, revenues and expenses of the School and its financial condition.
- (k) To strive for a diverse student population, reflective of the community;
- (l) Solicit and receive grants and other funding consistent with the mission of the School with the objective of raising operating and capital funds;
- (m) Carry out such other duties as required or described in the School's Charter.

Section 4. Formation. The first Board formed after the approval of a charter issued pursuant to HRS 302D shall consist of the members of the Committee to Form the School. Former Committee members prohibited from membership on the Board by HRS 302D-8 or HRS 302D-12 or other applicable statute or regulation shall resign from the Board at its first meeting. Remaining Board members shall fill all vacancies created by resignations or these Bylaws at the first meeting. The election of all new Board Members to fill vacancies on the Board, both at the initial Board meeting and at all future meetings where elections take place, shall include candidates whose election to the Board will maintain compliance with all applicable statutes and regulations.

Section 5. Qualifications; Election; Tenure. The Board shall be composed of seven (7) Directors unless and until changed by amendment of these Bylaws.

- (a) The Board shall seek to maintain a membership which is representative of the community served and possesses the breadth of knowledge and experience to effectively support and direct the operation of the School. To support this, the Board will endeavor to maintain a membership which includes:
  - (1) A parent of an enrolled student;
  - (2) An active or retired licensed educator;



(3) An individual with expertise in the areas of Accounting or Financial Management;

(2) And individual with expertise in the areas of Law or Human resources.

- (c) All Board members shall be devoted to the purpose and mission of the School and shall represent the interests of the community.
- (d) The Board Members shall serve five (5) year terms. Board members may serve no more than two (2) five year terms. Terms shall be staggered so that no more than 1/2 of the Board shall be up for election in any one year, unless a vacancy(ies) needs to be filled. The Board shall establish the term for a newly elected Director before the election, in order to stagger the terms of each member of the Board. To initially stagger the terms for the founding board, Three Directors will serve three-year terms, three Directors will serve four-year terms, and the remaining three will serve the usual five-year term. Those Directors who will serve the three, four, and five year terms will be determined by lottery at the first official board meeting upon receipt of the charter.
- (e) When the term of a Board Member has expired or when a Board Member resigns, the remaining Directors shall elect a new Director to fill the vacancy. It is incumbent upon the Board to fill any vacancies as soon as practicable. If for any reason the Board membership should drop below five (5) members, the only action that may be taken by the Governing Body is action to add members who will bring the governing body back into compliance with statute and its bylaws. Furthermore, once any Board Vacancy has been open for more than ninety (90) days, the only action that may be taken by the Governing Body is action to add members who will bring the governing body back into compliance with its bylaws.
- (f) It is the responsibility of existing Directors to identify new persons to serve on the Board of Directors. To Assist in identifying the best qualified candidates, the Board shall advertise a vacancy on the School's website and through direct (email, letter, text, or phone, etc.) communication to the parents of enrolled students. In compliance with HRS 302D-12, in selecting governing board members, consideration shall be given to person who:
  - 1. Provide the governing board with a diversity of perspective and a level of objectivity that accurately represent the interests of the charter school students and the surrounding community;
  - 2. Demonstrate an understanding of best practices of non-profit governance; and,
  - 3. Possess strong financial and academic management and oversight abilities, as well as human resource and fundraising experience.



- (g) The Board shall develop an orientation and training program for new directors and an annual continuing education program for existing directors. Board members will avail themselves of charter school conferences which offer workshops on governance, financial oversight, budget, and academic accountability, among others.

Section 6. Conflict of Interest. The Board shall follow the Kamalani Academy Conflict of Interest Policy.

Section 7. Annual Meeting. The annual meeting of the Board shall be held at the School in June of each year as the Board may determine. The annual meeting shall take the place of the Regular Meeting for that time-period. Written notice stating the place, day, and hour of the meeting shall be given personally or mailed to each member of the Board at least three (3) business days prior to the date fixed for the annual meeting. The annual meeting shall be for the purpose of electing officers and new Board members and for the transaction of such business as may come before the Board.

Section 8. Regular Meetings. The Board shall establish a regular day and place for regular meetings that shall occur no less frequently than once every two months. The meeting shall be held on the school site or in another location as set by the Board Chair that will allow for attendance by all Board Members and the involvement of the school community. Notice of the time and place of every regular meeting shall be given to each member of the Board, published to the school website and posted at the school site at least six (6) business days before the date fixed for the meeting. The purpose of any regular or special meeting must be specified in the notice of such meeting. Minutes of each Board meeting shall be taken and shall be approved by the Board. Said minutes shall be kept at the School and will be made available to the public, upon request, pursuant to HRS 302D-12(g).

Section 9. Special Meetings. Meetings of the Board may be called at any time by the Chairperson or by a majority of the Board. Special meetings shall be held at such time and place as may be designated by the authority calling such meeting.

Section 10. Agenda. An agenda must be produced for each regularly scheduled board meeting in order to provide effective and efficient meeting practice. In addition to previously requested agenda items, any Board member may provide additional agenda items for the following meeting by providing, via e-mail, fax or regular mail, the School's supervising employee or administrator the request, noting its appropriate place on the normal agenda format, and a realistic time requirement for such item. Such requests must be received at least 24 hours prior to the posting deadline.

Section 11. Open Meetings. Meetings of the Board shall be open to public and comply with all applicable requirements under HRS 302D-12(g).



Section 12. Quorum. A quorum at all meetings of the Board shall consist of a majority of the number of Board Members then in office. Except as provided specifically to the contrary by these Bylaws, the act of a majority of the Board Members in office at a meeting at which a quorum is present shall be the act of the Board. Proxy voting is not permitted.

Section 13. Ex-Officio Members. There shall be no ex-officio governing body members.

Section 14. Vacancies. Any vacancy occurring in the Board may be filled by the affirmative vote of a majority of the Directors at a regular or special meeting of the Board. A Director elected to fill a vacancy resulting from death shall be elected for the unexpired term of such person's predecessor in office and shall hold such office until such person's successor is duly elected and qualified. Any Director elected to fill a vacancy resulting from removal or resignation shall be elected for a new term.

Section 15. Committees. The Board may designate from among its members, by resolution adopted by a majority of the entire Board, an Academic Committee, a Governance Committee, a Financial Committee, and one or more other committees, each of which shall consist of at least one (1) Director and which shall have and may exercise such authority in the management of the School as shall be provided in such resolution or in these Bylaws. The Board shall not be permitted to delegate their power to contract nor their budget making authority. Any delegated activity or decision-making authority may be unilaterally revoked at any time.

Section 16. Removal. Any member of the Board may be removed by the affirmative vote of two-thirds (2/3) of the Directors then in office, excluding the member at issue whenever in their judgment such removal would serve the best interests of School.

Section 17. Resignation. A resignation by a Board member shall be effective upon receipt by the Chairperson of a written communication of such resignation.

Section 18. Participation by Telephone. To the extent permitted by law, any member of the Board or committee thereof may participate in a meeting of such Board or committee by means of a conference telephone network or similar communications method by which all persons participating in the meeting can hear each other, and participation in such a fashion shall constitute presence in person at such meeting.

Section 19. Proxy Voting. Proxy voting is not permitted.

Section 20. Compensation. No member of the Board shall receive any compensation for serving in such office, except that the Board Members may be reimbursed for reasonable expenses, including travel expenses, incurred in connection with service on the Board. Any such reasonable expenses that are not reimbursed by the School shall be construed as a gift to the School.



Section 21. Closed Sessions. Any Board member may call a Closed Session during any special or regular Board meeting for issues concerning personnel or other matters requiring confidentiality. All persons except Board members may be excluded from such Closed Sessions at the discretion of the Chair. Following such meetings, an officer shall provide a general description of the matters discussed, to be provided as the minutes of said Closed Session.

Section 22. Protocol. The Board shall use Robert's Rules of Order, unless stated otherwise herein. If a Board member is unable to attend a Board meeting, the Board member shall contact the Chairperson, Administrator or designated supervising employee prior to the meeting.

#### **ARTICLE IV OFFICERS**

Section 1. Number. The officers of the Governing Board shall include a Chair, Vice-Chair, Secretary, Treasurer, and such other officers as the Board shall deem necessary to elect.

Section 2. Election and Term of Office. The Board shall elect and appoint all officers of the School at the annual meeting of the Board, which officers shall be installed in office at such annual meeting to serve for terms of one (1) year and until their successors have been duly elected and qualified. Board Officers may serve no more than three (3) consecutive one-year terms in any office. Should there be more than one (1) nominee for a vacancy, the nominee receiving the greatest number of votes shall be declared elected and shall be installed in office at the annual meeting.

Section 3. Removal of Officers. Any officer of the School may be removed, either with or without cause, by a two-thirds (2/3) majority of the Board Members then in office at any regular or special meeting of the Board.

Section 4. Chair. The Chair of the Board shall preside at all meetings of the Board. The Chair of the Board shall possess the power to sign all certificates, contracts or other instruments of the School that are approved by the Board. The Chair of the Board shall exercise and perform such other powers and duties as may be prescribed by the Board from time to time.

Section 5. Vice-Chair. In the absence of the Chair of the Board or in the event of the Chair's disability, inability or refusal to act, the Vice-Chair of the Board shall perform all of the duties of the Chair and in so acting, shall have all of the powers of the Chair. The Vice-Chair shall have such other powers and perform such other duties as may be prescribed from time to time by the Board or by the Chair.

Section 6. Secretary. The Secretary shall keep or cause to be kept a book of minutes at the principal office or at such other place as the Board may order of all meetings of the Board



with the time and place of holding, whether regular or special and if special, how authorized, the notice thereof given, the name or names of those present at the Board meetings and the proceedings thereof. The Secretary shall give or cause to be given notice of all the meetings of the Board required by these Bylaws or by law to be given and perform such other duties as may be prescribed by the Board from time to time. The Secretary of the Board shall exercise and perform such other powers and duties as may be prescribed by the Board from time to time.

Section 7. Treasurer. The Treasurer shall have oversight responsibility and shall keep and maintain or cause to be kept and maintained adequate and correct accounts of the properties and business transactions of the School, including accounts of its assets, liabilities, receipts, disbursements, gains and losses. The books of account shall at all times be open to inspection by any Board member. The Treasurer shall be charged with safeguarding the assets of School and he or she shall sign financial documents on behalf of the School in accordance with the established policies of the School. He or she shall have such other powers and perform such other duties as may be prescribed by the Board from time to time.

Section 8. Vacancies. A vacancy in any office, held by an officer, because of death, resignation, removal, disqualification, or otherwise, may be filled by the Board by majority vote for the unexpired portion of the term.

## **ARTICLE V STAFF**

The Board shall appoint one employee to function as the administrator of the School (the "Administrator"). Such person may be delegated the authority to act in the absence of a specified policy provided that such action is consistent with the purpose and objectives of the Board and the School. Such person shall administer the School in accordance with Board direction and generally accepted educational practice.

## **ARTICLE VI CONTRACTS, LOANS, AND DEPOSITS**

Section 1. Contracts. The Board may authorize any officer or officers, agent or agents to enter into any contract or execute and deliver any instrument in the name of and on behalf of the School, and such authority may be general or confined to specific instances.

Section 2. Loans. No loans shall be contracted for or on behalf of the School and no evidence of indebtedness shall be issued in the name of the School unless authorized by a resolution of the Board. Such authority shall be confined to specific instances. No loan shall be made to any officer or Board member of the School.

Section 3. Checks, Drafts, and Notes. All checks, drafts, or other orders for payment of money, notes, or other evidence of indebtedness issued in the name of the School shall be signed by such officer or officers, or agents of the School and in such manner as shall be



determined by the Board. The Chair and Administrator are authorized and required to sign all checks over the amount of \$25,000.

Section 4. Deposits. All funds of the School not otherwise employed shall be deposited to the credit of the School in such banks, trust companies, or other custodians located in the State of Hawaii as the Board may select.

Section 5. Gifts. The Board may accept on behalf of the School any contribution, gift, bequest or devise for the general purposes or any special purpose of the School.

Section 6. Fiscal Year. The fiscal year of the School shall begin on July 1 and end on June 30.

## **ARTICLE VIII INDEMNIFICATION**

The Board of Directors may authorize the School to pay or cause to be paid by insurance or otherwise, any judgment or fine rendered or levied against a present or former Board member, officer, employee, or agent of the School in an action brought against such person to impose a liability or penalty for an act or omission alleged to have been committed by such person while a Board member, officer, employee, or agent of the School, provided that the Board shall determine in good faith that such person acted in good faith and without willful misconduct or gross negligence for a purpose which he reasonably believed to be in the best interest of the School. Payments authorized hereunder include amounts paid and expenses incurred in satisfaction of any liability or penalty or in settling any action or threatened action.

## **ARTICLE IX AMENDMENTS**

These Bylaws may be amended, altered, or repealed and new Bylaws may be adopted by the Board of Directors by an affirmative vote of two-thirds (2/3) of all the Directors then in office at any meeting of the Board, provided that the full text of the proposed amendment, alteration, or repeal shall have been delivered to each Director at least six (6) days prior to the meeting.

## **ARTICLE XI PURPOSE OF THE BYLAWS**

These Bylaws are adopted for the sole purpose of facilitating the discharge, in an orderly manner, of the purposes of the School. These Bylaws shall never be construed in any such way as to impair the efficient operation of the School.

## **CERTIFICATION**



I hereby certify that I am the duly elected and acting Secretary of the School, and that the foregoing Bylaws constitute the Bylaws of the School, as duly adopted by unanimous vote of the Board of Directors.

DATED this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_, Secretary.



## Statement of Assurances

Please print this form, and initial each item in the box provided. The form must be SIGNED by an authorized representative of the Applicant Governing Board.

The Applicant Governing Board agrees to comply with all of the following provisions, specifically, if approved the governing board and school:

- ☒ will operate in compliance with all applicable state and federal laws, including, but not limited to, HRS Chapter 302D;
- ☒ will operate as a public, nonsectarian, non-religious public school with control of instruction vested in the governing board of the school under the general supervision of the Commission and in compliance with the Charter Contract and HRS Chapter 302D;
- ☒ will operate in accordance with and comply with all of the requirements of Master Collective Bargaining Agreements, pursuant to HRS Chapter 89, and negotiate any supplemental agreements necessary;
- ☒ will, for the life of the Charter Contract, participate in all data reporting and evaluation activities as requested by the U.S. Department of Education and the Hawaii Department of Education, including participation in any federal or state funded charter school evaluations or studies, final grant report documentation, and financial statements;
- ☒ will provide special education services for students as provided in Title 49, Chapter 10, and Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, and Part B of the Individuals with Disabilities Education Act;
- ☒ will ensure that a student's records and, if applicable, a student's individualized education program, as defined in Section 602(11) of the Individuals with Disabilities Act, will follow the student, in accordance with applicable law (P.L. 107-110, section 5208);
- ☒ will comply with all provisions of Elementary and Secondary Education Act, including, but not limited to, provisions on school prayer, the Boy Scouts of America Equal Access Act, the Armed Forces Recruiter Access to Students and Student Recruiting Information, the Unsafe School Choice Option, the Family Educational Rights and Privacy Act, and assessments [P.L. 107-110];
- ☒ will follow all federal and state laws and constitutional provisions prohibiting discrimination on the basis of disability, race, creed, color, national origin, religion, ancestry, or need for special education services, including, but not limited to, the Age Discrimination Act of 1975, Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and Part B of the Individuals with Disabilities Education Act;
- ☒ will adhere to all provisions of federal law relating to students who are limited English proficient, including Title VI of the Civil Rights Act of 1964 and the Equal Educational Opportunities Act of 1974, that are applicable to it;
- ☒ will ensure equitable program participation, as required under Section 427 of the General Education Provision Act;
- ☒ will follow any federal and state court orders in place in the local school district;
- ☒ will comply with federal and state applicable health and safety standards;



- ☒ will permit the Commission to audit, review, and inspect the operator's activities, books, documents, papers, and other records;
- ☒ will comply with all federal and state audit requirements and ensure that arrangements have been made to finance those mandatory audits;
- ☒ will employ individuals to teach who hold a license to teach in a public school in Hawaii or meet the minimum requirements for licensure as defined by the State Board of Education;
- ☒ will operate on a July 1 to June 30 fiscal year and will adopt and operate under an annual budget for such fiscal year;
- ☒ will maintain its accounts and records in accordance with generally accepted accounting principles;
- ☒ will prepare and publish an annual financial report that encompasses all funds and includes the audited financial statements of the charter school; and
- ☒ will read, understand, and agree to comply with all parts of the Charter Contract, including, but not limited to, the performance standards and requirements established by the Charter Contract and attached performance framework.

#### Certification

Name of Proposed  
School:

Kamalani Academy

Name of Authorized  
Representative:

S. Ku'eipo Laumatia

I, the undersigned, do hereby agree to the assurances contained above.

S. Ku'eipo Laumatia  
Signature of Authorized Representative

1/16/2014

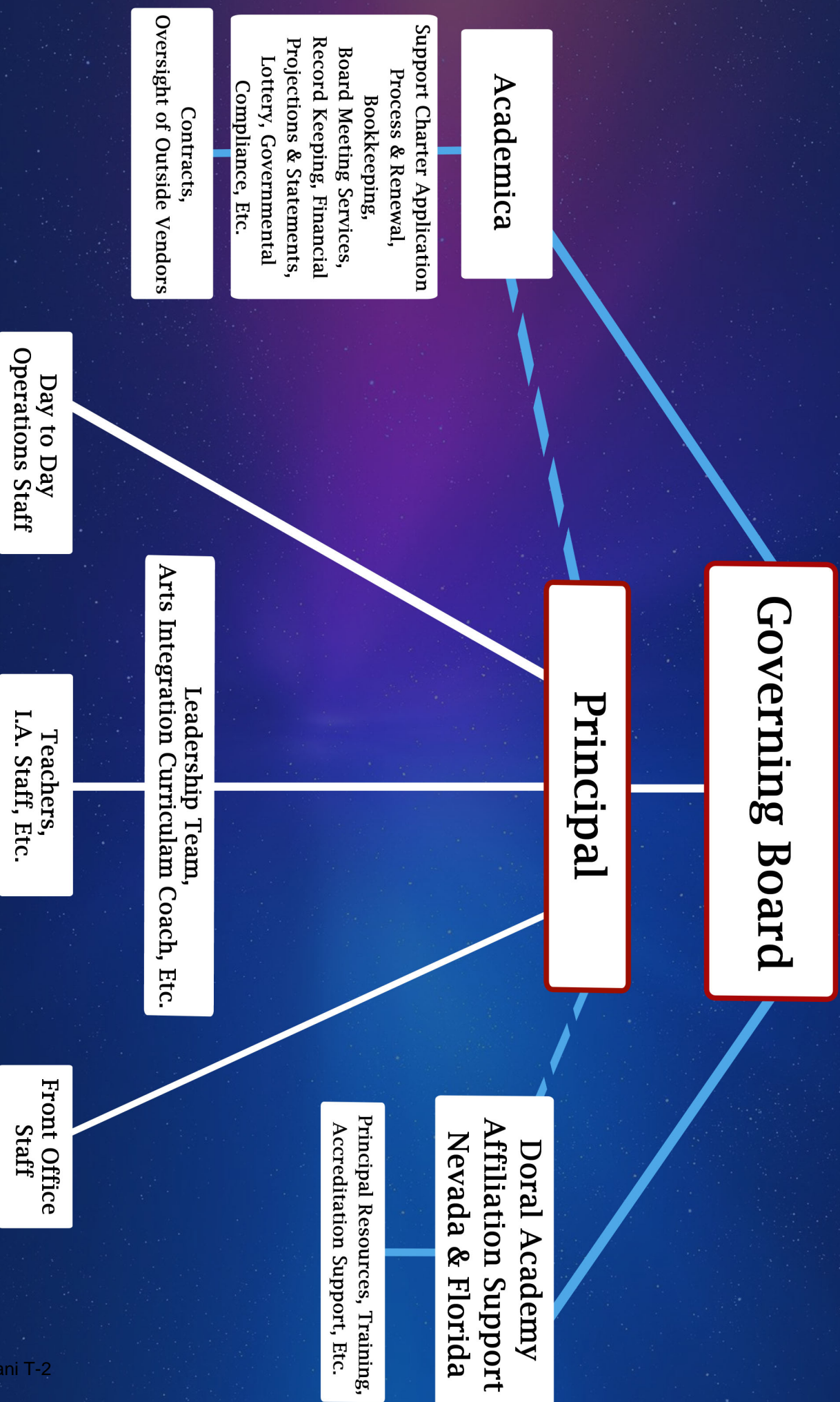
Date



## **Attachment T**



# Kamalani Academy Organizational Chart





## Attachment U





## About

I am an award-winning multiple-media journalist. I have been a web designer and producer since 1994, including eight years of daily online newspaper design and production and four years of education technology, digital media support. I am a graphic designer and print production specialist dating to 1976. I am a photographer, videographer, and video editor. I write and edit for multiple media. I have extensive experience in photo-typesetting systems, Macintosh pre-press production, Macintosh Internet applications and servers.

I am knowledgeable in design and production for the Internet and high-end print. I have extensive experience managing creative teams. My tools for print and Web include: Quark XPress, InDesign, Photoshop, FreeHand, Dreamweaver, FileMaker, FTP, mail server and mailing list software, MS Office, iMovie, GarageBand, and Final Cut Pro. I have experience with AfterEffects and the Avid Video Composer. I manage Apple file and Web servers, Apple system software and networking. I am familiar with Apache, PHP, MySQL, PERL and other Internet applications. I concurrently manage dozens of websites for myriad organizations, statewide.

## Experience

### Office of Information Management & Technology, Project Management Office

— June 2015 to present

*Technical Analyst; IT Project Manager*

The Technical Analyst works with project teams and internal business clients and is responsible for implementing analytical and systematic approaches to ensure systems are implemented successfully. Works with a technical team to solve functional issues, writes and reviews technical design documents, and makes recommendations on functional design documents, training manuals and other necessary documentation. Keeps up with technology advancements, drives and promotes continuous innovation and improvement using technology. Reviews and makes recommendations on technical scope definition and management, project schedule development and tracking, risk management, project communication, stakeholder management, mitigation plan implementation, project financial monitoring and reporting and deliverable achievement.

### Department of Hawaiian Home Lands

— May 2011 to May 2015

*Community Development, Journalist, Webmaster  
Acting Public Information Officer*

Information and Community Relations Office. Responsible for designing, producing and updating website. I also produce printed materials, newsletters, advertising, provide photography, video, audio and event production services. I designed and produced their 2012 annual report. Acting PIO 2013.

### ZZ-Type — Since 1988

*Web designer, graphic artist, photographer, videographer,  
Macintosh consultant*

My production and consulting company. I have worked freelance for graphic design firms, book

publishers, public relations firms and advertising agencies as well as a private client base. Some of the more notable projects I have been involved with include: *Matra/Group One* Honolulu mass transit proposal team. Typographic production for “*Discovery, The Hawaiian Odyssey*,” a coffee table book on canoe voyaging. Liberty House November 1992 *Home Sale* color catalog. Mauna Lani Resort’s 20-page *View* magazine for Starr Seigle. ∞ I also host multiple web sites for clients on my own web servers and Internet feed (since 2003).

### Office of Hawaiian Affairs

— Oct. 2007–Feb. 2010

*Acting Public Information Officer (2009)  
Webmaster, Media Production Specialist*

I managed the OHA Public Information Office and a staff of 7 from Aug. through Nov. 2009. In addition to running all aspects of [www.oha.org](http://www.oha.org), I was a journalist and staff photographer for OHA’s *Ka Wai Ola* newspaper. I managed all display and classified advertising for KWO and worked in various capacities on OHA’s radio, television and PR productions.

### University of Hawai‘i at Manoa

— Spring 2009 semester

*Instructor, Online Journalism*

Assisted Profs. Ann Auman and Kevin Kawamoto in teaching the online journalism component to their J402 and J302 classes.

### Honolulu Star-Bulletin

— Oct. 24, 2005–Oct. 2007

*Webmaster, starbulletin.com*

I was invited to return to my former management position at the Honolulu Star-Bulletin.

### Kamehameha Schools

— Oct. 22, 2001–Oct. 19, 2005

*Education Webmaster*

As IT staff, I implemented web servers and services dedicated to education users for this private K-12 school. My responsibilities centered around system administration and account management for faculty and administration, programming, analysis, consulting and operations support. ∞ I mentored middle and high school students via the Kamehameha CyberWarriors club. ∞ I also provided education technology, photography and video support to staff, as requested.

### University of Hawaii Outreach College, Pacific New Media

— Spring 1997–Dec. 2009

*Instructor, Create Your First Web Page*

I teach a four-hour adult education class several times a year on how to make and post your first web page. Class evaluation ratings are almost unanimously excellent.

### Honolulu Star-Bulletin

— Mar. 4, 1996–Oct. 19, 2001

*Webmaster, starbulletin.com*

I joined this daily newspaper and rolled out a daily online newspaper two weeks later. It has been online since. I produced thousands of complete online editions. I also occasionally wrote and edited newspaper articles and headlines, took photographs and shot video to accompany newspaper articles. Managed all aspects of the web site and team.

### Milici Valenti Ng Pack Advertising

— Sep. 1995–Mar. 1996

*Multimedia production manager; system support*

Produced multimedia slide shows, web sites, did occasional print production and consulting and managed the Macintosh network, including installing ethernet networking, router, file server and staff email.

### Starr Seigle McCombs Advertising

— Jan. 1992–Sep. 1995

*Manager of production art; system manager*

I converted an existing production crew from traditional graphic production to electronic production including page layout, logo illustration, scanned halftones and color separations, inside of one year. I set up the Macintosh software, networking, electronic mail, document storage, backup and retrieval systems. ∞ I supervised the production crew in day-to-day operations and oversaw the production of all ads and collateral pieces for the production managers and art directors. I also did some video production on the in-house Avid system. ∞ I was a principal in the startup of their Internet division, *Starrtech.com*. I designed and produced Web sites and servers for agency clients during this period including *princeville.com*, Hawaii’s second commercial Web site.

### Honolulu Weekly

— Jul. – Dec. 1991

*Freelance graphic artist, Macintosh consultant*

I consulted this startup weekly tabloid newspaper on full electronic production; specified and installed the equipment and produced every weekly 12-16-page edition (single-handedly) for the first six months of its operation. This was the first all-digital, direct-to-negative newspaper in Hawaii. We took the paper from bare walls to regular publication in two weeks, flat.

### Sellers Advertising, Inc. — 1990

*Production manager; system manager*

Oversaw art directors and production crew in print matters. Produced printing estimates, tracked jobs and coordinated complex print projects from concept through completion. Did press checks to insure quality. Managed the Macintosh network.

### Castle Medical Center Print Shop

— 1988–1989

Consulted, installed and implemented a Macintosh production system for this major medical center. Produced hospital forms and hospital collateral materials for the print shop and for the Public Relations department.

### Honblue — 1986–1988

Set up Honblue’s first typesetting department. Consulted, selected, installed and ran their original Compugraphic Integrator 9600 typesetting system. Set up pricing structures and operating procedures. Company now called Electric Pencil.

### Fergerstrom & Co. — 1981–1986

Owned this graphic design, typesetting and production company. Provided typesetting, vertical camera, platemaker and photo-lithographic darkroom services.





## Education

- Aiea High School, 1971, Hon. Mention
- US Navy Electronics 1972-73
- US Navy Submarine Sonar 1973
- Western Governors University, BS/CIS, May 2006
- Project Management Institute (PMI) Training, 2014-2015; expected PMP certification 2016

## Community Engagement

- Hawaiian Civic Club of Honolulu *Scholarship Committee, Webmaster (past)*
- Kalihi-Palama Hawaiian Civic Club *Webmaster*
- Royal Order of Kamehameha I *Ali'i 6th Degree, Chapter 1, Kūāubau (Secretary), Webmaster, Photographer, Historian*
- Leeward Kenpo Karate (Kajukenbo) *Third Degree Self-Defense Black Belt Instructor*
- 'Ahahui Haku Mo'olelo, (Hawaiian Journalists Association) *Founding member, 2014*

## Supervisory Contacts & References

### Department of Hawaiian Home Lands

*Crystal Kua, former Director, Information and Community Relations Office*

### Department of Hawaiian Home Lands

*Darrell T. Young, former DHHL Deputy Director and former Director, Information and Community Relations Office;*

### Department of Hawaiian Home Lands

*Punialoba Chee, former Director, Information and Community Relations Office*

### Honolulu Star-Bulletin

*David Shapiro, former Managing Editor*

### Kamehameha Schools

*Darrell Hamamura, former Manager, Developer Group*

### Starr Seigle McCombs Advertising

*Mary Fastenau, President, StarrTech.com*

## Additional References

### University of Hawaii Outreach College, Pacific New Media

*Susan Horowitz*

### Honolulu Board of Water Supply

*Arthur Aiu, Community Outreach, Community Relations Department*

## Accomplishments and Awards

### First color hot rod magazine in Hawai'i

*Hawaiian Hot Rod*

1980 - Publisher, Editor, Writer, Photographer, Producer, Sales and Distribution

### First 4-color concert poster printed in Hawai'i

*Liza, Live in Hawaii*

1983 - Liza Minelli, for John F. Leonard Productions

### First all-digital periodical publication in Hawai'i

*Honolulu Weekly*

1990 - Production manager, production artist at launch of this weekly newspaper, all editions were all-digital, straight to film from V 1, No. 1

### First all-digital advertising agency in Hawai'i

*Starr Seigle McCombs Advertising*

1991 - Manager of production art, converted an entire creative team of art directors and production artists from traditional print production (typesetting/paste-up) to all-digital in under a year

### First Hawai'i full-service advertising agency web site

*Starrtech.com*

1994 - Starr Seigle McCombs Advertising  
Principal at startup of Starr-Seigle's Starrtech.com site, built web server, built site, updated and maintained

### First QuickTime VR 360° Photo Panorama in Hawai'i

*Milici.com*

1996 - Milici Valenti Ng Pack Advertising  
First QuickTime VR panorama shot in Hawai'i using Apple's then-new virtual reality technology

### Second Hawai'i commercial web site

*Princeville.com*

1995 - Starr Seigle McCombs Advertising / Starrtech.com  
Trailed first commercial site, Outrigger.com, by 1 week, built web server, built site, updated and maintained

### First daily online newspaper in Hawai'i

*Starbulletin.com*

1996 - Honolulu Star-Bulletin

Launched site and produced every daily edition, solo, for 2-1/2 years, ranked 19th in the world in 1998

### 1996 Kilohana Award

*Honolulu Star-Bulletin*

*starbulletin.com*

### 1998 Eppy Award

*Editor and Publisher Magazine*

Best Overall U.S. Newspaper Online Service

Under 100,000 Circulation Finalist

*starbulletin.com*

### 2000 Best of the West Award

*Arizona State University Cronkite School of Journalism*

Online Enterprise Reporting

First Place, *Hana Road* story, photo,

video and Quicktime VR package,

*Honolulu Star-Bulletin*

### 2000 Pa'i Award

*Hawai'i Publishers Association*

First Place, Publication Web Site

*Honolulu Star-Bulletin*

### 2009 Spirit of Community Award

*Aloha United Way*

Finalist, Public Sector Campaign of the Year

Finalist, Coordinator of the Year

*Office of Hawaiian Affairs 2008 AUW Campaign*



# Board Member Information

**To be completed individually by each proposed school governing board member.**

**All forms must be signed by hand.**

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

## Background

1. Name of charter school on whose governing board you intend to serve: Kamalani Academy
2. Contact information:  
Name: Blaine Fergerstrom  
[REDACTED]  
[REDACTED]
3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.  
☒ Resume and professional bio are attached to this form.  
☐ Resume and professional bio are attached elsewhere in the application: \_\_\_\_\_
4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.  
☐ Does not apply to me ☒ Yes
5. Why do you wish to serve on the governing board of the proposed charter school? It has always been an honor contributing to the future of our children. I have taken great pride in mentoring students at many points in my career. This is an opportunity to make an even wider contribution to the future of our children.
6. What is your understanding of the appropriate role of a public charter school governing board member? Board members set policy for the school and or district, building a foundation to ensure success of the school, the district, and the students.
7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member. In the past I have served several years as a board member of the Hawai'i Youth Symphony Association. I also served on the board of the Kamehameha Schools Orchestra from 2009 to 2013, and continue to advise board members. From 2005 to 2012 I served on the board of The Slippah Foundation, a 501(c)(3) nonprofit which provides footwear and toiletries to homeless and underprivileged



children. I served for 10 years on the Scholarship Committee of the Hawaiian Civic Club of Honolulu, helping to administer their annual program which provides scholarships for Native Hawaiian students. Since 2008, I have served as secretary on the board of the Royal Order of Kamehameha I, Hawai'i Chapter 1, a fraternal organization founded in 1865 by King Kamehameha V, and its 501(c)(3), Pohai o Kamehameha.

8. Describe the specific knowledge and experience that you would bring to the governing board. I bring nearly 40 years of experience in publishing, advertising, print media and 20 years of online media. In addition, I have served for years on various boards and panels, including 10 years on the Scholarship Committee of the Hawaiian Civic Club of Honolulu.

### **School Mission and Plan**

1. What is your understanding of the school's mission and guiding beliefs? The vision of Kamalani Academy is to develop life-long learners with leadership skills acquired from the arts integration approach to learning. Kamalani Academy is committed to engaging all learners by educating the whole person: mind, body, and heart. We believe high standards of achievement, in a culturally responsive school environment, can be realized through active learning by using an arts integrated approach, nurturing a strong sense of belonging to our school 'ohana and to our 'āina, our land that nurtures us.

The No Child Left Behind (NCLB) Act, identifies the arts as core academic subjects. Americans for the Arts (2005) revealed that the American people overwhelmingly believe that arts are vital to a well-rounded education. Yet, despite federal and state policies aimed at promoting the arts and despite the general public's opinion on arts, arts education is disappearing from our schools (Holcomb, 2007). The educational philosophy of Kamalani Academy focuses on bringing back the arts to the classroom through cross curricular integration.

2. What is your understanding of the school's proposed academic plan? Kamalani's arts integrated approach supports all learners of all levels; it "evens the playing field." Students, who struggle in traditional educational approaches that heavily rely on linear, paper and pencil methods of learning, thrive in arts integration. Active learning, using non-linguistic modalities challenges all students to think metaphorically and process ideas socially. The social and kinesthetic processing gives all students access into the learning. The most important tools that are required are the student's body, voice, and imagination/mind. The skills they develop to process all content areas are collaboration and concentration.
3. What do you believe to be the characteristics of a successful school? I would look for students who enjoy school, enjoy learning and exploring, and students who explore the endless possibilities presented by any challenge.
4. How will you know that the school is succeeding or is not succeeding in its mission? I would personally look for high attendance and attentiveness rates, high levels of student curiosity and thinking, high levels of student problem solving and approaching problem solving with an eager sense of the possibilities being presented.

### **Governance**

1. Describe the role that the governing board will play in the school's operation. Any board should set direction and policy and leave the implementation of that policy to the school administration. It is not the purpose of a board to micromanage any organization; rather it is to build a foundation for the administration to implement and follow on the path to successful outcomes.



2. How will you know if the school is successful at the end of the first year of operation? I would look for continuously improving rather than declining school enrollment, high rates of attendance and high levels of creative output from excited, engaged learners.
3. How will you know at the end of five years if the school is successful? If the first campus is successful in the first two years, I would expect a second campus to be either in operation or in late planning stages, as the Kamalani Academy works to expand and duplicate its success in other communities, thereby serving an even wider range of students.
4. What specific steps do you think the governing board will need to take to ensure that the school is successful? The governing board will need to communicate its directives and desires effectively to a collaborative and innovative school administration, then let those professionals do their part to craft success.
5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school? I would not hesitate to call attention to the situation to the board, and to call for resolution of the conflicting situation. If I received unsatisfactory response from the board to the situation, I would not hesitate to seek higher authority.

### Disclosures

1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☐ I/we do not know these individuals ☒ Yes I am a friend and Hawaiian Civic Club associate of Advisory Board member Dr. VerlieAnn Malina Wright; Advisory Board member Alapaki Nahale-a is the former Director of the State Dept. of Hawaiian Home Lands (my current employer) and a friend; I am a former Project Management Professional student and friend of Kamalani Academy Chair Ku'uipo Laumatia.
2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☐ I/we do not know any such employees ☒ Yes My wife, Jean Fergerstrom, works as a budget analyst for the Early Childhood Education division of Kamehameha Schools in Honolulu.
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons ☐ Yes My involvement with the Kamalani Academy is strictly volunteer and I have no expectation of compensation or consideration in any form for my service.
4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we do not anticipate conducting any such business ☐ Yes My involvement with the Kamalani Academy is strictly volunteer and I have no expectation of compensation or consideration in any form for my service.



5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
☐ Not applicable because the school does not intend to contact with an education service provider or school management organization.  
☒ I/we do not know any such persons ☐ Yes
6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
☐ N/A. ☒ I/we have no such interest ☐ Yes
7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.  
☐ N/A ☒ I/we or my family do not anticipate conducting any such business ☐ Yes
8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.  
☒ Does not apply to me, my spouse or family ☐ Yes
9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.  
☒ None ☐ Yes

### Certification

I, Blaine Cook Fergerstrom, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.



\_\_\_\_\_  
Signature

January 11, 2016  
Date



# JARRETT P. MACANAS

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## LEGAL EXPERIENCE

**Attorney at Law**, Jarrett P. Macanas, AAL, LLC, Honolulu, Hawaii (October 2010-Present)

- Manage private law practice specializing in trusts & estates, probate, and elder law
- Supervise staff in the preparation of estate planning and probate documents
- Service over 150 clients in matters pertaining to estate planning

**Lecturer**, University of Hawaii's Kapiolani Community College, Honolulu, Hawaii (July 2011-Present)

- Teach Law 151 "Estate Planning & Probate", a college-level course on Hawaii estate planning
- Instruct students in KCC's business, legal and technology department's accredited paralegal program

**Managing Attorney**, Okura & Associates, Honolulu, Hawaii (March 2009-October 2010)

- Manage a Hawaii law firm's Honolulu office specializing in trusts & estates and Medicaid
- Held responsible for all new consultations, client relations and file management, and final work product
- Supervise paralegals, legal assistants and staff in estate planning and administrative work

**Associate Attorney**, Long Okura, P.C., Salt Lake City, Utah (June 2008-February 2009)

- Manage entire law firm's estate planning and probate department
- Perform all aspects of litigation caseload: manage initial consultations, draft pleadings, conduct discovery, prepare motions, make court appearances, handle mediation and settlement negotiations

**Associate Attorney/Law Clerk**, Jackman Arredondo, LLP, Orem, Utah (September 2005-June 2008)

- Draft estate planning documents, probate pleadings, business documents, and mortgage documents
- Assist clients in the maintenance of small business entities

## EDUCATION

**Masters of Law in Taxation** (LLM), Boston University (Expected 2014-15)

**Juris Doctor** (JD), University of Utah S. J. Quinney College of Law (2007)

- Articles and Notes Editor, *Extra Muros International Law Journal*
- Eccles Foundation Academic Scholarship

**Bachelor of Science** (BS), Brigham Young University, Provo, Utah (2004)

- Sociology (3.7 GPA) & Academic Merit Scholarship
- Spirit of BYU Award; Multicultural Student Leadership and Service Award

## OTHER

**State Bar Admissions:** Hawaii and Utah

**Affiliations/Memberships:** HSBA's Tax Section, Estate Planning & Probate Section, and Elder Law Section

**Presentations:** "Alternatives to Achieving Medicaid Eligibility" HSBA Elder Law Section



# Board Member Information

To be completed individually by each Applicant Governing Board member.

All forms must be signed by hand.

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

## Background

1. Name of charter school on whose governing board you intend to serve:  
KAMALANI ACADEMY
2. Contact information:  
Name: JARRETT MACANAS  
[REDACTED]  
[REDACTED]
3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.  
☒ Resume and professional bio are attached to this form.
4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.  
☐ Does not apply to me ☒ Yes
5. Why do you wish to serve on the governing board of the proposed charter school?  
As a native Hawaiian, local practicing attorney and a father of three small children, I can truly appreciate and understand the need for equal access to a quality education. I feel that with my background in law, education, and Hawaiian cultural studies, that my experience and expertise will serve the proposed charter school well.
6. What is your understanding of the appropriate role of a public charter school governing board member?  
A board member serves in a fiduciary capacity, owing obligations to both the charter school and the community. A productive board member will support the charter school in fulfilling its main functions while serving and reaching out to the community in an ambassador role. Another role is as a consultant, offering specific skills, expertise and resources for the overall benefit of the board, school and community.
7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous experience of this nature, explain why you



have the capability to be an effective board member.

I have experience as a board member for a Hawaii non-profit organization called Women in Need. I have assisted this organization with marketing, fundraising, and many other services needed.

8. Describe the specific knowledge and experience that you would bring to the governing board.  
I will provide expertise and training received in:
  - 1) Law (I am bar licensed in two states – Utah and Hawaii)
  - 2) Education (I received an undergraduate degree from BYU, a law degree from University of Utah, and I am currently enrolled as a student in the Master's in Taxation/graduate tax program at Boston University)
  - 3) Teaching (I'm an adjunct professor at Kapiolani Community College)
  - 4) Business/Entrepreneurship (I am self-made, first generation business owner in Hawaii, running my own law firm since 2010)
  - 5) Community Involvement (I attended schools in the mainland and public schools in Hawaii; scouting, and youth sports)

### **School Mission and Plan**

1. What is your understanding of the school's mission and guiding beliefs?  
I understand the school's mission is to fuse quality education with Hawaiian cultural conservation. The mission is to create life-long learners by providing children with a safe learning environment where each child's strengths, gifts and talents can be discovered and enriched. The mission is to achieve secular knowledge and skills while pursuing culturally-based artistic creativity.
2. What is your understanding of the school's proposed academic plan?
  - Blending arts with academics
  - Expanding the student body from K-6 to K-8 in 3 years
  - Complying with core standards for language arts and math
  - Positive behavioral support to nurture social and emotional growth
3. What do you believe to be the characteristics of a successful school?
  - Clear mission and shared focus
  - High standards and student expectations
  - Leadership
  - Collaboration and communication
  - Curriculum, instruction, and assessments in standards
  - Quality management
  - Professional development
  - High levels of parent and community involvement
  - Supportive learning environments
4. How will you know that the school is succeeding or is not succeeding in its mission?  
Kamalani Academy will be successful in fulfilling its mission if students:
  - Are prepared for high school and college
  - Show signs of leadership
  - Display effective communication



- Embrace cultural arts
- Are problem solvers and critical thinkers

### **Governance**

1. Describe the role that the governing board will play in the school's operation.
  - Determine the school's mission and purpose
  - Oversee the school's administrator and their job description and performance
  - Ensure effective organizational planning
  - Provide adequate resources so the school can achieve its mission, adhere to its charter and have the highest level of financial, organizational and academic performances
2. How will you know if the school is successful at the end of the first year of operation?  
The school has met or exceeded its first year metrics as outlined in the application and has met its goals for performance, attendance, enrollment numbers, professional development and student retention.
3. How will you know at the end of five years if the school is successful?  
The school has met or exceeded its metrics as outlined in the application and has met its goals for performance, attendance, enrollment numbers, professional development, and student retention.
4. What specific steps do you think the governing board will need to take to ensure that the school is successful?  
First, the governing board must confirm each board member is absolutely committed to the school and its mission. Only committed members who are consistent and dedicated should be chosen to serve on the board. Second, the board should promote active communication so everyone understands the school's mission. Last, the mission statement needs to be consistently shared to the board, staff, and parents to ensure that everyone is working toward the mission of the school.
5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school?  
I would speak to that board member first to verify my beliefs and then I would speak to the director or board chairman to have the concerns heard before the board. If the board refused to take disciplinary action, then I would resign as a board member.

### **Disclosures**

1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☐ I/we do not know these individuals ☒ Yes  
 I know the following people: MARK KOHLER AND KUUIPO LAUMATIA. I met Mark Kohler as a tax planning colleague. I know Kuuipo Laumatia as she has invited me to be a part of Kamalani Academy.
2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☒ I/we do not know any such employees ☐ Yes
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons ☐ Yes



4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
I/we do not anticipate conducting any such business ☒ Yes
5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
☐ Not applicable because the school does not intend to contact with an education service provider or school management organization.  
☒ I/we do not know any such persons ☐ Yes
6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
☐ N/A. ☒ I/we have no such interest ☐ Yes
7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.  
☐ N/A ☒ I/we or my family do not anticipate conducting any such business ☐ Yes
8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.  
☒ Does not apply to me, my spouse or family ☐ Yes
9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.  
☒ None ☐ Yes

#### Certification

I, JARRETT MACANAS, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.

  
Signature

2/1/16  
Date



## **S. Ku'uipo Laumatia, PMP, CSM, MBA**



### **Key Leadership Qualities:**

- Highly motivated, creative problem solver, thrives on implementing business change
- Able to make difficult portfolio/program/project decisions in stressful situations
- Successful project implementer through IT Governance process, gates, and owners
- Personable, persuasive communicator
- Professional and flexible presenter and facilitator
- Excellent at building interpersonal relationships at all levels and multicultural settings
- Expert at developing/expanding stakeholder/team relationships
- Experienced resource manager: hiring, training, motivating, mentoring, coaching, managing, and evaluating functional resources, project-loaned resources, contractors
- Able to remain level-headed and focused on the vision amidst changing work priorities
- Builder of high-performance teams, individual development plans and career pathing
- Adaptable, energetic, enthusiastic and positive

### **Profile Highlights:**

- Owner, president, and lead visionary of Mana'olana International, LLC.
  - Over 25 years of extensive experience in business consulting; portfolio, program, and project management consulting; customized project management office (PMO) development and building PMO centers of excellence; hiring, training, mentoring and developing PMO staff (project interns/coordinators, project managers, senior project managers, senior program managers, portfolio managers and resource managers); setting up business process management centers of excellence; hiring, training, mentoring business analysts, and simplifying business process reengineering tools and techniques for the business.
- Vice President and Board Chair of The Mana'olana Foundation, INC, the non-profit Native Hawaiian Organization (NHO) majority owner of Mana'olana International.
- The architect of Mana'olana International's and The Mana'olana Foundation's aggressive business development model, with the ultimate responsibility for the success of both companies.
- Current and prior leadership roles include top position in large business environments including those as Owner, President, Board of Director, Founder and Trustee.
- A certified Project Management Professional (PMP) with the Project Management Institute (PMI) 2000-2012, a certified Scrum Master, and an MBA graduate.



- Results-oriented leader highly experienced in business process analysis, Business Process Management, portfolio, program, and project management training/consulting and customized project management curriculum development. Extensive background in development and delivery of professional training courses, graduate and undergraduate academic programs, and executive workshops in portfolio, program, and project management.
- Established, consulted, trained, and mentored several local PMO's both enterprise and IT PMO's: Hawaiian Electric – IT PMO, Engineering PMO, Enterprise PMO, Kamehameha Schools PMO, Hawaiian Airlines PMO, First Insurance Company PMO, Department of Education IT PMO, Business Solutions Technologies PMO, Bank of Hawaii IT PMO, City & County of Honolulu IT PMO, Diagnostic Laboratory Services PMO, First Hawaiian Bank IT PMO, HawaiiUSA Federal Credit Union Enterprise PMO, State of Hawaii IT PMO.
- Training Curriculum Development: Project Management Fundamentals, Advanced Project Management Competencies, Project Management Professional Exam Preparation, Logical Framework Approach, Work Breakdown Structure Basics, Exceeding Stakeholder Expectations, High-Performance Teams, Resources, Roles & Responsibilities, Professional Communication, Time Management, Coaching & Mentoring Leaders, Facilitation Basics, Effective Meeting Management, Effective E-Mail Management, Implementing Organizational Change, Effective Leadership Styles, and Risk Management Basics.
- Experienced Business Leader (20+ years) in the following industries: utility, education, training, telecommunications, information technology, pharmaceuticals, finance, health, insurance, military branches, federal, state and city and county governments.
- Technology Implementer: Broadband over Powerline (BPL), Voice over IP (VoIP), e-business, software platforms, infrastructure/network systems, wireless attachments, software & web development, help desk operations, network engineering, business needs requirements, client & customer servicing operations

### **Education/Certification:**

M.B.A. – Concentration in Human Resources Management – Hawaii Pacific University, December 1994, *(With Distinction – Magna Cum Laude)*

B.S. – Information Systems Computer Science – Brigham Young University – Hawaii, June 1992, *(With Honors – Cum Laude)*

Project Management Professional (PMP) – *International certification for professional project managers by the Project Management Institute (PMI) – (4,500+ hours of project experience)*, March 2000

Certified Scrum Master (CSM) – Certification for Agile methodology by Scrum Alliance, January 2010.



## **Experience:**

Board Chair, Kamalani Academy, September 2014 to present

- Board Chair of a proposed arts integration Public Charter School in Hawaii serving all children of Hawaii K-12.

Technical Analyst, IT Governance, Enterprise Technology Services, State of Hawaii, June 2015 - present

- Project Management consultant, project management, portfolio management, program management, and IT governance process developer, team builder, trainer, mentor, and implementer. See [ITG.Hawaii.gov](http://ITG.Hawaii.gov) for process build, resources, tools, templates, training videos

Senior Project Manager, Oceanit, December 2014 to May 2015

- Senior project manager working on a consulting contract for State of Hawaii to re-build the PMO organization into an enterprise Program Management Center of Excellence. Build PM process, portfolio, governance process, roles and responsibilities, templates, interviewed, hired, trained, mentored new team of project managers for the State of Hawaii.

President, Mana'olana International, LLC, April 2011 – Present

- Federal Government Contracting, Management Consulting, Project/Program/Portfolio Management Services specializing in Construction Management, Engineering Services, Information Technology, Facilitation, Management & Consulting Services.

Vice President and Board Chair, The Mana'olana Foundation, Native Hawaiian Organization (NHO), May 2011 – Present

- The Mana'olana Foundation is a federally recognized non-profit Native Hawaiian Organization (NHO) controlled by Native Hawaiians and primarily serving the Native Hawaiian community. Founded on the core principles of faith, hope, and charity, the organization strives to inspire a sense of self-reliance to all local people and Hawaiians through a set of educational programs designed to enable individuals and families to reach their goals and achieve their dreams.

Vice President and Manager, Project Management Office – Bank of Hawaii, March 2009 – April 2014

- Manager of Project Management Office (PMO) in Information Management Services Group reporting to Senior Vice President and CIO. Establishing project and portfolio management processes within IT and across the enterprise. Responsible for mentoring & training program and project managers responsible for all technology-related programs and projects. Responsible for department and project budgets, strategic planning, company-wide portfolio prioritization, alignment of projects and programs to corporate strategies, establishing PMO guidelines, methodology, policies/procedures. Responsible for business process management program.

Business Owner – Project Professionals, LLC, Active from December 2000 – December 2015

- Business Process Re-engineering (Process Improvement), Portfolio Management, Program Management, and Project Management - Trainer and Consultant for over 50 companies resulting



in 1000+ individuals being trained in project management fundamentals, and 200+ PMPs trained and certified in PMI's project management methodology. Established 14+ PMO's.

- Develops training and consulting programs and curriculum, defines course objectives, outlines participant expectations, trains and certifies attendees, consults business owners and sponsors.

Adjunct Professor – Hawaii Pacific University, Active from August 2000 – December 2011

- Professor for the College of Finance and Business teaching graduate courses in project management to students earning degrees in business, information systems, organizational change, and human resources management. Mentored individuals from 57 different countries who provided project management services to local businesses and non-profit organizations, secured internships and employment for over 50 students. Helped 30+ students become PMP certified.

Director, Project Management Office – Hawaiian Electric Company, December 2001 – October 2004

- Established Project Management Office (PMO) in Information Technology & Services Department reporting to CIO. Mentored & trained 10 program and project managers responsible for all technology-related programs and projects (Broadband over Powerline (BPL) e-business, financial budgeting, phone system, network/infrastructure, software development, business applications, enterprise resource planning systems, and facilities attachments (joint use) program. Responsible for multi-million dollar budget, strategic planning, company-wide portfolio prioritization, alignment of projects and programs to corporate strategies, established PMO guidelines, methodology, policies/procedures. Reported to Chief Information Officer.

Telecommunications Business Manager - Hawaiian Electric Company  
December 2001

February 2000–

- Responsible for all telecommunications programs, projects, and department project managers. Established company joint use program for 5 islands. Organized and led a cross-functional project team consisting of transmission/distribution engineering, land and rights-of-way, legal, finance, permitting/zoning, construction and maintenance, telecom engineering, metering, customer installations, government relations, community relations, marketing, regulatory, purchasing, information technology, customer services, system operations, and human resources. Reported to Telecommunications Director.
- Developed relationships and negotiated contracts with external stakeholders including 8 wireless carriers and communication companies, 4 BPL vendors, Honolulu City & County Permitting Department, State of Hawaii Division of Land and Natural Resources, community neighborhood boards, condo and building associations, Internet Service Providers and telephone carriers.

Project Manager, Training Director – NuSkin/Pharmanex, August 1998 – January 2000

- Project Manager for all technical projects in pharmaceutical headquarters in San Francisco. Implemented new network, phone system, multimedia displays, for all headquarter offices.
- IT Training Director responsible for developing and implementing all training programs for all IT employees. Developed PMP certification training program with University of Phoenix for IT.

Academic Dean – Provo College; Education Director – Stevens Henager College, 12/94 to 7/98  
Program/Project Manager – Dept. of Education, Windward District, 8/92 to 11/94



Network Training Director, Special Projects – Brigham Young University-Hawaii, 5/89 to 6/92  
Division II Projects Supervisor – SoftCopy Inc., 1/87 to 4/89

### **Professional Organizations:**

- Board Chair – Kamalani Academy – proposed Charter School (K-12) on Oahu, Hawaii specializing in Arts Integration, Leadership, Culture, and Financial Literacy 2014-present
- Board Member - Corporate Relations, and member International Institute of Business Analysis (IIBA) 2010-present
- Board Member - Membership and Fund Development, and member Society of Human Resources Management (SHRM) 2008-2012
- Member, Project Management Institute (PMI) Honolulu Chapter 2000-present
- President, Project Management Institute (PMI) Honolulu Chapter 2004-2005
- PMI President-Elect (2003-2004), Education Director (2001-2003), Programs Committee (2000-2001)
- Trustee – PMI Northern Utah Chapter 1998-2000

### **Community Service:**

- Music Chairman, LDS Church – responsible for planning and execution of all music programs, training of all music directors, organists and pianists 2015 to present
- Organist/Pianist 2003 to present
- Employment Specialist – responsible for assisting members with finding employment, school, and training opportunities 2015 to present
- Ward Missionary/Gospel Principles Teacher – responsible for seeking those interested in the gospel and instructing those who are new or unfamiliar with gospel principles 2015 to present
- President of a Children's Organization, LDS Church – 18 months to 11 years old, responsible for leading, teaching, nurturing, staffing teachers, training and mentoring teachers, and cub scout leaders 2x a week 2013-2015
- Seminary Instructor, LDS Church – teenagers 14-17 years old, responsible for teaching youth the scriptures and motivating them to learn every morning prior to school 5 days a week 2010-2013
- President of a Women's Organization, LDS Church – 18 years to 87 years old, responsible for visiting, caring for, teaching, leading, and ensuring the well-being of every woman 2007-2010
- Girls Camp Director, LDS Church – girls 12-17 years old, responsible for teaching, leading, coaching, and mentoring girls to lead others and themselves, teach girls camp requirements, fulfill assignments and roles, successfully organize and execute annual week long camps 2007-2009



## Professional and Personal References:

Leila Kagawa (former PMO Program Officer for the State of Hawaii, IT PMO)  
Workforce Development Manager  
State of Hawaii, Enterprise Technology Services

[REDACTED]

Jennifer Pedro (former project management and PMO client)  
Vice President and PMO Manager  
Diagnostic Laboratory Services

[REDACTED]

Carolyn Yoshihara, PMP, MBA (current partner)  
Partner/Project Management Consultant & Trainer  
Project Professionals, LLC

[REDACTED]

Gwen Kojima (current business process reengineering client)  
Manager  
Oceanic Time Warner Cable

[REDACTED]

Tiana Koga, MBA, CPP (project management client)  
Outreach Programs Director  
Hawaii Community College

[REDACTED]

Robert Nievera, PMP, MBA (former employee)  
Project Manager  
First Hawaiian Bank

[REDACTED]

Brad Kellaway, PMP, MSIS, MBA (former graduate student and friend)  
President  
Kayway Global Solutions

[REDACTED]

[REDACTED]



# Board Member Information

To be completed individually by each Applicant Governing Board member.


All forms must be signed by hand.

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

## Background

1. Name of charter school on whose governing board you intend to serve: Kamalani Academy
2. Contact information:  
Name: S. Ku'uipo Laumatia  

3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.  
☒ Resume and professional bio are attached to this form.
4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.  
☐ Does not apply to me ☒ Yes
5. Why do you wish to serve on the governing board of the proposed charter school?  
I wish to serve on the Kamalani Academy Board to serve the keiki of Hawai'i and their 'ohana in providing an enriching, inspiring and motivational environment that our keiki can create, innovate, communicate, collaborate, and thrive in.
6. What is your understanding of the appropriate role of a public charter school governing board member?  
My role as a public charter school governing board member is to ensure that the public funds entrusted to the charter school are utilized in the most efficient and effective manner to service our keiki, parents, teachers, administrators, support staff, and community to accomplish our academic plan goals and life learning objectives, as well as meet all state and federal compliance and regulatory statutes including all union and DOE requirements.



7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.

I served on the PMI Northern Utah Chapter Board of Trustees 1996-2000, The PMI Honolulu Chapter as Education Director, Programs Committee Director, Professional Development Director, President Elect and President from 2000-2005, The Society of Human Resources Management Board as Membership Director, Executive Membership Director and Fund Development Director from 2008-2012, The International Institute of Business Analysis Board as Corporate Relations Director from 2010-2013, and the Murray Whanau Trustees Board from 2013 – 2016.

8. Describe the specific knowledge and experience that you would bring to the governing board.  
I bring my business ownership and entrepreneurial knowledge, governance expertise, project management experience, academic perspective and life experience as a mother of 10 to the governing board.

### **School Mission and Plan**

1. What is your understanding of the school's mission and guiding beliefs?

The mission of Kamalani Academy is: "Each of our students is born with great abilities. We use the arts to release those talents. The arts enhance the learning of core academic subjects and also provides students with vital skills such as creativity, communication, leadership and collaboration." Kamalani Academy, through arts integration, will actively engage and challenge students in a meaningful curriculum which will increase literacy skills and overall academic achievement. The positive learning environment embraces cultural diversity and nurtures the child's self-esteem and love of learning. Kamalani Academy strives to actively involve educators, families, and the community in our learning process.

All of this helps to execute our vision which is to provide "A space where children become leaders, prepared for a Twenty First Century we cannot even imagine." Only the children of Hawai'i will know what the future holds and what it will bring because they are the ones who are creating the future for all of us, day by day.

Our guiding beliefs include the core values the DOE has mandated for every public school based on the Na Hopena A'o statements of HA: BREATH of life. These values include B – belonging, R – responsibility, E – excellence, A – aloha, and T – total well-being, and H – a strengthened sense of place – Hawai'i. These values are the basic foundation of Kamalani Academy, which together with our mission and vision, will guide our pathway and our beliefs.

2. What is your understanding of the school's proposed academic plan?

Our proposed academic plan is based on an innovative arts integration curriculum that will increase a child's ability to achieve success by actively engaging them and challenging them to innovate and create meaningful, lasting, learning experiences for themselves and others. This leads to increased literacy skills, sound leadership experience, a collaborative and synergistic attitude resulting in increased self-esteem, and a life-long love of learning and application that will forever increase the child's quality of life.

3. What do you believe to be the characteristics of a successful school?

Our school will be successful when we are able to do what we said we would do, when the school is governed with thoughtfulness, consideration, and aloha, when children, parents, teachers, and the community are working together to make a difference in the lives of our children, and when the mana or "spirit" of the school is ever present and felt in the hearts of those who are part of the Kamalani 'ohana.

4. How will you know that the school is succeeding or is not succeeding in its mission?

We will know we are succeeding when we have happy children, parents, teachers,



administrators and community members. We will know we are succeeding when we have developed life-long learners with leadership skills, thoughtful communicators, critical and analytical thinkers, confident decision makers, resilient problem solvers, collaborative colleagues, and imaginative and creative solutionists who positively advocate for themselves and others.

We know we will have met our mission when our keiki develop the essential skills and understanding for college, career, and life readiness. We will have succeeded in our kuleana when are children are operating as thriving, contributing members of our local and global communities.

### **Governance**

1. Describe the role that the governing board will play in the school's operation.  
The governing board has an academic, operational, and fiduciary responsibility in making sound decisions that will positively impact our children, parents, teachers, staff, administrators and community. As a well governed and successfully operated school, we will continue to fulfill our mission and vision.
2. How will you know if the school is successful at the end of the first year of operation?  
If we have met all academic, operational, and fiduciary goals at the end of the first year, that is one indicator of success. If we have provided an enriching learning experience for our keiki, attained our student enrollment goals, and have satisfied our key stakeholders – children, parents, teachers, staff, administrators, community – that is another indicator of first year success. Finally, if we have a stable financial balance sheet and income statement, and have met all state, federal and commission compliance and reporting requirements that will be our third indicator of first year operational success.
3. How will you know at the end of five years if the school is successful?  
If we are thriving operationally and have more children whose parents want them to attend Kamalani than we have room for, that will be our indicator if the school is successful at the end of year 5.
4. What specific steps do you think the governing board will need to take to ensure that the school is successful?  
The governing board needs to communicate clearly with all key stakeholders, take the right information into account when making decisions, be aware of and listen to the children, parents, teachers, staff, and administrators of Kamalani. The governing board needs to use their wisdom and judgment to ensure the school is always moving forward in fulfilling its mission and vision and that the children, parents, teachers, staff, and administrators are happy, productive, and supported.
5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school?  
I would speak to that board member directly to ensure that the assumption of unethical actions were in fact true before bringing it to the entire board to discuss and decision what would be in the best interest of Kamalani Academy.

### **Disclosures**

1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☐ I/we do not know these individuals ☒ Yes



Lei Cummings, Pat Macy, Steve Davidson, and Blaine Fergerstrom are all former colleagues or acquaintances of mine.

2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☒ I/we do not know any such employees ☐ Yes
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons ☐ Yes
4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we do not anticipate conducting any such business ☐ Yes
5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
☐ Not applicable because the school does not intend to contact with an education service provider or school management organization.  
☒ I/we do not know any such persons ☐ Yes
6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
☐ N/A. ☒ I/we have no such interest ☐ Yes
7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.  
☐ N/A ☒ I/we or my family do not anticipate conducting any such business ☐ Yes
8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.  
☒ Does not apply to me, my spouse or family ☐ Yes
9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.  
☒ None ☐ Yes



**Certification**

I, S. Kuipo Laematai, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.

S. Kuipo Laematai  
Signature

January 20, 2016  
Date







# C. LEI CUMMINGS, MBA

## Executive Profile

An accomplished professional with excellent organizational, information technology and people skills. Successful in fundraising millions for charitable and nonprofit entities. Experienced in event and program planning, working with groups, large budgets and marketing. Over twenty years of experience in information technology project implementation and computer support including: fiber optic cabling, telephony (VOIP), network and email installation and support, Data Center construction, Call Center operations, Computer desktop rollout and support. Recognized in 2004 as one of the Top Technology Leaders in Hawaii by Lt Governor Duke Aiono. Also a 2002 nominee for Hawaii's iTEC 'Pono' Award, recognizing innovative solutions in Information Technology in Higher Education. In 1996, awarded the exceptional service award at BYU-Hawaii.

Career	<i>President, The Mana'olana Foundation</i> <span style="float: right;"><i>2011-Present</i></span> <ul style="list-style-type: none"><li>Native Hawaiian Organization to benefit Hawaiian families in their educational pursuits. Owner of Mana'olana International Inc.</li></ul>
	<i>Board of Director, Mana'olana International, Inc.</i> <span style="float: right;"><i>2011-Present</i></span> <ul style="list-style-type: none"><li>Co-founder of company that provides services to the Federal government for contract work in the area of managerial services, project management, construction, IT and engineering.</li></ul>
	<i>Associate Director of Major Gifts, LDS Philanthropies Hawaii</i> <span style="float: right;"><i>2007-Present</i></span> <ul style="list-style-type: none"><li>Recruited to work closely with Presidents, administrators and supporters of BYU-Hawaii, PCC and the LDS church on major fundraising priorities.</li><li>Responsible for developing and maintaining good relationships with patrons and supporters.</li><li>Facilitate donations to all Church charities including all educational institutions and Humanitarian Aid.</li><li>Successful in generating millions of dollars annually toward the fundraising goals for BYU-Hawaii, Polynesian Cultural Center and the LDS church.</li></ul>
Highlights of Achievements	<i>Director of Marketing &amp; Executive Programs, BYU-Hawaii CITO</i> <span style="float: right;"><i>2004 - 2006</i></span> <i>(Center for Instructional Technology &amp; Outreach)</i> <ul style="list-style-type: none"><li>Recruited to assist new division with marketing efforts and new professional programs in Asia and the Pacific.</li><li>Help to develop new marketing materials for distribution to Asia and the Pacific.</li><li>Developed several new programs to generate revenue including new executive programs, Six Sigma training, Aloha Summer and sports camps</li><li>Create and maintain relationships with vendors and the community.</li><li>Assist with technology solutions for distance education in Asia &amp; the Pacific.</li></ul>
	<i>Director for Information Technology Services, BYU-Hawaii</i> <span style="float: right;"><i>1999 - 2004</i></span> <ul style="list-style-type: none"><li>Selected as one of the 2004 "Top High Tech Leader" in Hawaii.</li></ul>



- Invited to speak at the 2004 Technology Conference hosted by Oceanic Cable. Presented "Wireless Waikiki" proposal for HPU MBA class.
- Managed of over 20 full-time and 30 student employees with responsibility over network, servers, desktop, call center operations, training and project management support for BYU-Hawaii campus.
- Planning and implementation of an extensive re-design of network cabling on campus. Project costs were close to \$500k and lasted over three years resulting in new fiber optic cabling and better management of cable using wire closets. Network reliability improved by 100%.
- Implemented a new VOIP technology system on campus.
- Planning and management of new desktop support and imaging system to provide quicker turnaround time for new computer setups and trouble tickets. Support time cut in half.
- Responsible for annually million dollar budget to manage IT operations and projects. Created a system for billing of services to keep vital operations running. Designed onsite support contracts offering technicians to departments for custom support.
- Planning and implementation of a new \$250k Storage Area Network System designed to provide file space to students, faculty and staff for their data in a protected and redundant environment.
- Planning and oversight of the construction of a new Data Center for critical IT production equipment. New building houses a generator and provides backup for power, air conditioning and protection against fire hazards. New facility has dramatically increased network uptime by 100%.
- Planning and implementation of a new enterprise management system providing 24 x 7 monitoring of all critical IT and non-IT equipment on campus.
- Planning and implemented the deployment of a new ticketing system that ties in directly to enterprise management creating event logs automatically for engineers to respond to and update. Productivity increased by 50%.

<b>Career Progression</b>	<b><i>Information Systems Adjunct Faculty, BYU-Hawaii</i></b>	<b><i>1993 - 1999</i></b>
	<ul style="list-style-type: none"> <li>• Taught core Computer Competencies Class educating students on the use of Operating Systems, Word Processing, Spreadsheet and Database applications.</li> <li>• Taught Systems Analysis to college seniors. Created projects for students to assist with on campus and invited professionals in the industry to speak.</li> <li>• Taught Microcomputer Information Systems to college students educating them on management strategies, IT operations and support.</li> </ul>	
	<b><i>Microcomputer Support Manager, BYU-Hawaii</i></b>	<b><i>1994-1999</i></b>
	<ul style="list-style-type: none"> <li>• Organized and designed the BYU-Hawaii Tech Fair showcasing technology for campus users and the community bringing in vendors from the mainland and Hawaii. This event became a highlight for students, faculty, staff and other educational institutions in the community for 8-years.</li> <li>• Organized an annual IT Boot Camp which provided a week-long training program for IT staff focusing on a different area of support each day. This program was in existence for 10-years.</li> <li>• Organized and designed the BYU-Hawaii IT Job Fair to help in finding jobs for college students both locally and in the mainland. Established</li> </ul>	



relationships and internships with vendors and assisted many students with the transition from college to work. This program was in existence for 7-years. Several students were offered jobs with big corporations like Microsoft, Apple, Oracle and Novell to name a few.

- Increased employee retention rate by 90% focusing on training, team building and recognition programs. Earned a reputation as one of the most sought after departments for student jobs on campus.
- Established and designed policies and procedures for a newly established Computer Support Department. Created a mission statement, vision and objectives for the department while organizing a new employee orientation-training program.
- Implemented single vendor support program for all desktop, server and network equipment acquisitions. This total cost of ownership (TCO) model resulted in lower acquisition costs, improved vendor support and reduced cycle times for hardware maintenance.
- Designed and implemented a customer service help desk system using an online web system developed in-house. This system was successfully used for close to 8-years providing a valuable way for technicians and customers to keep track of their requests.
- Began and organized the IT training at BYU-Hawaii offering formal workshops for faculty, staff and students in standard applications used on campus.

***Programmer/Analyst, Polynesian Cultural Center***

***1986-1994***

- Recruited to work in the center's first MIS department after graduation.
- Deployed the first microcomputers and provided support, and training.
- Established the first budgeting system for the Cultural Center. Created sophisticated macros to automate the budget process for employees.
- Setup and managed the first mainframe system used by the center for payroll, reservations, accounting and asset management. Project took over a year to complete.
- Implemented the first time clock system.
- Started a computer-training column for the center's monthly newsletter.
- Created special high-profile board presentations for the President and PCC management team.

**Education and Training**

***Master of Business Administration, Information Technology, 2005***  
HAWAII PACIFIC UNIVERSITY

***Bachelor of Science, Computer Information Systems, 1986***  
BRIGHAM YOUNG UNIVERSITY - HAWAII CAMPUS

**Continuing Professional Development:**

- ***Fundraising School***, LDS Philanthropies, 2007
- ***Big Ten Fundraisers Institute (BTFRI)***, 2008
- ***Six Sigma***, Tony LaTurner, Pacific Rim Consulting, 2005
- ***Project Management***, Ernie Nelson Consulting, BYU Provo 2002
- ***Call Manager 3.3 (VOIP)***, Cisco 2002
- ***Four Roles of Leadership***, Steven Covey 2001
- ***A+ Certification***, CompTIA, 2001
- ***Call Center Management***, Help Desk Institute, 1996



- *Novell Netware Administration*, BYU-Hawaii, 1993
- *Computer Maintenance & Repair*, Kapi'olani Community College, 1992

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#### Affiliations


<i>Council for Advancement &amp; Support of Education (CASE)</i>	2010-2012
<i>BYU-Hawaii Enactus, Business Advisory Board</i>	2009-Present
<i>Ko'olaupia Educational Alliance, Secretary/Board of Directors</i>	2002-2009
<i>The Kamaupia Foundation, Vice President/Board of Directors</i>	2006-2008
<i>Ko'olaupia Track &amp; Field Club, President/Board of Directors</i>	1999-2009
<i>Educause, National Organization for High Ed Institutions in IT</i>	2000-2003
<i>iTEC Hawaii, Board of Directors</i>	2001-2002
<i>BYU - Hawaii Alumni, Executive Board of Directors</i>	1999-2003
<i>Project Management Institute (PMI)</i>	1998-1999

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#### Community

- Helped to donate computers to local schools on behalf of BYU-Hawaii that helped to establish new computer labs for students.
  - Provided free computer support and network services to local schools and businesses.
  - Provided free computer-training for teachers and professionals.
  - Created computer mini Boot Camps for elementary students.
  - Board Member and IT Consultant for 'Kahuku.org', a retail store and e-commerce website for Kahuku High School. The City and Council of Honolulu recognized Kahuku.Org for its success in April 2003.
  - Co-founder of the Ko'olaupia Track & Field Club to provide activities for community children and adults. Wrote grants and secured funding for track equipment and uniforms. Awarded scholarships to high school seniors to honor of club founder, John Cummings.
  - President of the Primary Organization for the Laie 8<sup>th</sup> Ward, LDS church. Oversee 120 children and 30 teachers each week and provide gospel teaching.
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#### References

*Alfred Grace, President/Polynesian Cultural Center*  


*Tim Critchlow, Former Director/LDS Philanthropies*  


*Dr. Phillip McArthur, Dean/BYU-Hawaii*  


*Napua Baker, Former Vice President, BYU-Hawaii*  


*Shauna Ockey, President/Tanbridge Academy*  




*Dr. Bret Ellis*, Former Chief Information Officer, BYU-Hawaii & VP for Information Technology, Weber State University; Email: [bret.r.ellis@gmail.com](mailto:bret.r.ellis@gmail.com)



## Board Member Information



To be completed individually by each Applicant Governing Board member.  
All forms must be signed by hand.

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

### Background

1. Name of charter school on whose governing board you intend to serve:
2. Contact information:  
Name: Lei Cummings  
Phone:   
E-mail: 
3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.  
☐ Resume and professional bio are attached to this form.
4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.  
☐ Does not apply to me ☒ Yes The Mana'o lani Foundation, President
5. Why do you wish to serve on the governing board of the proposed charter school? To serve my community and help provide better educational opportunities for our keiki.
6. What is your understanding of the appropriate role of a public charter school governing board member? To help, advise and oversee school curriculum
7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member. I served last year as a board member of Kamalani Academy; Attended city council meetings
8. Describe the specific knowledge and experience that you would bring to the governing board.

### School Mission and Plan

1. What is your understanding of the school's mission and guiding beliefs? Kamalani will prepare self-directed individuals, to lead themselves and others, to live in a
2. What is your understanding of the school's proposed academic plan? performing arts, Hawaiiana values, to become responsible, productive adults who passionately embrace and into an innovative future

[School Name] Kamalani Academy

Attachment U - Page 1



3. What do you believe to be the characteristics of a successful school? *Happy Teachers, students, parents; students learn and score well on nat'l tests.*
4. How will you know that the school is succeeding or is not succeeding in its mission? *(same as above - include performing Arts and Hawaiian studies)*

#### Governance

1. Describe the role that the governing board will play in the school's operation. *Very little - this should be handled by the principal and*
2. How will you know if the school is successful at the end of the first year of operation? *Academic*
3. How will you know at the end of five years if the school is successful? *By the feedback we receive from parents, teachers, students and by student scores.*
4. What specific steps do you think the governing board will need to take to ensure that the school is successful? *(same as above - growth)*
5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school? *Market school, get parent interest, surveys, focus groups, parent meetings, teacher meetings*

#### Disclosures

1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☒ I/we do not know these individuals ☐ Yes
2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☒ I/we do not know any such employees ☐ Yes
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons ☐ Yes
4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we do not anticipate conducting any such business ☐ Yes
5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
☐ Not applicable because the school does not intend to contact with an education service provider or school management organization.  
☒ I/we do not know any such persons ☐ Yes
6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
☒ N/A. ☐ I/we have no such interest ☐ Yes
7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.



N/A I/we or my family do not anticipate conducting any such business Yes

8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.

☒ Does not apply to me, my spouse or family ☐ Yes

9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.

☒ None ☐ Yes

#### Certification

I, Lei Cummings, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.

Lei Cummings

Signature

1/20/16

Date



# Curriculum Vitae

**MARK J. KOHLER, M.Pr.A., C.P.A., J.D.**

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## EDUCATION

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WILLAMETTE UNIVERSITY COLLEGE OF LAW, SALEM, OREGON  
*Juris Doctor, 2000*

UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH  
DAVID ECCLES SCHOOL OF BUSINESS  
*Masters of Professional Accountancy - Taxation, 1997*

UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH  
*Bachelor of Sciences, Accounting, 1996*

## CREDENTIALS

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LICENSED CERTIFIED PUBLIC ACCOUNTANT AND ATTORNEY

PARTNER – KYLER KOHLER OSTERMILLER & SORENSEN, LLP

PARTNER - KOHLER & EYRE CPAs, LLP

AUTHOR- “WHAT YOUR CPA ISN’T TELLING YOU- LIFE CHANGE TAX STRATEGIES”, 2011

AUTHOR- “LAWYERS ARE LIARS- THE TRUTH ABOUT PROTECTING OUR ASSETS”, 2007

HOST OF THE “MARK KOHLER SHOW”- BLOG TALK RADIO (5 YEARS AND RUNNING)

TAX AND LEGAL CONTRIBUTOR FOR ENTREPRENEUR.COM, UPS.COM AND MULTIPLE OTHER NEWS OUTLETS, INCLUDING HIS OWN BLOG AT [WWW.MARKJKOHLER.COM](http://WWW.MARKJKOHLER.COM).

ACCREDITED SPEAKER FOR UTAH DIVISION OF REAL ESTATE ON TAX AND LEGAL TOPICS

## FAMILY & INTERESTS

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MARRIED WITH FOUR CHILDREN

EAGLE SCOUT AND CURRENT SCOUT MASTER FOR TROOP 793, LADERA RANCH, CA

ENJOYS SURFING, GOLF, BIKING AND FLY FISHING



# Board Member Information


To be completed individually by each Applicant Governing Board member.  
All forms must be signed by hand.

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

## Background

1. Name of charter school on whose governing board you intend to serve:  
**Kamalani Academy**
2. Contact information:  
Name: Mark J Kohler  

3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.  
☒ Resume and professional bio are attached to this form.
4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.  
☐ Does not apply to me ☒ Yes
5. Why do you wish to serve on the governing board of the proposed charter school?  
To help children receive better education
6. What is your understanding of the appropriate role of a public charter school governing board member?  
Assist in decision making and acting in compliance with the school's charter, including state and local laws.
7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.  
I have the professional credentials of a CPA, Lawyer, Master's degree, Law degree, I taught courses at Southern Utah University as an adjunct professor and I speak around the



country as a national expert on business issues.

8. Describe the specific knowledge and experience that you would bring to the governing board.  
See item 7 above.

### **School Mission and Plan**

1. What is your understanding of the school's mission and guiding beliefs?  
The primary mission of the school is to produce life-long learners and leaders through integration of the arts into the academic environment of the school.
2. What is your understanding of the school's proposed academic plan?
  - a. Blending the arts with the academics
  - b. Growing the student body
  - c. Compliance with the new Common Core Standards
  - d. Frequent assessment of progress
  - e. The philosophy of Positive Behavioral Support to nurture student growth
3. What do you believe to be the characteristics of a successful school?
  - a. Operating in compliance with the charter
  - b. Operating in a fiscally sound manner
  - c. Help kids have a positive experience and better education
4. How will you know that the school is succeeding or is not succeeding in its mission?
  - a. Regular testing of students
  - b. Feedback from parents
  - c. Feedback from instructors
  - d. Feedback from the community
  - e. Feedback from the staff
  - f. Feedback from the other board members

### **Governance**

1. Describe the role that the governing board will play in the school's operation.  
The governing board will be responsible for the financial, organizational and academic performance of the school and for adherence to the charter.
2. How will you know if the school is successful at the end of the first year of operation?  
Kamalani Academy will be successful at the end of its first year of operation if it has met or exceeded the metrics outlined in the first phase of the application.
3. How will you know at the end of five years if the school is successful?  
Kamalani will have met or exceeded its five year metrics in the areas outlined above.
4. What specific steps do you think the governing board will need to take to ensure that the school is successful?
  - a. Act with independence, due care, and with a fiduciary duty
  - b. Meet regularly and make careful decisions
  - c. Reviewing the operations of the company on a regular basis
  - d. Involvement in the community



e. Monitoring achievement of all goals and objectives

5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school?  
Complete a thorough investigation gathering all of the facts and then meet as a Board making transparent and unbiased decisions in the best interest of the school.

### Disclosures

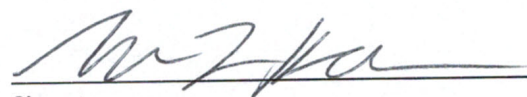
1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☒ I/we do not know these individuals ☐ Yes
2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☒ I/we do not know any such employees ☐ Yes
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons ☐ Yes
4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we do not anticipate conducting any such business ☐ Yes
5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
☐ Not applicable because the school does not intend to contact with an education service provider or school management organization.  
☒ I/we do not know any such persons ☐ Yes
6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
☐ N/A. ☒ I/we have no such interest ☐ Yes
7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.  
☐ N/A ☒ I/we or my family do not anticipate conducting any such business ☐ Yes
8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.  
☒ Does not apply to me, my spouse or family ☐ Yes
9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.



None      Yes

**Certification**

I, MARK J. KOHLER, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.



Signature

1/28/16

Date



# Rae Takemoto



## Work Experience

- Turnaround Arts Hawai'i, 2015-present; Local Program Director

## Teaching Experience

1986-present

- Pomaika'i Elementary School, 2007-present; Arts Integration Literacy Curriculum Coordinator/Coach/Vision Leadership
- Kula Elementary School, 1991-2007; taught 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> grades, heterogeneously grouped self-contained classrooms
- Haiku Elementary School, 1987-1991; taught 2<sup>nd</sup> and 6<sup>th</sup> grades, heterogeneously grouped self-contained classrooms
- Mother Rice Preschool, 1985-1986; taught 3-5 year olds

## Relevant Experiences at Pomaika'i School

- Coach and coordinator of teacher leadership groups
- Academic Review Team school lead
- Common Core, Teacher Induction, STEAM Lead
- EES Co-Lead
- Develop sustainable whole school arts integration model
- Coach all teaching staff in arts integration
- Coordinate all arts related and Common Core professional development
- Coordinate all arts residencies and related arts programs for students
- Support all arts related programs involving the school's neighborhood community
- Ongoing workshop presenter in drama and visual arts integration for Pomaika'i School and other professionally related organizations
- Program developer for STEAM (Science, Technology, Engineering, Arts, Math)
- Co-Coordinator and facilitator of Action Research projects
- Coordinator of professional learning communities
- Lead coordinator of new teacher mentoring
- Co-chair of PTSA's Reflections Program (arts program)
- Coach for Pomaika'i School's student public relations team (purpose is to teach students to educate community on the powerful learning in and through the arts)
- Anne Davies Summer Institute on Formative Assessment; 2008
- Multisensory Math and Thinking Maps trainer





- Grant writer for arts related programs
- Coordinator of school-wide program-Waihe'e Shoreline; service learning projects to restore the Waihe'e Wetlands and Shoreline, as well as advocate for our environment

### **Relevant Experiences at Kula School**

- Co-Coordinator and teacher leader of Action Research projects, 2002-2005
- Facilitated Kula School's 3 Arts Excellence Awards
  - Wrote the applications and coordinated school-wide professional development projects and artist residencies-visual arts, literary arts, and digital arts (incorporating all art forms)
- Arts Lead teacher with the Maui Arts and Cultural Center 1999-2007
- Ebb and Flow Teacher Facilitator 2003-2005
  - Assisted musician/composer, Robert Pollock, as he developed the "Scaling Haleakala" music curriculum
- Technology workshop presenter for staff-2002
- Goals 2000 grant-Integrating the Arts professional development school representative
- Taught Multiple Intelligences workshops for teachers and community members 1999

### **Related Professional Experiences (Professional Development / Presentations)**

- Kennedy Center Partners In Education: Department of Education partner w/ Maui Arts & Cultural Center (Hawaii '95 Team)-2009 till present
- Kennedy Center Annual Partners in Education Conferences
  1. Advisory Committee Member representing the West (AZ, CA, HI, NM, NV) 2011-2014
  2. Workshop Co-Presenter, "Design Thinking in Secondary Schools; - Feb. 2015
  3. Workshop Co-presenter, "Bringing Research to life" - Feb. 2014
  4. Plenary Presenter: "Whole School Professional Development for Sustainability"- Feb. 2013
  5. Workshop Co-presenter at Kennedy Center Annual Meeting, "Classroom Teacher + Teaching Artist = Moving Beyond Mentorships"; Feb. 2009
  6. Workshop Co-presenter w/on action research. Demonstrated an arts integrated lesson to show how to collect data in the arts-Feb. 2004
- Maui Arts and Cultural Center:
  - Arts Education Advisory Board 2007-present
  - 1000+ hours of professional development
  - Speaker for various MACC donor functions regarding the importance of supporting arts education
  - Teacher Mentor for Arts Integration Research Project 2005-2007 at Kihei Elementary School
  - Workshop presenter
    1. Co-presenter for lead teachers: Storytelling/writing integration lesson
    2. Neighborhood Bridges (Storytelling/writing)
    3. China Alive (Multidisciplinary Instructional Unit w/strong emphasis on the arts)
    4. Multiple Intelligences (An Introduction to MI Theory)





- HI Dept. of Education; Presenter: Whole School Model Using Arts Integration – Dec. 2013
- Right Brain Initiative Summer Institute Workshop Presenter; Portland, Oregon; 2012
- The Hawaii Association for Independent Schools □ Schools of the Future Conference; Co-presenter: Pomaikai School Whole School Model; Presenter: Drama integration experience for 800+ conference attendees; Oct. 2010
- Education Leadership Institute (ELI) in Chicago, National Endowment of the Arts initiative; DOE representative on State Team; March 2009
- Hawaii Apple Learning Interchange, 2003-2005
  - Authored and implemented three arts integrated units of study (3 lessons in each) for the Apple Learning Interchange, an online professional development resource by Apple Computers
- United States Department of Education Research to Practice Summit in Washington DC, July 2004
  - Represented State of Hawaii at the annual summit of best practices in research development. Invited by Doug Herbert, Special Assistant on Teacher Quality and Arts Education to the Secretary of Education
- Partners in Education Arts Education Institute in Silver City, New Mexico; Workshop presenter: “Action Research in the Arts”; Aug. 2004
- Hawaii Governor’s Conference on Arts Education, Workshop presenter-“China Alive” (Interdisciplinary Arts Unit); 2003
- Harvard University-Project Zero Summer Institute, 1999
- International Peace Poem Organization
  - Authored poetry lessons for their website

### **Professional Affiliations and Awards**

- Maui Arts and Cultural Center-Master Teacher of Arts Integration Mentor
- Maui Dance Council Board-Vice President, 2000-present
- Hawaii Writing Project Advisory Board, 2010
- Association for Supervision and Curriculum Development 2008-present
- Hawaii Association for Independent Schools Visiting Committee 2010-2011
- Hui No’eau Art Center-Program Advisory Board 2006-2007
- International Peace Poem Teacher of the Year 2006
- Hawaii Council of Teachers of Mathematics, 2005-2007
- Both Sides Now-Teacher Award 2005
- State of Hawaii Global Teacher of the Year 2003
- Maui Literacy Council
  - President Elect 2000-2002 / Vice President 1999-2000
- Recognized as a “Hawaii Top Teacher” by Star Bulletin Newspaper, 1997





## Education

University of Hawai'i-Manoa; Bed / PD

Dec. 1985

- B.Ed and Professional Diploma (Masters in Ed equivalent) in Elementary Education



# Board Member Information



**To be completed individually by each Applicant Governing Board member.  
All forms must be signed by hand.**

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

## Background

1. Name of charter school on whose governing board you intend to serve: Kamalani Academy School
2. Contact information:  
Name: Rae Takemoto  
Phone:   
E-mail: 
3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.  
X Resume and professional bio are attached to this form.
4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.  
Yes: Currently serving as President of the Maui Dance Council Board.
5. Why do you wish to serve on the governing board of the proposed charter school? Hawaii's students need a variety of educational opportunities beyond the traditional school approach. I believe an arts integrated instructional approach facilitates deeper learning, provides multiple access points into curriculum, and cultivates a school culture of collaborative learning. I fully support Kamalani's mission to embrace the diversity of their learners, as well as help students find and develop their individual talents.
6. What is your understanding of the appropriate role of a public charter school governing board member? Governing board members utilize their expertise in an advisory role, with a responsibility for the financial, academic, and management performance of the school in a manner that is compliant with the school's state and local laws, as well as collective bargaining agreements.



7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member. I've worked collaboratively on many educational committees at local, state, and national levels, often serving in a leadership capacity. I helped open an arts integrated school and have co-created a structure and system to sustain effective school systems and practices. My professional experiences have served me well in developing my communication and collaboration skills, taking a strength based teaming approach toward organizational change and leadership.
8. Describe the specific knowledge and experience that you would bring to the governing board.
  - a. 30 years of teaching experience
  - b. 20 years of professional experience in developing and implementing arts integrated curriculum through arts strategies
  - c. Coaching educators in arts integration
  - d. Developing school-wide immersion of vision and mission
  - e. Developing shared leadership practices
  - f. Planning and coordinating professional development in arts integration.
  - g. Planning and coaching for supporting classroom implementation of arts instructional strategies.
  - h. State and National network of arts educators' peer to peer support

### **School Mission and Plan**

1. What is your understanding of the school's mission and guiding beliefs? Kamalani believes that all students have talents, intelligences, and leadership potential that can be uncovered or discovered and fully developed through an arts integrated approach. Students thrive when they learn in a collaborative and creative educational environment and are connected to the place where they live.
2. What is your understanding of the school's proposed academic plan?

The academic plan includes:

  - Common Core Standards aligned English Language Arts and Math curriculum, taught through arts integrated strategies to build content understandings, process skills, communication and collaboration skills, cultural empathy, and a growth mindset.
  - Curriculum, instruction, and assessment are designed to develop learning habits, like resiliency, perseverance and risk-taking.
  - Educational content and approach includes learning about and nurturing a growing connection to the culture of living in Hawai'i.
  - Ongoing formative and summative assessments will inform the scaffolding of instruction for each child.
  - A positive behavioral system with guidance education will provide the social-emotional support for every child.



3. What do you believe to be the characteristics of a successful school? A successful school:
  - Meets the educational goals of the whole child (academic, emotional, and social goals) through a systems approach, such that the structure and resources of the school are strategically leveraged to serve school's vision and mission.
  - Has visionary leadership who can operationalize, make tangible, the mission of the school
  - Develops 3-5 year plans and adjusts accordingly based on a variety of data, utilizing different metrics to assess the school's progress.
  - Utilizes ongoing professional development on curriculum, instruction, assessment, and collaborative shared leadership, with strategic supports for classroom implementation, with a 3 year implementation plan that cycles and builds.
  - Parent, families, community are woven into the fabric of the school's operations and value systems. Parents are present and actively engaged in school, as well as supporting school related efforts in the community.
  - Community partnerships are actively in place to support the innovative learning of the school.
  - Students, teachers, staff, and parents feel safe, nurtured, and valued in the school.
  - Exhibits a palpable sense of joyful learning in all school settings.
  
4. How will you know that the school is succeeding or is not succeeding in its mission? I will know Kamalani is succeeding when: Students demonstrate the understandings, skills and attitudes to be well prepared for high school, college, and life. They are leaders who contribute to their communities, who are global and growth minded. Students communicate and collaborate effectively, take and encourage risk taking, creatively solve problems, and care about each other, their communities, and the world they live in. This also holds true for the faculty. Evidence includes the above indicators of a successful school and shows:
  - Academic growth
  - Academic Achievement
  - Quality students' portfolios and projects
  - Meaningful self selected students' service learning projects
  - Creative school environment with a collaborative school culture
  - Classroom teachers consistently integrating the arts, with a project based learning focus.
  - Low teachers and student transiency
  - School's Academic and Financial Plan has short term and long term goals, with clear measures. Plan demonstrates actions aligned with vision and mission.
  - Cohesive professional development plan
  - Low number of behavioral referrals to the office
  - High school attendance / low absenteeism
  - High satisfaction in attitudinal surveys of students, parents, and faculty.
  - Extra-curricular opportunities for students

### **Governance**

1. Describe the role that the governing board will play in the school's operation.  
The board will act with independence to determine the organization and management of the school and its curriculum, including the financial, organizational, and academic performance of the school and adherence to its charter.
  
2. How will you know if the school is successful at the end of the first year of operation?  
Kamalani will be successful at the end of its first year of operation if it has met or exceeded the metrics outlined in the application in such areas as academic achievement, attendance, stakeholder satisfaction, enrollment numbers, fiscal soundness, board professional development, and teacher retention.



3. How will you know at the end of five years if the school is successful?  
Kamalani will have met or exceeded its year five metrics in the areas outlined above.

4. What specific steps do you think the governing board will need to take to ensure that the school is successful? The governing board will need to meet regularly with a focus on monitoring achievement of all goals and objectives, review the fiscal operation of the school and adherence to the charter and all applicable laws. The board will need to involve students, faculty, parents, community whenever possible. Board members will do site visits with a lens for supporting the implementation of school goals, and by identifying markers of mission attainment.
5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school? I'd find out as much information as possible, including speaking with the member. I'd bring my concern to the governing board to seek solutions and different perspectives. If needed, I'd consult with the Charter School Commission.

### Disclosures

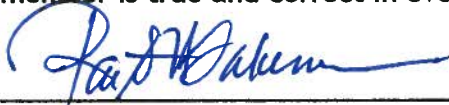
1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☒ Yes  
I know Ku'uipo Laumatia and the other board members through our work together in this application process. I've worked with Jamie Simpson Steele through my employment with Pomaika'i School, the first public arts integrated school in Hawai'i. I've hired Jamie for professional development for our teachers, developed plans for supporting school-wide strategies and teacher peer to peer support.
2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☒ I/we do not know any such employees
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons
4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we do not anticipate conducting any such business
5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
Not applicable because the school does not intend to contact with an education service provider or school management organization.  
☒ I/we do not know any such persons



6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
N/A. ☒ I/we have no such interest
7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.  
~~N/A~~ ☒ I/we or my family do not anticipate conducting any such business ~~Yes~~
8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.  
☒ Does not apply to me, my spouse or family
9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.  
☒ None

#### Certification

I, Rae Takemoto, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.



Signature

1-20-16

Date



# PATRICK MACY



## EDUCATION

<b>Doctorate of Education</b>	<b>Northern Arizona University</b>	<b>Flagstaff, AZ</b>
May 1996	Major: Educational Leadership	Minor: Education Administration
<i>Dissertation: The Development of High School Education Among Utah Navajo: Case Study at Monument Valley, Utah</i>		
<b>Master of Education</b>	<b>Brigham Young University</b>	<b>Provo, UT</b>
August 1983	Major: Education Administration	Minor: Community Education
<i>Thesis: Right Brain/Left Brain Theory and the Navajo Student.</i>		
<ul style="list-style-type: none"><li>• Emphasis on Community Education</li><li>• Certification programs for Superintendent and Principals</li></ul>		
<b>Bachelor of Science</b>	<b>BYU-Hawaii</b>	<b>Laie, HI</b>
1971-1978	Major: Physical Education	Minor: Education/Teaching
<b>Honors:</b> ASBYUH Vice-President 1976, 1977, 1978 BYUH Rugby Team 1975, 1976, 1977, 1978 Pan Pacific Rugby Team 1977, Hawaii All-Star Rugby Team 1977, 1978 South Pacific Tour Team 1978 Showcase Hawaii 1975		

## CERTIFICATIONS

<b>ALASKA:</b>	Type A: PE Teacher; Type B-Superintendent/Principal K-12	Expired: Nov 2008
<b>ARIZONA:</b>	Superintendent and Principal, Standard Secondary PE	Expiration: May 2015
<b>HAWAII:</b>	HTSB Physical Education 7-12; Administrative Credentials	Expiration: May 2016
<b>UTAH:</b>	Level 3 Standard Administrative K-12, Secondary (6-12) PE	Expiration: Jun 2014

## PROFESSIONAL AND COMMUNITY ORGANIZATIONS

Past Coach:	Laie Park Big Boys Football Club, Laie, Hawaii
Board Examiner:	National Council for Accreditation of Teacher Education (NCATE)
Member:	Association of International Educators (NAFSA)
Past Member:	Association for Supervision and Curriculum (ASCD)
Past Member:	National School Boards Association (NSBA)
Past Member:	Indian Education Committee, Navajo Nation
Past Member:	Arizona School Boards Association (ASBA)
Past Member:	Ko'olauloa Neighborhood Board #27, City and County of Honolulu (2000-2007)
Scout Committee	Eagle Scout Committee, Aloha Council, Boy Scouts of America



# PATRICK MACY

## EXPERIENCE

<b>International Student Advisor, PDSO/RO</b>	<b>Laie, HI</b>
Mar 2007- present	808-675-3558
PDSO and RO BYU-Hawaii International Students (approximately 1500). Duties include Exchange Visitor (J)Program Redesignation, DOS Annual Reports, ISS Assessments, SEVIS – Alerts, AT/OPT/CPT/Internships, DSO/ARO training, Reduced Course Loads, Transfers, Discontinuance, Student Investigations, Overhours Employment issues, Data Tracking, Presentations, R Visa issues, I-17 Redesignation, ISS Policies, 24/7 On Call.	
<b>Hawaii Teacher Standards Board</b>	<b>Honolulu, HI</b>
2005-2007	808-586-2619
Oversee the State Approval of Teacher Education (S.A.T.E.) programs in conjunction with NCATE standards for all Institutions of Higher Learning (IHE). Responsible for the Initial licensing for all teachers in the State of Hawaii.	
<b>Hawaii Department of Education</b>	<b>Windward O'ahu</b>
2000–2005	808-233-5700
<ul style="list-style-type: none"> <li>• Counselor at Laie Elementary School (2000-2001)</li> <li>• Vice-Principal at King Intermediate (Jul 2001-Feb 2003).</li> <li>• Acting Principal of Benjamin Parker Elementary School (Feb 2003-Jul 2003).</li> <li>• Acting Principal of Ka'a'awa Elementary School (Jul 2003-Sep 2003);</li> <li>• Vice-Principal of Kahuku Elementary School (Sep 2003-April 2005).</li> </ul>	
<b>Superintendent of Red Mesa Unified Schools</b>	<b>Teec Nos Pos, AZ</b>
1998–2000	520-656-3511
<ul style="list-style-type: none"> <li>• Responsible for entire operation of Public Schools in the Red Mesa area (3 elementary, 1 intermediate, 1 high school). Directly responsible for curriculum, instruction, budget, personnel, negotiations, physical plant, community relations, transportation, recruitment/retention, federal programs, state programs, etc.). These public Schools are located within the Navajo Nation and as such I worked with 6 Chapters and the Navajo Nation Education Committee.</li> <li>• Developed a Ten Year Plan for major renovations and additions to the facilities of the district. These renovations included the construction of two new Elementary schools, a teacher-housing complex, an athletic complex, and renovation to existing buildings (infrastructure).</li> <li>• Reported directly to the Governing Board (Johnny Descheny, School Board President).</li> </ul>	
<b>Assistant Superintendent of Page Unified Schools</b>	<b>Page, AZ</b>
1997–1998	800-238-2891
<ul style="list-style-type: none"> <li>• Areas of responsibility included: Curriculum and Instruction, Indian Education, Federal Programs, JOM, Personnel, Negotiations, Public Relations, and Evaluations.</li> <li>• Introduced and developed a Navajo Language Curriculum and facilitated the recognition of Navajo language as a second language (for college entrance) with the State of Arizona.</li> <li>• Worked directly with Arizona Teacher Certification as it pertained to licensure for new hires.</li> <li>• A member of accreditation committee for District accreditation team.</li> </ul>	



# PATRICK MACY

<b>Elementary School Principal</b>	<b>Barrow, AK</b>
1996–1997	907-852-5311
<ul style="list-style-type: none"> <li>• Ipalook Elementary School (K-5) located in the North Slope Borough and part of the North Slope Borough School District. It is the largest Elementary school in Alaska.</li> <li>• Administered a regular English curriculum and an Inupiat Immersion curriculum in the largest elementary school in Alaska. Promoted the use of culture within our educational goals.</li> <li>• Ipalook is an Alaska Public school with strong community support, a 13 Million Dollar budget for approximately 850 students.</li> </ul>	
<b>Assistant Professor-Education</b>	<b>Cedar City, UT</b>
1994-1996	435-586-7800
<ul style="list-style-type: none"> <li>• Taught Undergraduate and Graduate classes at <i>Southern Utah University</i>. Also Supervisor for various Student Teachers.</li> <li>• Worked under the direction of Dr. Kevin Robinson, Education Department Chair and Dr. Quentin Bowler, Dean-College of Education.</li> <li>• Advisor for Polynesian and American Indian Clubs.</li> <li>• <b><i>Nominated for Professor of the Year 1993</i></b></li> <li>• <b><i>Runner-up for Professor of the Year 1994</i></b></li> </ul>	
<b>Project Director/HS Dean</b>	<b>Tuba City, AZ</b>
1993-1994	520-283-6291
<ul style="list-style-type: none"> <li>• Wrote and received funding for a JPTA School to Work Grant. The program was funded at 1.3 million for 3 years. Administered the grant and represented the District when audited by the State of Arizona. Program was reviewed and received commendations in 1994.</li> <li>• Monitored all High School discipline for Tuba City High School.</li> <li>• High School Varsity Volleyball Assistant Coach.</li> <li>• Reported directly to the Superintendent (Dr. Hector Tahu)</li> </ul>	
<b>Principal: Monument Valley High School</b>	<b>Monument Valley, UT</b>
1988-1993	435-727-3204
<ul style="list-style-type: none"> <li>• Developed a curriculum that focused on school academies (schools within a school). These academies included technology, fine arts, tourism, vocational/agricultural sciences, and health sciences. These academies were all inter-related through a core curriculum of classes (Communication/Language, Culture/History, and Business/Math).</li> <li>• MVHS is an innovative Public High School on the Navajo Reservation. Enrollment of 300. Majority of students (98%) are Navajo.</li> <li>• President of Navajo Football League; Region XIII Board of Managers and a Part-time Instructor for Navajo Community College.</li> <li>• Reported directly to Superintendent Hal Jensen (retired).</li> </ul>	



# PATRICK MACY

<b>Principal: Chinle Jr. High School</b>	<b>Chinle, AZ</b>
1986-1988	520-674-3481
<ul style="list-style-type: none"> <li>Developed a curriculum aligning Elementary standards with High School Graduation standards. Worked under the direction of Dr. Ray Aquilera, former Superintendent.</li> <li>Chinle Jr. High is an Arizona Public school on the Navajo Reservation. Enrollment of 585.</li> <li>Coached Football/Wrestling at High School.</li> <li>Part-time Instructor for Navajo Community College.</li> </ul>	
<b>College Counselor – Northern Arizona University</b>	<b>Flagstaff, AZ</b>
1985-1986	520-523-3011
<ul style="list-style-type: none"> <li>Counseled students to resolve academic problems, personal problems; focused on retention, career planning and placement.</li> <li>Worked specifically with International and Minority students</li> <li>NAU Assistant Wrestling Coach (NCAA).</li> <li>Men's Dorm Director (Tinsley: 500 male residents).</li> </ul>	
<b>Community School Director : Uintah School District</b>	<b>Vernal, UT</b>
1984-1985	800-238-2891
<ul style="list-style-type: none"> <li>Responsible for all Community Education classes and curriculum, coordinated GED, USU, and After-school programs. Also taught Student Council during the normal school curriculum.</li> <li>Coached Wrestling, also served as Indian Club Advisor.</li> <li>Worked under the direction of Bill Caldwell, former Principal (Uintah HS).</li> </ul>	
<b>Teacher: Whitehorse High School</b>	<b>Montezuma Creek, UT</b>
1981-1984	435-651-3427
<ul style="list-style-type: none"> <li>Worked under the direction of Mitch Kalauli, former Principal</li> <li>Taught: PE, Health, Math, Science, and Student Council. Coordinated the Community Education Programs of WHS. This included vocational classes, college classes, community interest classes, and cultural programs.</li> <li>Coached Football, Volleyball, and Wrestling. Also served as Athletic Director.</li> <li><i>Teacher of the Year 1983</i></li> </ul>	

## REFERENCES

Dr. Manley Begay	Administration, University of Arizona	
Dr. Paul Buckingham	Retired Director, BYUH Counseling	
Cynthia Chun	Retired, DOE Principal	
Dr. Charles Goo	Retired, BYU Hawaii	
Sharon Mahoe	Retired, HTSB Administrator	
Dr. N. Kaluhiokalani	BYU Hawaii Professor	



### Board Member Information

To be completed individually by each Applicant Governing Board member.

All forms must be signed by hand.

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

### Background

1. Name of charter school on whose governing board you intend to serve:

*Kamalani Academy*

2. Contact information: *Patrick Macy*, [REDACTED]
3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.

☒ *Resume and professional bio are attached to this form.*

4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.

☒ *Yes*

5. Why do you wish to serve on the governing board of the proposed charter school?

*Arts integrated curriculum is an avenue of teaching to which I support. Also, the integration of Culture greatly interests me. Kamalani academy will prepare children to be 21<sup>st</sup> century leaders and a valuable addition to the Hawaii public school environment.*

6. What is your understanding of the appropriate role of a public charter school governing board member?

*a. Lending his/her expertise in governing the school*

*b. Being responsible for the financial, academic, and management performance of the school.*

*c. Acting in compliance with the school's charter, state and local laws, and applicable collective bargaining agreements.*

7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous



experience of this nature, explain why you have the capability to be an effective board member.

*My experience comes from being a DOE teacher, coach, administrator, personnel officer, and University Professor. I have worked in the Pre-school to Graduate school settings. I also have experience from many educational backgrounds (including Hawaii) and cultural backgrounds.*

8. Describe the specific knowledge and experience that you would bring to the governing board.

*Experience in being a student, a teacher, an administrator. Living within a budget, planning curriculum, dealing with all kinds of personnel issues, integrating cultural components into lesson plans.*

### **School Mission and Plan**

1. What is your understanding of the school's mission and guiding beliefs?

*Kamalani believes that all students are born with innate abilities. It is the mission of the school to use the arts to release those abilities, skills, talents and to teach the core academic subjects using the arts. In addition, the arts will be used to foster such qualities as collaboration, communication, leadership, and creativity.*

2. What is your understanding of the school's proposed academic plan?

*The academic plan includes:*

- a. *Blending the arts with academic subjects to enhance student involvement, motivation, and persistence; to encourage creativity and risk-taking; and to stimulate both sides of the brain*
- b. *Growing the student body from K-6 to K-8 over three years.*
- c. *Compliance with Common Core Standards for the Language Arts and for Mathematics*
- d. *Frequent assessment, modeled after the Doral Academy, to provide data to identify the need for adjustment of the academic plan as well as those students requiring additional support*
- e. *The philosophy of Positive Behavioral Support to nurture the social and emotional growth of each student.*

3. What do you believe to be the characteristics of a successful school?

*Operate within budget, within its charter, within all State and Local laws. Achieve academic goals. Instill moral and ethical values of our country. Instill pride and ownership of one's education. Teach and instill service to others. Develop life-long learners.*

4. How will you know that the school is succeeding or is not succeeding in its mission?

*When the characteristics of a successful school are documented and supported by data, we will know of its success. Forms of measurement include pre-post assessments, statewide assessments, national assessments, subject assessments, high school placements, college placements, performance participation, parent surveys, student surveys, and teacher surveys.*



### Governance

1. Describe the role that the governing board will play in the school's operation.  
*The Governing Board will be responsible for the financial, organizational, and academic performance of the school and for adherence to its charter. The board will act with independence to determine the organization and management of the school and its curriculum. It will be the employer of school employees and negotiate supplemental collective bargaining agreements. The board will ensure compliance with all applicable laws.*
2. How will you know if the school is successful at the end of the first year of operation?  
*Kamalani will be successful at the end of its first year of operation if it has met or exceeded the metrics outlined in the application in such areas as academic achievement, attendance, stakeholder satisfaction, enrollment numbers, fiscal soundness, board professional development, and teacher retention.*
3. How will you know at the end of five years if the school is successful?  
*Kamalani will have met or exceeded its year five metrics in the areas outlined above.*
4. What specific steps do you think the governing board will need to take to ensure that the school is successful?  
*The board will*
  - a. *Act with independence in determining the organization and management of the school*
  - b. *Meet regularly*
  - c. *Adhere to good meeting management practices*
  - d. *Rigorously review the fiscal operation of the school*
  - e. *Ensure adherence to the charter and all applicable laws*
  - f. *Hire a school leader with a successful track record and experience with arts integrated education*
  - g. *Involve students, parents, community, as appropriate*
  - h. *Monitor achievement of all goals and objectives*
5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school?  
*After gathering all the pertinent data, I would speak with the board member in question. Based on that outcome, I may bring my concerns to the board chairperson. If I found that the board was not able to resolve the situation, I would take my concerns to the Charter School Commission.*

### Disclosures

1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☒ Yes  
*I have worked in Education for many years and in many capacities and have met some of the board through those experiences. I have also developed friendships with some of the Board and hope to develop stronger relationships with more of them.*




2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☒ I/we do not know any such employees (there are no school employees)
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons
4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we do not anticipate conducting any such business
5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
☒ Yes I have met several members of the Academica Nevada team.
6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
☒ I/we have no such interest
7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we or my family do not anticipate conducting any such business
8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.  
☒ Does not apply to me, my spouse or family
9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.  
☒ None



### Certification

I, Patrick Macy, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.

  
\_\_\_\_\_  
Signature

01/19/2016  
Date



**Steven Davidson, Ed.D.**

## Experience

<b>Project Manager/Consultant/Instructor</b>	09/12-present
■ Mana`olana International, Honolulu, HI	
<b>Client Facilitator</b>	05/08-11/14
■ FranklinCovey, HawaiiUSA Federal Credit Union, Honolulu, HI	
<b>Senior Investment Program Manager</b>	07/06-08/11
■ HawaiiUSA Federal Credit Union, Honolulu, HI	
<b>Executive Investment Consultant, Vice President</b>	09/94-07/05
■ Bankoh Investment Services, Bank of Hawaii, Honolulu, HI	
<b>Financial Advisor</b>	09/91-09/94
■ American Express Financial Advisors, Honolulu, HI	
<b>Registered Representative-Investment Sales</b>	05/87-09/91
■ First Investors Corporation, Hingham, MA	
<b>Chief Psychologist</b>	05/82-05/87
■ Farrokh Khajavi-Noori, M.D., Stoneham, MA	

## Education

<b>Project Management Professional Designation</b>	2007
Project Management Institute, Newtown Square, PA	
<b>Certified Financial Planner Professional Designation</b>	1995
College for Financial Planning, Denver, CO	
<b>Ed.D.-Counseling Psychology</b>	1978
Boston University, Boston, MA	
<b>M.A.-Counseling Psychology</b>	1970
New York University, New York, NY	
<b>B.S.-Aeronautical Engineering</b>	1968
Rensselaer Polytechnic Institute, Troy, NY	



## Board Member Information

To be completed individually by each Applicant Governing Board member.

All forms must be signed by hand.

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

### Background

1. Name of charter school on whose governing board you intend to serve:

Kamalani Academy

2. Contact information:

Name: Steve Davidson



3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.

☒ Resume and professional bio are attached to this form.

4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.

☐ Does not apply to me ☒ Yes

5. Why do you wish to serve on the governing board of the proposed charter school?

I believe it is important to provide Hawaii's families with alternatives to traditional public schools and to high-priced private schools. I further believe that the Kamalani Vision of preparing children to be 21<sup>st</sup> century leaders will be a valuable addition to the Hawaii public school environment.

6. What is your understanding of the appropriate role of a public charter school governing board member?

a. Lending his/her expertise in governing the school

b. Being responsible for the financial, academic, and management performance of the school.



- c. Acting in compliance with the school's charter, state and local laws, and applicable collective bargaining agreements.
- 7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.

I have a very diverse educational and professional background. I have been an engineer, a practicing counseling/family systems psychologist, a college instructor, a Certified Financial Planner, a financial institution department manager, a Project Management Professional, and a facilitator of personal effectiveness and productivity courses. I will be able to apply all of these experiences as a member of the Kamalani Board.

I have been the Vice President and Secretary of the 501(c)3 Hawaii Prostate Cancer Coalition for five years. I have, also, served as the President of the Hawaii Chapter of the International Association for Financial Planning and as a Board Member of the Hawaii Chapter of the Financial Planning Association.

- 8. Describe the specific knowledge and experience that you would bring to the governing board.

Through the experiences listed above, I bring:

- a. Listening skills
- b. Organizational skills
- c. An understanding of family systems and dynamics
- d. Meeting management skills
- e. An understanding of group dynamics
- f. Leadership skills
- g. Goal setting and execution skills
- h. Objectivity
- i. Financial management skills
- j. Writing and editing skills

### **School Mission and Plan**

- 1. What is your understanding of the school's mission and guiding beliefs?

Kamalani believes that all students are born with great abilities. It is the mission of the school to use the arts to release those talents and to teach the core academic subjects. The arts will, also, be used to foster such qualities as collaboration, communication, leadership, and creativity.

- 2. What is your understanding of the school's proposed academic plan?

The academic plan includes:

- a. Blending the arts with academic subjects to enhance student involvement, motivation, and persistence; to encourage creativity and risk-taking; and to stimulate both sides of the brain
- b. Growing the student body from K-6 to K-8 over three years.
- c. Compliance with Common Core Standards for the Language Arts and for Mathematics
- d. Frequent assessment, modeled after the Doral Academy, to provide data to identify the need for adjustment of the academic plan as well as those students requiring additional support
- e. The philosophy of Positive Behavioral Support to nurture the social and emotional growth of each student.



3. What do you believe to be the characteristics of a successful school?

A successful charter school will

- a. Operate in compliance with its charter and all state and local laws and applicable collective bargaining agreements
- b. Operate in a fiscally sound manner
- c. Achieve its academic and other goals

4. How will you know that the school is succeeding or is not succeeding in its mission?

In succeeding at its mission, a successful Kamalani Academy will produce students who

- a. Are prepared for high school and college
- b. Are leaders
- c. Are skillful communicators
- d. Continue to embrace the arts
- e. Are problem solvers
- f. Are critical thinkers
- g. Are collaborators and
- h. Are ready to contribute to their communities and the world

### **Governance**

1. Describe the role that the governing board will play in the school's operation.

The Governing Board will be responsible for the financial, organizational, and academic performance of the school and for adherence to its charter. The board will act with independence to determine the organization and management of the school and its curriculum. It will be the employer of school employees and negotiate supplemental collective bargaining agreements. The board will ensure compliance with all applicable laws.

2. How will you know if the school is successful at the end of the first year of operation?

Kamalani will be successful at the end of its first year of operation if it has met or exceeded the metrics outlined in the application in such areas as academic achievement, attendance, stakeholder satisfaction, enrollment numbers, fiscal soundness, board professional development, and teacher retention.

3. How will you know at the end of five years if the school is successful?

Kamalani will have met or exceeded its year five metrics in the areas outlined above.

4. What specific steps do you think the governing board will need to take to ensure that the school is successful?

The board will

- a. Act with independence in determining the organization and management of the school and curriculum.
- b. Meet regularly



- c. Adhere to good meeting management practices
  - d. Rigorously review the fiscal operation of the school
  - e. Ensure adherence to the charter and all applicable laws
  - f. Hire a school leader with a successful track record and experience with arts integrated education
  - g. Involve the community, including parents, wherever possible
  - h. Monitor achievement of all goals and objectives
5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school?

I would, first, be confident that I understood the facts of the situation. This might involve speaking with the board member in question. I would, then, bring my concerns to the board chairperson. If I found that the board was not able to resolve the situation, I would take my concerns to the Charter School Commission.

### Disclosures

1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☐ I/we do not know these individuals ☒ Yes
- I know Ku`uipo Laumatia well. We worked together when she was a consultant at HawaiiUSA Federal Credit Union and she later asked me to work with her at Manaolana International. I know the other members of the board only as a result of our work together over the last one and one-half years on the Kamalani application. My spouse has met Ku`uipo once.
2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☐ I/we do not know any such employees ☐ Yes There are no school employees
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons ☐ Yes
4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we do not anticipate conducting any such business ☐ Yes
5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
☐ Not applicable because the school does not intend to contact with an education service provider or school management organization.  
☐ I/we do not know any such persons ☒ Yes I have worked over the last one and one-half years with several members of the Academica Nevada team on the Kamalani application.
6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
☐ N/A. ☒ I/we have no such interest ☐ Yes

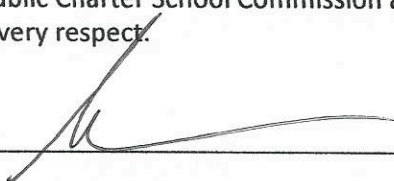


7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.  
☐ N/A ☒ I/we or my family do not anticipate conducting any such business ☐ Yes
8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.  
☒ Does not apply to me, my spouse or family ☐ Yes
9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.  
☒ None ☐ Yes

#### Certification

I, Steven Davidson, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.

Signature



Date

1/14/16



**VerlieAnn Leimomi Kapule Malina-Wright, Ed.D.**

**Education**

**University of Hawaii at Mānoa**

- College of Education, Education Administration Program, 2000-2004
- College of Education, Curriculum and Instruction, MEd., 1969
- College of Business Administration, Finance, BBA, 1966

**University of California, Los Angeles (UCLA)**

- College of Education, Business and Economics Education/Administration, Ed.D. With Honors, 1978  
- Education Professions Development Act Fellowship (EPDA)

**Employment**

- 2014 -- RIM Architects, Strategic Vision Kupuna, Sub-contractor with The Pacific American Foundation, UH-WO campus, Creative Digital Media Bldg., Cultural Consultant
- 2014 -- RIM Architects, Strategic Vision Kupuna, Sub-contractor with The Pacific American Foundation, HART Pearl City Transit Station Complex Design Team with the Hawaiian Dredging Construction Company, Cultural Consultant
- 2011-2014, HI FushionED dba isisHawaii, Ipu Waiwai Kula 'AE – Aquaponics in Education (2011-14), Education Adm. Mentor and Cultural Consultant. This project (sponsored by the U.S. Department of Education Native Hawaiian Education Program), targeted public intermediate schools in the Leeward District (Nanakuli/Waianae). Its primary goal is to increase NH student capacity by honoring and recognizing indigenous science as it aligns to 21st century learning and skill development. Also conducted Stanford Design Thinking training for students and teachers -- Castle, Honolulu, Nanakuli School Complexes grade K-12.
- 2010-present, Indigenous Education Institute, Cultural Science Consultant, National Science Foundation partnerships, Imiloa Astronomy Center and U.C. Berkeley, Astrophysics, Indigenous Informal Sciences -- Mayan Cosmic Serpent and Native Skies and Mars Atmosphere and Volatile Evolution (MAVEN) Project, Aquaponics in space. Youth leadership NSF grant in Indigenous Scientific Collaboration.
- 2012-2014, Roots of Wisdom: Native Knowledge. Shared Science. Cultural Science Education Consultant. Exhibit and Research examples of successful projects that incorporate both traditional ecological knowledge and western science using traditional knowledge in conjunction with cutting-edge science practices with tools of traditional land management and resource use reviving cultural practices.
- 2008 to 2013, President, The Wright Consultants, Inc., Retired. Culture-based Education Programs, Technologies and Indigenous Evaluation. Education cultural consultant -- state, national and international accreditation, P-21. Clients include Waianae Health Academy, cultural competencies, 21<sup>st</sup> Century Workforce Alu Like, Inc. Native Hawaiian Career and Technical Education, Hawaii Technologies Institute – CTE Certifications; WARE Learning Hale web-based software, basic skills mastery; The Pacific American Foundation – Aloha Aina, KUDER College Career Planning, Financial Literacy Academy – Bloomberg Lab International; Chaminade U., Lililehua Inquiry Ahupua'a Science – Elementary School Project including Hawaiian language immersion—culture-based K-12 curriculum, submersible robotics, aquaponics and hydroponics), Hi'ilei Aloha, 501-C3 Office of Hawaiian Affairs, Waimea-Kauai District – West Kauai Business and Professional Association—Promising Neighborhoods Grant; World Indigenous Nations – P-21 accreditation, and King Kalakaua Science and Technology Center (preliminary design. Other technical assistance mentoring and capacity building – Administration of Native American Programs, Native Hawaiian Education Act, Innovation in Improvement I3, NCLB Training and Office of Hawaiian Affairs.



- 2000 – 2008: Hawaii State Department of Education, Kula Kaiapuni ‘O Ānuenue, Hawaiian Language Immersion School, K-12, Hope Po’okumu, Vice Principal, Retired, Institutional Planning, Data, Evaluation and Assessments, Professional Development Planning and Fund Development, Budgeting, NCLB Compliance Assessments, Hawaii State Assessment, Hawaii Aligned Portfolio Assessments, Academic and Career Software and Technology Systems, Cultural Indicators Rubrics, Academic and Financial Action Plans, Teacher and Staff Evaluations, Parent NLK Group

2000-2006: Summer School, Ānuenue, Grades 6-12, King Intermediate, Grades 7-8 and Kalaheo H. S., 9-12

1996 - 2000, Hawaii State Department of Education, Vice Principal

- Kailua High School, 9-12
- Kailua Intermediate School, 7-8
- Kahalu’u Elementary School, K-6

1978 – 1995, The Kamehameha Schools, Retired - Director of Continuing Education Programs

- Kamehameha Adult Community School, Western Association of Schools and Colleges Accreditation
- GED High School Diploma Program, Career/Vocational Education, Health and Wellness and Hawaiian Studies Curriculum and Instruction Program
- Ohana (families) Education Program
- Statewide Hawaiian Culture Lecture Series

1977 – The Kamehameha Schools

- Director of the Office of Career Services

1976 – The Kamehameha Schools

- Director of the Office of Employment Training and Research

### **Teaching Experience:**

1966 – 2000

- Elementary Education, Kahalu’u Elementary and Keolu Elementary School
- Secondary Education, Kailua High School, Castle High School, Sacred Hearts Academy
- Adult Education, Kalaheo Community School for Adults, Moanalua Community School for Adults, Farrington Community School for Adults, Kaimuki Community School for Adults
- Higher Education, University of Hawaii at Manoa, College of Education, Curriculum and Instruction/Teacher Education and Curriculum Studies, Adjunct Faculty, Vocational Education
- *Major Teaching and Learning Interests:* Hawaiian traditional practices, arts and crafts, indigenous knowledge and epistemologies, mentoring, tribal college initiatives, culture-based education and curriculum perpetuating native languages and cultural traditions, indigenous assessments/research, and culture-based education assessments. Emerging interest in digital media, animation and gaming.

### **Community Education:**

- Native Hawaiian Performance Indicators and Indigenous Assessment Hui, NH Education Council.
- Native Hawaiian Evaluation and Program Assessments, Teacher Induction Pre-BEd. Program Evaluation and Assessment: elementary, middle and high school charter, immersion, public schools, higher education
- Native Hawaiian Education Council, Chairperson, 2010-2011
- University of Hawaii, at Manoa, Laboratory School, PCS, Local School Board Member
- Board Member, Hawaii Technologies Institute, Hawaii Maoli, Pacific American Foundation
- Facilitator, WARE Group, reading and math software, My Reading Coach, Lexia, Reading Plus, Symphony Math; Lexile Group



- Hawaii Maoli, in partnerships with workforce programs, Hawaii Technology Institute, and substance abuse treatment mental health Hoomau ke Ola, culture and aina-based, cultural and the arts healing.
- Accreditation Visiting Committee Member – Waialae Elementary, PCS; Kanu o Ka Aina PCS
- President – National Indian Education Association (NIEA) 2006-07, raised \$1 million endowment.
- Chairman, World Indigenous Higher Education International Consortium, New Zealand
- Established Introduction to Data Processing and Computer Programming, Castle High School
- Hawaii State Technology Grant Funding Computer Equipment for Classroom Use, Castle High School
- Established Office of Employment Research and Training, The Kamehameha Schools, Assist Kamehameha Alumni and other Hawaiian High School or College Graduates in Professional Career and College Placement Services
- Established Office of Career Services to provide school to work career pathways including post-high school and apprenticeship training programs for gainful employment and higher education
- Established from an idea to an accredited school, The Kamehameha Schools Adult and Community Education School featuring courses in Hawaiian language, music, dance, arts and crafts; intergenerational learning, 'Ohana Education. Expanded vocational education programs utilizing state of the art facilities in metals fabrication, automotive, wood technology, electronics and AutoCAD design. Introduced General Education Develop (GED) program.
- Established a statewide Hawaiian Culture Lecture series for traditional cultural practitioners and scholars to teach Hawaiian culture, tradition, language, music, dance, and philosophy to the general public, serving annual 12,000 participants.
- Conducted a major doctoral dissertation study on the Hawaii Hotel Industry and the educational programs required for employees entering and leaving the field of tourism and hospitality industry. Established and copyrighted the MODELS Curriculum – Modern Office and Distribute Education Learning Systems, a national training model for the hotel industry.
- World Indigenous Nations Higher Education Consortium, International, New Zealand. Board Member that helped to establish the Indigenous Higher Education School Accreditation process. Accrediting higher education school programs worldwide that base their founding principles on the values and education needs of the indigenous communities that there schools service. The criteria are designed around traditional knowledge and the transfer of native ways of knowing, doing, being and becoming through cultural lenses with global results. Te Wananga o Aotearoa, U. of Montana, Bozeman, Seventh Generation College, Ontario, Canada, Sami University International, Kautokeno, Norway and Fort Peck CC, Montana.
- National Indian Education Association. U.S. Senate Committee on Indian Affairs, U.S House Committee on Health, Education and Labor Pensions. Public hearings on No Child Left Behind and the U.S. President's Budget Appropriations for Alaskan Natives, American Indians and Native Hawaiians.
- Hawaii State Accreditation of Teacher Education (SATE)/National Commission Accreditation of Teacher Education (NCATE), Chairman, University of Hawaii at Hilo, Kahakalau Keelikolani Hawaiian Language and Indigenous Studies College, Kahuawaiola Indigenous Teacher Education Program
- Leo Reano Human Civil Rights National Award, National Education Association, Washington, DC
- Native Hawaiian Education Association, Outstanding Hawaiian Educator
- Board member, Hawaii Technologies Institute, The Pacific American Foundation, Hawaii Maoli, UH Elementary Lab PCS, Halau Wanana (MEd. NH College, Waimea, Hawaii), Prince Kuhio Hawaiian Civic Club, Hawaii Maoli

References available upon request.



# Board Member Information

To be completed individually by each Applicant Governing Board member.

All forms must be signed by hand.

Serving on a public charter school governing board is a position of public trust and fiduciary responsibility. As a governing board member of a public school, you are responsible for ensuring the quality of the school's plans, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its Charter Contract.

As part of the application for a new charter school, the Commission requests that each prospective governing board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the team behind each school proposal in advance of the applicant interview; and 2) to encourage governing board members to reflect individually, as well as collectively, on their common mission, purposes, and obligations at the earliest stage of school development. Please add the full name of your school to the footer of this document so that it appears on all pages.

## Background

1. Name of charter school on whose governing board you intend to serve:

**Kamalani Academy**

2. Contact information:

Name: Dr. VerlieAnn Malina-Wright

[Redacted]

3. Describe your educational and employment history. No narrative response is required if a resume and professional biography are attached.

X ☐ Resume and professional bio are attached to this form.

4. Indicate whether you currently or have previously served on a board of a school district, another charter school, a non-public school, or any nonprofit organization.

☐ Does not apply to me X ☐ Yes - University Laboratory School (ULS), Honolulu, HI

5. Why do you wish to serve on the governing board of the proposed charter school?

The opportunity to participate in the process of launching a new charter school that provides our families and their children access to choices about deciding how and where to educate their children is a basic democratic tenant of civic engagement, parental involvement and advocacy and stakeholder partnerships. As a retired educator and now Kupuna (elder), the establishment of an integrated arts charter school will be a major addition to our public school system -- a new thriving PCS with students, teachers, parents, administrators, support staff, and community.

6. What is your understanding of the appropriate role of a public charter school governing board member?

The appropriate role of a public charter school governing board member are 1) fiduciary responsibility, 2) due diligence, 3) fiscal accountability and transparency, 4) and a high standard of care serving children and their education community.



7. Describe any previous experience you have that is relevant to serving on the charter school's governing board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.

My education career included teacher, mentor/coach, education officer, research, adjunct faculty higher ed, etc. The skill sets of 50 years of experience in education (early childhood, elementary/secondary, higher ed, and lifelong learning ed) are contributions that I can share as a contributing board member. This includes city, state, national and international experiences of servant leadership.

8. Describe the specific knowledge and experience that you would bring to the governing board.

State and international school accreditation visiting committee chairman, committee member, and CoChair of the World Indigenous Nations Higher Education Consortium, CoChairman WINHEC Accreditation Board of Authority. Culture-based, place-based, project-based curriculum, instruction, professional learning communities; culturally responsive evaluation and assessment; research and technology applications for student, administration, content assisted instruction and assessment.

### **School Mission and Plan**

1. What is your understanding of the school's mission and guiding beliefs?

Working together, we have developed the school's mission: Kamalani believes that all students are born with great abilities. It is the mission of the school to use the arts to release those talents and to teach the core academic subjects. The arts will, also, be used to foster such qualities as collaboration, communication, leadership, and creativity.

2. What is your understanding of the school's proposed academic plan?

The academic plan includes:

- a. Blending the arts with academic subjects to enhance student involvement, motivation, and persistence; to encourage creativity and risk-taking; and to stimulate both sides of the brain
- b. Growing the student body from K-6 to K-8 over three years.
- c. Compliance with Common Core Standards for the Language Arts, Mathematics and Science (NGSS).
- d. Frequent assessment, modeled after the Doral Academy, to provide data to identify the need for adjustment of the academic plan as well as those students requiring additional support; in addition to teacher school level initiatives to collaborate as professional learning communities -- grade level and school-wide.
- e. The philosophy of Positive Behavioral Support to nurture the social and emotional growth of each student.
- f. Inclusion of Nā Hopena A'o ("HA") the Department of Education's core values and beliefs to develop the competencies that strengthen a sense of belonging, responsibility, excellence, aloha, total-wellbeing and Hawaii ("BREATH") in ourselves, students and others.

3. What do you believe to be the characteristics of a successful school?

Access to a purposeful and holistic education -- curriculum, instruction, counseling, assessment and service learning to the K-8 grades children who are living in the school community district that Kamalani Academy serves. This generation of children will enter into a completely new world of work and lifelong learning that will continue to be impacted upon by rapid expanding knowledge, information, communications, technologies, and inventions in the education, science, business, manufacturing, health and economic sectors. Each graduate must enter the world ready to flourish and contribute to the commons with aloha.



4. How will you know that the school is succeeding or is not succeeding in its mission?

The relationship between all stakeholders of the school and community is seamless so that students' transition to high school, graduate on time, enters a college to work continuum, entering and graduating from college with workforce internships leading to gainful employment/self-employment and prosperous sustainability. These outcomes are evidences of achieving the vision and mission of Kamalani Academy whether the student is enrolled, graduated, an adult contributing to his family, community and country.

### **Governance**

1. Describe the role that the governing board will play in the school's operation.

The role of the governing board is established by the Articles of Incorporation, By-Laws, state and federal compliance laws and administrative rules, collective bargaining agreements, fund development, Board Handbook of Policies and Procedures, Conflict of Interest Disclosure. The Board is responsible for working with the school leadership and stakeholders to develop the required documents -- academic and financial plans, strategic plan and business plan. The board members should all be vested and raise funds for the school.

2. How will you know if the school is successful at the end of the first year of operation?

Success indicators include school start-up on time, administration and operations conducted with quarterly progress monitoring and annual assessments of students meeting proficiency in language arts, math and science. Student records database established and implemented to monitor every student/teachers development/progress. Flourishing examples of integrated arts through student performances and exhibits. Progressive growth with increases in student enrollment, teacher stability meeting highly qualified criteria, student/parent/teacher satisfaction as reported through the School Quality Survey, no grievance filings pending, and substantive evidence of revenue streams. School is a joyful place for everyone.

3. How will you know at the end of five years if the school is successful?

There will be classes graduating from 8<sup>th</sup> grade and all students are college, career ready to be promoted to high school. Students and teachers are progressing to their next grade levels, meeting proficiencies in all content areas, teachers reflect best praxis evidence of professional learning communities, administration and community relations, partnerships, fund development are all thriving.

4. What specific steps do you think the governing board will need to take to ensure that the school is successful?

The board will adhere to policy decision-making and not become involved in the school day to day operations. The board will empower school leadership with stakeholders to meet the requirements and expectations of charter school compliance with fidelity of all statute, administrative rules; while insuring that the facilities are safe and in good condition. The board will insure that school finance controls are sound and increasing. Follow all sunshine laws, monthly board meeting agenda announcements, posting of minutes and budgets on the school's web. Work with Principal to notify appropriate HDOE system/Charter Commission staff; and other appropriate authorities.

5. How would you handle a situation in which you believe one or more members of the governing board were acting unethically or not in the best interests of the school?

If there appears to be an inappropriate event that has occurred by a board member, school staff, community member, student, support staff, guest/outsider on campus, and the chain of command for school level is through the school principal. If there is a board member who may have caused the problem, then the board should



establish a committee to address this issue and determine whether 1) a problem; 1) conflict of interest; 2) theft or other criminal activity may have occurred; or a hostile work environment issue may exist, etc. the board should refer to their policies and procedures which may provide for an adhoc committee to investigate and gather information to make recommendations to the board (executive session). The board shall authorize the Chair and/or committee designee to resolve the problem with the board member. The decision recommended with right to appeal should also be considered as a step 2, including mediation assistance as necessary. Work with Principal to notify appropriate HDOE system/Charter Commission staff; and other appropriate authorities.

### **Disclosures**

1. Indicate whether you or your spouse knows the other prospective governing board members for the proposed school. If so, please indicate the precise nature of your relationship.  
☐ I/we do not know these individuals ☒ Yes
2. Indicate whether you or your spouse knows any person who is, or has been in the last two years, a school employee. If so, indicate the precise nature of your relationship.  
☒ I/we do not know any such employees ☐ Yes
3. Indicate whether you or your spouse knows anyone who is doing, or plans to do, business with the charter school (whether as an individual or as a director, officer, employee, or agent of an entity). If so, indicate and describe the precise nature of your relationship and the nature of the business that such person or entity is transacting or will be transacting with the school.  
☒ I/we do not know any such persons ☐ Yes
4. Indicate if you, your spouse, or other immediate family members anticipate conducting, or are conducting, any business with the school. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ I/we do not anticipate conducting any such business ☐ Yes
5. If the school intends to contract with an education service provider or management organization, indicate whether you or your spouse knows any employees, officers, owners, directors, or agents of that provider. If the answer is in the affirmative, please describe any such relationship.  
☒ Not applicable because the school does not intend to contact with an education service provider or school management organization.  
☐ I/we do not know any such persons ☐ Yes
6. If the school contracts with an education service provider, please indicate whether you, your spouse, or other immediate family members have a direct or indirect ownership, employment, contractual, or management interest in the provider. For any interest indicated, provide a detailed description.  
☒ N/A. ☐ I/we have no such interest ☐ Yes
7. If the school plans to contract with an education service provider, indicate if you, your spouse, or other immediate family member anticipate conducting, or are conducting, any business with the provider. If so, indicate the precise nature of the business that is being or will be conducted.  
☒ N/A ☐ I/we or my family do not anticipate conducting any such business ☐ Yes
8. Indicate whether you, your spouse, or other immediate family members are a director, officer, employee, partner, or member of, or are otherwise associated with, any organization that is partnering with the charter school. To the extent you have provided this information in response to prior items, you may so indicate.  
☒ Does not apply to me, my spouse or family ☐ Yes
9. Indicate any potential ethical or legal conflicts of interests that would or are likely to exist should you serve on the school's governing board.  
☐ None ☒ Yes



Possible partnership with Pacific Am Foundation culture-based STREAM curriculum "Aloha Aina."

**Certification**

I, VerlieAnn Malina-Wright, certify to the best of my knowledge and ability that the information I am providing to the State Public Charter School Commission as a prospective governing board member is true and correct in every respect.

*VerlieAnn Malina-Wright*  
Signature

February 1, 2016  
Date



## **Attachment V:**

### **Kamalani Academy**

#### **Code of Ethics and Conflict of Interest Policy**

#### **For Directors, Officers, and Members of a Committee with Board Delegated Powers**

##### **Article I – Purpose**

1. The purpose of this Board Code of Ethics and Conflict of Interest Policy is to protect Kamalani Academy (“KAMALANI”) and its interests when it is contemplating entering into a transaction or arrangement that may benefit the private interests of an Officer or Director of KAMALANI or might result in a possible excess benefit transaction.
2. This policy is intended to supplement, but not replace, any applicable State and Federal laws (Hawaii Revised Statutes 84 and 302D) governing conflicts of interest applicable to nonprofit and charitable organizations and charter schools.
3. This policy is also intended to identify “Independent” Directors.

##### **Article II – Definitions**

1. Interested Person – Any Director, Principal Officer, or Member of a committee with Governing Board delegated powers, who has a direct or indirect financial interest, as defined below, is an Interested Person.
2. Financial Interest – A person has a financial interest if the person has, directly or indirectly, through business, investment, or family:
  - a. An ownership or investment interest in any entity with which KAMALANI has a transaction or arrangement;
  - b. A compensation arrangement with KAMALANI or with any entity or individual with which KAMALANI has a transaction or arrangement; or
  - c. A potential ownership or investment interest in, or compensation arrangement with, any entity or individual with which KAMALANI is negotiating a transaction or arrangement.

Compensation includes direct and indirect remuneration as well as gifts or favors that are not insubstantial.

A financial interest is not necessarily a conflict of interest. A person who has a financial interest may have a conflict of interest only if the Governing Board or Executive Committee decides that a conflict of interest exists, in accordance with this policy.

3. Independent Director – A Director shall be considered “Independent” for the purposes of this policy if he or she is “Independent” as defined in the instructions for the IRS 990 form or, until such definition is available, the Director:
  - a. Is not, and has not been for a period of at least three years, an employee of KAMALANI or any entity in which KAMALANI has a financial interest;
  - b. Does not directly or indirectly have a significant business relationship with KAMALANI or which might affect independence in decision-making;



- c. Is not employed as an executive of another corporation where any of KAMALANI's executive officers or employees serve on that corporation's compensation committee; and,
- d. Does not have an immediate family member who is an executive officer or employee of KAMALANI or who holds a position that has a significant financial relationship with KAMALANI.

### **Article III – Procedures**

1. Duty to Disclose – In connection with any actual or possible conflict of interest, an Interested Person must disclose the existence of the financial interest and be given the opportunity to disclose all material facts to the Governing Board or Executive Committee.
2. Recusal of Self – Any Director may recuse himself or herself at any time from involvement in any decision or discussion in which the Director believes he or she has or may have a conflict of interest, without going through the process for determining whether a conflict of interest exists.
3. Determining Whether a Conflict of Interest Exists – After disclosure of the financial interest and all material facts, and after any discussion with the Interested Person, he/she shall leave the Governing Board or Executive Committee meeting while the determination of a conflict of interest is discussed and voted upon. The remaining Governing Board or Executive Committee Members shall decide if a conflict of interest exists.
4. Procedures for Addressing the Conflict of Interest
  - a. An Interested Person may make a presentation at the Governing Board or Executive Committee meeting, but after the presentation, he/she shall leave the meeting during the discussion of, and the vote on, the transaction or arrangement involving the possible conflict of interest.
  - b. The Chairperson of the Governing Board or Executive Committee shall, if appropriate, appoint a disinterested person or committee to investigate alternatives to the proposed transaction or arrangement.
  - c. After exercising due diligence, the Governing Board or Executive Committee shall determine whether KAMALANI can obtain, with reasonable efforts, a more advantageous transaction or arrangement from a person or entity that would not give rise to a conflict of interest.
  - d. If a more advantageous transaction or arrangement is not reasonably possible under circumstances not producing a conflict of interest, the Governing Board or Executive Committee shall determine, by a majority vote of the disinterested Directors, whether the transaction or arrangement is in KAMALANI's best interest, for its own benefit, and whether it is fair and reasonable. In conformity with the above determination, it shall make its decision as to whether to enter into the transaction or arrangement.
5. Violations of the Conflicts of Interest Policy
  - a. If the Governing Board or Executive Committee has reasonable cause to believe a Member has failed to disclose actual or possible conflicts of interest, it shall inform the Member of the basis for such belief and afford the Member an



- opportunity to explain the alleged failure to disclose.
- b. If, after hearing the Member's response and after making further investigation as warranted by the circumstances, the Governing Board or Executive Committee determines the Member has failed to disclose an actual or possible conflict of interest, it shall take appropriate disciplinary and corrective action.

#### **Article IV – Records of Proceedings**

The minutes of the Governing Board and all committees with board delegated powers shall contain:

1. The names of the persons who disclosed or otherwise were found to have a financial interest in connection with an actual or possible conflict of interest, the nature of the financial interest, any action taken to determine whether a conflict of interest was present, and the Governing Board's or Executive Committee's decision as to whether a conflict of interest in fact existed.
2. The names of the persons who were present for discussions and votes relating to the transaction or arrangement, and a record of any votes taken in connection with proceedings.

#### **Article V – Compensation**

1. A voting member of the Governing Board who receives compensation, directly or indirectly, from KAMALANI for services is precluded from voting on matters pertaining to that member's compensation.
2. A voting member of any committee whose jurisdiction includes compensation matters and who receives compensation, directly or indirectly, from KAMALANI for services is precluded from voting on matters pertaining to that member's compensation.
3. A voting member of the Governing Board or any committee whose jurisdiction includes compensation matters and who receives compensation, directly or indirectly, from KAMALANI, either individually or collectively, is prohibited from providing information to any committee regarding compensation.

#### **Article VI – Annual Statements**

1. Each Director, Principal Officer, and Member of a Committee with Governing Board delegated powers shall annually sign a statement which affirms such person:
  - a. Has received a copy of the conflict of interest policy,
  - b. Has read and understands the policy,
  - c. Has agreed to comply with the policy, and
  - d. Understands KAMALANI is a government entity and in order to maintain its tax exemption it must engage primarily in activities that accomplish one or more of its tax-exempt purposes.
2. Each voting Member of the Governing Board shall annually sign a statement that declares whether such person is an Independent Director.
3. If at any time during the year, the information in the annual statement changes materially, the Director shall disclose such changes and revise the annual disclosure form.



4. The Executive Committee, if formed, shall regularly and consistently monitor and enforce compliance with this policy by reviewing annual statements and taking such other actions as are necessary for effective oversight. However, if the Executive Committee has not been formed, each member of the Governing Board shall review all Directors' annual statements independently in order to ensure no conflicts are present.

#### **Article VII – Periodic Reviews**

To ensure KAMALANI operates in a manner consistent with charitable purposes and does not engage in activities that could jeopardize its tax-exempt status, periodic reviews shall be conducted. The periodic reviews shall, at a minimum, include the following subjects:

1. Whether compensation arrangements and benefits are reasonable, based on competent survey information (if reasonably available), and the result of arm's length bargaining.
2. Whether partnerships, joint ventures, and arrangements with management organizations, if any, conform to KAMALANI's written policies, are properly recorded, reflect reasonable investment or payments for good and services, further charitable purposes and do not result in inurement or impermissible private benefit or in an excess benefit transaction.

#### **Article VIII – Use of Outside Experts**

When conducting the periodic reviews as provided for in Article VII, KAMALANI may, but need not, use outside advisors. If outside experts are used, their use shall not relieve the Governing Board of its responsibility for ensuring periodic reviews are conducted.



## **Attachment W**



# Evan Anderson



## Objective:

*Transform teaching and learning in Hawai'i through the arts.*

## Education:

**Princeton University**  
B.A. in Politics, 1996  
Certificate in Political Theory

**University of California at Berkeley**  
M.A. in Educational Leadership, 2002  
Principal Leadership Institute

## Professional Degrees:

**Hawaii State Teaching License**  
K-6, Multiple Subject—renewed 2013

**Tier I Administrative Services Credential**  
State of California—2002

## Experience:

July 2007-Present                      Voyager Public Charter School—Honolulu, HI

- **Arts Integration Coach (2015-)**
- **Kindergarten, K-1 Classroom Teacher (2007-2010, 2011-2015)**
- **Administrative Coordinator (2012-2013)**
- **Training and Methodology Coordinator (2011-2012)**
- **Kennedy Center Partners in Education Member (2011-present)**

Regularly incorporating arts-based learning strategies in support of core curriculum objectives, recruiting guest teaching artists through the Collaborative Residency, Artists in the Schools, and Art Bento programs. Implementing Feuerstein's Instrumental Enrichment, Quantum Learning, and Malcolm Baldrige's Total Quality Management (TQM) for continuous academic and organizational improvement. Member of Leadership Team, Negotiating Team, and Local School Board for 4 years.

As **Training and Methodology Coordinator and Arts Integration Coach**, supporting 15 classroom teachers and SPED staff in implementing Voyager's three core methodologies and arts integration. Facilitating regular Professional Learning Community meetings with grade-level teacher teams around student assessment data. Building partnerships with local community arts organizations to support learning through the arts.

As lead member of the **arts integration partnership team** through the Kennedy Center for the Arts (Washington, D.C.), collaborated with Honolulu Theatre for Youth and Hanahau'oli School in planning and supporting professional development in arts integration, leading statewide effort toward *collective impact* through the arts.

November 2011-Present    **Leadership Team Member, A'o Hawai'i Curriculum Grant**  
Facilitating curriculum development in conjunction with the World Wide Voyage of sailing canoes Hokule'a and Hikianalia. Collaborating with educators statewide, University of



Hawai'i, and Nainoa Thompson of the Polynesian Voyaging Society to create professional development opportunities for teacher/crew members around the theme "Malama Honua."

- August 2006-June 2007 Punahou School—Honolulu, HI  
**Assistant Teacher, Grade 1**  
Teaching a self-contained classroom of 25 students in collaboration with lead teacher, sharing instructional, assessment, and supervisory responsibilities. Also coaching JV Boys' Volleyball.
- August 2005-May 2006 SUNY Potsdam School of Education—Potsdam, NY  
**Instructor and Student Teaching Supervisor**  
Developing syllabus for and teaching two sections of a graduate-level course in classroom management, as well as supervising 18 student teacher placements over the school year.
- January 2005-June 2005 Canton Central School—Canton, NY  
Hermon-DeKalb Central School—DeKalb Junction, NY  
**Substitute Teacher**, all subjects, K-12
- August 1998-June 2002 Cragmont Elementary School—Berkeley, CA  
August 2003-June 2004 **Classroom Teacher—Grades K, 1, and 4**  
Teaching a self-contained, regular elementary education classroom of 25-30 students, including approximately five students per year with IEPs requiring special needs. Member of School Leadership Team, 2000-2004.
- October 2002-May 2003 Hokuani Elementary School—Honolulu, HI  
**Part-Time Teacher**  
Teaching math and literature study to 6<sup>th</sup> grade students, and assisting full-time substitute with all daily activities.
- June 2002-July 2002 Lowell Middle School SummerPrep Academy—Oakland, CA  
**Administrative Intern**  
Assisting Principal and Vice Principal in daily duties of school administration, including teacher observation and evaluation, certified personnel evaluation, parent contact and student discipline.
- June 1998-August 1998 Hawthorne Elementary School—Oakland, CA  
**Technology Support Provider**  
Developing a schoolwide assessment database.
- August 1996-June 1998 Partners in School Innovation—San Francisco, CA  
**School Change Agent**  
Coordinating and expanding research-based reading comprehension program, Reciprocal Teaching, at Hawthorne Elementary School.
- March 1997-August 2004 "I Have a Dream" Foundation—Oakland, CA  
**Board Trustee** and consultant on issues of student learning  
Providing college scholarships and other educational resources to support the academic success of at-risk youth in West Oakland.



**Activities:**

1985 to Present	Music: Vocal Performance and Piano Member, Hawai'i Vocal Arts Ensemble A cappella, barbershop, choral, and community theater
1994 to Present	Volleyball—NCAA Division I Varsity and beach volleyball

**Additional Skills:**

- Meeting facilitation
- Spreadsheet and Database management (Excel, SPSS, Google Docs)
- Word Processing (Word, Google Docs)
- Presentation software (PowerPoint, Keynote, Prezi, Google Slides)
- Project management (Vision-Guided Action Planning)



## **C. Bryan FitzGerald**



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**PROFILE:** Data center project director, Hawaii Deputy Attorney General, e-discovery technology developer, executive in entrepreneurial software and energy companies. Key strengths include the ability to absorb new information and learn new skills quickly, flexibility, attention to detail, adaptability, trustworthiness, responsiveness, autonomy and inventiveness.

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### **EXPERIENCE:**

#### **HAWAI'I HEALTH DATA CENTER PROJECT MANAGER**

State Of Hawai'i and University of Hawai'i Collaboration June 2014 to current  
Initiated States development of Health Data Research Center. Secured over \$4 million in grant funding, oversaw development of data governance protocols and overall project implementation.

#### **DEPUTY ATTORNEY GENERAL**

Hawaii Commerce and Economic Development Division, June 2006 to June 2014  
Lead counsel in serial massive consumer protection actions, leveraging business litigation, securities and information technology experience to achieve the State's goals in seemingly impossible environments. Developed and implemented the Department's personal information security policies. Resolved multiple intellectual property disputes at virtually no cost.

#### **LITIGATION AND BUSINESS ATTORNEY**

Business, Technology and Injury Litigation Hawaii 1992 to current

- Defense and plaintiff bar along with general counsel, and corporate executive experience provides unsurpassed trial and complex litigation management. Proven in areas ranging from contacts and conveyancing to IP, medical malpractice, securities litigation, and corporate governance matters.

#### **BUSINESS DEVELOPMENT DIRECTOR**

Octane Software San Mateo, CA. 1998 - 2000

- Achieved annual growth of 300 percent, before being acquired for 3.18 billion. 10x revenue increase to \$35 million in final quarter. Successfully headed IP litigation avoidance efforts. Served as Board member on a variety of technology VCap and outsourcing companies. Competitive analyst, responsible for tracking and articulating to engineering and outside sales the status and development plans for all known and potential competitive vendors.

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### **EDUCATION:**

- **FINRA (fka NASD)** Series 7 & 24 Principal Broker 2005
- **Juris Doctorate** University of Houston 1991
- **Bachelor of Arts** Social Sciences, Hawaii Pacific University 1989





Kahu Dr. Francine Mikiala Park-Palama  
Maunakai & Associates  
*Design, Planning and Restoration Services*  
P.O. Box 222  
Ka‘a‘awa, HI 96730

➤ **Business**

Established on October 20, 2004, State of Hawai‘i

➤ **Education**

- 2012 University of Hawai‘i at Mānoa: Doctorate of Architecture
- 2009 Certificate in Historic Preservation  
Dept. of Urban and Regional Planning, Master Candidate, Spring 2016
- 1997 Hawai‘i Community College: Drafting and Engineering, AS
- 1974 Chaminade University: Criminal Justice, BS
- 1969 Honolulu Community College: Police Science, AS
- 1967 Kamehameha Schools, Graduated

➤ **Civic Affiliations**

Pastor, Keali‘iokamalu Church, Haleiwa, HI., Keaukaha Community Association, member, Hilo, HI., Ko‘olauloa Hawaiian Civic Club, member, Hon., HI., Board of Trustee, Hawaiian Missions Houses Society, Hon., HI., Friends of Kahana, member, Kahana, HI., Gregory House Programs, Vice-President and board member, Hon., HI., Ho‘omau Ke Ola Programs, Kupuna Council Chairperson, Waianae, HI.

➤ **Professional Experiences**

- 2015 New Orleans, LA. Resettlement and resilient communities of the Isle de Jean Charles Band: Biloxi, Chitimacha and Choctaw, Lead designer and planner facilitator, HUD Grant
- 2015 He‘eia Cultural Learning Center for Kama‘āina Kids Corp. plan and provide cultural and traditional designs and prepare Shoreline Assessment Management report. Hon., HI.
- 2015 Private residence on DHHL: provide architectural design, support and manage the project, Hon., HI.
- 2014 Kamehameha Hall Restoration Project: plan to coordinate and manage technical professionals, community groups and provide consultation throughout. Hilo, HI.
- 2014 Keali‘iokamalu Church Restoration Project: plan to provide technical assistance, prepare construction drawings and coordinate volunteer groups. Haleiwa, HI
- 2013 Puakea Learning Center Project: provide consultation and coordinate required reports between the private and public sectors. Hon., HI.
- 2012 Waianae Protestant Church Restoration Project: prepare RFP’s, coordinate technical specialists and nomination to SHPD and National Historic Register. Waianae, HI.
- 2012 Siona Christian Congregational Church Structural Assessment. Plan, coordinate and provide technical assistance to assess the structural integrity. American Samoa.
- 2010 Center of Light Christian Ministries: prepare Master Plan, coordinate community Meetings and record HABS drawings for SHPD and nominate to NHR. Hon., HI.
- 2009 Kalihi Valley Nature Park Project: Conduct research; prepare and submit an Environmental Assessment Report. Hon., HI.
- 2009 Ulupo Heiau Cultural Resource Management Plan. Conduct research, coordinate



community meetings and submit plan. Hon., HI.

2008 County of Maui: recorded data on HABS and HAER measured drawings for numerous Projects;

2006 Documentary filmmaker of 2 films, co-producer, cultural historian and researcher; successful grant writer; volunteer on numerous community service projects across the state.

➤ **Interests**

Long board surfing, eating poke and poi and riding my 1979 Harley D...

References upon request.



## LEI AHSING

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### Education Director HAWAII ARTS ALLIANCE

Ms. Ahsing has developed, implemented, and provided oversight for the Alliance's community and education programs since 1995. This includes:

- Program support for Hawai'i State Foundation on Culture and the Arts' (HSFCA) Art Bento Program @ HiSAM for the past four years. Ms. Ahsing has worked closely with HSFCA's Museum Educator to design program content that supports Common Core State standards and HCPS III fine arts standards. Responsibilities have included communication with schools; coordination of residency and museum scheduling; development and preparation of orientation, PD, and program materials/supplies; contracting and paying artists and guides; documentation; application process and panel; monitoring; deliverables; and evaluation.
- Development and coordination of annual ARTS FIRST Institutes on Oahu since 2001. Ms. Ahsing and her ARTS FIRST Partners (HSFCA and Hawai'i Department of Education) work closely with a team of master teaching artists to develop the Institute's standards based theme and content. These Institutes serve 60-80 elementary classroom teachers. Ms. Ahsing coordinates the registration, travel, scheduling, contracting and logistics for the Institutes.
- Working closely with the ARTS FIRST Partners and Affiliate Members - Hawai'i Department of Education, HSFCA, Maui Arts & Cultural Center, and Honolulu Theatre for Youth - to implement and refine ARTS FIRST programs statewide. These programs include professional development for teaching artists, planning for the Teaching Artists Institute and the Artists in the Schools Program.

Ms. Ahsing's past projects have included supervision of two U.S. Department of Education Arts in Education Model Development and Dissemination grants (2003-06 and 2006-10) that studied the effects of standards based arts education on student achievement in reading and teacher pedagogy, attitudes, and practice; coordination and member of the curriculum framework committee that wrote the ARTS FIRST Essential Arts Toolkit: Hawai'i Fine Arts Grade Level Guide for the K-5 Classroom Teacher, 1<sup>st</sup> (2003) and 2<sup>nd</sup> editions (2006); and oversight of the development of twenty standards based arts exhibits for the Hawaii Learning Interchange, an affiliate of the Apple Learning Interchange.

Ms. Ahsing has served as a panelist for HSFCA's Artists in the Schools Program and Artistic Teaching Partners Roster. She is a member of the ARTS FIRST Partners' Steering Committee.



# Albert “*Alapaki*” Nahale-a

## *Education Leadership & Experience*

### **UNIVERSITY OF PENNSYLVANIA, Philadelphia, PA**

1986 – 1991: BA in Political Science

**Co-founder of the Hawaiian Club, PENN Student Services Marketing Manager**

### **KAMEHAMEHA SCHOOLS, Honolulu, HI**

1982 – 1986: class of 1986

**Student Body President, Outstanding Leader & Best Attitude Awards**

### **ARIZONA STATE UNIVERSITY, Phoenix, AZ**

2005 – 2006: Pursued MA in Education under the Leadership for Educational Entrepreneurship Program. Completed first year of a two year distance learning program. Federal funding cuts eliminated distance component of program.

### **LAUPAHOEHOE COMMUNITY PUBLIC CHARTER SCHOOL**

August 2013 – present,

#### **Dean of Students & Instruction**

- Primarily responsible for managing student support services, especially the school’s SPED program and behavior interventions. Also played a key role in facilitating and supporting faculty efforts, especially in regards to planning for future initiatives around project based learning. Served as the lead administrator whenever the Director was unavailable. Assisted with other administrative functions including creation and implementation of the Title 1 plan, reviewing, formatting and presentation of the budget, and personnel management. Have also been active in building community relations and support, meeting consistently with current stakeholders and potential partners/funders. Took on the role of overseeing and building student government, including teaching a leadership seminar during the second semester.

### **KAMEHAMEHA SCHOOLS**

August 2012 – August 2013,

#### **Director of Community Education – Hawaii Island**

- Responsible for overseeing Kamehameha’s community education programs on Hawaii Island which include investments in charter schools; literacy support, teacher and administrator training, fourth and fifth grade social studies and science supports from a Hawaiian perspective for the Department of Education; aina based educational programming; early education campuses as well as community support programs; and graduation and post high support programs.
- As a Director, extremely active in the organizations strategic decision making initiatives including Impact Cost studies, regional impact assessment, education cost deployment analysis, capital improvement projects, and current efforts to complete its next fifteen year strategic plan.

June 1991 – May 1994



### **Program Specialist, Teacher, Dorm Advisor, Coach**

- Developed and conducted workshops on personal growth, financial management, goal setting, and team work, for boarding students. Developed and implemented workshops for the Kulia I Ka Pono program. Ensured students physical, emotional, and mental well-being. Served as a temporary and substitute teacher in grades K-12. Also served as a Life Guard, Gym Manager, and Coach.

### **HAWAII CHARTER SCHOOLS NETWORK**

September 2009 – December 2010, **Executive Director**

October 2008 – July 2009, **Board President**

- Contracted to help build an effective and sustainable organization while simultaneously advocating for charter schools. Responsible for internal and external communication, developing partnerships, strategic thinking and planning, board development, fund development, and overall advocacy. Took the lead on calling for the charter school movement to be committed to quality and to hold schools to high standards. Was an active supporter for all public education, including participation in both of Hawaii's Race to the Top applications. As a volunteer board president, led the organizations effort to advocate for charter schools and the charter school movement in Hawaii. Included facilitation of stakeholder meetings and conversations, meeting with legislators and their staff, and setting strategic directions. Led the effort to convert HCSN from a volunteer organization to one with high capacity.

### **KA UMEKE KAE O HAWAIIAN IMMERSION PUBLIC CHARTER SCHOOL**

July 2003 – June 2009, **Director**

August 2002 – June 2009, **Local School Board Member & Chairperson**

- Responsible for all aspects of school leadership including strategic thinking and planning, management of school staff and faculty, creation and monitoring of the budget, compliance with local, state and national regulations, educational performance of students, and communication & collaboration with the internal and external school community. During tenure the school, which had a 95% at risk population, consistently met AYP, added a pre-school and middle school, and doubled enrollment while still establishing a significant building fund reserve. Also implemented enhanced parent involvement programs increasing participation and support from families.
- Served as a board member eventually becoming the board president. Led efforts to establish business practices at the school, including higher accountability measures.

### **AHA PUNANA LEO**

August 1997 – November 1998

**Development Director**

- Responsible for tracking the progress of grants under the Native Hawaiian Higher Education Act. Assisted in evaluating programs to ensure that grant goals and objectives were met while maintaining grant compliance.

### ***Government Leadership & Experience***



## **HAWAIIAN HOME LANDS TRUST**

December 2010 – May 2012, **Department Director & Chairman of the Commission**

October 2008 – December 2010, **East Hawaii Commissioner**

- Appointed by Governor Abercrombie in December of 2010 to serve as the Director of the Department of Hawaiian Home Lands and the Chairman of the Hawaiian Homes Commission. Facilitated monthly meetings of the nine commissioners and led policy initiatives, evaluation of programs, and establishment of the annual budget. Managed two hundred department positions, a \$60,000,000 annual operating budget and \$120,000,000 development budget. Responsible for all aspects of working collaboratively with other State Departments, beneficiaries, direct stakeholders, and the larger community.
- Appointed by Governor Lingle in October of 2008 to serve as the voluntary East Hawaii member of the Hawaiian Homes commission. Worked with other commissioners and the Department to set policy via the approval of the budget and evaluation and support of programs. Also responsible for certain management functions, such as ruling on contested case hearings and approval of fiscal and legal actions of the department.

## **COUNTY OF HAWAII CHARTER COMMISSION**

July 2009 – November 2010

**East Hawaii Commissioner**

- In conjunction with fellow commissioners, responsible for evaluating the Hawaii county charter and crafting and proposing amendments to be put forth to the voters on the 2010 ballot.

## **HAWAII COMMUNITY COLLEGE**

October 2002 – July 2003

**Federal Title III Coordinator**

- Charged with successful accomplishment of all activities for the Title III Project entitled I Ola Haloa at HawCC. Includes management of grant staff and budget, collection of data, and tracking and assessment of program progress. Responsible for coordination of meetings, reports, and communication internally and externally to identify and formulate partnerships and collaborative efforts to meet grant goals.

## **RURAL COMMUNITY ASSISTANCE CORPORATION**

March 2000 – April 2002

**Development Specialist for Federal Housing Programs**

- Served as the technical assistance provider for the USDA RD 523 Mutual Self-Help Housing federal grant program and the HUD HOME program. Provided technical assistance to non-profits and government entities in the areas of strategic planning, compliance, community development, affordable housing, grant writing, meeting coordination, communication, & fiscal management.

## **COUNTY OF HAWAII**

May 1999- February 2000, **Fiscal/Program Review Auditor**

June 1994 – July 1997, **Legislative Auditor Assistant**

- Worked with Legislative Auditor staff to conduct research and develop reports assigned by the County Council & Coordinated Council's Non-Profit Grants program.



- Served as Committee staff for various Council Committees. Reviewed Committee agendas, coordinated attendees, & drafted Committee reports. Also responsible for researching, reviewing, and drafting legislation
- Responsible for community contact including letter writing, responding to complaints, community meetings, and drafting press releases.

## ***Community Leadership & Experience***

### **PRESIDENTIAL SCHOLARS COMMISSION**

January 2012 - present

#### **Commission Member**

- Appointed by President Obama to serve on the National Presidential Scholars Commission to evaluate and select scholars as well as establish policy for the Presidential Scholars program.

### **COUNTY OF HAWAII CULTURAL RESOURCES COMMISSION**

February 2013 - present

#### **Commission Member**

- Appointed by Mayor Kenoi and confirmed by the Hawaii County Council to serve on the Cultural Resources Commission to provide guidance and propose policy on the preservation of the Counties important cultural resources.

### **KUIKAHI MEDIATION CENTER**

August 2009 – December 2010

#### **Board Member (& former volunteer mediator)**

- Serving as a volunteer board member. Focusing on expanding and improving services to the Native Hawaiian community and enhancing generated revenue.

### **KAKOO KA UMEKE**

August 2006 – December 2010

#### **Founder and Board Member**

- Created a nonprofit to provide education supports to Hawaiian communities, prioritizing Ka Umeke Kaeo Hawaiian Immersion Public Charter School.

### **NATIVE HAWAIIAN LEGAL CORPORATION**

2001-2005 & 2007-2008

#### **Board Member**

- Served as a volunteer board member. Focused efforts on expanding legal services to the Hawaiian community.

### **COUNCIL FOR NATIVE HAWAIIAN ADVANCEMENT**

April 2002 – September 2002

#### **Director of Community Development**

- Responsible for researching community resource programs (government & private sector grants), preparing workshops on those programs, and then conducting those workshops in the community.



- Coordinated and implemented components of summits and conferences including workshops, panels, speakers, and other presenters and presentations. Included moderation and emcee duties.



## References

**Curtis Muraoka**, *Director*

West Hawaii Explorations Academy Public Charter School



**Andrew Aoki**, *Principal*

3Point Consulting




**Waialeale Sarsona**, *Director – Hoolako Like*

Kamehameha Schools




**Todd Apo**, *Director of Public Affairs - Hawaii*

Walt Disney Parks & Resorts



**Guy Kaulukukui**, *Principal*

Kealapono



**Lee Wilson**, *Marketing Manager*

Hawaii Planning Mill



**Poeko Waiwaiole**

*former Ka Umeke Kaeo Local School Board President*





# Jamie Simpson Steele

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## EDUCATION

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### **University of Hawai'i at Mānoa, College of Education**

2008

- Ph.D. in Education: Curriculum and Instruction
- Cognate Field: Performance and Society
- Emphasis Area: Performing Arts of the Pacific

Honolulu, HI

### **New York University, Steinhardt School of Education**

2000

- M.A. in Educational Theatre
- Emphasis Area: Youth Theatre
- Study Abroad: Ireland

New York, NY

### **Duke University, Trinity College of Arts and Sciences**

1994

- B.A. in English
- Concentration Area: Drama
- Secondary Teaching Certification in Language Arts

Durham, NC

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## PROFESSIONAL EXPERIENCE

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### **University of Hawai'i at Mānoa, College of Education**

2012 – present

#### ***Assistant Professor, Performing Arts Education***

Honolulu, HI

- Institute for Teacher Education, Elementary and Early Childhood and Secondary Programs. Teach undergraduate level coursework in Performing Arts for the Elementary Teachers, Introduction to Inclusive Teaching, Foundations of Assessment, Behavior Management, and Field Experiences
- Coordinate, mentor and supervise K-6 teacher candidates in cohorts placed in DOE school settings across Oahu complexes
- Coordinate and collaborate with Special Education faculty in program development of Exceptional Student and Elementary Education (ESEE)
- Research in the areas of performing arts curriculum, in-service professional development, performances of culture, and art research methodology

### **Hawai'i Pacific University, School of Education**

2009 – 2012

#### ***Assistant Professor, Elementary Field Services Coordinator***

Honolulu, HI

- Taught graduate and undergraduate level coursework: The Fine Arts for the Elementary Teacher, Integrated Curriculum for the Elementary Teacher, Service Learning in Education, The Reflective Practitioner, Culturally Responsive Teaching in Hawai'i, and The Scholarly Teacher
- Established, maintained, and nurtured partnerships with public and private schools to ensure field opportunities for candidates in the B.A. and M.Ed. in Elementary programs
- Coordinated faculty to develop, implement, and analyze national accreditation assessment instruments for the Elementary Education Program.



**University of Hawai'i at Mānoa, College of Education*****Instructor***

- Taught for the Institute for Teacher Education, Elementary and Early Childhood Program: undergraduate level coursework in Performing Arts for the Elementary Teacher, Introduction to Teaching, and Field Experience and graduate coursework in Qualitative Research
- Coordinated, mentored and supervised K-6 teacher candidates in cohorts over a two-year span and in field settings across Oahu districts
- Served as the principal investigator for Teacher Training Assistance Project, an annual, million dollar grant aimed to help teachers in American Samoa become certified and highly qualified

2003-2009  
Honolulu, HI

**Honolulu Theatre for Youth*****Drama Education Associate***

- Devised, implemented, and assessed school residencies utilizing DIE/TIE strategies, aligned with state standards and integrated with core curriculum
- Conducted professional development in educational drama and theatre for in-service and pre-service teachers
- Directed plays written, devised and performed by youth
- Administered and taught after-school and summer youth programs

2001 – 2006  
Honolulu, HI

**New York University, Creative Arts Team*****Teaching Artist***

- Coordinated school partnerships supported by the Annenberg grant, an initiative to reform education in New York City schools through arts
- Devised, implemented, and assessed school residencies utilizing DIE/TIE strategies, aligned with state standards and integrated with core curriculum
- Devised original theatre through playbuilding as assistant director with the CAT Youth Theatre

1998-2001  
New York, NY

**Duke University, Summer Youth Programs*****Instructor***

- Teacher for Duke Young Writers, Duke Drama, and Duke Expressions programs
- Developed and taught courses in playwriting, performance writing, and acting
- Directed theatrical productions

1996-2000  
(summers)  
Durham, NC

**Pirate Playhouse, Island Theatre Wing (SPT7)*****Education and Outreach Coordinator***

- Directed community theatre, youth theatre, and theatre for youth
- Coordinated educational programs with main stage productions
- Taught acting for children
- Provided in-school workshops
- Wrote educational guides to main stage productions
- Conducted educational forums
- Performed in main stage and dark-night productions

1996-1994  
Sanibel, FL

**Independence High School*****Theatre Teacher***

- Taught grade 9-12 theatre classes
- Facilitated Drama Club
- Directed school productions
- Developed acting, creative writing, and film criticism curricula

1994-1996  
Charlotte, NC



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## MANUSCRIPTS UNDER REVIEW

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Simpson Steele, J. The teaching artist: Identity and development in a hybrid profession. *Youth Theatre Journal*. Submitted September 16, 2015.

Simpson Steele, J. El Sistema fundamentals in practice: An examination of one public elementary school partnership in the US. *International Journal of Music Education*. Submitted July 6, 2015.

Simpson Steele, J. Noncognitive factors in an elementary school-wide arts integrated model. *Journal of Learning Through the Arts*. Submitted March 14, 2015.

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## PUBLICATIONS

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Simpson Steele, J. (2015). Becoming creative practitioners: Elementary teachers tackle artful approaches to writing instruction. *Teaching Education*. Published online May 15, 2015.

Frambough-Kritzer, C. Buelow, S. & Simpson Steele, J. (2015). What are disciplinary literacies in dance and drama in the elementary grades? *Journal of Language & Literacy Education*. 11(1), 65-87.

Simpson Steele, J. (2014). The vagabond's dilemma; Representing host culture as a teaching artist. In Kelin, D. and Dawson K., Eds. *The reflective teaching artist: Collected wisdom from the drama/theatre field*. Chicago: University of Chicago Press.

Simpson Steele, J. (2013). Approaching evaluation of professional development in arts integration. *Teaching Artist Journal*. 11(3), 147-155.

Simpson Steele, J. & Kelin, D. (2013). Dramatic differences: The power of playbuilding for young English language learners. *The Tapestry Journal*. 4(2), 19-31.

Simpson Steele, J. (2013). Geopathology on May Day: Expressions of culture on Hawai'i's Elementary School Stages. *Equity and Excellence in Education*. 46(2), 169-183.

Simpson Steele, J. (2012). Talk-story: A quest for new research methodology in neocolonial Hawai'i. *Youth Theatre Journal*. 26, 38-49.

Simpson Steele, J., Gohier, G, Lipscomb, A.L., Simpson Steele A. (2012). May Day is Lei Day in Hawai'i. *Cultural Studies ⇄ Critical Methodologies*, 12(1), 43-50.

Simpson Steele, J. (2008). The May Day show: Performances of culture on Hawai'i's elementary school stages. (Doctoral dissertation, University of Hawai'i at Mānoa, 2008.)

Simpson, J. (2005). Performance and social inversion: The Sāmoan White Sunday. *Youth Theatre Journal*, V. 19, pp. 132-147.

Tabata, L. & Simpson, J. (2005). The College of Education Doctoral Student Association: Providing peer support and community to doctoral students. *Educational Perspectives*, V.38, n.1, pp. 46-48.

Simpson J., Herring J., & Kelin D. (2002). Developing Creative Curriculum: A model for preservice teacher training in drama education, *Stage of the Arts*, V.14 n.3, pp.12-16.



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## RESEARCH REPORTS

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<b>Honolulu Theatre for Youth</b> <b><i>The Collaborative Residency Project: The Influence of Co-Teaching on Professional Development in Arts Integration</i></b> How and to what extent does collaboration with a teaching artist influence a classroom teacher's professional growth?	2015 Honolulu, HI
<b>Honolulu Theatre for Youth</b> <b><i>Teaching Artist Perspectives on Professional Development</i></b> How do teaching artists define themselves? What do teaching artists perceive as their greatest needs for professional development?	2015 Honolulu, HI
<b>Hawai'i Arts Alliance</b> <b><i>Arts First Institute</i></b> Evaluated professional development program for in-service teachers to develop knowledge, skills, and values for integrating Arts and Science content (STEAM)	2013-2015 Honolulu, HI
<b>Honolulu Theatre for Youth</b> <b><i>More Than Words</i></b> Evaluated a professional development for in-service teachers to develop fluency and expression of oral language for K-6 students through drama.	2014 Honolulu, HI
<b>El Sistema Hawai'i</b> <b><i>Kalikolehua</i></b> Evaluated a new music program geared toward social change through an El Sistema model during the extended school day.	2013 Honolulu, HI
<b>Honolulu Theatre for Youth</b> <b><i>Before Pencil Touches Paper</i></b> Provided evaluation of a professional development program for in-service teachers to strengthen pre-writing classroom activities through the arts.	2013 Honolulu, HI
<b>Maui Arts and Culture Center</b> <b><i>Pomaika'i Elementary School</i></b> How does school-wide arts integration in an elementary setting impact student success as they transition to middle school?	2013 Kahului, HI
<b>Hawai'i Arts Alliance</b> <b><i>Arts and Literacy for All</i></b> Participated in quasi-experimental research on the effect of arts strategies on reading comprehension.	2007-2010 Honolulu, HI
<b>Honolulu Theatre for Youth</b> <b><i>In Our Own Words</i></b> Evaluated a two-year program investigating the influence of drama strategies on English language learners at a school on the Big Island of Hawai'i	2006-2008 Kona, HI
<b>UH Mānoa, Curriculum Research &amp; Development Group</b> <b><i>Arts in Education Windward Research Project</i></b> Consulted in the development of scoring instruments. Evaluated and scored teacher performance in arts integration	2006 Honolulu, HI



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## INVITED PRESENTATIONS FOR TEACHERS & ADMINISTRATORS

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<b>East-West Center: Brunei English Teaching Apprentices</b> <i>Language Alive! Drama Strategies for Multi-Language Learners</i>	2015 Manoa, HI
<b>Maui Arts and Cultural Center</b> <i>Asking Questions to Develop Curiosity</i>	2015 Kahului, HI
<b>Turnaround Arts</b> (Kamile Elementary, Waianae Elementary, Kalihi Kai Elementary) <i>Introduction to Arts Integration</i>	2015 Waianae, HI
<b>Kula Elementary School</b> <i>STEAM: Integrating Science, Engineering &amp; Art</i>	2015 Kula, Maui
<b>Maui &amp; Baldwin Complex Area Administrators</b> <i>Introduction to Arts Integration</i>	2013-2015 Kahului, Maui
<b>Pomaika'i Elementary School</b> <i>STEAM: Integrating Science, Engineering &amp; Art</i>	2013-2015 Kahului, Maui
<b>Hawai'i ArtsFIRST Summer Institute</b> <i>Malama ka Aina: Investigating Cause and Effect Through Arts and Science</i>	2015 Honolulu, HI
<b>Honolulu Theatre for Youth and Hawai'i Department of Education</b> <i>Creative Engagement, Critical Literacy</i>	2015 Honolulu, HI
<b>Maui Arts and Cultural Center</b> <i>Universal Design for Learning Through Arts Integration: Access for All</i>	2014 Kahului, Maui
<b>Hawai'i ArtsFIRST Summer Institute</b> <i>STEAM: Igniting Curiosity &amp; Creativity, Connecting Science &amp; Arts</i>	2014 Honolulu, HI
<b>Hawai'i Department of Education</b> <i>Common Core and the Power of Arts Integration</i>	2014 Honolulu, HI
<b>Honolulu Theatre for Youth</b> <i>Malama Ko Aloha: Storytelling with Hula Ki'i, Compassion in the Classroom</i>	2014 Honolulu, HI
<b>Maui Arts and Cultural Center</b> <i>Malama Ko Aloha: Storytelling with Hula Ki'i, Compassion in the Classroom</i>	2013 Kahului, HI
<b>Pomaika'i Elementary School</b> <i>The First Days of School: Community, Excellence, &amp; Vision Through the Arts</i>	2013 Kahului, HI
<b>Hawai'i ArtsFIRST Summer Institute</b> <i>STEAM: The Arts are Science at Work</i>	2013 Honolulu, HI
<b>Pomaika'i Elementary School</b> <i>ELA Common Core: Developing Reasoning Skills Through Drama Strategies</i>	2013 Kahului, HI
<b>Maui Arts and Cultural Center</b> <i>ELA Common Core: Developing Reasoning Skills Through Drama Strategies</i>	2013 Kahului, HI



<b>Honolulu Theatre for Youth</b> <i>Reading Comprehension for Struggling Learners</i>	2012 Honolulu, HI
<b>Maui Arts and Cultural Center</b> <i>Essential Questions &amp; Critical Thinking Through the Arts</i>	2011 Maui, HI
<b>Pomaika'i Elementary School</b> <i>Essential Questions &amp; Critical Thinking Through the Arts</i>	2011 Maui, HI
<b>Hawai'i ArtsFIRST Summer Institute</b> <i>Arts Integration Strategies for Reading Comprehension and Literacy</i>	2008 - 2011 Honolulu, HI
<b>Honolulu Theatre for Youth</b> <i>Strategies for Engaging and Motivating Students: An Arts Toolbox</i>	2011 Honolulu, HI
<b>Ho'okulaiwi Center for Native Hawaiian and Indigenous Education</b> <i>Performing Arts Integration Across the Curriculum (Ni'ihau Teachers)</i>	2010 Kauai, HI
<b>Hawai'i Arts Alliance Arts and Literacy for All (ALA)</b> <i>Drama and Dance Strategies in the Language Arts Curriculum</i>	2007-2010 Honolulu, HI
<b>Pomaika'i Elementary School</b> <i>Questioning: The Fine Art of Provoking Reflective Thought</i>	2010 Maui, HI
<b>Honolulu Theatre for Youth</b> <i>Reading Beyond the Page: Using Drama to Bring Literature to Life</i>	2008 Hilo, HI

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#### INVITED PRESENTATIONS FOR TEACHING ARTISTS

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<b>Hawai'i Teaching Artist Institute</b> <i>Assessment for the Teaching Artist</i> <i>Putting the Power Back Into PowerPoint</i> <i>Shifting with the Common Core</i>	2013 -2015 Honolulu, HI
<b>Maui Arts and Cultural Center</b> <i>Shifting with the Common Core</i>	2014 Kahului, Maui
<b>Art Bento</b> <i>Responding to Art with the Common Core</i>	2013 Honolulu, HI
<b>Kalikolehua</b> <i>Becoming Reflective Practitioners</i>	2012-13 Honolulu, HI
<b>Hawai'i Arts Alliance &amp; Hawai'i State Foundation for Culture and the Arts</b> <i>Pedagogy Primer: Core Principles of Teaching and Learning</i>	2010-2011 Honolulu, HI
<b>Hawai'i Teaching Artist Intensive</b> <i>Artistic Perspectives: Developing Reflective Skills in Students</i>	2010 Honolulu, HI
<b>Honolulu Theatre for Youth</b> <i>Questions, Questioning, and Reflective Practice</i>	2010 Honolulu, HI
<b>Hawai'i Arts Alliance &amp; Hawai'i State Foundation for Culture and the Arts</b> <i>The Art of Lesson Planning by Backward Design</i>	2008, 2010 Honolulu, HI



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## CONFERENCE PRESENTATIONS

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<b>Teacher Education Division of CEC (TED)</b> <i>Successes and Challenges of Implementing a Merged Elementary and Special Education Program in Hawaii.</i> Co-Presented with Donna Grace, Amelia Jenkins, and Lysandra Cook.	2015 Tempe, AZ
<b>Teacher Education Division of CEC (TED)</b> <i>Program Revision Impact on Pre-service Teachers' Efficacy for Inclusive Practices.</i> Co-Presented with Lysandra Cook.	2015 Tempe, AZ
<b>American Alliance for Theatre Education (AATE)</b> <i>Universal Design for Learning: Access Through Drama</i>	2015 Milwaukee, WI
<b>Read to Me</b> <i>Reading Comprehension Through Dramatic Engagement</i>	2015 Honolulu, HI
<b>Council for Exceptional Children (CEC)</b> <i>Are we Walking the Walk? An Examination of Co-Teaching in a Merged Elementary &amp; Special Education Program.</i> Co-Presented with Lysandra Cook.	2015 San Diego, CA
<b>Association for Teacher Educators</b> <i>A Framework for STEAM integration.</i> Co-Presented with Lori Fulton.	2015 Phoenix, AZ
<b>American Alliance for Theatre Education (AATE)</b> <i>Shifting with the Core: Adapting and Adopting in the 21st Century</i>	2014 Denver, CO
<b>Council for Exceptional Children (CEC)</b> <i>The Use of Hawaiian Puppetry to Promote Compassion in the Classroom</i>	2014 Braga, Portugal
<b>American Education Research Association (AERA)</b> <i>Noncognitive Factors in Arts Integrated Learning</i>	2014 Philadelphia, PA
<b>American Education Research Association (AERA)</b> <i>Becoming Creative Practitioners</i>	2014 Philadelphia, PA
<b>American Alliance for Theatre Education (AATE)</b> <i>The Practitioner and the Researcher: Blurring the Roles to Strengthen Drama Education.</i> Co-Presented with Daniel A. Kelin, II.	2013 Washington D.C.
<b>Pacific Consortium Conference (PCC)</b> <i>Scientists are Artists: A Framework for Merging Processes in the Sciences and the Arts.</i> Co-Presented with Lori Fulton.	2013 Honolulu, HI
<b>Contemporary Ethnography Across Disciplines (CEAD)</b> <i>The Power of Playbuilding for Young English Language Learners</i>	2012 New Zealand
<b>Schools of the Future Conference</b> <i>Learning in the 21st Century: The Arts as Tools</i>	2012 Honolulu, HI



<b>First International Teaching Artist Conference</b> <i>Approaching Evaluation in Professional Development: Problems and Possibilities for the Teaching Artist</i>	2012 Oslo, Norway
<b>American Education Research Association (AERA)</b> <i>Strengthening Arts Education Through Professional Development</i>	2011 New Orleans, LA
<b>Contemporary Ethnography Across Disciplines (CEAD)</b> <i>The May Day Show: Performances of Culture on Hawai‘i’s Elementary School Stages</i>	2010 New Zealand
<b>Hawai‘i International Conference in Education</b> <i>The May Day Show: Performances of Culture on Hawai‘i’s Elementary School Stages</i>	2010 Honolulu, HI
<b>Children’s Literature Hawai‘i Conference</b> <i>Reading Between the Lines: Using Drama in the Art of Inference</i>	2006 Honolulu, HI
<b>American Alliance for Theatre &amp; Education (AATE)</b> <i>Performing Arts Integration by the Elementary Teacher; Novice to Expert</i>	2005 Chicago, IL
<b>Ka ‘Aha Hula ‘O Halauaola International Hula Conference</b> <i>Hula Moves: Learning to Dance Through “How To” Hula Texts</i>	2005 Maui, HI
<b>The Keys to Science Education</b> <i>Drama as an Alternative</i>	2005 American Sāmoa
<b>Hawai‘i Council of Teachers of English</b> <i>Integrating Drama throughout the Curriculum</i>	2004 Honolulu, HI
<b>Hawai‘i State Teachers Association</b> <i>Colors Inside of Me: Multiculturalism through Drama</i>	2001 Maui, HI
<b>Hawai‘i State Teachers Association</b> <i>The World of Literature: Opening Doors with Drama</i>	2000 Honolulu, HI Maui, HI
<b>Teachers as Professionals Conference</b> <i>Integration through Drama: Verbs and Viruses</i>	2004 Honolulu, HI
<b>Governor’s Conference on Arts Education</b> <i>Metaphor, Myth, and Motivation</i>	2004 Honolulu, HI
<b>Children’s Literature Hawai‘i Conference</b> <i>Literature to Life</i>	2001 Honolulu, HI



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## COMMUNITY SERVICE

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<b>Teacher Education Council: Fine Arts</b> UH Manoa, College of education representative for ITE.	2013-2015
<b>ArtsFIRST</b> UH Manoa, College of Education representative on the steering committee.	2015
<b>Arts Educator Hui</b> A coalition of organizations involved in educating teachers to ensure all children have meaningful arts experiences.	2014-2015
<b>Hawai'i Teaching Artist Professional Development Steering Committee</b> Planning and coordination of activities for Hawaii's teaching artists	2013-2015
<b>Hawai'i State Foundation on Culture and the Arts (HSFCA)</b> Artists in the Schools (AITS) Advisory task Force Artists in the Schools (AITS) grant selection panel & consultant Artistic Teaching Partners (ATP) roster selection panel & consultant Arts Bento grant panel Biennium grants panel – Presenting and Performing Arts	2007 - 2015
<b>Hawai'i Arts Alliance</b> Member and consultant	2001-2015
<b>Kamalani Academy</b> Advisory Board member in the development of a new arts integration public charter school.	2015
<b>Improv-Ed Hawai'i</b> Board Member for a non-profit organization with a mission to provide educational experiences using improvisation to develop life and learning skills	2012-2014
<b>Hālau Mōhala 'Ilima</b> Participant in hālau life; consultant for Naoneala'a, outreach in education	2004-2011
<b>College of Education Doctoral Student Association: University of Hawai'i</b> Chair	2004-2005
<b>College Advisory Council: COE, University of Hawai'i</b> Member	2004-2005
<b>College of Education Senate: COE, University of Hawai'i</b> Member	2004-2005
<b>Educational Perspectives Editorial Board: COE, University of Hawai'i</b> Member	2004-2005



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## SELECTED CREATIVE EXPERIENCE

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<i>From Me to You</i> , Hawai'i Public Radio	Actor	2014
<i>Tasi's Gift</i> , Honolulu Theatre for Youth	Co-Playwright	2011
<i>Aloha Shorts</i> , Hawai'i Public Radio	Actor	
<i>Waiting for Henry</i>		2012
<i>First</i>		2011
<i>Fear Over the Ala Wai</i>		2011
<i>Sister from Another Planet</i>		2008
<i>The Smell of Rotting Mangoes</i>		2008
<i>Selected poems by Kathy Phillips</i>		2007
<i>Salvation</i>		2006
<i>Snowbird</i>		2004
<i>Grossology</i> , Honolulu Theatre for Youth	Director	2006
<i>Life is a Dream</i> , Lizard Loft (The Arts at Mark's Garage)	Actor	2006
<i>A Friendly Game of Death</i> , Murder Mystery Players	Director	2004
<i>A Midsummer Night's Dream</i> , Honolulu Theatre for Youth	Director	2003
<i>The Rubies of Nepal</i> , Murder Mystery Players	Actor	2003
<i>Duck, Duck, Scrooge</i> , Loose Screws (The Arts at Mark's Garage)	Actor	2002
<i>Theatrefest</i> , Honolulu Theatre for Youth	Director	2002
<i>La Traviata</i> , Hawai'i Opera Theatre	Assistant Stage Manager	2002
<i>Carmen</i> , Hawai'i Opera Theatre	Assistant Stage Manager	2002
<i>UnCommon Sense</i> , Honolulu Theatre for Youth	Director	2002

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## PROFESSIONAL AFFILIATIONS

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American Educational Research Association (AERA)

International Congress of Qualitative Inquiry (ICQI)

American Alliance of Theatre Educators (AATE)

Hawai'i Arts Alliance (HAE)

Hawai'i State Foundation for Culture and the Arts (HSFCA)



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## AWARDS AND HONORS

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Hawaiʻi Community Foundation Grant (supporting <i>The May Day Show</i> research)	2007
University of Hawaiʻi College of Education: McInerny Scholarship	2005-2006
University of Hawaiʻi College of Education: Lin Scholarship	2004-2005
University of Hawaiʻi College of Education: Award of Excellence in Arts Education	2004
USA Funds Hawaiʻi Silver Anniversary Scholarship	2004-2006
Hawaiʻi Community Foundation: Alma White Delta Kappa Gamma Scholarship	2003-2005
Hawaiʻi Community Foundation: Dr. Hans & Clara Zimmerman Foundation Grant	2003
American Alliance of Theatre & Education: Lin Wright Special Recognition	2002
Creative Arts Team: Outstanding Contribution	2000
Independence High School: Honorary Member of Order of the Patriot	1996
Cooke Scholarship: Full scholarship for undergraduate studies	1990-1994



**Attachment X**  
**School-Specific Measures**

School-Specific Performance Goal #1	<i>What is the proposed school's school-specific performance goal #1?</i> Student Success in English Language Arts/Literacy, Math, and Science															
Measure	<i>How will the proposed school assess and demonstrate performance toward this goal?</i>  This goal will be measured through the HIDOE's chosen standardized assessment (SBAC) for ELA/Literacy and Math and the Hawaii State Assessment in (HSA) in Science															
Metric	<i>How will the proposed school quantify this measure? For Conversion Charter School applicants, is the proposed Conversion Charter School tracking this data now?</i>  The measure will be quantified as follows: <ul style="list-style-type: none"><li>• Baseline data will be collected in SY 2017-2018</li><li>• That data will be compared to the Leilehua Complex data since it is assumed that the majority of students will be from that complex. Data points have already been identified for the complex through 2018.</li><li>• School data will be compared with the data points identified for the complex, thus allowing Kamalani the opportunity to do a temperature check in its first year of operation.</li><li>• Kamalani will utilize the same percentage increase that the complex uses to create targets for future years. Currently those percentage increases are:</li></ul> <table><tr><th>Standardized Assessment</th><th>Percentage Increase</th></tr><tr><td>English Language Arts/Literacy</td><td>4%</td></tr><tr><td>Math</td><td>5%</td></tr><tr><td>Science</td><td>6%</td></tr></table>	Standardized Assessment	Percentage Increase	English Language Arts/Literacy	4%	Math	5%	Science	6%							
Standardized Assessment	Percentage Increase															
English Language Arts/Literacy	4%															
Math	5%															
Science	6%															
Targets	<i>What targets will the proposed school achieve?</i>  Kamalani Academy will, at a minimum, meet the goals set for the Leilehua Complex Schools. Additionally, through the delivery of a culture-based, arts integrated curriculum, it is expected that Kamalani will exceed these targets beginning in Year 3. <table><tr><th>Assessment</th><th>SY 17 – 18 Baseline</th><th>SY 18 – 19</th><th>SY 19 – 20</th><th>SY 20-21</th></tr><tr><td>ELA/Lit</td><td>62%</td><td>66%</td><td>70%</td><td>74%</td></tr><tr><td>Math</td><td>58%</td><td>63%</td><td>68%</td><td>73%</td></tr></table>	Assessment	SY 17 – 18 Baseline	SY 18 – 19	SY 19 – 20	SY 20-21	ELA/Lit	62%	66%	70%	74%	Math	58%	63%	68%	73%
Assessment	SY 17 – 18 Baseline	SY 18 – 19	SY 19 – 20	SY 20-21												
ELA/Lit	62%	66%	70%	74%												
Math	58%	63%	68%	73%												



	Science	68%	74%	80%	86%								
Rationale for Goal	<i>Why is this goal important to the proposed school's mission?</i>  The mission of Kamalani is to increase academic achievement through a focus on our common culture and arts integration. This goal is aligned with the HIDOE Strategic Plan and serves as a common measuring stick for Kamalani Academy and its neighboring schools.												
Assessment Reliability and Scoring Consistency	<i>How will the proposed school demonstrate both the reliability and scoring consistency of the assessment(s) the proposed school plans to use, if non-standardized?</i>  Kamalani will use the assessments used by the HIDOE, thus ensuring reliability and scoring consistency.												
Baseline Data	<i>What is the proposed school's beginning data point?</i>  The baseline data points will be collected in SY 2017-2018. At this time it is expected that they will mirror the data points set by the Leilehua Complex. It should be noted that a review of the Complex Trend Report for SY 2014 – 2015 indicated a decline in scores; this may be attributable to the change from the HSA to the Smarter Balanced Assessments, as data from SY 2012-2014 and 2013-2014 generally exhibited an upward trend. <table><tr><td>Assessment</td><td>SY 17 – 18 Baseline</td></tr><tr><td>English Language Arts/Literacy</td><td>62%</td></tr><tr><td>Math</td><td>58%</td></tr><tr><td>Science</td><td>68%</td></tr></table>					Assessment	SY 17 – 18 Baseline	English Language Arts/Literacy	62%	Math	58%	Science	68%
Assessment	SY 17 – 18 Baseline												
English Language Arts/Literacy	62%												
Math	58%												
Science	68%												
Attachments	<i>Provide optional attachments to illustrate the assessment(s). (Note and attach relevant school-developed assessments and/or assessment tools.)</i>												

School-Specific Performance Goal #2	<p><i>What is the proposed school's school-specific performance goal #2?</i></p> <p>Students will show growth of at least one (1) year in Reading and Mathematics annually. This goal, although it may appear to be identical to SSP #1; however, Kamalani students must strive to not only show</p>
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	growth, but also demonstrate or exceed proficiency in the core curriculum.
Measure	<p><i>How will the proposed school assess and demonstrate performance toward this goal?</i></p> <p>Kamalani will use standardized assessment tools (AIMS Web or STAR) to assess students on a regular basis.</p>
Metric	<p><i>How will the proposed school quantify this measure? For Conversion Charter School applicants, is the proposed Conversion Charter School tracking this data now?</i></p> <p>Baseline information will be collected followed by quarterly reports. The data will be quantified using enrollment records for all students, with an initial focus on the first cohort of students (SY 2017-2018 and beyond).</p>
Targets	<p><i>What targets will the proposed school achieve?</i></p> <p>Incremental growth will be determined after baseline data has been collected, with an expected minimum gain of 10% annually.</p>
Rationale for Goal	<p><i>Why is this goal important to the proposed school's mission?</i></p> <p>This goal allows us to demonstrate student growth on an individual and group basis, thus ensuring that Kamalani students strive for proficiency and beyond.</p>
Assessment Reliability and Scoring Consistency	<p><i>How will the proposed school demonstrate both the reliability and scoring consistency of the assessment(s) the proposed school plans to use, if non-standardized?</i></p> <p>STAR and AIMS Web are commercially available standardized tests that have validity and reliability. Measurements are based on the Strive HI formula, ensuring reliability and consistency in administration, scoring, reporting, evaluating, and planning.</p>
Baseline Data	<p><i>What is the proposed school's beginning data point?</i></p> <p>The baseline data will be collected at the beginning of each school year or when a student enrolls at anytime during the school year.</p>
Attachments	<p><i>Provide optional attachments to illustrate the assessment(s). (Note and attach relevant school-developed assessments and/or assessment tools.)</i></p>



## **Attachment Y**

### **Application and Enrollment Policy**

Enrollment Applications for SY 2017-2018 will be accepted starting February 1 to March 13, 2017. Applications will be available on our website starting February 1, 2017. Once available, the application form can be downloaded as a PDF file, printed, filled out and mailed to Kamalani Academy or submitted on-line. Applications have a deadline of 3:00 p.m. on March 13, 2017. All applications go into a public lottery system as more applications are received than spaces available. The lottery will take place at Kamalani Academy on April 3, 2017 at 9:00 a.m. Applicants do not need to be present.

### **IMPORTANT ADMISSION INFORMATION FOR PARENTS**

Thank you for your interest in our charter school. As a school of choice, prospective families will want to explore our website to learn about Kamalani Academy's philosophy and instructional program. Information learned about the school will help parents understand the level of participation expected from parents and know if the Kamalani Academy program meets their child's learning style and needs.

The following summary outlines how children are admitted to our school. For further information and/or questions, send an email to [info@kamalaniacademy.net](mailto:info@kamalaniacademy.net). Include your contact information (email, phone number, and best time to call).

**Who Can Apply:** Kamalani Academy has an open admission policy regarding all who wish to attend. It does not target any particular student population. It is intended that all students be admitted in compliance with state and federal mandates. The only eligibility requirement for all students is that families must agree to and support the Kamalani Academy Vision, Mission, and Student Code of Conduct.

**Minimum Age Requirement:** Kamalani Academy follows the August 1 Federal age requirement for enrollment. Children entering sixth grade must be eleven (11) years old by August 1 of their entry year. Children who are younger may be developmentally unprepared to enter our program.

**Parent Volunteers:** Kamalani Academy is a school of choice open to all. Parents determine if enrollment at Kamalani Academy will provide an appropriate learning environment for their child based on educational setting, expectations for students, and services available. Parents also must determine if they are willing to commit to parent participation expectations. Parent volunteers are valued at Kamalani Academy. Parent volunteers help Kamalani Academy meet the vision and goals of the school. There are many ways for parents to help. By submitting an application for your child, you are committing to active participation in the school through volunteering.

**Special Needs Applicants:** The Department of Education has developed a policy regarding the



enrollment of Special Education students in charter schools. The purpose of this policy is to ensure that students and their families are aware of the services available at the charter school. Students who have been identified as needing Special Education Services, have an IEP, and are selected in the lottery are offered enrollment after it is determined that the staff at Kamalani Academy can provide the services needed for that child. Parents will meet with the home school and Kamalani Academy teams to determine what services are needed for their child and what services Kamalani Academy can provide.

SPED students at Kamalani Academy receive services from a Special Education Teacher using an inclusion model (students are not pulled out of their classroom for servicing; rather they receive services in the classroom in their regular setting.)

If SPED services are required that Kamalani Academy cannot provide, the child's placement will be at his/her home school where services can be provided.

Lottery: In the event that more students apply for admission than space allows, the school will admit students based on a public lottery system as required by federal mandate. A lottery is a random selection process by which applicants are admitted to the charter school.

Each completed application will be drawn in random order to fill the available open slots. Once the openings are filled, the subsequent applicants will be assigned a wait list number. In the event that more than one child from a single family has applied to the same grade level (twins), one child will be placed in the lottery and one number will be assigned to both children.

Application and Lottery Dates / Notification of Results: Applications are accepted starting February 1 up to the deadline date of March 13, 2017. The lottery will be held April 3, 2017 at 9 a.m. Parents and applicants do not need to be present for the drawing. Students whose names are drawn in the lottery and space is available, will be offered enrollment on April 5, 2017 via phone call. Waitlist students will have their name added to the existing waitlist until September 29, 2017. These applicants will be notified via a letter of their waitlist status. After September 29, 2017, applications of students who have not been offered a slot will be purged. Applicants must reapply the following year for participation in the enrollment lottery.

Lottery Exemptions and Order: The only students exempt from the lottery are returning students, siblings of Kamalani Academy students, and students of staff, board members, and founding board members. The order in which openings are filled is as follows:

- Returning students from current school year
- Younger siblings (including stepchildren) of students/former students, and
- Children of Kamalani Academy staff and board members

**Applicants on wait list from previous year's lottery (if grade level openings are available)**

- Applicants for school's entry grade level - If more applicants apply than openings, a public lottery will be held



- Ranking of lottery - All non-placed students shall be wait-listed in the order in which they are drawn in the lottery. The starting waitlisted number for each grade level will be determined by total number of existing waitlisted students for each of the grade levels. If after April 3rd there are spaces available and no waitlisted applicants, then from that time forward all students shall be admitted on a first-apply, first-offered basis.
- Parents do not need to be present at the lottery to gain entry for their child. Families of children accepted for enrollment through the lottery will be notified by phone and/or a mailed letter. If a family cannot be reached by phone and the letter is returned without forwarding information, the school will go to the next child on the list to offer enrollment.

## **Documents**

Parents and guardians will need to bring the following documents and forms to upon enrolling in Kamalani Academy:

- Student Health Record
- Birth Certificate
- Proof of current address
- Documents from a previous school
- Legal documents

### **1. Student Health Record**

Kamalani Academy works in conjunction with the Department of Health to ensure that students meet key [health and immunization requirements](#). By the first day of school, all students entering school in Hawaii for the first time must have:

- Tuberculosis (TB) clearance, AND
- A completed [student health record](#) that includes:
  - Physical examination (PE)
  - All required immunizations
  - OR,
  - a signed statement or a medical appointment card from your child's doctor to prove that your child is in the process of completing missing immunizations or the PE

Students who have not completed these requirements by the first day of school will not be allowed to attend school until these requirements are met.

If your child requires emergency rescue medications or other daily/routine medications, please fill out [this form](#) and take to the school.

### **2. Birth certificate**

If a student is from a foreign country, the student's passport or student visa is acceptable.



### **3. Proof of current address**

- Documentation by the parent or legal guardian of the child's legal residence.
- Children experiencing [homelessness](#) are covered by enrollment guidelines provided in the McKinney-Vento Act.

### **4. Documents from a previous school**

For students in grades other than Kindergarten, the following documents are needed:

- **School Documents**
  - release packet with an unofficial transcript or latest report card, and
  - Individualized Education Plan for students in special education
- Legal Documents (if applicable):
  - Power of Attorney if the child is not living with the parents
  - Temporary Restraining Order
  - Guardianship documents
  - Legal name change
  - Court orders



## Attachment Z



47-510 Lulani Street  
Kaneohe, Hawaii 96744-4719  
February 6, 2016

To Whom It May Concern:

I am writing this letter to give support to the proposal for Kamalani Academy, a charter school that will be in Wahiawa.

I lived in Wahiawa for eight years when I was Sr. Pastor of Wahiawa United Methodist Church. During that time I joined the Rotary Club of Wahiawa-Waialua, and I am now president of that Rotary Club. Even though I no longer live in Wahiawa I stay connected to that community through Rotary and other civic groups.

Ms. Laumatia gave a presentation to our Rotary Club this week, and I was very impressed. The Board members have impressive credentials, the curriculum is an integrated curriculum that promotes connections between different subjects, joy of learning, problem solving, and will prepare students for life in our technical culture.

We were satisfied that Board Chairperson, Ms. Ku'uipo Laumatia, who has an MBA, has a plan that is fiscally sound.

I believe there are many children and youth in Wahiawa who will benefit from this educational opportunity, and I urge you to give approval and support for Kamalani Academy.

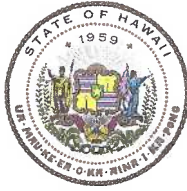
Thank you for your consideration.

Sincerely,

*Frances M. Wiebenga*

Rev. Dr. Frances M. Wiebenga, President  
Rotary Club of Wahiawa-Waialua





## The Senate

STATE CAPITOL  
HONOLULU, HAWAII 96813  
**SENATOR DONOVAN M. DELA CRUZ**

February 1, 2016

To Whom It May Concern:

I am pleased to write this in support of Kamalani Academy School's request for approval to operate as a public charter school. They propose to operate as a tuition-free, arts-integrated curriculum school using various forms of art to stimulate creative thinking and strategies.

Apart from the traditional teaching methods, arts integration is also known as whole child learning through active movement, involvement and group work. Because the curriculum includes drama, visual arts, music and dance, it enables students to express themselves in a way that appeals to them and not be limited to conventional learning.

Experience has been that arts immersion learning also resulted in students having increased self-confidence and the ability to communicate effectively because it encourages students to collaboratively solve creative challenges and also helps to develop social skills from a young age.

I hope a favorable consideration could be given Kamalani Academy's request for approval to operate as a public charter school as it will allow parents the opportunity to choose an option aside from conventional learning to an arts-integrated curriculum for their children.

Sincerely,



Senator Donovan M. Dela Cruz  
District 22

State Senate, State Capitol  
415 S. Beretania Street, Rm. 202  
Honolulu, HI 96813  
Phone: (808) 586-6090 Fax: (808) 586-6091  
Email: [sendelacruz@capitol.hawaii.gov](mailto:sendelacruz@capitol.hawaii.gov)





## OFFICE OF REPRESENTATIVE MARCUS R. OSHIRO

State Capitol, Room 424, Honolulu, Hawaii 96813

Phone: (808) 586-6700 • Fax: (808) 586-6702 • E-Mail: [repmoshiro@capitol.hawaii.gov](mailto:repmoshiro@capitol.hawaii.gov)

February 4, 2016

To Whom It May Concern:

My name is Marcus R. Oshiro, and I am the Representative of the 46<sup>th</sup> District (Wahiawa, Whitmore Village, Launani Valley) of the House of Representatives of the State of Hawaii. I am urging your support for the establishment of Kamalani Academy as a Charter School in Wahiawa, Central Oahu.

Wahiawa is an ethnically diverse community that faces the daunting challenges of the twenty-first century. No longer can our residents rely on the pineapple plantation as the primary source of employment in the region. To survive, our citizens must have the necessary skills to compete in the marketplace.

Education is key to Wahiawa's survival. It is imperative that our youth learn the skills they will need to obtain good-paying jobs. Only by supporting the education of our youth can we protect and preserve Wahiawa's unique way of life for generations to come.

The establishment of a Charter School in Wahiawa, Central Oahu, will provide our citizens with an alternative to the traditional public school experience. Modeled after the highly successful Doral Academy of Nevada, a 5-star, accredited arts integration charter school, Kamalani Academy will utilize the teaching of arts as the basis for learning – where academic mindsets of the students will include drive with traits of mastery and persistence, a sense of belonging, and an intrinsic value for learning. . . strategies for learning, such as variety, visualization, and creative problem solving.

Accordingly, I urge your support for the establishment of Kamalani Academy as a Charter School in Wahiawa, Central Oahu.

Thank you for your consideration. Should you have any questions, please do not hesitate to contact me at 586-6700.

Very Truly Yours,

REPRESENTATIVE MARCUS R. OSHIRO  
46<sup>th</sup> District (Wahiawa, Whitmore Village, Launani Valley)



# UNIVERSITY OF HAWAII AT MĀNOA

College of Education  
Institute for Teacher Education

January 14, 2016

To Whom It May Concern,

I am writing with enthusiastic support for the developing partnership between the University of Hawaii's College of Education, Institute for Teacher Education, and Kamalani Academy. There are many fruitful ways a collaboration between the two could support one another. For example:

- 1) Faculty members who are arts educators, actively involved in the professional development of both pre-service and in-service teachers may be available to support the professional development of Kamalani faculty through workshops, classroom demonstrations, and/or coaching.
- 2) Teacher candidates at the College of Education study under the mentorship of an experienced teacher. As the Kamalani classroom teachers become proficient as arts integrators, they will become excellent mentors for emerging teachers who are just beginning to study ways to actively engage children through culturally responsive pedagogy. In return, teacher candidates support classroom learning by providing tutoring, co-teaching, lowering the student-teacher ratio, and creating an environment where reflective practice spurs ongoing development. What's more, Kamalani can begin influencing the practices of new teachers who will become prospective faculty at Kamalani.
- 3) UH faculty who are interested in researching the influence of the arts in a child's learning might engage Kamalani administration, teachers, families, and students to contribute to the body of evidence supporting arts education and arts integration partnerships. By participating in such research, the Kamalani community will learn more about itself.

Kamalani Academy has the potential to become a great community resource beyond the boundaries of its own walls. Before that, its administration and faculty will be learning and growing as it defines its identity and develops its pedagogy. It is my personal hope to be a part of that journey.

Please contact me if you have further questions,



Jamie Simpson Steele  
Assistant Professor of Performing Arts Education  
[jamesim@hawaii.edu](mailto:jamesim@hawaii.edu)



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*Artistic Director*

Daniel A. Kelin, II  
*Director of Drama Education*

January 9, 2016

Hawaii State Public Charter School Commission  
Regarding the proposed Kamalani Academy

Dear Commission:

The possibility of an Oahu-based, arts integrated charter school is not only an exciting idea, but one that would be, I believe, very welcomed. I truly hope Kamalani Academy blooms. Honolulu Theatre for Youth (HTY) supports the endeavor, dedicated as we are to engaging young people in, through and about theatre. As a potential partner in the endeavor, HTY could offer the new school field trips to the theatre, providing Kamalani Academy students the opportunity for regular interaction with professional theatre performances. More than simply visits, however, we would embrace a more collaborative partnership through which HTY staff might provide arts-based and arts-integrated learning experiences for the students, collaborative teaching experience with Kamalani teachers, and professional development workshops and training for teachers.

HTY has a rich history of collaborating with fellow arts organizations, schools and other organizations that recognize the power of arts learning experiences for children. We know that having additional institutions dedicated to such a mission will only better our community and HTY as well.

We look forward to engaging in further conversation with the proposed school and their planners and advocates about future possibilities. Please feel free to contact me for further information about HTY and our support, if desired.

Aloha,



Daniel A. Kelin, II  
Director of Drama Education



**Hawai'i  
Arts  
Alliance**



*A member of the  
Kennedy Center  
Alliance for Arts  
Education Network*

January 13, 2016

To whom it may concern,

I am writing in support of developing a community partnership with Kamalani Academy and its work as an arts integrated charter school.

Hawai'i Arts Alliance, founded in 1980, is the only statewide nonprofit for all the arts that belongs to the national Kennedy Center Alliance for Arts Education Network, a major program of the John F. Kennedy Center for the Performing Arts in Washington, D.C. In addition to representing 145 organizations and 700 individuals with a combined statewide membership of over 35,000, Hawai'i Arts Alliance is one of six named partners in the ARTS First Partners. ARTS FIRST is a network of organizations whose mission is "to work collaboratively to create the conditions and culture that promise a comprehensive high-quality arts education – learning in, about, and through the arts – for every student in Hawai'i." In support of this work, the Hawai'i Arts Alliance works directly with classroom teachers, art educators and students to achieve these outcomes through its professional development workshops and its work as local partner for Turnaround Arts, a signature program of the President's Committee on the Arts and the Humanities.

The Alliance looks forward to the registration and participation of Kamalani Academy staff in our professional development offerings such as our ARTS FIRST Institute.

I can be reached at 808-533-2787 if you have any further questions.

Sincerely,

Lei Ahsing  
Education Director

P.O. Box 3948  
Honolulu, Hawai'i  
96812-3948  
Phone: (808) 533.2787  
Fax: (808) 526.9040  
arts@hawaiiartsalliance.org  
www.hawaiiartsalliance.org

**Kamalani Z-7**





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C/O Bay View Golf Park  
45-285 Kaneohe Bay Drive, #102  
Kāne'ohe, HI 96744

Phone: (808) 664-3027

[www.thepaf.org](http://www.thepaf.org)

#### *Place-based education*

*When we understand our  
connection to land,*

*When we accept responsibility for  
our actions to the land and sea,*

*When we are accountable for our  
own learning,*

*When we strive to become  
stewards.*

*When we appreciate history and  
the importance of language and  
culture,*

*We kindle the light of hope within  
ourselves to spark enlightened  
pathways for future generations  
whose journey towards global  
sustainability is forever more.*

*H. Lee, Jr.*

March 4, 2016

Hawaii State Charter School Commission  
1111 Bishop St., Suite 516  
Honolulu, HI 96813

Aloha,

Established in 1993, the Pacific American Foundation (PAF) is a national 501c (3) nonprofit, tax-exempt organization with the mission to “*improve the lives of Pacific Americans through service with dignity, courage, humility, and competence.*” PAF’s goal is to influence systemic change in the educational system that preserve and perpetuate traditional indigenous ways of knowing for emerging Pacific Century leaders, college career readiness, culturally responsive research, evaluation and assessment, economic and community partnership development.

PAF is submitting this *Letter of Support on behalf of Kamalani Academy, an Integrated Arts Pubic Charter School*. Kamalani Academy will enhance our public education system and communities served by providing added benefits of excellence, rigor and multidisciplinary integration through important approaches honoring the role of Hawaii’s diverse cultures.

Historically, King David Kalakaua preserved our Hawaiian language, and hula through the integrated arts. Today, we experience a global impact of this cultural legacy of Aloha. Problem-based learning aligns to performance-based competencies exemplified across our traditional culture and the arts. Indigenous ways of knowing and doing shall bring to the heart and soul of Kamalani Academy students the humanities and their contribution to our place called mother earth -- Honua. Nestled in the ahupua’a and moku of East Oahu, students will be able to integrate the arts with sciences in preparation for the 21<sup>st</sup> Pacific Century.

In addition, Dr. VerlieAnn Malina-Wight, PAF Board Chairman has personally committed to Kamalani Academy her in-kind professional services as a Strategic Visioning Elder to contribute her 50 years of international, national, state education experiences. We look forward to working with Kamalani Academy by leveraging resources to collectively impact our communities towards sustainable prosperity, wellness, education and culture-based values and practices through all of the integrated arts. *Maika’i loa!*

*Me ke aloha pumehana,*

Herb Lee, Executive Director









Hawaii State Charter School Commission  
1111 Bishop St., Suite 516  
Honolulu, HI 96813

Aloha,

The Waikīkī Hawaiian Civic Club (WHCC) is a chartered member of the Association of Hawaiian Civic Clubs since 1964. WHCC is dedicated to the promotion and perpetuation of traditional native Hawaiian values and practices and has a long history of involvement in diverse areas including native health, education, and the environment. It has also been involved with several Hawaiian language immersion projects relating to native language and cultural practices.

We are writing to express our support for the Kamalani Academy charter school application, of which cultural diversity is an important component. The Civic Club has worked with the Hawaiian Studies Faculty at the University of Hawaii-Manoa and foster families in conducting workshops in imu, fish, and salt preparation, taro cultivation, and uses of the coconut and kukui plants. Our community service has included events at the Royal Mausoleum, Mauna Ala, providing toiletries to various groups, and awarding educational scholarships. The Club will continue with these kinds of activities, educating the public in Hawaiian practices and culture and contributing to the community. We look forward to partnering with this new school in providing its students with cultural experiences like these.

If there is anything else you would like to know regarding our interest in supporting and working with Kamalani Academy, please feel free to contact me.

Sincerely,

Lisa Letoto-Ohata  
President  
Waikiki Hawaiian Civic Club  
c/o 1711 East-West Rd. #650  
Honolulu, HI 96848-1711

**For more info visit- <http://waikikihcc.org>**





The Mana'olana Foundation, Inc.  
P.O. Box 893384  
Mililani, HI. 96789  
808-206-5946

February 3, 2015

TO WHOM IT MAY CONCERN,

On behalf of The Mana'olana Foundation, we are pleased to offer our support and community partnership with The Kamalani Academy and its work in the arts integration public charter school program.

Founded on the core principles of Hope, Faith, Charity, The Mana'olana Foundation strives to inspire a sense of self-reliance to all Native Hawaiians through a set of programs designed to enable individuals to reach their personal goals and dreams. Our belief is that through education, partnerships, community involvement and financial assistance, every Native Hawaiian can reach his or her full potential and become productive members within their community and society.

It is our vision to make it possible for every Native Hawaiian across the globe to achieve his/her dreams. Our Philosophy is 'IMI 'IKE – To seek knowledge; and to inspire action. Other goals include helping Native Hawaiians develop self-confidence while learning strategies and skills that will lead them to a future of promise and possibilities. Our priorities include a tailored approach which offers specific solutions to specific problems through a combination of education assistance, vocational and life skills training, employment skills, and counseling and mentoring. The Foundation programs are tailored to the individual and challenges each person to take action to achieve his/her dreams.

We look forward to a long and lasting partnership with Kamalani Academy and strive for mutual cooperation for the benefit of others.

Please contact me if you have any questions.

Sincerely,

  
Brad Kellaway  
Board of Directors





February 19, 2015

To Whom It May Concern:

We are pleased and excited to learn about the Kamalani Academy and its vision to launch an arts integrated charter school. I am writing to you in hopes of developing a community partnership that would support Kamalani Academy's mission and objectives.

Founded in 2002, HI FusionED is a 501(c)(3) not-for-profit organization that connects K-12 educators with local professionals from industry and academia to co-develop science and technology enrichment activities for students. We leverage integrated technology and our network of community partners to develop project-based, culturally responsive approaches and professional development and training. We also provide consultation services based on Design Thinking methodologies to help schools transition towards student-centered learning environments. HI FusionED programs target underserved communities, prioritizing diversity in all our initiatives.

Through our extended network, we have been able to offer schools the following multidisciplinary learning activities:

- Robotics
- 3-dimensional computer aided design
- Maker movement consultation and support
- Hydroponic and aquaponic food production
- Design Thinking based consultation and training for administrators, staff, faculty and students
- Jr. Engineering activities for PreK and Kindergarten (introduction to electronics, coding and renewable energy technologies)

We look forward to learning more about Kamalani Academy and to explore the opportunity to join you on this incredible journey.

Please contact me if you have questions or need additional information.

Mahalo,

A handwritten signature in black ink, appearing to read "Lynn N. Fujioka", written over the printed name.

Lynn N. Fujioka, President



Dear Board Chair Ku'uipo Laumatia, thank you for your presentation about Kamalani Academy as the guest speaker at the Wahiawa Lions Club's Feb. 3, 2016 meeting.

We were pleased to learn more about your Board's plan for the proposed new arts immersion charter school in the Wahiawa area.

Tonight, Feb. 3, 2016, the Wahiawa Lions Club Board of Directors voted unanimously to support your plan.

The Wahiawa Lions Club wishes you well in your efforts to bring Kamalani Academy into reality.

Aloha, Don Robbins

Wahiawa Lions Club President



## **Attachment AA**

This is not applicable, as a school site has not been secured.



## Kamalani Academy Start Up Plan

StartUp Task Name	Task Description and Status	Owners	Timeline
Source Sites for Proposed School's Facility	Meetings with realtors, potential site owners, KA Board members, and AcademicaNV(AN) CEO & facility mgr	Kuuipo Laumatia (KA) & Bob Howell (AN)	1/15-1/16
Source & Negotiate Use of Current Site (OLS)	Site visits at Our Lady of Sorrows School (OLS), discussions/negotiations with Pastor/Parish Leadership to obtain a lease agreement	Bob Howell & Father Richard McNally (OLS)	5/15-8/16
Inspection of OLS Site for Cost Estimates	Inspection visits by architects, engineers, contractor, AN to determine renovation needs, code requirement upgrades, etc. to estimate OLS facility readiness costs	Bob Howell & Mike Muromoto (DP) Design Partners Inc. architectural firm	11/15-2/16
Obtain Financing for OLS Facility Renovation	Meetings, emails, discussions and eventually final approval on financing OLS renovations by Turner-Agassi Charter Funding Foundation (TA)	Bob Howell & Aarthi Sowrirajan (TA)	12/15-8/16
Facility Renovation Activities	Planning, executing, monitoring and controlling and completing renovation (includes CUP permit required & neighborhood board meeting minutes)	Bob Howell & Mike Muromoto	1/16-6/17
<b>MILESTONE A:</b> Physical Site (OLS) Has Been Financed and is Move-in Ready	All facility tasks completed, Certificate of Occupancy received, building is ready for internal furnishings and set-up rooms	Ku'uipo Laumatia & Bob Howell	7/17
Start Up Period Funding	Year 0 (2016-2017) Start Up Funding \$25k provided for essential start-up costs (mailers, meeting costs, etc.); already provided and in use	Bob Howell & Kuuipo Laumatia	2016-2017
Start Up Period Funding with Grants or Fundraising Activities	N/A as KA will complete all start up tasks using Start Up Funding provided	N/A	N/A
Human Resource Requirements – (KA donated labor)	Principal Martha Evans, KA Board – Kuuipo Laumatia & Steve Davidson are donating their hours of labor (500 each) to work on start-up tasks as needed; we also have a Project Manager (PM) and Project Coordinator (PC) donating at least 200 labor hours each as needed	Martha Evans, Kuuipo Laumatia & Steve Davidson;  Valerie Wong – PM and Craig Ponting - PC	2016-2017
Start Up Tasks Support from Academica Nevada – (0 cost labor)	Bob Howell and Academica Nevada team have committed to performing required start up tasks as needed to get KA ready to open, as they do on all new charters they support to receive approval	Bob Howell & AN Team	2016-2017
<b>MILESTONE B:</b> Start Up Period Tasks Funding Received	Start Up Period – Year 0 Funding Received and human resource	Bob Howell & Ku'uipo Laumatia	2016-2017



## Kamalani Academy Start Up Plan

StartUp Task Name	Task Description and Status	Owners	Timeline
	commitments (donated labor) received		
Marketing Activities for Potential Students	Mailers sent to all homes of children ages 3-11 for parent interest meetings 12/15/15 and 2/9/16 (12,000+ homes), two successful parent interest meetings generating 80+ parents & students interested in KA, continued mailers for future meetings, KA website announcements, emails to interested parents/teachers from website, KA instagram & twitter posts and feeds, word of mouth parents to other parents, activities will continue until enrollment caps	Kuuipo Laumatia & Blaine Fergerstrom – Director KA Communications	9/16-8/17
Activities to Develop Partnerships with Other Charter Schools, DOE Schools, and Private Schools	Meetings, emails, presentations, site visits with Kawai Hona, Voyager, Malama Honua, Lehua Elementary, Pomaika'i Elementary, Hoala, Trinity Lutheran, Wahiawa Baptist, Headstart – Wahiawa Elementary and Ka'ala, Rainbow Preschool and future similar contact activities to partner with other schools and source students who may fit more with KA's teaching approach	Martha Evans – KA Principal, Kuuipo Laumatia	1/15-8/17
Community Awareness Events & Presentations	KA has presented to: the Wahiawa Minister's Group and provided flyers and brochures to all the pastors for their congregations, the Lion's Club, the Rotary Club, the Neighborhood Board, the area legislators, and has many upcoming meetings and community awareness events (i.e. a carnival) planned for the upcoming year and a half	Martha Evans, Steve Davidson, Kuuipo Laumatia	12/15-8/17
Enrollment Opening Activities	Official Start of Open Enrollment Period for 2017-2018 School Year (website), including lottery if needed	Martha Evans, Blaine Fergerstrom	3/17-8/17
<b>MILESTONE C: Projected Enrollment Numbers Met</b>	By the time KA opens in August 2017 we will have achieved our projected enrollment numbers	Martha Evans & Kuuipo Laumatia	8/17
Principal Recruitment and Selection	KA has interviewed several principals and selected Martha Evans 40+ years teaching, developing curriculum, public and private administration roles	Kuuipo Laumatia, KA Governing Board	1/16



## Kamalani Academy Start Up Plan

StartUp Task Name	Task Description and Status	Owners	Timeline
Arts Integration Curriculum Specialist Recruitment and Selection	KA has interviewed and will continue to source and interview for this leadership role until a candidate has been selected	Martha Evans, KA Governing Board	7/15-12/16
Teacher and Teacher's Aide/Specialists Recruitment and Selection	Teacher/Teacher's Aide/Specialists interested in KA (data collected via KA website -14 to date), teacher fairs, online recruitment, social media marketing, UH Manoa College of Education and BYU Hawaii partnerships	Martha Evans, Arts Integration Curriculum Specialist	7/15-7/17
KA Staff Recruitment/Selection	To hire administrative and support staff for KA will entail two sub tasks: 1) the establishment of an Academica Nevada office in Hawaii to be called Academica Hawaii – 2 support staff hired locally; and 2) recruiting and hiring a KA Office Manager and other contracted services to support payroll, finance, business, payroll, IT, janitorial, food service provider, & similar required services	Subtask 1: Bob Howell  Subtask 2: Martha Evans & KA Board	1/17-7/17
Professional Development Activities	Professional Development Training for teachers, aides/specialists, administrators	Martha Evans, Arts Integration Specialist, Kuuipo Laumatia	6/17-7/17
<b>MILESTONE D: KA Administrators, Teachers, Specialists, Support Staff Hired &amp; Trained</b>	Administrators and teachers (including specialists) and support staff hired, trained, and ready for new school year to start	Martha Evans, Arts Integration Specialist, Kuuipo Laumatia	7/17-8/17
KA Governing Board Selection Process	KA Governing board members identified, recruited, selected; completed 12/15	Kuuipo Laumatia	10/14-12/15
KA Governing Board Replacement Process	KA Governing board members replacement plan and governing board transition plan outlined in Criterion III.A.5.d and Criterion IIIA.5.e completed 1/16	Kuuipo Laumatia, KA Board	1/16
KA Governing Board Training	KA Governing Board will be trained upon receiving approval that KA has a Charter	Kuuipo Laumatia, Ryan Reeves – AN Governance Specialist	9/16-7/17
<b>MILESTONE E: KA Governing Board Members Selected &amp; Trained</b>	The KA Governing Board is selected, trained, and ready to begin their duties as a governance oversight body for KA	Kuuipo Laumatia & Ryan Reeves	12/16-1/17



## Kamalani Academy Start Up Plan

StartUp Task Name	Task Description and Status	Owners	Timeline
Selection and Procurement of Curriculum Materials	Curriculum materials are selected, approved for purchase, and ordered	Martha Evans, Arts Integration Specialist, KA Board	4/17
Furniture, Fixtures, Equipment (FFE) Procured	Approval to purchase FFE granted, FFE ordered	KA Board, Martha Evans, Academica Nevada (AN)	4/17
Phone and Internet System Installed	All tasks relating to selecting and procuring phone system and internet connection are complete	Martha Evans, KA Board, AN	6/17
FFE Installed	All classroom furniture, fixtures, equipment received and installed	Martha Evans, KA Board, AN	7/17
General School Supplies Received	All general school supplies purchased, received and placed in rooms/offices	Martha Evans, KA Office Manager	7/17
<b>MILESTONE F: Operational Tasks Complete</b>	All operational tasks to ready the classrooms and offices are complete	Martha Evans, KA Board, KA Office Manager	8/17



## **Attachment GG**

The core operations budget does not depend on any sources of funds other than the per-pupil funding.



## Attachment HH





## **Doral Academy, Inc.**

February 8, 2016

To whom it may concern:

Doral Academy Incorporated is proud to support the charter school application of Kamalani Academy. The vision of Doral Academy Inc. is to provide a high quality K-12 seamless education that maximizes upon student potential and kindles a pursuit of lifelong learning. The schools within the Doral system offer a curriculum that contributes to the vision by providing students with a full range of opportunities in the classroom, as well as through clubs and community service, to learn and develop skills that will empower them to become lifelong learners. Students learn about the importance of communication, conflict resolution, ethics, reasoning, and the application of what they have learned and researched. Through this combination of skills, our schools hope to encourage students to continue in their pursuit of knowledge beyond high school graduation.

The mission of Doral Academy Inc. is to create a high quality K-12 educational learning community where stakeholders are dedicated to promoting an exceptional educational experience with an obligation to ensure that our students engage in rigorous learning opportunities that will help them strive for academic achievement and a desire to be lifelong learners and successful leaders in their professional careers. Doral Academy Inc. schools provide opportunities for all students to learn by taking into account the student needs as evidenced through data collected. Staff at both the system and school level set high academic and social expectations for the students and ensure that students learn in meaningful and innovative ways.

It is the commitment of each Doral Academy school to uphold high expectations for all, to create safe and caring learning environments, and to maintain a culture where parents, teachers,



students, governing board members, and community stakeholders work as a cohesive team. It is this common commitment aligned with the vision to provide a high quality of education to develop lifelong learners that has yielded the academic success of Doral Academy. The driving force behind this success is the motivation and dedication of each stakeholder to not just maintain that vision, but to continuously strive to reach beyond it from year to year. The result has been a school system that is characterized by successful students, innovative educators, exceptional administrators, committed board members, and engaged parents.

The Board of Doral Academy Inc. will operate with Kamalani Academy under an affiliation agreement that sets forth the conditions for current and future operations of the Hawaii school. The Board hires a Head of Schools to oversee the Florida schools and insure compliance of the affiliation agreement with Hawaii. The Head of Schools meets with the Administrator's Coalition that will include the Hawaii school principal once per month and makes a minimum of four formal visits to Hawaii each year. In addition, the Nevada School will participate in:

- a. On site principal training
- b. On site teacher training
- c. Classroom management critique and assessment
- d. Technology training
- e. Accreditation training

It is a honor and pleasure to support the application of Kamalani Academy.

Sincerely,

A handwritten signature in black ink, appearing to read 'DR', with a long horizontal line extending to the right.

Douglas Rodriguez,  
Head of Schools Doral Academy Incorporated





1378 Paseo Verde Pkwy, Ste. 200  
Henderson, Nevada 89012  
p (702) 431-6260 • f (702) 431-6250

**February 9, 2016**

Hawaii State Public Charter School Commission,

Academica is the educational management services provider selected by Kamalani Academy. Academica currently supports charter school operations in Florida, Texas, Utah, California, Colorado and Nevada, providing services which include facilities procurement and maintenance, finance, staffing and human resource coordination, as well as bookkeeping, budgeting, regulatory compliance and financial forecasting. Academica's mission is to help support independent Boards of Directors in establishing a unique educational environment that will best serve their students and community.

As the Chief Operating Officer of Academica's operations in Nevada, I have worked closely and supported numerous boards of directors in the opening of more than 14 new charter school campuses serving more than 11,000 students. We are proud that the Las Vegas Valley is sometimes referred to as "the ninth island," due to the area's strong and growing Hawaiian community and affinity for Hawaiian food, culture, art and history. We are excited to have this opportunity to further strengthen our ties to Hawaii through the growth of Academica to Hawaii, and the support of Kamalani Academy.

At Academica, we know that our reputation and the success of the schools we serve depends upon a successful partnership with a passionate, highly-qualified, and knowledgeable Board of Directors. We know that we have found an effective partner in the Kamalani Academy Board of Directors. Their knowledge, background and experience is as strong as any Board we work with in any state. Furthermore, the arts-integration educational model selected by Kamalani Academy has a strong track record of successful implementation and academic growth in multiple school districts with diverse student bodies.

Academica is fully dedicated to providing all of the resources necessary to support the timely and effective opening of the Kamalani Academy charter school. Academica's national network of offices, and experienced staff of attorneys, accountants, facilities managers, finance experts, and others stand ready and willing to serve.

Sincerely,

Ryan J. Reeves, Esq.  
Chief Operating Officer  
Academica

Nevada





# OUR LADY OF SORROWS CHURCH

*The Spirit-filled Body of Christ*

To: The Hawaii Public School Charter Commission  
Re: The Kamalani Academy

Commission Members,

I would like to express my support for the application for charter approval of the Kamalani Academy.

I believe many of our Wahiawa youngsters could benefit from the educational project of the academy with its emphasis on Hawaiian culture and learning through the arts. Few of my parishioners can afford to send their children to private school, having another style of public education available to them would be a valuable opportunity. I would certainly encourage parents to consider Kamalani.

Please feel free to contact me for further conversation.

Sincerely,

(Rev.) Richard McNally, ss.cc.

Pastor

Our Lady of Sorrows Catholic Church  
Wahiawa, Hawaii





February 4, 2016

The Hawaii State Public Charter School Commission  
1111 Bishop Street, Suite 516  
Honolulu, HI 96813

February 4, 2016

To Whom It May Concern:

On behalf of the Turner-Agassi Charter School Facilities Fund, I am pleased to submit this letter of interest to develop an educational facility for Kamalani Academy upon its obtainment of a charter contract.

TACSFF is the nation's preeminent developer of permanent campuses for best-in-class public charter schools. Since 2011, TACSFF has developed 33 campuses, serving 64 schools and 33,100 students nationwide. These campuses have enabled the nation's top charter management organizations to address the needs of children and families who have been chronically underserved by their respective large districts. TACSFF's second fund will allow it to develop close to \$1 billion in campuses for similar communities between now and 2020.

Since 2012, Turner-Agassi has partnered with Academica Nevada to develop 10 campuses in Las Vegas - 8 which are already open and 2 which are currently under construction. Among those, we have built or are building four campuses for Doral Academy (three campuses open and one under construction and targeted to open in September 2016) in Las Vegas, NV. In aggregate, the four Doral campuses will serve over 3,750 students at full capacity. Both Academica Nevada and Doral Academy will be working with Kamalani Academy.

Our construction capabilities, coupled with a keen understanding of charter school operations and management, position us well to meet the needs of our charter school clients. Our deep understanding of the real estate and construction markets positions us well to serve high-performing operators across the country. We look forward to continuing our work with Academica Nevada and Kamalani Academy in meeting the organization's facility needs.

Upon Turner-Agassi's thorough underwriting of the market and Kamalani Academy's charter, we are excited by the opportunity to invest in Hawaii and are in support of bringing quality educational options to more children and families. If you have any questions, please contact our office at 310-752-9600.

Sincerely,  
Aarthi Sowrirajan  
Regional Director – West

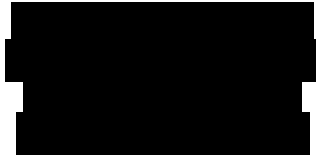
3000 Olympic Blvd. Suite 2120 | Santa Monica CA 90404  
office: 310.752.9600 fax: 310.752.9601  
[www.turneragassi.com](http://www.turneragassi.com)



## Attachment II



## **Martha A. Evans**



### **Objective**

Seeking a position in school administration to utilize my proficiency and experience in the K-12 educational setting

### **Ability Summary**

Career educator seeking opportunities to contribute to the K-12 educational environment

### **Employment History**

#### **Curriculum Coordinator - PTT, Adult Basic and Secondary Education and Literacy Teachers and Instructors**

State of Hawaii - McKinley Community School for Adults

634 Pensacola Street Room 216, Honolulu, HI

Employment Type: Part Time (Less than 30 Hours)

Coordinate curriculum for out-of-school youth and adults in English Language acquisition, remedial education classes, preparatory classes for the General Educational Development test, literacy, and career and college readiness. Develop and deliver professional development for faculty based on results from formative and summative assessments.†

#### **Grant and Scholarship Manager, Education Administrators, Postsecondary**

Saint Louis School

3142 Waialae Avenue, Honolulu, HI

Employment Type: Full Time (30 Hours or More)

##### **Administered Grants and Scholarship Process**

**Grants** - Worked with the Director of Advancement to set and calendar annual goals and objectives for the number of grants awards and amount secured annually, and monitor progress towards achievement of goals and objectives. Managed existing grants by tracking progress towards goals and objectives; developing internal reporting systems; writing reports; maintaining historical records; working with staff to ensure each project or program is meeting proposal conditions and expectations.

**Scholarships** - Provided management and support in all aspects of scholarship administration processes from the application through the award life cycle including, but not limited to: application design and reviews, coordination of volunteer reviewers, posting/publicity of scholarship availability, processing scholarship applications, awards and payments, ensuring compliance to all state and federal requirements;

#### **School Principal, Education Administrators, Elementary and Secondary School**

Saint Louis School

3142 Waialae Avenue, Honolulu, HI

Employment Type: Full Time (30 Hours or More)

Planned, directed, and coordinated the academic, administrative, and auxiliary school operations.† Managed



daily school activities, coordinated curricula, and oversaw teachers and other school staff to provide a safe and productive learning environment for students.

### **Vice Principal, Education Administrators, Elementary and Secondary School**

Saint Louis School

3142 Waialae Avenue, Honolulu, HI

Employment Type: Full Time (30 Hours or More)

Coordinated curricula and oversaw the school-wide testing and assessment program for all students. Conducted professional development for faculty and staff. Worked with the school community to ensure a safe learning environment.

### **Curriculum and Assessment Coordinator, Instructional Coordinators**

Saint Louis School

3142 Waialae Avenue, Honolulu, HI

Employment Type: Full Time (30 Hours or More)

Developed instructional material and coordinated its implementation and assessed its effectiveness. Planned, organized, and conducted professional development sessions. Observed and evaluated teachers instruction and analyzed student test data to ensure ongoing improvement.

### **Vice Principal, Education Administrators, Elementary and Secondary School**

Lanai High & Elementary School

555 Fraser Ave (P.O. Box 630630), Lanai City, HI

Employment Type: Full Time (30 Hours or More)

Coordinated curricula and oversaw the school-wide testing and assessment program for all students. Conducted professional development for faculty and staff. Worked with the school community to ensure a safe learning environment.†

### **Classroom Teacher, Teachers and Instructors, All Other**

Lanai High & Elementary School

555 Fraser Ave (P.O. Box 630630), Lanai City, HI

Employment Type: Full Time (30 Hours or More)

#### **Main Job Tasks and Responsibilities**

- plan, prepare and deliver instructional activities that facilitate active learning experiences
- develop schemes of work and lesson plans
- establish and communicate clear objectives for all learning activities
- prepare classroom for class activities
- provide a variety of learning materials and resources for use in educational activities
- identify and select different instructional resources and methods to meet students' varying needs
- instruct and monitor students in the use of learning materials and equipment
- use relevant technology to support instruction
- observe and evaluate student's performance and development
- assign and grade class work, homework, tests and assignments
- provide appropriate feedback on work
- encourage and monitor the progress of individual students



- maintain accurate and complete records of students' progress and development
- update all necessary records accurately and completely as required by law, district policies and school regulations
- prepare required reports on students and activities
- manage student behavior in the classroom by establishing and enforcing rules and procedures
- maintain discipline in accordance with the rules and disciplinary systems of the school
- apply appropriate disciplinary measures where necessary
- perform certain pastoral duties including student support, counseling students with academic problems and providing student encouragement
- participate in extracurricular activities such as social activities, sporting activities, clubs and student organizations
- participate in department and school meetings, parent meetings
- communicate necessary information regularly to students, colleagues and parents regarding student progress and student needs
- keep updated with developments in subject area, teaching resources and methods and make relevant changes to instructional plans and activities

### **Education and Training**

<b>Completion Date</b>	<b>Issuing Institution</b>	<b>Location</b>	<b>Qualification</b>	<b>Course of Study</b>
08/1976	University of Hawaii at Manoa	Honolulu, HI	Master's Degree	Elementary Education - Curriculum and Instruction
05/1972	University of Hawaii at Manoa	Honolulu, HI	Bachelor's Degree	Elementary Education

### **Occupational Licenses & Certificates**

<b>Certification Title</b>	<b>Issuing Organization</b>	<b>Completion Date</b>
School Administrator	Hawaii State Department of Education	05/2001

### **Additional Information**

Career educator seeking opportunities to contribute to the K-12 educational environment.† Experience with curriculum development, educational assessment, and instructional methodology.† Able to facilitate professional and curriculum development and work collaboratively and effectively in a team environment.† Experience working with Hawaiian and minority students.† Knowledge of and sensitivity to Hawaiian culture and values.

### **References Available on Request**



## **Attachment JJ**

This attachment is not applicable, as a School Principal has been selected.



## **Attachment KK**

This attachment is not applicable, as the remaining members of the leadership and management teams have not been selected.



## **Attachment LL**



## **JOB DESCRIPTION**

**POSITION TITLE:** Arts Integration Curriculum Specialist

**CONTRACT YEAR:** Ten (10) Months

### **QUALIFICATIONS**

**EDUCATION:** An earned bachelor's and/or master's degree from an accredited institution. The Lead Teacher must be highly qualified in compliance with all applicable State and Federal laws.

### **EXPERIENCE**

**REQUIRED:** A minimum of three (3) years of combined successful work experience, which includes a minimum of two (2) years teaching experience. Prior experience, exposure to, training in, and/or appreciation the Arts and the Arts Integration Curriculum is preferred.

**REPORTS TO:** Principal.

**POSITION GOAL:** To assist and support the Principal and teachers with the implementation and support of the Arts Integration curriculum.

### **ESSENTIAL PERFORMANCE RESPONSIBILITIES:**

The Arts Integration Curriculum Specialist shall

- Attend all curriculum related meetings and in-service events
- Serve as a liaison between the Kennedy Center and the school
- Assist grade levels in implementation of the Arts Integration curriculum
- Assist grade levels in the development of units
- Develop storage and checkout system for grade-level instructional materials; coordinate with grade level chairs to maintain grade-level instructional materials
- Maintain a list of materials needed to be ordered (new teacher materials, replacement of materials, additional instructional resources for future units of study to be developed, "wish lists")
- Coordinate staff development speakers
- Deliver, and coordinate with outside resources to develop in-house professional development regarding Arts Integration
- Coordinate school visits by parents, central office administrators, and community members. Possibly choose one day a week as "visitation" day (not Mondays or Fridays)
- Provide assistance and training for new teachers to sustain implementation
- Perform other duties as assigned by the Principal.
- **Note:** A Lead Teacher facilitates completion of these tasks, but usually acts in collaboration with the Principal and colleagues.