
# AMERICANA CHINESE INTERNATIONAL SCHOOL

## Curriculum: Grades PK-6

## Chiang Mai Primary Educational Service

## The Ministry of Education

# Contents

## Introduction

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# Introduction

The Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects (hereafter referred to as "the Standards") are the culmination of an extended, broad-based effort to fulfill the charge issued by the states to create the next generation of standards in kindergarten to grade 6 to help ensure that all students are literate and college and career ready no later than the end of high school.

The Standards set requirements not only for English language arts (ELA) but also for literacy in history/social studies, science, and technical subjects. Just as students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so too must the Standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines. Literacy standards for grade 7 and above are based on the expectation that teachers of ELA, history/social studies, science, and technical subjects use their expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in those content areas.

As a natural outgrowth of meeting the charge to define college and career readiness, the Standards also lay out a vision of what it means to be a literate person in the twenty-first century. Indeed, the skills and understandings students are expected to demonstrate have wide application outside the classroom or workplace. Students who meet the Standards readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and digitally. They actively seek wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews. They reflexively demonstrate cogent reasoning and use evidence in a way that is essential to both private deliberation and responsible citizenship in a democratic republic. In short, students who meet the Standards develop the skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language.
*June 2, 2010*

## Key Design Considerations

The Standards insist that instruction in reading, writing, speaking, listening, and language be a shared responsibility within the school. The K–6 standards include expectations for reading, writing, speaking, listening, and language applicable to a range of subjects, including but not limited to ELA. The grade 6 standards are divided into two sections: one for ELA and the other for history/social studies, science, and technical subjects. This division reflects the unique, time-honored place of ELA teachers in developing students' literacy skills while at the same time recognizing that teachers of other subjects must have a role in this development as well.

Part of the motivation behind the interdisciplinary approach to literacy promulgated by the Standards is extensive research establishing the need for college and career ready students to be proficient in reading complex informational text independently in a variety of content areas. Most of the required reading in college and in workforce training programs is informational in structure and challenging in content; postsecondary education programs typically provide students with both a higher volume of such reading than is generally required in K–12 schools and comparatively little scaffolding.

## Students Who Are College and Career Ready in Reading, Writing, Speaking and Listening, and Language

### They demonstrate independence.

Students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information. Likewise, students are independently able to discern a speaker's key points, request clarification, and ask relevant questions. They build on others' ideas, articulate their own ideas, and confirm they have been understood. Without prompting, they demonstrate command of standard English and acquire and use a wide-ranging vocabulary. More broadly, they become self-directed learners, effectively seeking out and using resources to assist them, including teachers, peers, and print and digital reference materials.

### They comprehend as well as critique.

Students are engaged and open-minded—but discerning—readers and listeners. They work diligently to understand precisely what an author or speaker is saying, but they also question an author's or speaker's assumptions and premises and assess the veracity of claims and the soundness of reasoning.

### They value evidence.

Students cite specific evidence when offering an oral or written interpretation of a text. They use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to the reader or listener, and they constructively evaluate others' use of evidence.

### They use technology and digital media strategically and capably.

Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn through technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and media and can select and use those best suited to their communication goals.

### They come to understand other perspectives and cultures.

Students appreciate that the twenty-first-century classroom and workplace are settings in which people from often widely divergent cultures and who represent diverse experiences and perspectives must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different from their own.

The appendices are available on the Common Core State Standards Initiative Web site at http://www.corestandards.org/ELA-Literacy.

## Instructional Design:

### CORE CURRICULUM, INSTRUCTIONAL MATERIALS, AND DESIGN

ACIS has adopted a Standards-based, college preparatory curriculum closely following the current CA Common Core State Standards. ACIS uses the Standards as a floor, not a ceiling. ACIS ensures that students develop critical thinking skills, including but not limited to observation and analytical reasoning as well as decision- making skills to help them

access, process, organize, and interpret the information that the Standards present. Students are able to communicate the concepts they have learned through connections between subjects and application of the information to the real world and their own experience. Most importantly, ACIS students draw inspiration from the curriculum to seek further information from other sources.

ACIS analyzes the Standards and has developed clear, useful and assessable guidelines for the Content Standards to be presented to students and their families, so that they may understand the grade-level expectations of ACIS and the State. ACIS outlines all applicable Standards taught in each grade level and subject areas by aligning these in a scope and sequence format. ACIS high school courses range from College prep to Honors courses.

## INSTRUCTIONAL MATERIALS

ACIS evaluates the instructional materials used in the School's educational program on a yearly basis. ACIS relies on the professional judgment of its educators to select educational materials that best meet the needs of students at the different grade levels. Educational materials are selected from CA state-adopted lists to ensure that they reflect CA State Standards for the core subjects of reading and language arts, mathematics, science, history/social science and elective subjects.

ACIS includes professional development time for teachers to learn how best to use the selected instructional materials in the curriculum. ACIS plans ahead and budgets sufficient resources to ensure that all students have the needed textbooks, workbooks, technology resources, computer software, and other instructional materials. ACIS prints its own report cards and purchases assessment tools such as testing texts and state and national standardized testing materials as needed.

## ENGLISH LANGUAGE ARTS

The ACIS English Language Arts program is completely aligned with the Common Core standards. Courses are designed to develop critical thinking skills through literary analysis, rhetorical analysis, and research and to cultivate student literacy and increase reading comprehension through the study of a variety of texts from numerous genres and cultures. At every grade level, students engage in class discussions, group discussions, and seminars to ensure they are proficient in the speaking and listening skills outlined by the Common Core Standards. Likewise, at every grade level, students compose writings within a variety of genres—prose, poetry, analysis, narrative, expository, persuasion, speeches, and multimedia presentations--and for a variety of audiences.

Unlike in other disciplines in which students must master one skill before moving on to another, in language arts classes, the skills remain largely the same from grade to grade as the texts to which students are exposed become more and more complex and their vocabulary more challenging. This is reflected in the scope and sequence of the Common Core Standards themselves. The Common Core Standards for reading, writing, listening, speaking, and language are addressed at all levels with the nuances outlined by the standards. The scope and sequence of skills taught in the Language Arts program of ACIS reflect this concept of grade-appropriate growth and challenge.

ACIS Language Arts program ascribes to the Common Core philosophy that all students need to tackle complex texts and be taught how to determine the meaning of words from context, to discern levels of meaning, to identify the central ideas, to draw inferences, support those inferences through textual evidence, and evaluate methods authors use to convey meaning—ethos, logos, pathos, use of literary devices and textual elements. One can enter a first grade ELA class at ACIS and witness activities, instruction and class discussions that are very similar to those occurring in a sixth-grade course but on a level and using language appropriate for younger students. Likewise, the College and Career Readiness Anchor Standards are addressed in every classroom with particular emphasis on developing a command of the conventions of Standard English grammar, usage, capitalization, and punctuation as well as use of college- and career-level vocabulary and an understanding that words carry with them distinct connotations.

# Project Based Learning

One distinctive way in which Americana Chinese International School is unique to other International Schools is the integration of Project Based Learning (hereafter referred to as PBL) to our curriculum.

PBL is a teaching method which incorporates higher order thinking skills, such as creation and evaluation in order to demonstrate knowledge gained in the classroom. These projects are cross-curricular in nature and may last anywhere from 1 week to 1 semester. Apart from higher order thinking, PBL benefits not only our school community but our local communities as well. As a school, we decide on the project given to students, and incorporate the local community into given projects.

Project Based Learning is infused into all grade levels at ACIS. Projects are scaffolded to incorporate this style of learning into all grade levels.

**Sample Project**

The following documents describe a Project-Based Learning unit on magnets. This unit is scaffolded to incorporate different grade levels.

1. Pre-School classes are introduced to magnets, and experiment with various objects to decide which ones react with the magnets. Students will be introduced to related vocabulary.
2. Kindergarten 1 classes review what magnets are and experiment with various objects to decide which objects react with the magnets. Students identify magnetic attraction as “weak” or “strong” and expand their English vocabulary with other relative descriptions. Lastly, they complete “Magnet Painting” exercise (document with instructions attached).
3. Kindergarten 2 classes review what magnets are and various items they attract or detract with. Students practice English reading and writing to describe the attraction. Students complete “Magnet Painting” exercise (document with instructions attached). Teachers guide students through real-world examples of magnets and how we can use them in our communities (i.e. trains that use magnetic propulsion as mass transportation).
4. Kindergarten 3 – Grade 1 classes review the principles of magnetic attraction and complete the “Fishing for Magnets” exercise (document with instructions attached), “Attract or Repel” exercise (document with instructions attached), “Magnetic Robot” exercise, and “Magnetic Painting” exercise (document with instructions attached). Teachers guide students through real-world examples of magnets and how we can use them in our communities (i.e. trains that use magnetic propulsion as mass transportation).
5. Grade 2 – Grade 3 classes review the principles of magnetic attraction by completing “Attract or Repel” exercise (document with instructions attached). Students further their investigation of magnets by completing “Magnetic Slime” exercise. Teachers guide them through real-world examples of magnets and how we can use them in our communities (i.e. trains that use magnetic propulsion as mass transportation). Students are tasked to describe one way in which magnets could be used to benefit their daily life, using magnets to create their description.
6. Grade 4 – Grade 6 classes review the principles of magnetic attraction by completing “Attract or Repel” exercise (document with instructions attached). Students further their investigation of magnets by completing “Magnetic Cereal” exercise. Teachers guide them through real-world examples of magnets and how we can use them in our communities (i.e. trains that use magnetic propulsion as mass transportation). Students are tasked to design, create and orally present an invention that would benefit their local community using magnets.
7. Grades 2-6 will end this unit with a school sponsored “Magnetic Showcase” for their peers, parents and community to “showcase” their ideas, creations and inventions.

Standards for

# Infant/Toddler Education

## PK-K1

**Alignment of the Infant/Toddler Learning Foundations with Other Key Resources**

The *Infant/Toddler Learning and Development Foundations,* are designed to align with content standards in key early childhood resources. The alignment is of the *California Preschool Learning Foundations* with the *California Infant/Toddler Learning and Development Foundations,* the California content standards for kindergarten and the *Common Core State Standards* (CCSS) for kindergarten.

**Social-Emotional Development**

• **Interactions with Adults:** The child's developing ability to respond to social cues from adults and engage in back-and-forth social exchanges with adults

• **Relationships with Adults:** The child's development of close relationships with adults who provide consistent nurturance

• **Interactions with Peers:** The child's developing ability to respond to social overtures from peers, engage in back-and-forth interaction with other children, and, ultimately, to engage in cooperative play with other children.

• **Relationships with Peers:** The child's development of relationships with certain peers through interactions over time

• **Identity of Self in Relation to Others:** The child's developing concept of self as an individual who operates within social relationships

• **Recognition of Ability:** The child's developing understanding of the ability to take action to influence the immediate social and physical environments

• **Expression of Emotion:** The child's developing ability to communicate various emotions through facial expressions, movements, gestures, sounds, or words

• **Empathy:** The child's developing ability to share in the emotional experiences of others

• **Emotion Regulation:** The child's developing ability to manage or regulate emotional responses with and without assistance from adults

• **Impulse Control:** The child's developing capacity to wait for needs to be met, to inhibit behavior, and to act according to social expectations, including safety rules

• **Social Understanding:** The child's developing understanding of the responses, communication, emotional expressions, and actions of other people.

**Language Development**

• **Receptive Language:** The child's developing ability to understand words and increasingly complex utterances

• **Expressive Language:** The child's developing ability to produce the sounds of language, and speak with an increasingly expansive vocabulary and use increasingly complex utterances

• **Communication Skills and Knowledge:** The child's developing ability to communicate nonverbally and verbally

• **Interest in Print:** The child's developing interest in engaging with print in books and in the environment

**Cognitive Development**

• **Cause-and-Effect:** The child's developing understanding that one event or action brings about another

• **Spatial Relationships:** The child's developing understanding of how things move and fit in space

• **Problem Solving:** The child's developing ability to engage in a purposeful effort to reach a goal or to determine how something works

• **Imitation:** The child's developing capacity to mirror, repeat, and practice the actions of others, either immediately or at a later time

• **Memory:** The child's developing ability to store and later retrieve information.

• **Number Sense:** The child's developing understanding of number or quantity

• **Classification:** The child's developing ability to group, sort, categorize, and form expectations based on the attributes of objects and people

• **Symbolic Play:** The child's developing ability to use actions, objects, or ideas to represent other actions, objects, or ideas

• **Attention Maintenance:** The child's developing ability to attend to people and things while interacting with others or exploring the environment and play materials

• **Understanding of Personal Care Routines:** The child's developing ability to understand personal care routines and participate in them

**Perceptual and Motor Development**

• **Perceptual Development:** The child's developing ability to become aware of the immediate social and physical environments through the senses

• **Gross Motor:** The child's developing ability to move and coordinate large muscles

• **Fine Motor:** The child's developing ability to move and coordinate small muscles

Standards for

# Pre School

# K2

## Alignment of the Preschool Learning Foundations with Other Key Resources

The *California Preschool Learning Foundations, Volumes 1–3,* are designed to align with content standards in key early childhood resources. The alignment is of the *California Preschool Learning Foundations* with the *California Infant/Toddler Learning and Development Foundations,* the California content standards for kindergarten and the *Common Core State Standards* (CCSS) for kindergarten.

### Social-Emotional Development

- *Self,* which includes self-awareness and self-regulation, social and emotional understanding, empathy and caring, and initiative in learning
- *Social Interaction,* which focuses on interactions with familiar adults, interactions with peers, group participation, and cooperation and responsibility
- *Relationships,* which addresses attachments to parents, close relationships with teachers and caregivers, and friendships

### Language and Literacy

- *Listening and Speaking,* which includes language use and conventions, vocabulary, and grammar
- *Reading,* which covers concepts about print, phonological awareness, alphabetic and word/print recognition, comprehension and analysis of age-appropriate text, and literacy interest and response
- *Writing,* which focuses on writing strategies, including the emergent use of writing and writing-like behaviors

### English-Language Development

- *Listening,* which includes understanding words, requests and directions, and basic and advanced concepts
- *Speaking,* which focuses on using English to communicate needs, expand vocabulary, become skillful at engaging in conversations, use increasingly complex grammatical constructions when speaking, understand grammar, ask questions, use social conventions, and tell personal stories
- *Reading,* which covers appreciating and enjoying reading, understanding book reading, understanding print conventions, demonstrating awareness that print conveys meaning, developing awareness and recognition of letters, demonstrating phonological awareness, and manipulating sounds, such as rhyming
- *Writing,* which includes understanding the communicative function of writing and engaging in simple writing and writing-like behaviors

### Mathematics

- *Number Sense,* which includes understanding of counting, number relationships, and operations
- *Algebra and Functions (Classification and Patterning),* which focuses on sorting and classifying objects and recognizing and understanding simple, repeating patterns
- *Measurement,* which includes comparison and ordering
- *Geometry,* which focuses on properties of objects (shape, size, position) and the relation of objects in space
- *Mathematical Reasoning,* which addresses how young children use mathematical thinking to solve everyday problems

### Visual and Performing Arts

- *Visual Art,* which includes noticing, responding to, and engaging in visual art; developing skills; and creating, inventing, and expressing through visual art
- *Music,* which covers noticing, responding to, and engaging in music; developing skills; and creating, inventing, and expressing through music
- *Drama,* which focuses on noticing, responding to, and engaging in drama; and developing skills to create, invent, and express through drama
- *Dance,* which centers on noticing, responding to, and engaging in dance; developing skills; and creating, inventing, and expressing through dance

### Physical Development

- *Fundamental Movement Skills,* which include balance, locomotor skills, and manipulative skills
- *Perceptual–Motor Skills and Movement Concepts,* which focus on body awareness, spatial awareness, and directional awareness
- *Active Physical Play,* which addresses active participation, cardiovascular endurance, muscular strength, muscular endurance, and flexibility

### Health

- *Health Habits,* which cover basic hygiene, oral health, knowledge of wellness, and sun safety
- *Safety,* which focuses on injury prevention
- *Nutrition,* which addresses nutrition knowledge, nutrition choices, and the self-regulation of eating

### History–Social Science

1. *Self and Society,* which centers on culture and diversity, relationships, and social roles and occupations
2. *Becoming a Preschool Community Member (Civics),* which pertains to skills for democratic participation, responsible conduct, fairness and respect for other people, and conflict resolution
3. *Sense of Time (History),* which includes understanding past events, anticipating and planning future events, personal history, and historical changes in people and the world
4. *Sense of Place (Geography and Ecology),* which covers navigating familiar locations, caring for the natural world, and understanding the physical world through drawings and map
5. *Marketplace (Economics),* which focuses on the economic concept of exchange

### Science

1. *Scientific Inquiry,* which pertains to observation and investigation and to documentation and communication
2. *Physical Sciences,* which focuses on the properties and characteristics of nonliving objects and materials and the changes in nonliving objects and materials
3. *Life Sciences,* which addresses properties and characteristics of living things and changes in living things
4. *Earth Sciences,* which covers properties and characteristics of earth materials and objects and changes in the earth

Standards for

# English Language Arts

## K3–5

# College and Career Readiness Anchor Standards for Reading

The K3–5 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 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 those fields that will also give them the background to be better readers in all content areas. Students can gain this foundation only 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 future success.*

*Please see Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

# RL Reading Standards for Literature K3–5

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.*

| | Kindergartner 3 | 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 *who, what, where, when, why*, and *how* 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. (See grade K Language standards 4–6 for additional expectations.) | 4. Identify words and phrases in stories or poems that suggest feelings or appeal to the senses. (See grade 1 Language standards 4–6 for additional expectations.) | 4. Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song. (See grade 2 Language standards 4–6 for additional expectations.) |
| | 5. Recognize common types of texts (e.g., storybooks, poems, fantasy, realistic text). | 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. |

# RL Reading Standards for Literature K3–5

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| 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.<br>a. Activate prior knowledge related to the information and events in texts.<br>b. Use illustrations and context to make predictions about text. | 10. With prompting and support, read prose and poetry of appropriate complexity for grade 1.<br>a. Activate prior knowledge related to the information and events in a text.<br>b. Confirm predictions about what will happen next in a text. | 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. |

| | Grade 3 Students | Grade 4 Students | Grade 5 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. | 1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. | 1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. |
| | 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. | 2. Determine a theme of a story, drama, or poem from details in the text; summarize 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. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events. | 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). | 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). |

# RL Reading Standards for Literature K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| Craft and Structure | 4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language. **(See grade 3 Language standards 4–6 for additional expectations.) CA** | 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). **(See grade 4 Language standards 4–6 for additional expectations.) CA** | 4. Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes. **(See grade 5 Language standards 4–6 for additional expectations.) CA** |
| | 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. |

# RL Reading Standards for Literature K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| **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. |

# RI Reading Standards for Informational Text K3–5

| | Kindergartner 3 | 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 *who, what, where, when, why,* and *how* 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. (See grade K Language standards 4–6 additional expectations.) | 4. Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. (See grade 1 Language standards 4–6 for additional expectations.) | 4. Determine the meaning of words and phrases in a text relevant to a *grade 2 topic or subject area*. (See grade 2 Language standards 4–6 for additional expectations.) |
| | 5. Identify the front cover, back cover, and title page of a book. | 5. Know and use various text structures (e.g., sequence) and 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. |

# RI Reading Standards for Informational Text K3–5

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| **Range of Reading and Level of Text Complexity** | 10. Actively engage in group reading activities with purpose and understanding.<br>a. Activate prior knowledge related to the information and events in texts.<br>b. Use illustrations and context to make predictions about text. | 10. With prompting and support, read informational texts appropriately complex for grade 1.<br>a. Activate prior knowledge related to the information and events in a text.<br>b. Confirm predictions about what will happen next in a text. | 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. |
| | **Grade 3 Students** | **Grade 4 Students** | **Grade 5 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. | 1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. | 1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. |
| | 2. Determine the main idea of a text; recount the key details and explain how they support the main idea. | 2. Determine the main idea of a text and explain how it is supported by key details; summarize 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. 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. 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. | 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.* (See grade 3 Language standards 4–6 for additional expectations.) | 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*. (See grade 4 Language standards 4–6 for additional expectations.) | 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*. (See grade 5 Language standards 4–6 for additional expectations.) |
| | 5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently. | 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. | 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. Distinguish their own point of view from that of the author of a text. | 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. |

# RI Reading Standards for Informational Text K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| 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, science, 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. |

# RF Reading Standards for Foundational Skills K3–5

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.*

| | Kindergartner 3 | Grade 1 Students |
|---|---|---|
| **Print Concepts** | 1. Demonstrate understanding of the organization and basic features of print.<br>a. Follow words from left to right, top to bottom, and page by page.<br>b. Recognize that spoken words are represented in written language by specific sequences of letters.<br>c. Understand that words are separated by spaces in print.<br>d. Recognize and name all upper- and lowercase letters of the alphabet. | 1. Demonstrate understanding of the organization and basic features of print.<br>a. Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation). |
| Phonological Awareness | 2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).<br>a. Recognize and produce rhyming words.<br>b. Count, pronounce, blend, and segment syllables in spoken words.<br>c. Blend and segment onsets and rimes of single-syllable spoken words.<br>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/.)<br>e. Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.<br>f. Blend two to three phonemes into recognizable words. | 2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).<br>a. Distinguish long from short vowel sounds in spoken single-syllable words.<br>b. Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.<br>c. Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.<br>d. Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes). |

*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.

# RF Reading Standards for Foundational Skills K3–5

*Note: In kindergarten, children are expected to demonstrate increasing awareness and competence in the areas that follow.*

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| **Phonics and Word Recognition** | 3. Know and apply grade-level phonics and word analysis skills in decoding words both in isolation and in text.<br>a. Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sounds or many of the most frequent sounds for each consonant.<br>b. Associate the long and short sounds with common spellings (graphemes) for the five major vowels. (Identify which letters represent the five major vowels (Aa, Ee, Ii, Oo, and Uu) and know the long and short sound of each vowel. More complex long vowel graphemes and spellings are targeted in the grade 1 phonics standards.)<br>c. Read common high-frequency words by sight (e.g., *the, of, to, you, she, my, is, are, do, does*).<br>d. Distinguish between similarly spelled words by identifying the sounds of the letters that differ. | 3. Know and apply grade-level phonics and word analysis skills in decoding words both in isolation and in text.<br>a. Know the spelling-sound correspondences for common consonant digraphs.<br>b. Decode regularly spelled one-syllable words.<br>c. Know final -e and common vowel team conventions for representing long vowel sounds.<br>d. Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.<br>e. Decode two-syllable words following basic patterns by breaking the words into syllables.<br>f. Read words with inflectional endings.<br>g. Recognize and read grade-appropriate irregularly spelled words. | 3. Know and apply grade-level phonics and word analysis skills in decoding words both in isolation and in text.<br>a. Distinguish long and short vowels when reading regularly spelled one-syllable words.<br>b. Know spelling-sound correspondences for additional common vowel teams.<br>c. Decode regularly spelled two-syllable words with long vowels.<br>d. Decode words with common prefixes and suffixes.<br>e. Identify words with inconsistent but common spelling-sound correspondences.<br>f. Recognize and read grade-appropriate irregularly spelled words. |
| **Fluency** | 4. Read emergent-reader texts with purpose and understanding. | 4. Read with sufficient accuracy and fluency to support comprehension.<br>a. Read on-level text with purpose and understanding.<br>b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings.<br>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. | 4. Read with sufficient accuracy and fluency to support comprehension.<br>a. Read on-level text with purpose and understanding.<br>b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings.<br>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. |

RF

# Reading Standards for Foundational Skills K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| **Phonics and Word Recognition** | 3. Know and apply grade-level phonics and word analysis skills in decoding words both in isolation and in text.<br>a. Identify and know the meaning of the most common prefixes and derivational suffixes.<br>b. Decode words with common Latin suffixes.<br>c. Decode multisyllable words.<br>d. Read grade-appropriate irregularly spelled words. | 3. Know and apply grade-level phonics and word analysis skills in decoding words.<br>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. | 3. Know and apply grade-level phonics and word analysis skills in decoding words.<br>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. |
| **Fluency** | 4. Read with sufficient accuracy and fluency to support comprehension.<br>a. Read on-level text with purpose and understanding.<br>b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings<br>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. | 4. Read with sufficient accuracy and fluency to support comprehension.<br>a. Read on-level text with purpose and understanding.<br>b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.<br>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. | 4. Read with sufficient accuracy and fluency to support comprehension.<br>a. Read on-level text with purpose and understanding.<br>b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.<br>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. |

# 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 and/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.*

# W Writing Standards K3–5

The following standards for K3–5 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.

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| **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 . . .*). | 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. | 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. 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. | 2. Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. | 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. 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. | 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. | 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. |

# W Writing Standards K3–5

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| Production and Distribution of Writing | 4. (Begins in grade 2) | 4. (Begins in grade 2) | 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 adults, respond to questions and suggestions from peers and add details to strengthen writing as needed. | 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. | 5. With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing. |
| | 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. | 8. 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 2) | 10. (Begins in grade 2) | 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. |

# W Writing Standards K3–5

## Text Types and Purposes

| Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|
| 1. Write opinion pieces on topics or texts, supporting a point of view with reasons.<br>a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.<br>b. Provide reasons that support the opinion.<br>c. Use linking words and phrases (e.g., *because, therefore, since, for example*) to connect opinion and reasons.<br>d. Provide a concluding statement or section. | 1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.<br>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.<br>b. Provide reasons that are supported by facts and details.<br>c. Link opinion and reasons using words and phrases (e.g., *for instance, in order to, in addition*).<br>d. Provide a concluding statement or section related to the opinion presented. | 1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.<br>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.<br>b. Provide logically ordered reasons that are supported by facts and details.<br>c. Link opinion and reasons using words, phrases, and clauses (e.g., *consequently, specifically*).<br>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.<br>a. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.<br>b. Develop the topic with facts, definitions, and details.<br>c. Use linking words and phrases (e.g., *also, another, and, more, but*) to connect ideas within categories of information.<br>d. Provide a concluding statement or section. | 2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.<br>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.<br>b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.<br>c. Link ideas within categories of information using words and phrases (e.g., *another, for example, also, because*).<br>d. Use precise language and domain-specific vocabulary to inform about or explain the topic.<br>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.<br>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.<br>b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.<br>c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., *in contrast, especially*).<br>d. Use precise language and domain-specific vocabulary to inform about or explain the topic.<br>e. Provide a concluding statement or section related to the information or explanation presented. |

# W Writing Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| **Text Types and Purposes (Continued)** | 3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.<br>a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.<br>b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.<br>c. Use temporal words and phrases to signal event order.<br>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.<br>a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.<br>b. Use dialogue and description to develop experiences and events or show the responses of characters to situations.<br>c. Use a variety of transitional words and phrases to manage the sequence of events.<br>d. Use concrete words and phrases and sensory details to convey experiences and events precisely.<br>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.<br>a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.<br>b. Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.<br>c. Use a variety of transitional words, phrases, and clauses to manage the sequence of events.<br>d. Use concrete words and phrases and sensory details to convey experiences and events precisely.<br>e. Provide a conclusion that follows from the narrated experiences or events. |
| **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.) | 4. Produce clear and coherent writing (including multiple-paragraph texts) 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.) | 4. Produce clear and coherent writing (including multiple-paragraph texts) 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 3.) | 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.) | 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.) |

# W Writing Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| Production and Distribution of Writing (continued) | 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. | 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. | 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. | 7. Conduct short research projects that build knowledge through investigation of different aspects of a topic. | 7. Conduct short research projects that use several sources to build knowledge through investigation of different aspects of 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. | 8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes, paraphrase, and categorize information, and provide a list of sources. | 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.<br>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].").<br>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.<br>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]").<br>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]"). |

# W Writing Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| 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.*

# SL Speaking and Listening Standards K3–5

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.*

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| Comprehension and Collaboration | 1. Participate in collaborative conversations with diverse partners *about kindergarten topics and texts* with peers and adults in small and larger groups.<br>a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).<br>b. Continue a conversation through multiple exchanges. | 1. Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.<br>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).<br>b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges.<br>c. Ask questions to clear up any confusion about the topics and texts under discussion. | 1. Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.<br>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).<br>b. Build on others' talk in conversations by linking their comments to the remarks of others.<br>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.<br>a. Understand and follow one- and two-step oral directions. | 2. Ask and answer questions about key details in a text read aloud or information presented orally or through other media.<br>a. Give, restate, and follow simple two-step directions. | 2. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.<br>a. Give and follow three- and four-step oral directions. |
| | 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. |

# SL Speaking and Listening Standards K3–5

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| 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.<br>a. Memorize and recite poems, rhymes, and songs with expression. | 4. Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.<br>a. Plan and deliver a narrative presentation that: recounts a well-elaborated event, includes details, reflects a logical sequence, and provides a conclusion. |
| | 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 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 for specific expectations.) |

# SL Speaking and Listening Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 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.<br>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.<br>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).<br>c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.<br>d. 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 4 topics and texts*, building on others' ideas and expressing their own clearly.<br>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.<br>b. Follow agreed-upon rules for discussions and carry out assigned roles.<br>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.<br>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.<br>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.<br>b. Follow agreed-upon rules for discussions and carry out assigned roles.<br>c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.<br>d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions. |
| | 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. | 2. Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. | 2. Summarize a written 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. | 3. Identify the reasons and evidence a speaker or media source provides to support particular points. | 3. Summarize the points a speaker or media source makes and explain how each claim is supported by reasons and evidence and identify and analyze any logical fallacies. |

# SL Speaking and Listening Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| Presentation of Knowledge and Ideas | 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.<br>a. Plan and deliver an informative/explanatory presentation on a topic that: organizes ideas around major points of information, follows a logical sequence, includes supporting details, uses clear and specific vocabulary, and provides a strong conclusion. | 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.<br>a. Plan and deliver a narrative presentation that: relates ideas, observations, or recollections; provides a clear context; and includes clear insight into why the event or experience is memorable. | 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.<br>a. Plan and deliver an opinion speech that: states an opinion, logically sequences evidence to support the speaker's position, uses transition words to effectively link opinions and evidence (e.g., consequently and therefore), and provides a concluding statement related to the speaker's position.<br>b. Memorize and recite a poem or section of a speech or historical document using rate, expression, and gestures appropriate to the selection. |
| | 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. | 5. Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes. | 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 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 and 3 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 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.*

# L Language Standards K3–5

The following standards for grades K3–5 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 (*).

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| **Conventions of Standard English** | 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.<br>a. Print many upper- and lowercase letters.<br>b. Use frequently occurring nouns and verbs.<br>c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., *dog, dogs*; *wish, wishes*).<br>d. Understand and use question words (interrogatives) (e.g., *who, what, where, when, why, how*).<br>e. Use the most frequently occurring prepositions (e.g., *to, from, in, out, on, off, for, of, by, with*).<br>f. Produce and expand complete sentences in shared language activities. | 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.<br>a. Print all upper- and lowercase letters.<br>b. Use common, proper, and possessive nouns.<br>c. Use singular and plural nouns with matching verbs in basic sentences (e.g., *He hops*; *We hop*).<br>d. Use personal (subject, object), possessive, and indefinite pronouns (e.g., *I, me, my; they, them, their; anyone, everything*).<br>e. Use verbs to convey a sense of past, present, and future (e.g., Y*esterday I walked home; Today I walk home; Tomorrow I will walk home*).<br>f. Use frequently occurring adjectives.<br>g. Use frequently occurring conjunctions (e.g., *and, but, or, so, because*).<br>h. Use determiners (e.g., articles, demonstratives).<br>i. Use frequently occurring prepositions (e.g., *during, beyond, toward*).<br>j. Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts. | 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.<br>a. Use collective nouns (e.g., *group*).<br>b. Form and use frequently occurring irregular plural nouns (e.g., *feet, children, teeth, mice, fish*).<br>c. Use reflexive pronouns (e.g., *myself, ourselves*).<br>d. Form and use the past tense of frequently occurring irregular verbs (e.g., *sat, hid, told*).<br>e. Use adjectives and adverbs, and choose between them depending on what is to be modified.<br>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*).<br>g. Create readable documents with legible print. |

L

# Language Standards K3–5

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| **Conventions of Standard English (continued)** | 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.<br>a. Capitalize the first word in a sentence and the pronoun *I*.<br>b. Recognize and name end punctuation.<br>c. Write a letter or letters for most consonant and short-vowel sounds (phonemes).<br>d. Spell simple words phonetically, drawing on knowledge of sound-letter relationships. | 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.<br>a. Capitalize dates and names of people.<br>b. Use end punctuation for sentences.<br>c. Use commas in dates and to separate single words in a series.<br>d. Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words.<br>e. Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions. | 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.<br>a. Capitalize holidays, product names, and geographic names.<br>b. Use commas in greetings and closings of letters.<br>c. Use an apostrophe to form contractions and frequently occurring possessives.<br>d. Generalize learned spelling patterns when writing words (e.g., cage → badge; boy → boil).<br>e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings. |
| **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.<br>a. Compare formal and informal uses of English. |

# L Language Standards K3–5

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| **Vocabulary Acquisition and Use** | 4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *kindergarten reading and content.*<br>a. Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* is a bird and learning the verb *to duck*).<br>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.<br>a. Use sentence-level context as a clue to the meaning of a word or phrase.<br>b. Use frequently occurring affixes as a clue to the meaning of a word.<br>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.<br>a. Use sentence-level context as a clue to the meaning of a word or phrase.<br>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*).<br>c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *addition*, *additional*).<br>d. Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., *birdhouse, lighthouse, housefly; bookshelf, notebook, bookmark*).<br>e. Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases in all content areas. |

L

# Language Standards K3–5

| | Kindergartner 3 | Grade 1 Students | Grade 2 Students |
|---|---|---|---|
| Vocabulary Acquisition and Use (continued) | 5. With guidance and support from adults, explore word relationships and nuances in word meanings.<br>a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.<br>b. Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).<br>c. Identify real-life connections between words and their use (e.g., note places at school that are *colorful*).<br>d. Distinguish shades of meaning among verbs describing the same general action (e.g., *walk, march, strut, prance*) by acting out the meanings. | 5. With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings.<br>a. Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent.<br>b. Define words by category and by one or more key attributes (e.g., a *duck* is a bird that swims; a *tiger* is a large cat with stripes).<br>c. Identify real-life connections between words and their use (e.g., note places at home that are *cozy*).<br>d. Distinguish shades of meaning among verbs differing in manner (e.g., *look, peek, glance, stare, glare, scowl*) and adjectives differing in intensity (e.g., *large, gigantic*) by defining or choosing them or by acting out the meanings. | 5. Demonstrate understanding of word relationships and nuances in word meanings.<br>a. Identify real-life connections between words and their use (e.g., describe foods that are *spicy* or *juicy*).<br>b. Distinguish shades of meaning among closely related verbs (e.g., *toss, throw, hurl*) and closely related adjectives (e.g., *thin, slender, skinny, scrawny*). |
| | 6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts. | 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., *because*). | 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., *When other kids are happy that makes me happy*). |

L

# Language Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| Conventions of Standard English | 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.<br>a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.<br>b. Form and use regular and irregular plural nouns.<br>c. Use abstract nouns (e.g., *childhood*).<br>d. Form and use regular and irregular verbs.<br>e. Form and use the simple (e.g., *I walked; I walk; I will walk*) verb tenses.<br>f. Ensure subject-verb and pronoun-antecedent agreement.*<br>g. Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.<br>h. Use coordinating and subordinating conjunctions.<br>i. Produce simple, compound, and complex sentences.<br>j. Write legibly in cursive or joined italics, allowing margins and correct spacing between letters in a word and words in a sentence.<br>k. Use reciprocal pronouns correctly. | 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.<br>a. Use interrogative, relative pronouns (*who, whose, whom, which, that*) and relative adverbs (*where, when, why*).<br>b. Form and use the progressive (e.g., *I was walking; I am walking; I will be walking*) verb tenses.<br>c. Use modal auxiliaries (e.g., *can, may, must*) to convey various conditions.<br>d. Order adjectives within sentences according to conventional patterns (e.g., *a small red bag* rather than *a red small bag*).<br>e. Form and use prepositional phrases.<br>f. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.*<br>g. Correctly use frequently confused words (e.g., *to, too, two; there, their*).*<br>h. Write fluidly and legibly in cursive or joined italics. | 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.<br>a. Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences.<br>b. Form and use the perfect (e.g., *I had walked; I have walked; I will have walked*) verb tenses.<br>c. Use verb tense to convey various times, sequences, states, and conditions.<br>d. Recognize and correct inappropriate shifts in verb tense.*<br>e. Use correlative conjunctions (e.g., *either/or, neither/nor*). |

L

# Language Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| **Conventions of Standard English (continued)** | 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.<br>a. Capitalize appropriate words in titles.<br>b. Use commas in addresses.<br>c. Use commas and quotation marks in dialogue.<br>d. Form and use possessives.<br>e. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting, smiled, cries, happiness*).<br>f. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.<br>g. 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.<br>a. Use correct capitalization.<br>b. Use commas and quotation marks to mark direct speech and quotations from a text.<br>c. Use a comma before a coordinating conjunction in a compound sentence.<br>d. Spell grade-appropriate words correctly, consulting references as needed. | 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.<br>a. Use punctuation to separate items in a series.*<br>b. Use a comma to separate an introductory element from the rest of the sentence.<br>c. Use a comma to set off the words *yes* and *no* (e.g., *Yes, thank you*), to set off a tag question from the rest of the sentence (e.g., *It's true, isn't it?*), and to indicate direct address (e.g., *Is that you, Steve?*).<br>d. Use underlining, quotation marks, or italics to indicate titles of works.<br>e. Spell grade-appropriate words correctly, consulting references as needed. |
| **Knowledge of Language** | 3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.<br>a. Choose words and phrases for effect.*<br>b. Recognize and observe differences between the conventions of spoken and written standard English. | 3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.<br>a. Choose words and phrases to convey ideas precisely.*<br>b. Choose punctuation for effect.*<br>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). | 3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.<br>a. Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.<br>b. Compare and contrast the varieties of English (e.g., dialects, registers) used in stories, dramas, or poems |

L

# Language Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| 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.<br>a. Use sentence-level context as a clue to the meaning of a word or phrase.<br>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, heat/preheat*).<br>c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *company, companion*).<br>d. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases *in all content areas*. | 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.<br>a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.<br>b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *telegraph, photograph, autograph*).<br>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 and to identify alternate word choices *in all content areas*. | 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.<br>a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.<br>b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *photograph, photosynthesis*).<br>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 and to identify alternate word choices *in all content areas*. |
| | 5. Demonstrate understanding of word relationships and nuances in word meanings.<br>a. Distinguish the literal and non-literal meanings of words and phrases in context (e.g., *take steps*).<br>b. Identify real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*).<br>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.<br>a. Explain the meaning of simple similes and metaphors (e.g., *as pretty as a picture*) in context.<br>b. Recognize and explain the meaning of common idioms, adages, and proverbs.<br>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.<br>a. Interpret figurative language, including similes and metaphors, in context.<br>b. Recognize and explain the meaning of common idioms, adages, and proverbs.<br>c. Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words. |

L

# Language Standards K3–5

| | Grade 3 Students | Grade 4 Students | Grade 5 Students |
|---|---|---|---|
| **Vocabulary Acquisition and Use (continued)** | 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., *quizzed, 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 | Grade(s) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 3 | 4 | 5 | 6 | 7 | 8 | 9–10 | 11–12 |
| **L.3.1.f.** Ensure subject-verb and pronoun-antecedent agreement. | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.3.3.a.** Choose words and phrases for effect. | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.4.1.f.** Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons. | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.4.1.g.** Correctly use frequently confused words (e.g., *to/too/two; there/their*). | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.4.3.a.** Choose words and phrases to convey ideas precisely.* | No | Yes | Yes | Yes | No | No | No | No |
| **L.4.3.b.** Choose punctuation for effect. | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.5.1.d.** Recognize and correct inappropriate shifts in verb tense. | No | No | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.5.2.a**. Use punctuation to separate items in a series.** | No | No | Yes | Yes | Yes | Yes | No | No |
| **L.6.1.c.** Recognize and correct inappropriate shifts in pronoun number and person. | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.6.1.d.** Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.6.1.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. | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.6.2.a.** Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.6.3.a**. Vary sentence patterns for meaning, reader/listener interest, and style.*** | No | No | No | Yes | Yes | Yes | Yes | No |
| **L.6.3.b.** Maintain consistency in style and tone. | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.7.1.c.** Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers. | No | No | No | No | Yes | Yes | Yes | Yes |
| **L.7.3.a.** Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy. | No | No | No | No | Yes | Yes | Yes | Yes |
| **L.8.1.d.** Recognize and correct inappropriate shifts in verb voice and mood. | No | No | No | No | No | Yes | Yes | Yes |
| **L.9–10.1.a.** Use parallel structure. | No | No | No | No | No | No | Yes | Yes |

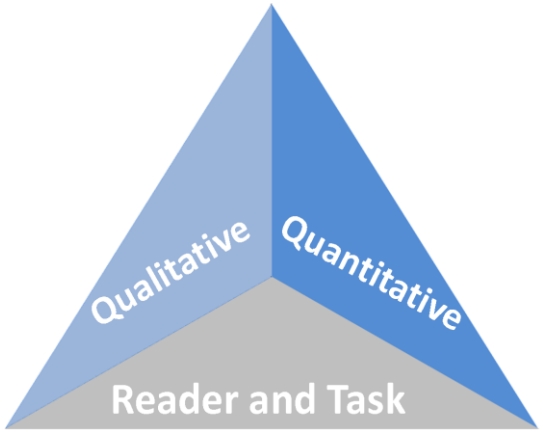
*Subsumed by L.7.3.a

**Subsumed by L.9–10.1.a

***Subsumed by L.11–12.3.a

# Standard 10: Range, Quality, and Complexity of Student Reading K3–5

## Measuring Text Complexity: Three Factors




**Qualitative evaluation of the text:** Levels of meaning, structure, language conventionality and clarity, and knowledge demands

**Quantitative evaluation of the text:** Readability measures and other scores of text complexity

**Matching reader to text and task:** Reader variables (such as motivation, knowledge, and experiences) and task variables (such as purpose and the complexity generated by the task assigned and the questions posed)

**Note:** More detailed information on text complexity and how it is measured is provided in Appendix A.

## Range of Text Types for K3–5

Students in grades K3-5 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

| Literature | | | Informational Text |
|---|---|---|---|
| **Stories** | **Drama** | **Poetry** | **Literary Nonfiction and Historical, Scientific, and Technical Texts** |
| Includes children's adventure stories, folktales, legends, fables, fantasy, realistic fiction, and myth. | Includes staged dialogue and brief familiar scenes. | Includes nursery rhymes and the subgenres of the narrative poem, limerick, and free verse poem. | Includes biographies and autobiographies; books about history, social studies, science, and the arts; technical texts, including directions, forms, and information displayed in graphs, charts, or maps; and digital sources on a range of topics. |

# Texts Illustrating the Complexity, Quality, and Range of Student Reading K3–5

| | Literature: Stories, Dramas, Poetry | Informational Texts: Literary Nonfiction and Historical, Scientific, and Technical Texts |
|---|---|---|
| **K†** | • *Over in the Meadow* by John Langstaff (traditional) (c1800)*<br>• *A Boy, a Dog, and a Frog* by Mercer Mayer (1967)<br>• *Pancakes for Breakfast* by Tomie DePaola (1978)<br>• *A Story, A Story* by Gail E. Haley (1970)*<br>• *Kitten's First Full Moon* by Kevin Henkes (2004)* | • *My Five Senses* by Aliki (1962)**<br>• *Truck* by Donald Crews (1980)<br>• *I Read Signs* by Tana Hoban (1987)<br>• *What Do You Do With a Tail Like This?* by Steve Jenkins and Robin Page (2003)*<br>• *Amazing Whales!* by Sarah L. Thomson (2005)* |
| **1†** | • "Mix a Pancake" by Christina G. Rossetti (1893)**<br>• *Mr. Popper's Penguins* by Richard Atwater (1938)*<br>• *Little Bear* by Else Holmelund Minarik, illustrated by Maurice Sendak (1957)**<br>• *Frog and Toad Together* by Arnold Lobel (1971)**<br>• *Hi! Fly Guy* by Tedd Arnold (2006) | • *A Tree Is a Plant* by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)**<br>• *Starfish* by Edith Thacher Hurd (1962)<br>• *Follow the Water from Brook to Ocean* by Arthur Dorros (1991)**<br>• *From Seed to Pumpkin* by Wendy Pfeffer, illustrated by James Graham Hale (2004)*<br>• *How People Learned to Fly* by Fran Hodgkins and True Kelley (2007)* |
| **2–3** | • "Who Has Seen the Wind?" by Christina G. Rossetti (1893)<br>• *Charlotte's Web* by E. B. White (1952)*<br>• *Sarah, Plain and Tall* by Patricia MacLachlan (1985)<br>• *Tops and Bottoms* by Janet Stevens (1995)<br>• *Poppleton in Winter* by Cynthia Rylant, illustrated by Mark Teague (2001) | • *A Medieval Feast* by Aliki (1983)<br>• *From Seed to Plant* by Gail Gibbons (1991)<br>• *The Story of Ruby Bridges* by Robert Coles (1995)*<br>• *A Drop of Water: A Book of Science and Wonder* by Walter Wick (1997)<br>• *Moonshot: The Flight of Apollo 11* by Brian Floca (2009) |
| **4–5** | • *Alice's Adventures in Wonderland* by Lewis Carroll (1865)<br>• "Casey at the Bat" by Ernest Lawrence Thayer (1888)<br>• *The Black Stallion* by Walter Farley (1941)<br>• "Zlateh the Goat" by Isaac Bashevis Singer (1984)<br>• *Where the Mountain Meets the Moon* by Grace Lin (2009) | • *Discovering Mars: The Amazing Story of the Red Planet* by Melvin Berger (1992)<br>• *Hurricanes: Earth's Mightiest Storms* by Patricia Lauber (1996)<br>• *A History of US* by Joy Hakim (2005)<br>• *Horses* by Seymour Simon (2006)<br>• *Quest for the Tree Kangaroo: An Expedition to the Cloud Forest of New Guinea* by Sy Montgomery (2006) |

*Read-aloud **Read-along

†Children at the kindergarten and grade 1 levels should be expected to read texts independently that have been specifically written to correlate to their reading level and their word knowledge. Many of the titles listed above are meant to supplement carefully structured independent reading with books to read along with a teacher or that are read aloud to students to build knowledge and cultivate a joy in reading.

**Note**: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a wide range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of K–5 text complexity, quality, and range.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study those topics or themes in depth. On the next page is an example of progressions of texts building knowledge across grade levels.

# Staying on Topic Within a Grade and Across Grades: How to Build Knowledge Systematically in English Language Arts K–5

Building knowledge systematically in English language arts is like giving children various pieces of a puzzle in each grade that, over time, will form one big picture. At a curricular or instructional level, texts—within and across grade levels—need to be selected around topics or themes that systematically develop the knowledge base of students. Within a grade level, there should be an adequate number of titles on a single topic that would allow children to study that topic for a sustained period. The knowledge children have learned about particular topics in early grade levels should then be expanded and developed in subsequent grade levels to ensure an increasingly deeper understanding of these topics. Children in the upper elementary grades will generally be expected to read these texts independently and reflect on them in writing. However, children in the early grades (particularly K–2) should participate in rich, structured conversations with an adult in response to the written texts that are read aloud, orally comparing and contrasting as well as analyzing and synthesizing, in the manner called for by the Standards.

Preparation for reading complex informational texts should begin at the very earliest elementary school grades. What follows is one example that uses domain-specific nonfiction titles across grade levels to illustrate how curriculum designers and classroom teachers can infuse the English language arts block with rich, age-appropriate content knowledge and vocabulary in history/social studies, science, and the arts. Having students listen to informational read-alouds in the early grades helps lay the necessary foundation for students' reading and understanding of increasingly complex texts on their own in subsequent grades.

| Exemplar Texts on a Topic Across Grades | K | 1 | 2–3 | 4–5 |
|---|---|---|---|---|
| **The Human Body**<br><br>**Students can begin learning about the human body starting in kindergarten and then review and extend their learning during each subsequent grade.** | **The five senses and associated body parts**<br>• *My Five Senses* by Aliki (1989)<br>• *Hearing* by Maria Rius (1985)<br>• *Sight* by Maria Rius (1985)<br>• *Taste* by Maria Rius (1985)<br>• *Touch* by Maria Rius (1985)<br>**Taking care of your body: Overview (hygiene, diet, exercise, rest)**<br>• *My Amazing Body: A First Look at Health & Fitness* by Pat Thomas (2001)<br>• *Get Up and Go!* By Nancy Carlson (2008)<br>• *Go Wash Up* by Doering Tourville (2008)<br>• *Sleep* by Paul Showers (1997)<br>• *Fuel the Body* by Doering Tourville (2008) | **Introduction to the systems of the human body and associated body parts**<br>• *Under Your Skin: Your Amazing Body* by Mick Manning (2007)<br>• *Me and My Amazing Body* by Joan Sweeney (1999)<br>• *The Human Body* by Gallimard Jeunesse (2007)<br>• *The Busy Body Book* by Lizzy Rockwell (2008)<br>• *First Encyclopedia of the Human Body* by Fiona Chandler (2004)<br>**Taking care of your body: Germs, diseases, and preventing illness**<br>• *Germs Make Me Sick* by Marilyn Berger (1995)<br>• *Tiny Life on Your Body* by Christine Taylor Butler (2005)<br>• *Germ Stories* by Christine Taylor Butler (2005)<br>• *Germ Stories* by Arthur Kornberg (2007)<br>• *All About Scabs* by Genichiro Yagu (1998) | **Digestive and excretory systems**<br>• *What Happens to a Hamburger* by Paul Showers (1985)<br>• *The Digestive System* by Rebecca L. Johnson (2006)<br>• *The Digestive System* by Kristin Petrie (2007)<br>**Taking care of your body: Healthy eating and nutrition**<br>• *Good Enough to Eat* by Lizzy Rockwell (1999)<br>• *Showdown at the Food Pyramid* by Rex Barron (2004)<br>**Muscular, skeletal, and nervous systems**<br>• *The Mighty Muscular and Skeletal Systems* Crabtree Publishing (2009)<br>• *Muscles* by Seymour Simon (1998)<br>• *Bones* by Seymour Simon (1998)<br>• *The Astounding Nervous System* Crabtree Publishing (2009)<br>• *The Nervous System* by Joelle Riley (2004) | **Circulatory system**<br>• *The Heart* by Seymour Simon (2006)<br>• *The Heart and Circulation* by Carol Ballard ( 2005)<br>• *The Circulatory System* by Kristin Petrie (2007)<br>• *The Amazing Circulatory System* by John Burstein (2009)<br>**Respiratory system**<br>• *The Lungs* by Seymour Simon (2007)<br>• *The Respiratory System* by Susan Glass (2004)<br>• *The Respiratory System* by Kristin Petrie (2007)<br>**Endocrine system**<br>• *The Exciting Endocrine System* by Rebecca Olien (2006)<br>• *The Exciting Endocrine System* by John Burstein (2009) |

Standards for

# English Language Arts

## Grade 6

# College and Career Readiness Anchor Standards for Reading

The grades 6 standards on the following pages define what students should understand and be able to do by the end of 6th 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 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.*

*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.

# RL Reading Standards for Literature 6

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 |
|---|---|
| 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 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. |
| | 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. |
| 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. (See grade 6 Language standards 4–6 for additional expectations.) |
| | 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. |
| | 6. Explain how an author develops the point of view of the narrator or speaker in a text. |
| | 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. |
| | 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. |
| | 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. |

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# Reading Standards for Informational Text 6

| | 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). |
| Craft and Structure | 4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings. (See grade 6 Language standards 4–6 for additional expectations.) |
| | 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.<br>a. Analyze the use of text features (e.g., graphics, headers, captions) in popular media. |
| | 6. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text. |
| Integration of Knowledge and Ideas | 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. |
| | 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). |
| 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. |

# College and Career Readiness Anchor Standards for Writing

The grades 6 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 and/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.

**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.*

*These broad types of writing include many subgenres. See Appendix A for definitions of key writing types.

# W Writing Standards 6

The following standards for grade 6 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.*

| Grade 6 Students | |
|---|---|
| Text Types and Purposes | 1. Write arguments to support claims with clear reasons and relevant evidence.<br>a. Introduce claim(s) and organize the reasons and evidence clearly.<br>b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.<br>c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.<br>d. Establish and maintain a formal style.<br>e. Provide a concluding statement or section that follows from the argument presented.<br>2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.<br>a. Introduce a topic or thesis statement; 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.<br>b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.<br>c. Use appropriate transitions to clarify the relationships among ideas and concepts.<br>d. Use precise language and domain-specific vocabulary to inform about or explain the topic.<br>e. Establish and maintain a formal style.<br>f. Provide a concluding statement or section that follows from the information or explanation presented.<br>3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.<br>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.<br>b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.<br>c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.<br>d. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.<br>e. Provide a conclusion that follows from 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.)<br>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.)<br>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. |
| **Research to Build and Present Knowledge** | 7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.<br>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.<br>9. Draw evidence from literary or informational texts to support analysis, reflection, and research.<br>a. Apply *grade 6 Reading standards* 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").<br>b. Apply *grade 6 Reading standards* 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"). |
| **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. |

# College and Career Readiness Anchor Standards for Speaking and Listening

The grade 6 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 be 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, make comparisons and contrasts, and analyze and synthesize a multitude of ideas according to the standards of evidence appropriate to a particular discipline. Whatever their intended major or profession, high school graduates will depend heavily on their ability to listen attentively to 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 the 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.*

# SL Speaking and Listening Standards 6

The following standards for grade 6 offers 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.<br>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.<br>b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.<br>c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.<br>d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.<br>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.<br>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 (e.g., argument, narrative, informative, response to literature presentations), sequencing ideas logically and using pertinent descriptions, facts, and details and nonverbal elements to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.<br>a. Plan and deliver an informative/explanatory presentation that: develops a topic with relevant facts, definitions, and concrete details; uses appropriate transitions to clarify relationships; uses precise language and domain specific vocabulary; and provides a strong conclusion. |
| | 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 for specific expectations.) |

# College and Career Readiness Anchor Standards for Language

The grade 6 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 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 its 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.*

L

# Language Standards 6

The following standards for grade 6 offers 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.*

| | Grade 6 Students |
|---|---|
| Conventions of Standards English | 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.<br>a. Ensure that pronouns are in the proper case (subjective, objective, possessive).<br>b. Use all pronouns, including intensive pronouns (e.g., *myself, ourselves*) correctly.<br>c. Recognize and correct inappropriate shifts in pronoun number and person.*<br>d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).*<br>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.<br>a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.*<br>b. Spell correctly. |
| | 3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.<br>a. Vary sentence patterns for meaning, reader/ listener interest, and style.*<br>b. Maintain consistency in style and tone.* |
| | 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.<br>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.<br>b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).<br>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.<br>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). |
| Vocabulary Acquisition | 5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.<br>a. Interpret figures of speech (e.g., personification) in context.<br>b. Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.<br>c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *stingy, scrimping, economical, unwasteful, thrifty*). |
| | 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 | Grade(s) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 3 | 4 | 5 | 6 | 7 | 8 | 9–10 | 11–12 |
| **L.3.1.f.** Ensure subject-verb and pronoun-antecedent agreement. | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.3.3.a.** Choose words and phrases for effect. | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.4.1.f.** Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons. | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.4.1.g.** Correctly use frequently confused words (e.g., *to/too/two; there/their*). | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.4.3.a.** Choose words and phrases to convey ideas precisely.* | No | Yes | Yes | Yes | No | No | No | No |
| **L.4.3.b.** Choose punctuation for effect. | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.5.1.d.** Recognize and correct inappropriate shifts in verb tense. | No | No | Yes | Yes | Yes | Yes | Yes | Yes |
| **L.5.2.a**. Use punctuation to separate items in a series.** | No | No | Yes | Yes | Yes | Yes | No | No |
| **L.6.1.c.** Recognize and correct inappropriate shifts in pronoun number and person. | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.6.1.d.** Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.6.1.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. | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.6.2.a.** Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.6.3.a**. Vary sentence patterns for meaning, reader/listener interest, and style.*** | No | No | No | Yes | Yes | Yes | Yes | No |
| **L.6.3.b.** Maintain consistency in style and tone. | No | No | No | Yes | Yes | Yes | Yes | Yes |
| **L.7.1.c.** Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers. | No | No | No | No | Yes | Yes | Yes | Yes |
| **L.7.3.a.** Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy. | No | No | No | No | Yes | Yes | Yes | Yes |
| **L.8.1.d.** Recognize and correct inappropriate shifts in verb voice and mood. | No | No | No | No | No | Yes | Yes | Yes |
| **L.9–10.1.a.** Use parallel structure. | No | No | No | No | No | No | Yes | Yes |

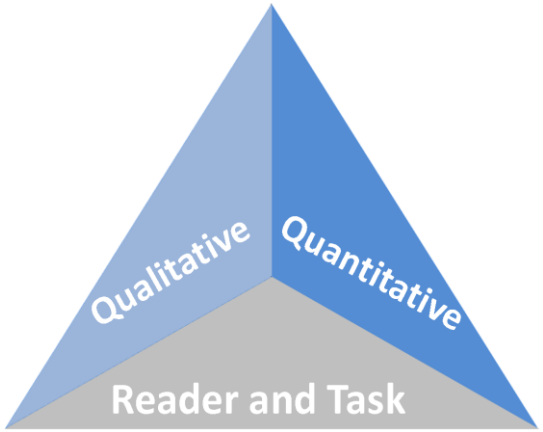
*Subsumed by L.7.3.a

**Subsumed by L.9–10.1.a

***Subsumed by L.11–12.3.a

# Standard 10: Range, Quality, and Complexity of Student Reading Grade 6

## Measuring Text Complexity: Three Factors




**Qualitative evaluation of the text:** Levels of meaning, structure, language conventionality and clarity, and knowledge demands

**Quantitative evaluation of the text:** Readability measures and other scores of text complexity

**Matching reader to text and task:** Reader variables (such as motivation, knowledge, and experiences) and task variables (such as purpose and the complexity generated by the task assigned and the questions posed)

**Note:** More detailed information on text complexity and how it is measured is provided in Appendix A.

## Range of Text Types for 6

Students in grade 6 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

| Literature | | | Informational Text |
|---|---|---|---|
| **Stories** | **Drama** | **Poetry** | **Literary Nonfiction** |
| Includes the subgenres of adventure stories, historical fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels. | Includes classical through contemporary one-act and multi-act plays, both in written form and on film, and works by writers representing a broad range of literary periods and cultures. | Includes classical through contemporary works and the subgenres of narrative poems, lyrical poems, free verse poems, sonnets, odes, ballads, and epics by writers representing a broad range of literary periods and cultures. | Includes the subgenres of exposition, argument, and functional text in the form of personal essays, speeches, opinion pieces, essays about art or literature, biographies, memoirs, journalism, and historical, scientific, technical, or economic accounts (including digital sources) written for a broad audience. |

# Texts Illustrating the Complexity, Quality, and Range of Student Reading Grade 6

| | Literature: Stories, Dramas, Poetry | Informational Texts: Literary Nonfiction |
|---|---|---|
| 6–8 | • *Little Women* by Louisa May Alcott (1869)<br>• *The Adventures of Tom Sawyer* by Mark Twain (1876)<br>• "The Road Not Taken" by Robert Frost (1915)<br>• *The Dark Is Rising* by Susan Cooper (1973)<br>• *Dragonwings* by Laurence Yep (1975)<br>• *Roll of Thunder, Hear My Cry* by Mildred Taylor (1976) | • "Letter on Thomas Jefferson" by John Adams (1776)<br>• *Narrative of the Life of Frederick Douglass, an American Slave* by Frederick Douglass (1845)<br>• "Blood, Toil, Tears and Sweat: Address to Parliament on May 13th, 1940" by Winston Churchill (1940)<br>• *Harriet Tubman: Conductor on the Underground Railroad* by Ann Petry (1955)<br>• *Travels with Charley: In Search of America* by John Steinbeck (1962) |

**Note**: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a range of topics and genres.

Standards for

# Literacy in History/Social Studies, Science, and Technical Subjects

## Grade 6

# College and Career Readiness Anchor Standards for Reading

The grade 6 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.

*Please see 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**

*Reading is critical to building knowledge in history/social studies as well as in science and technical subjects. College and career ready reading in these fields requires an appreciation of the norms and conventions of each discipline, such as the kinds of evidence used in history and science; an understanding of domain-specific words and phrases; an attention to precise details; and the capacity to evaluate intricate arguments, synthesize complex information, and follow detailed descriptions of events and concepts. In history/social studies, for example, students need to be able to analyze, evaluate, and differentiate primary and secondary sources. When reading scientific and technical texts, students need to be able to gain knowledge from challenging texts that often make extensive use of elaborate diagrams and data to convey information and illustrate concepts. Students must be able to read complex informational texts in these fields with independence and confidence because the vast majority of reading in college and workforce training programs will be sophisticated nonfiction. It is important to note that these Reading standards are meant to complement the specific content demands of the disciplines, not replace them.*

# RH Reading Standards for Literacy in History/Social Studies 6

The standards below begin at grade 6; standards for K–5 reading in history/social studies, science, and technical subjects are integrated into the K–5 Reading standards.

| | Grades 6 Students |
|---|---|
| Key Ideas and Details | 1. Cite specific textual evidence to support analysis of primary and secondary sources. |
| | 2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions. |
| | 3. Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered). |
| Craft and Structure | 4. Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies. |
| | 5. Describe how a text presents information (e.g., sequentially, comparatively, causally). |
| | 6. Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts). |

| | Grades 6 Students |
|---|---|
| Integration of Knowledge and Ideas | 7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts. |
| | 8. Distinguish among fact, opinion, and reasoned judgment in a text. |
| | 9. Analyze the relationship between a primary and secondary source on the same topic. |
| Range of Reading and Level of Text Complexity | 10. By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently. |

# RST Reading Standards for Literacy in Science and Technical Subjects 6

| | Grades 6–8 Students |
|---|---|
| Key Ideas and Details | 1. Cite specific textual evidence to support analysis of science and technical texts. |
| | 2. Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. |
| | 3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. |
| Craft and Structure | 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.* |
| | 5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic. |
| | 6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text. |
| | 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). |
| | 8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. |
| | 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. |
| | 10. By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently. |

# College and Career Readiness Anchor Standards for Writing

The grade 6 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 and/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.

**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 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. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long-time frames throughout the year.*

WHST

# Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6

The standards below begin at grade 6; standards for K–5 writing in history/social studies, science, and technical subjects are integrated into the K–5 Writing standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

| | Grades 6 Students |
|---|---|
| Text Types and Purposes | 1. Write arguments focused on *discipline-specific content*.<br>a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.<br>b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources.<br>c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.<br>d. Establish and maintain a formal style.<br>e. Provide a concluding statement or section that follows from and supports the argument presented. |
| Text Types and Purposes | 2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.<br>a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.<br>b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.<br>c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.<br>d. Use precise language and domain-specific vocabulary to inform about or explain the topic.<br>e. Establish and maintain a formal style and objective tone.<br>f. Provide a concluding statement or section that follows from and supports the information or explanation presented. |
| Text Types and Purposes | 3. (See note; not applicable as a separate requirement) |
| 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. 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 |
| | 6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently. |

| | |
|---|---|
| **Research to Build and Present Knowledge** | 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.<br>8. Gather relevant information from multiple print and digital sources (primary and secondary), 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. CA<br>9. Draw evidence from informational texts to support analysis reflection, and research. |
| **Range of Writing** | 10. Write routinely over extended time frames (time for 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. |

Instructional Design for:

# Mathematics

## K3-6

# Introduction:

The Common Core State Standards: Mathematics (CCSSM) reflect the importance of focus, coherence, and rigor as the guiding principles for mathematics instruction and learning. The implementation of the CCSSM demonstrates a commitment to providing a world-class education for all students that supports college and career readiness and the knowledge and skills necessary to fully participate in the twenty-first-century global economy.

The CCSSM build on the standards-based educational system in which curriculum, instruction, professional learning, assessment, and accountability are aligned to support student attainment of the standards. The CCSSM incorporate current research and input from education stakeholders—including other state departments of education, scholars, professional organizations, teachers and other educators, parents, and students. California additions to the standards (identified in boldface text and followed by the abbreviation "CA") were incorporated in an effort to retain the consistency and precision of our past standards. The CCSSM are internationally benchmarked, research-based, and unequivocally rigorous.

The standards call for learning mathematical content in the context of real-world situations, using mathematics to solve problems, and developing "habits of mind" that foster mastery of mathematics content as well as mathematical understanding. The standards for kindergarten through grade 8 prepare students for higher mathematics. The standards for higher mathematics reflect the knowledge and skills that are necessary to prepare students for college and careers and productive citizenship.

CCSSM require not only rigorous curriculum and instruction but also conceptual understanding, procedural skill and fluency, and the ability to apply mathematics. In short, the standards call for meeting the challenges of the twenty-first century through innovation.

## MATHEMATICS: INSTRUCTIONAL TIME AND OVERVIEW

### Kindergarten 3 Instructional Time

In kindergarten, instructional time should focus on two critical areas: (1) representing, relating, and operating on whole numbers, initially with sets of objects; and (2) describing shapes and space. More learning time in kindergarten should be devoted to number than to other topics.

(1) Students use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set; counting out a given number of objects; comparing sets or numerals; and modeling simple joining and separating situations with sets of objects, or eventually with equations such as 5 + 2 = 7 and 7 – 2 = 5. (Kindergarten students should see addition and subtraction equations, and student writing of equations in kindergarten is encouraged, but it is not required.) Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.

(2) Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic two-dimensional shapes, such as squares, triangles, circles, rectangles, and hexagons, presented in a variety of ways (e.g., with different sizes and orientations), as well as three-dimensional shapes such as cubes, cones, cylinders, and spheres. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

## Kindergarten 3 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

## Grade 1 Instructional Time

In grade 1, instructional time should focus on four critical areas: (1) developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; (2) developing understanding of whole number relationships and place value, including grouping in tens and ones; (3) developing understanding of linear measurement and measuring lengths as iterating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes.

(1) Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model add-to, take-from, put-together, take-apart, and compare situations to develop meaning for the operations of addition
and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., “making tens”) to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.

(2) Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative
sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.

(3) Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.1

(4) Students compose and decompose plane or solid figures (e.g., put two triangles together to make a quadrilateral) and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

## 1st Grade 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.

## Grade 2 Instructional Time

In grade 2, instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

(1) Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).

(2) Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.

(3) Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.

(4) Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

## 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.

**Grade 3 Instructional Time**

In grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.

(1) Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

(2) Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, 1/2 of the paint in a small bucket could be less paint than 1/3 of the paint in a larger bucket, but 1/3 of a ribbon is longer than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.

(3) Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.

(4) Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

**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.

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.

Geometry
• Reason with shapes and their attributes.

**Grade 4 Instructional Time**

In grade 4, instructional time should focus on three critical areas: (1) developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

(1) Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate or mentally calculate products. They develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate and mentally calculate quotients, and interpret remainders based upon the context.

(2) Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g., 15/9 = 5/3), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.

(3) Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

## 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 multidigit 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.

## Grade 5 Instructional Time

In grade 5, instructional time should focus on three critical areas: (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2) extending division to two-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3) developing understanding of volume.

(1) Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing unit fractions by whole numbers and whole numbers by unit fractions.)

(2) Students develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. They finalize fluency with multi-digit addition, subtraction, multiplication, and division. They apply their understandings of models for decimals, decimal notation, and properties of operations to add and subtract decimals to hundredths. They develop fluency in these computations and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of decimals to hundredths efficiently and accurately.

(3) Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select

appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real-world and mathematical problems.

**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.

**Grade 6 Instructional Time**

In grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division, and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

(1) Students use reasoning about multiplication and division to solve ratio and rate problems about quantities. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students connect their understanding of multiplication and division with ratios and rates. Thus, students expand the scope of problems for which they can use multiplication and division to solve problems, and they connect ratios and fractions. Students solve a wide variety of problems involving ratios and rates.

(2) Students use the meaning of fractions, the meanings of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for dividing fractions make sense. Students use these operations to solve problems. Students extend their previous understandings of number and the ordering of numbers the full system of rational numbers, which includes negative rational numbers, and in particular negative integers. They reason about the order and absolute value of rational numbers and about the location of points in all four quadrants of the coordinate plane.

(3) Students understand the use of variables in mathematical expressions. They write expressions and equations that correspond to given situations, evaluate expressions, and use expressions and formulas to solve problems. Students understand that expressions in different forms can be equivalent, and they use the properties of

operations to rewrite expressions in equivalent forms. Students know that the solutions of an equation are the values of the variables that make the equation true. Students use properties of operations and the idea of maintaining the equality of both sides of an equation to solve simple one-step equations. Students construct and analyze tables, such as tables of quantities that are in equivalent ratios, and they use equations (such as 3x = y) to describe relationships between quantities.

(4) Building on and reinforcing their understanding of number, students begin to develop their ability to think statistically. Students recognize that a data distribution may not have a definite center and that different ways to measure center yield different values. The median measures center in the sense that it is roughly the middle value. The mean measures center in the sense that it is the value that each data point would take on if the total of the data values were redistributed equally, and also in the sense that it is a balance point. Students recognize that a measure of variability (interquartile range or mean absolute deviation) can also be useful for summarizing data because two very different sets of data can have the same mean and median yet be distinguished by their variability. Students learn to describe and summarize numerical data sets, identifying clusters, peaks, gaps, and symmetry, considering the context in which the data were collected.

Students in grade 6 also build on their work with area in elementary school by reasoning about relationships among shapes to determine area, surface area, and volume. They find areas of right triangles, other triangles, and special quadrilaterals by decomposing these shapes, rearranging or removing pieces, and relating the shapes to rectangles. Using these methods, students discuss, develop, and justify formulas for areas of triangles and parallelograms. Students find areas of polygons and surface areas of prisms and pyramids by decomposing them into pieces whose area they can determine. They reason about right rectangular prisms with fractional side lengths to extend formulas for the volume of a right rectangular prism to fractional side lengths. They prepare for work on scale drawings and constructions in grade 7 by drawing polygons in the coordinate plane.

**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.

Standards for:

# Mathematics

## K3-6

## Kindergarten

### Counting and Cardinality K.CC

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.1
7. Compare two numbers between 1 and 10 presented as written numerals.

### Operations and Algebraic Thinking K.OA

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,2 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. Describe several measurable attributes of a single object.
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. 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.
3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.3

## 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.
6. Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"

## Grade 1

### Operations and Algebraic Thinking 1.OA

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.
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.3 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.

7. 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.
8. 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 = □ – 3, 6 + 6 = □.

### Number and Operations in Base Ten 1.NBT

Extend the counting sequence.

1. 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.

2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
a. 10 can be thought of as a bundle of ten ones—called a "ten."
b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
c. 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).
3. 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.
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 relation- ship 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.
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**

**Operations and Algebraic Thinking 2.OA**

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.

Add and subtract within 20.
2. Fluently add and subtract within 20 using mental strategies.
2 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.

**Number and Operations in Base Ten 2.NBT**

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 2s, 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.
7.1 Use estimation strategies to make reasonable estimates in problem solving.
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. Know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year).
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 problems4 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. 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**

**Operations and Algebraic Thinking 3.OA**

Represent and solve problems involving multiplication and division.
1. Interpret products of whole numbers, e.g., interpret 5 × 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 × 7.
2. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 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÷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.
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 × ? = 48, 5 = □ ÷ 3, 6 × 6 = ?.

Understand properties of multiplication and the relationship between multiplication and division.
5. Apply properties of operations as strategies to multiply and divide.2 Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)
6. Understand division as an unknown-factor problem. For example, find 32 ÷ 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 × 5 = 40, one knows 40 ÷ 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.32
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.
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 × 80, 5 × 60) using strategies based on place value and properties of operations.

**Number and Operations—Fractions 5 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 0. 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.
1. 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).6 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.

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 twostep “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 × b and a × 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

**Operations and Algebraic Thinking 4.OA**

Use the four operations with whole numbers to solve problems.

1. Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 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.

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.

**Number and Operations in Base Ten2 4.NBT**

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 ÷ 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—Fractions3 4.NF**

Extend understanding of fraction equivalence and ordering.
1. Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × 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 × (1/4), recording the conclusion by the equation 5/4 = 5 × (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 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × 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 100.4 For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.2
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 0.62 on a number line diagram.
7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only 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 the number line or another 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 (1/2, 1/4, 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 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. (Two-dimensional shapes should include special triangles, e.g., equilateral, isosceles, scalene, and special quadrilaterals, e.g., rhombus, square, rectangle, parallelogram, trapezoid.)
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

### Operations and Algebraic Thinking 5.OA

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.

2.1 Express a whole number in the range 2–50 as a product of its prime factors. For example, find the prime factors of 24 and express 24 as $2 \times 2 \times 2 \times 3$.

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.

### Number and Operations in Base Ten 5.NBT

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 ÷ 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) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (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 × a)/(n × 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.

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) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 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 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (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 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 0.05 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 (1/2, 1/4, 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**

**Ratios and Proportional Relationships 6.RP**

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."1

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) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (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°C > –7°C to express the fact that –3°C is warmer than –7°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 = s3 and A = 6 s2 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 = l w h and V = b h 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.

Standards for:

# Science

## K3-6

# Next Generation Science Standards

## Kindergarten 3

The section entitled "Disciplinary Core Ideas" is reproduced verbatim from *A Framework for K–12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas*. Revised March 2015.

**K-LS1 From Molecules to Organisms: Structures and Processes**

| **K-LS1 From Molecules to Organisms: Structures and Processes** | | |
|---|---|---|
| Students who demonstrate understanding can:<br>**K-LS1-1.** **Use observations to describe patterns of what plants and animals (including humans) need to 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** |
| **Analyzing and Interpreting Data**<br>Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.<br>▪ Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1)<br><br>---<br>***Connections to Nature of Science***<br><br>**Scientific Knowledge is Based on Empirical Evidence**<br>▪ Scientists look for patterns and order when making observations about the world. (K-LS1-1) | **LS1.C: Organization for Matter and Energy Flow in Organisms**<br>▪ 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) | **Patterns**<br>▪ Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1) |
| *Connections to other DCIs in kindergarten:* N/A | | |
| *Articulation of DCIs across grade-bands:* **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) | | |
| *California Common Core State Standards Connections:*<br>*ELA/Literacy –*<br>**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)<br>*Mathematics –*<br>**K.MD.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

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)

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***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-bands:* **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) | |
| *California 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.1-3** | Know number names and the count sequence. (K-ESS2-1) |
| **K.MD.1** | Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (K-ESS2-1) |
| **K.MD.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

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

**Asking Questions and Defining Problems**

Asking questions and defining problems in grades K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.

- Ask questions based on observations to find more information about the designed world. (K-ESS3-2)

**Developing and Using Models**

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.

- Use a model to represent relationships in the natural world. (K-ESS3-1)

**Obtaining, Evaluating, and Communicating Information**

Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.

- Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world. (K-ESS3-2)
- Communicate solutions with others in oral and/or

### Disciplinary Core Ideas

**ESS3.A: Natural Resources**

- 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)

**ESS3.B: Natural Hazards**

- 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)

**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. (K-ESS3-3)

**ETS1.A: Defining and Delimiting an Engineering Problem**

- Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary to K-ESS3-2)

**ETS1.B: Developing Possible Solutions**

- 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)

### Crosscutting Concepts

**Cause and Effect**

- Events have causes that generate observable patterns. (K-ESS3-2),(K-ESS3-3)

**Systems and System Models**

- Systems in the natural and designed world have parts that work together. (K-ESS3-1)

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***Connections to Engineering, Technology, and Applications of Science***

**Interdependence of Science, Engineering, and Technology**

- People encounter questions about the natural world every day. (K-ESS3-2)

**Influence of Engineering, Technology, and Science on Society and the Natural World**

- People depend on various technologies in their lives; human

| | | |
|---|---|---|
| written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3) | | life would be very different without technology. (K-ESS3-2) |

*Connections to other DCIs in kindergarten:* **K.ETS1.A** (K-ESS3-2),(K-ESS3-3)

*Articulation of DCIs across grade-bands:* **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)

*California 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.1-3** | Know number names and the count sequence. (K-ESS3-1),(K-ESS3-2) |
| **K.CC.4-5** | Count to tell the number of objects. (K-ESS3-1),(K-ESS3-2) |
| **K.CC.6-7** | Compare numbers. (K-ESS3-1),(K-ESS3-2) |

## 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

**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.

- With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1)

**Analyzing and Interpreting Data**

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Analyze data from tests of an object or tool to determine if it works as intended. (K-PS2-2)

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***Connections to Nature of Science***

**Scientific Investigations Use a Variety of Methods**

- Scientists use different ways to study the world.

### Disciplinary Core Ideas

**PS2.A: Forces and Motion**

- Pushes and pulls can have different strengths and directions. (K-PS2-1),(K-PS2-2)
- 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)

**PS2.B: Types of Interactions**

- When objects touch or collide, they push on one another and can change motion. (K-PS2-1)

**PS3.C: Relationship Between Energy and Forces**

- A bigger push or pull makes things speed up or slow down more quickly (secondary to K-PS2-1)

**ETS1.A: Defining Engineering Problems**

- 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)

### Crosscutting Concepts

**Cause and Effect**

- Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1),(K-PS2-2)

| (K-PS2-1) | | |
|---|---|---|
| *Connections to other DCIs in kindergarten:* **K.ETS1.A** (K-PS2-2); **K.ETS1.B** (K-PS2-2) | | |
| *Articulation of DCIs across grade-bands:* **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) | | |
| *California Common Core State Standards Connections:*<br>*ELA/Literacy –*<br>**RI.K.1** With prompting and support, ask and answer questions about key details in a text. (K-PS2-2)<br>**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)<br>**SL.K.3** Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-PS2-2)<br>*Mathematics –*<br>**MP.2** Reason abstractly and quantitatively. (K-PS2-1)<br><br>**K.MD.1-2** Describe and compare measurable attributes. (K-PS2-1) | | |

## 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)

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***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-bands:* **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) | |
| *California 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.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–2 ETS1 Engineering Design

Students who demonstrate understanding can:

**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.**

**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.**

**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.**

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 K–2 builds on prior experiences and progresses to simple descriptive questions.

- Ask questions based on observations to find more information about the natural and/or designed world(s). (K–2-ETS1-1)
- Define a simple problem that can be solved through the development of a new or improved object or tool. (K–2-ETS1-1)

**Developing and Using Models**

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 simple model based on evidence to represent a proposed object or tool. (K–2-ETS1-2)

**Analyzing and Interpreting Data**

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Analyze data from tests of an object or tool to determine if it works as intended. (K–2-ETS1-3)

### Disciplinary Core Ideas

**ETS1.A: Defining and Delimiting Engineering Problems**

- A situation that people want to change or create can be approached as a problem to be solved through engineering. (K–2-ETS1-1)
- Asking questions, making observations, and gathering information are helpful in thinking about problems. (K–2-ETS1-1)
- Before beginning to design a solution, it is important to clearly understand the problem. (K–2-ETS1-1)

**ETS1.B: Developing Possible Solutions**

- 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)

**ETS1.C: Optimizing the Design Solution**

- Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K–2-ETS1-3)

### Crosscutting Concepts

**Structure and Function**

- The shape and stability of structures of natural and designed objects are related to their function(s). (K–2-ETS1-2)

*Connections to other DCIs in this grade-band:*

*Connections to K–2-ETS1.A: Defining and Delimiting Engineering Problems include:*

**Kindergarten:** K-PS2-2, K-ESS3-2

*Connections to K–2-ETS1.B: Developing Possible Solutions Problems include:*

**Kindergarten:** K-ESS3-3, **First Grade:** 1-PS4-4, **Second Grade:** 2-LS2-2

*Connections to K–2-ETS1.C: Optimizing the Design Solution include:*

**Second Grade:** 2-ESS2-1

*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); **3–5.ETS1.C** (K–2-ETS1-1),(K–2-ETS1-2),(K–2-ETS1-3)

*California 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. (K–2-ETS1-1) |
| **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. (K–2-ETS1-1),(K–2-ETS1-3) |
| **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) |
| **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) |

*Mathematics –*

| | |
|---|---|
| **MP.2** | Reason abstractly and quantitatively. (K–2-ETS1-1),(K–2-ETS1-3) |
| **MP.4** | Model with mathematics. (K–2-ETS1-1),(K–2-ETS1-3) |
| **MP.5** | Use appropriate tools strategically. (K–2-ETS1-1),(K–2-ETS1-3) |

# Grade One

## 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

**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 materials to design a device that solves a specific problem or a solution to a specific problem. (1-LS1-1)

**Obtaining, Evaluating, and Communicating Information**

Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.

- Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world. (1-LS1-2)

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***Connections to Nature of Science***

### Disciplinary Core Ideas

**LS1.A: Structure and Function**

- 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)

**LS1.B: Growth and Development of Organisms**

- 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)

**LS1.D: Information Processing**

- 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)

### Crosscutting Concepts

**Patterns**

- Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence. (1-LS1-2)

**Structure and Function**

- The shape and stability of structures of natural and designed objects are related to their function(s). (1-LS1-1)

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***Connections to Engineering, Technology, and Applications of Science***

**Influence of Science, Engineering and Technology on Society and the Natural World**

- 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)

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|---|---|---|
| **Scientific Knowledge is Based on Empirical Evidence**<br>▪ Scientists look for patterns and order when making observations about the world. (1-LS1-2) | | |

*Connections to other DCIs in first grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

**RI.1.1** Ask and answer questions about key details in a text. (1-LS1-2)

**RI.1.2** Identify the main topic and retell key details of a text. (1-LS1-2)

**RI.1.10** With prompting and support, read informational texts appropriately complex for grade.

a. Activate prior knowledge related to the information and events in a text. **CA**

b. Confirm predictions about what will happen next in a text. **CA** (1-LS1-2)

**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-LS1-1)

*Mathematics –*

**1.NBT.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)

**1.NBT.4-6** Use place value understanding and properties of operations to add and subtract. (1-LS1-2)

## 1-LS3 Heredity: Inheritance and Variation of Traits

Students who demonstrate understanding can:

**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.]

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 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.

- Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (1-LS3-1)

### Disciplinary Core Ideas

**LS3.A: Inheritance of Traits**

- 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)

**LS3.B: Variation of Traits**

- Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. (1-LS3-1)

### Crosscutting Concepts

**Patterns**

- Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence. (1-LS3-1)

*Connections to other DCIs in first grade:* N/A

*Articulation of DCIs across grade-bands:* **3.LS3.A** (1-LS3-1); **3.LS3.B** (1-LS3-1)

*California Common Core State Standards Connections:*

**RI.1.1** Ask and answer questions about key details in a text. (1-LS3-1)

**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)

**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)

*Mathematics –*

**MP.2** Reason abstractly and quantitatively. (1-LS3-1)

**MP.5** Use appropriate tools strategically. (1-LS3-1)

**1.MD.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-LS3-1)

## 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

**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. (1-ESS1-2)

**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. (1-ESS1-1)

### Disciplinary Core Ideas

**ESS1.A: The Universe and its Stars**

- Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted. (1-ESS1-1)

**ESS1.B: Earth and the Solar System**

- Seasonal patterns of sunrise and sunset can be observed, described, and predicted. (1-ESS1-2)

### Crosscutting Concepts

**Patterns**

- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (1-ESS1-1),(1-ESS1-2)

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***Connections to Nature of Science***

**Scientific Knowledge Assumes an Order and Consistency in Natural Systems**

- Science assumes natural events happen today as they happened in the past. (1-ESS1-1)
- Many events are repeated. (1-ESS1-1)

*Connections to other DCIs in first grade:* N/A

*Articulation of DCIs across grade-bands:* **3.PS2.A** (1-ESS1-1); **5.PS2.B** (1-ESS1-1),(1-ESS1-2); **5-ESS1.B** (1-ESS1-1),(1-ESS1-2)

*California 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

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| | 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.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. (1-ESS1-2) |
| **1.MD.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) |

## 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 make materials vibrate.** [Clarification Statement: Examples of vibrating materials that make sound could include tuning forks and plucking a stretched 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 in darkness 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

**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.

- 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)

**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.

- Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (1-PS4-2)
- Use tools and materials provided to design a device that solves a specific problem. (1-PS4-4)

### Disciplinary Core Ideas

**PS4.A: Wave Properties**

- Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1)

**PS4.B: Electromagnetic Radiation**

- Objects can be seen if light is available to illuminate them or if they give off their own light. (1-PS4-2)
- 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)

**PS4.C: Information Technologies and Instrumentation**

### Crosscutting Concepts

**Cause and Effect**

- 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)

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***Connections to Engineering, Technology, and Applications of Science***

**Influence of Engineering, Technology, and Science, on Society and the Natural World**

- People depend on various technologies in their lives; human life would be very different without technology. (1-PS4-4)

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| ---<br>***Connections to Nature of Science***<br><br>**Scientific Investigations Use a Variety of Methods**<br>▪ Science investigations begin with a question. (1-PS4-1)<br>▪ Scientists use different ways to study the world. (1-PS4-1) | ▪ People also use a variety of devices to communicate (send and receive information) over long distances. (1-PS4-4) | |

*Connections to other DCIs in first grade:* N/A

*Articulation of DCIs across grade-bands:* **K.ETS1.A** (1-PS4-4); **2.PS1.A** (1-PS4-3); **2.ETS1.B** (1-PS4-4); **4.PS4.B** (1-PS4-4); **4.PS4.C** (1-PS4-4); **4.ETS1.A** (1-PS4-1)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

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| **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.a–c** | 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 –*

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| **MP.5** | Use appropriate tools strategically. (1-PS4-4) |
| **1.MD.1-2** | Measure lengths indirectly and by iterating length units. (1-PS4-4) |

## K–2 ETS1 Engineering Design

Students who demonstrate understanding can:

**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.**

**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.**

**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.**

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 K–2 builds on prior experiences and progresses to simple descriptive questions.

- Ask questions based on observations to find more information about the natural and/or designed world(s). (K–2-ETS1-1)
- Define a simple problem that can be solved through the development of a new or improved object or tool. (K–2-ETS1-1)
-

**Developing and Using Models**

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 simple model based on evidence to represent a proposed object or tool. (K–2-ETS1-2)

**Analyzing and Interpreting Data**

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Analyze data from tests of an object or tool to determine if it works as intended. (K–2-ETS1-3)

### Disciplinary Core Ideas

**ETS1.A: Defining and Delimiting Engineering Problems**

- A situation that people want to change or create can be approached as a problem to be solved through engineering. (K–2-ETS1-1)
- Asking questions, making observations, and gathering information are helpful in thinking about problems. (K–2-ETS1-1)
- Before beginning to design a solution, it is important to clearly understand the problem. (K–2-ETS1-1)

**ETS1.B: Developing Possible Solutions**

- 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)

**ETS1.C: Optimizing the Design Solution**

- Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K–2-ETS1-3)

### Crosscutting Concepts

**Structure and Function**

- The shape and stability of structures of natural and designed objects are related to their function(s). (K–2-ETS1-2)

*Connections to other DCIs in other grade-bands:*
*Connections to K–2-ETS1.A: Defining and Delimiting Engineering Problems include:*
**Kindergarten:** K-PS2-2, K-ESS3-2
*Connections to K–2-ETS1.B: Developing Possible Solutions to Problems include:*
**Kindergarten:** K-ESS3-3, **First Grade:** 1-PS4-4, **Second Grade:** 2-LS2-2
*Connections to K–2-ETS1.C: Optimizing the Design Solution include:*
**Second Grade:** 2-ESS2-1

*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); **3–5.ETS1.C** (K–2-ETS1-1),(K–2-ETS1-2),(K–2-ETS1-3)

*California 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-ESS1-1) |
| **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. (K–2-ETS1-1),(K–2-ETS1-3) |
| **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) |
| **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) |

*Mathematics –*

| | |
|---|---|
| **MP.2** | Reason abstractly and quantitatively. (K–2-ETS1-1),(K–2-ETS1-3) |
| **MP.4** | Model with mathematics. (K–2-ETS1-1),(K–2-ETS1-3) |
| **MP.5** | Use appropriate tools strategically. (K–2-ETS1-1),(K–2-ETS1-3) |

# Grade Two

## 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

**Developing and Using Models**

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 simple model based on evidence to represent a proposed object or tool. (2-LS2-2)

**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.

- Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-LS2-1)

### Disciplinary Core Ideas

**LS2.A: Interdependent Relationships in Ecosystems**

- Plants depend on water and light to grow. (2-LS2-1)
- Plants depend on animals for pollination or to move their seeds around. (2-LS2-2)

**ETS1.B: Developing Possible Solutions**

- 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)

### Crosscutting Concepts

**Cause and Effect**

- Events have causes that generate observable patterns. (2-LS2-1)

**Structure and Function**

- The shape and stability of structures of natural and designed objects are related to their function(s). (2-LS2-2)

*Connections to other DCIs in second grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California 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-LS2-1)

**W.2.8** Recall information from experiences or gather information from provided sources to answer a question. (2-LS2-1)

**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)

*Mathematics –*

| | |
|---|---|
| **MP.2** | Reason abstractly and quantitatively. (2-LS2-1) |
| **MP.4** | Model with mathematics. (2-LS2-1),(2-LS2-2) |
| **MP.5** | Use appropriate tools strategically. (2-LS2-1) |
| **2.MD.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-LS2-2) |

## 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.** [Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.]

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 which can be used to make comparisons. (2-LS4-1)

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***Connections to Nature of Science***

**Scientific Knowledge is Based on Empirical Evidence**

- Scientists look for patterns and order when making observations about the world. (2-LS4-1)

### Disciplinary Core Ideas

**LS4.D: Biodiversity and Humans**

- 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)

### Crosscutting Concepts

*Connections to other DCIs in second grade:* N/A

*Articulation of DCIs across grade-bands:* **3.LS4.C** (2-LS4-1); **3.LS4.D** (2-LS4-1); **5.LS2.A** (2-LS4-1)

*California 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.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-LS4-1)

## 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 |
|---|---|---|
| **Constructing Explanations and Designing Solutions**<br>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.<br>▪ Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (2-ESS1-1) | **ESS1.C: The History of Planet Earth**<br>▪ Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1) | **Stability and Change**<br>▪ Things may change slowly or rapidly. (2-ESS1-1) |

*Connections to other DCIs in second grade:* N/A

*Articulation of DCIs across grade-bands:* **3.LS2.C** (2-ESS1-1); **4.ESS1.C** (2-ESS1-1); **4.ESS2.A** (2-ESS1-1)

*California 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-ESS1-1)

**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)

**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)

**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)

**W.2.8** Recall information from experiences or gather information from provided sources to answer a question. (2-ESS1-1)

**SL.2.2** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. a. Give and follow three- and four-step oral directions. **CA** (2-ESS1-1)

*Mathematics –*

**MP.2** Reason abstractly and quantitatively. (2-ESS1-1)

**MP.4** Model with mathematics. (2-ESS1-1)

**2.NBT.1-4** Understand place value. (2-ESS1-1)

## 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*:

### Science and Engineering Practices

**Developing and Using Models**

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)

**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.

- Compare multiple solutions to a problem. (2-ESS2-1)

**Obtaining, Evaluating, and Communicating Information**

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

### Disciplinary Core Ideas

**ESS2.A: Earth Materials and Systems**

- Wind and water can change the shape of the land. (2-ESS2-1)

**ESS2.B: Plate Tectonics and Large-Scale System Interactions**

- Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2)

**ESS2.C: The Roles of Water in Earth's Surface Processes**

- Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)

**ETS1.C: Optimizing the Design Solution**

- 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)

### Crosscutting Concepts

**Patterns**

- Patterns in the natural world can be observed. (2-ESS2-2),(2-ESS2-3)

**Stability and Change**

- Things may change slowly or rapidly. (2-ESS2-1)

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***Connections to Engineering, Technology, and Applications of Science***

**Influence of Engineering, Technology, and Science on Society and the Natural World**

- Developing and using technology has impacts on the natural world. (2-ESS2-1)

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***Connections to Nature of Science***

**Science Addresses Questions About the Natural and Material World**

- Scientists study the natural and material world. (2-ESS2-1)

| | | |
|---|---|---|
| media that will be useful in answering a scientific question. (2-ESS2-3) | | |

*Connections to other DCIs in second grade:* **2.PS1.A** (2-ESS2-3)

*Articulation of DCIs across grade-bands:* **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)

*California 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.3** | Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (2-ESS2-2) |
| **2.MD.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) |

## 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. **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.]

**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.

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.

- Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-PS1-1)

**Analyzing and Interpreting Data**

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Analyze data from tests of an object or tool to determine if it works as intended. (2-PS1-2)

**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.

### Disciplinary Core Ideas

**PS1.A: Structure and Properties of Matter**

- 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)
- Different properties are suited to different purposes. (2-PS1-2),(2-PS1-3)
- A great variety of objects can be built up from a small set of pieces. (2-PS1-3)

**PS1.B: Chemical Reactions**

- 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)

### Crosscutting Concepts

**Patterns**

- Patterns in the natural and human designed world can be observed. (2-PS1-1)

**Cause and Effect**

- Events have causes that generate observable patterns. (2-PS1-4)
- Simple tests can be designed to gather evidence to support or refute student ideas about causes. (2-PS1-2)

**Energy and Matter**

- Objects may break into smaller pieces and be put together into larger pieces, or change shapes. (2-PS1-3)

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***Connections to Engineering, Technology, and Applications of Science***

**Influence of Engineering, Technology, and Science on Society and the Natural World**

- Every human-made product is designed by applying some knowledge of the natural world and is built by using natural materials. (2-PS1-2)

| | | |
|---|---|---|
| ▪ Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (2-PS1-3)<br><br>**Engaging in Argument from Evidence**<br>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).<br>▪ Construct an argument with evidence to support a claim. (2-PS1-4)<br>----------<br>***Connections to Nature of Science***<br><br>**Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena**<br>▪ Scientists search for cause and effect relationships to explain natural events. (2-PS1-4) | | |

*Connections to other DCIs in second grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California 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.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) |

## K–2-ETS1 Engineering Design

Students who demonstrate understanding can:

**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.**

**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.**

**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.**

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 K–2 builds on prior experiences and progresses to simple descriptive questions.

- Ask questions based on observations to find more information about the natural and/or designed world(s). (K–2-ETS1-1)
- Define a simple problem that can be solved through the development of a new or improved object or tool. (K–2-ETS1-1)

**Developing and Using Models**

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 simple model based on evidence to represent a proposed object or tool. (K–2-ETS1-2)

**Analyzing and Interpreting Data**

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Analyze data from tests of an object or tool to determine if it works as intended. (K–2-ETS1-3)

### Disciplinary Core Ideas

**ETS1.A: Defining and Delimiting Engineering Problems**

- A situation that people want to change or create can be approached as a problem to be solved through engineering. (K–2-ETS1-1)
- Asking questions, making observations, and gathering information are helpful in thinking about problems. (K–2-ETS1-1)
- Before beginning to design a solution, it is important to clearly understand the problem. (K–2-ETS1-1)

**ETS1.B: Developing Possible Solutions**

- 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)

**ETS1.C: Optimizing the Design Solution**

- Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K–2-ETS1-3)

### Crosscutting Concepts

**Structure and Function**

- The shape and stability of structures of natural and designed objects are related to their function(s). (K–2-ETS1-2)

*Connections to other DCIs in this grade-band:*

*Connections to K–2-ETS1.A: Defining and Delimiting Engineering Problems include:*

**Kindergarten:** K-PS2-2, K-ESS3-2

*Connections to K–2-ETS1.B: Developing Possible Solutions Problems include:*

**Kindergarten:** K-ESS3-3, **First Grade:** 1-PS4-4, **Second Grade:** 2-LS2-2

*Connections to K–2-ETS1.C: Optimizing the Design Solution include:*

**Second Grade:** 2-ESS2-1

*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); **3–5.ETS1.C** (K–2-ETS1-1),(K–2-ETS1-2),(K–2-ETS1-3)

*California 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-ESS1-1) |
| **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. (K–2-ETS1-1),(K–2-ETS1-3) |
| **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) |
| **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) |

*Mathematics –*

| | |
|---|---|
| **MP.2** | Reason abstractly and quantitatively. (K–2-ETS1-1),(K–2-ETS1-3) |
| **MP.4** | Model with mathematics. (K–2-ETS1-1),(K–2-ETS1-3) |
| **MP.5** | Use appropriate tools strategically. (K–2-ETS1-1),(K–2-ETS1-3) |
| **2.MD.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) |

# Grade Three

## 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 |
|---|---|---|
| **Developing and Using Models**<br>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.<br>▪ Develop models to describe phenomena. (3-LS1-1)<br>---<br>***Connections to Nature of Science***<br>**Scientific Knowledge is Based on Empirical Evidence**<br>▪ Science findings are based on recognizing patterns. (3-LS1-1) | **LS1.B: Growth and Development of Organisms**<br>▪ Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1) | **Patterns**<br>▪ Patterns of change can be used to make predictions. (3-LS1-1) |

*Connections to other DCIs in third grade:* N/A

*Articulation of DCIs across grade-bands:* **MS.LS1.B** (3-LS1-1)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

**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)

**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)

*Mathematics –*

**MP.4** Model with mathematics. (3-LS1-1)

**3.NBT.1-3** Use place value understanding and properties of operations to perform multi-digit arithmetic. (3-LS1-1)

**3.NF.1-3** Develop understanding of fractions as numbers. (3-LS1-1)

**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 |
|---|---|---|
| **Engaging in Argument from Evidence**<br>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).<br>▪ Construct an argument with evidence, data, and/or a model. (3-LS2-1) | **LS2.D: Social Interactions and Group Behavior**<br>▪ 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) | **Cause and Effect**<br>▪ Cause and effect relationships are routinely identified and used to explain change. (3-LS2-1) |

*Connections to other DCIs in third grade:* N/A

*Articulation of DCIs across grade-bands:* **1.LS1.B** (3-LS2-1); **MS.LS2.A** (3-LS2-1)

*California 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-LS2-1)

**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)

**W.3.1.a–d** Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-LS2-1)

**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)

*Mathematics –*

**MP.4** Model with mathematics. (3-LS2-1)

**3.NBT.1-3** Use place value understanding and properties of operations to perform multi-digit arithmetic. (3-LS2-1)

## 3-LS3 Heredity: Inheritance and Variation of Traits

Students who demonstrate understanding can:

**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.** [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.]

**3-LS3-2.** **Use evidence to support the explanation that traits can be influenced by the environment.** [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.]

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-LS3-1)

**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 support an explanation. (3-LS3-2)

### Disciplinary Core Ideas

**LS3.A: Inheritance of Traits**

- Many characteristics of organisms are inherited from their parents. (3-LS3-1)
- 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)

**LS3.B: Variation of Traits**

- Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1)
- The environment also affects the traits that an organism develops. (3-LS3-2)

### Crosscutting Concepts

**Patterns**

- Similarities and differences in patterns can be used to sort and classify natural phenomena. (3-LS3-1)

**Cause and Effect**

- Cause and effect relationships are routinely identified and used to explain change. (3-LS3-2)

*Connections to other DCIs in third grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California 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-LS3-1),(3-LS3-2)

**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)

**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)

**W.3.2.a–d** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS3-1),(3-LS3-2)

**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.

a. Plan and deliver an informative/explanatory presentation on a topic that: organizes ideas around major points of information, follows a logical sequence, includes supporting details, uses clear and specific vocabulary, and provides a strong conclusion. **CA** (3-LS3-1),(3-LS3-2)

*Mathematics –*

**MP.2** Reason abstractly and quantitatively. (3-LS3-1),(3-LS3-2)

**MP.4** Model with mathematics. (3-LS3-1),(3-LS3-2)

**3.MD.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)

## 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

### 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.

### 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)

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***Connections to Engineering, Technology,***

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| that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.<br>▪ Use evidence (e.g., observations, patterns) to construct an explanation. (3-LS4-2)<br>**Engaging in Argument from Evidence**<br>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).<br>▪ Construct an argument with evidence. (3-LS4-3)<br>▪ 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) | (Note: moved from K–2) (3-LS4-1)<br>▪ Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments. (3-LS4-1)<br>**LS4.B: Natural Selection**<br>▪ Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. (3-LS4-2)<br><br>**LS4.C: Adaptation**<br>▪ For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)<br>**LS4.D: Biodiversity and Humans**<br>▪ Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4) | ***and Applications of Science***<br><br>**Interdependence of Engineering, Technology and Applications of Science on Society and the Natural World**<br>▪ Knowledge of relevant scientific concepts and research findings is important in engineering. (3-LS4-4)<br><br>---<br>***Connections to Nature of Science***<br><br>**Scientific Knowledge Assumes an Order and Consistency in Natural Systems**<br>▪ Science assumes consistent patterns in natural systems. (3-LS4-1) |
| *Connections to other DCIs in third grade:* **3.ESS2.D** (3-LS4-3); **3.ESS3.B** (3-LS4-4) | | |
| *Articulation of DCIs across grade-bands:* **K.ESS3.A** (3-LS4-3)(3-LS4-4); **K.ETS1.A** (3-LS4-4); **1.LS3.B** (3-LS4-2);**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) | | |
| *California Common Core State Standards Connections:*<br>*ELA/Literacy –*<br>**RI.3.1.a–d** 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,(3-LS4-4)<br>**RI.3.2.a–d** 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),(3LS4-4)<br>**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)<br>**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)<br>**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)<br>**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-LS4-1)<br>**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.<br>a. Plan and deliver an informative/explanatory presentation on a topic that: organizes ideas around major points of information, follows a | | |

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| | logical sequence, includes supporting details, uses clear and specific vocabulary, and provides a strong conclusion. **CA** (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.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. (3-LS4-2),(3-LS4-3) |
| **3.MD.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

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*:

### 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 tables and various graphical displays (bar graphs, pictographs) to reveal patterns that indicate relationships. (3-ESS2-1)

**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.

- Obtain and combine information from books and other reliable media to explain phenomena. (3-ESS2-2)

### Disciplinary Core Ideas

**ESS2.D: Weather and Climate**

- 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)
- Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2)

### Crosscutting Concepts

**Patterns**

- Patterns of change can be used to make predictions. (3-ESS2-1),(3-ESS2-2)

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| *Connections to other DCIs in third grade:* N/A | |
| *Articulation of DCIs across grade-bands:* **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) | |
| *California 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.3.8** | Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-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.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.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 lighting 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 |
|---|---|---|
| **Engaging in Argument from Evidence**<br>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).<br>▪ 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) | **ESS3.B: Natural Hazards**<br>▪ 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.) | **Cause and Effect**<br>▪ Cause and effect relationships are routinely identified, tested, and used to explain change. (3-ESS3-1)<br>----------***Connections to Engineering, Technology, and Applications of Science***<br>**Influence of Engineering, Technology, and Science on Society and the Natural World**<br>▪ 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)<br>----------***Connections to Nature of Science***<br>**Science is a Human Endeavor**<br>▪ Science affects everyday life. (3-ESS3-1) |

*Connections to other DCIs in third grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

**W.3.1.a–d** Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-ESS3-1)

**W.3.7** Conduct short research projects that build knowledge about a topic. (3-ESS3-1)

*Mathematics –*

**MP.2** Reason abstractly and quantitatively. (3-ESS3-1)

**MP.4** Model with mathematics. (3-ESS3-1)

## 3-PS2 Motion and Stability: Forces and Interactions

**3-PS2 Motion and Stability: Forces and Interactions**

Students who demonstrate understanding can:

**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.]

**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.]

**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.]

**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.]

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 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships.

- Ask questions that can be investigated based on patterns such as cause and effect relationships. (3-PS2-3)
- Define a simple problem that can be solved through the development of a new or improved object or tool. (3-PS2-4)

**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

## Disciplinary Core Ideas

**PS2.A: Forces and Motion**

- 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)
- 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

## Crosscutting Concepts

**Patterns**

- Patterns of change can be used to make predictions. (3-PS2-2)

**Cause and Effect**

- Cause and effect relationships are routinely identified. (3-PS2-1)
- Cause and effect relationships are routinely identified, tested, and used to explain change. (3-PS2-3)

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***Connections to Engineering, Technology, and Applications of Science***

**Interdependence of Science, Engineering, and Technology**

- Scientific discoveries about the natural world can often lead to new and improved

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| evidence, using fair tests in which variables are controlled and the number of trials considered. (3-PS2-1)<br>▪ 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)<br><br>----------<br>***Connections to Nature of Science***<br><br>**Science Knowledge is Based on Empirical Evidence**<br>▪ Science findings are based on recognizing patterns. (3-PS2-2)<br>**Scientific Investigations Use a Variety of Methods**<br>▪ Science investigations use a variety of methods, tools, and techniques. (3-PS2-1) | developed.) (3-PS2-2)<br>**PS2.B: Types of Interactions**<br>▪ Objects in contact exert forces on each other. (3-PS2-1)<br>▪ 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) | technologies, which are developed through the engineering design process. (3-PS2-4) |

*Connections to other DCIs in third grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

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| **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) |
| **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) |
| **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) |
| **W.3.7** | Conduct short research projects that build knowledge about a topic. (3-PS2-1),(3-PS2-2) |
| **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) |
| **SL.3.3** | Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. (3-PS2-3) |

*Mathematics –*

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| **MP.2** | Reason abstractly and quantitatively. (3-PS2-1) |
| **MP.5** | Use appropriate tools strategically. (3-PS2-1) |
| **3.MD.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) |

## 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

### 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

### 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-ETS-2)

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| 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.<br>▪ 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) | improved. (3–5-ETS1-3)<br>**ETS1.C: Optimizing the Design Solution**<br>▪ 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) | |

*Connections to other DCIs in this grade-band:*

*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)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

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| **RI.5.1** | Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (3–5-ETS1-2) |
| **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-ETS2) |
| **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.a,b** | Draw evidence from literary or informational texts to support analysis, reflection, and research. (3–5-ETS1-1),(3–5-ETS1-3) |

*Mathematics –*

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| **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.OA.1-4** | Represent and solve problems involving multiplication and division. (3–5-ETS1-1),(3–5-ETS1-2) |
| **3.OA.5-6** | Understand properties of multiplication and the relationship between multiplication and division. (3–5-ETS1-1),(3–5-ETS1-2) |
| **3.OA.7** | Multiply and divide within 100. (3–5-ETS1-1),(3–5-ETS1-2) |
| **3.OA.8-9** | Solve problems involving the four operations, and identify and explain patterns in arithmetic. (3–5-ETS1-1),(3–5-ETS1-2) |

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| **4.OA.1-3** | Use the four operations with whole numbers to solve problems. (3–5-ETS1-1),(3–5-ETS1-2) |
| **4.OA.4** | Gain familiarity with factors and multiples. (3–5-ETS1-1),(3–5-ETS1-2) |
| **4.OA.5** | Generate and analyze patterns. (3–5-ETS1-1),(3–5-ETS1-2) |
| **5.OA.1-2.1** | Write and interpret numerical expressions. (3–5-ETS1-1),(3–5-ETS1-2) |
| **5.OA.3** | Analyze patterns and relationships. (3–5-ETS1-1),(3–5-ETS1-2) |

# Grade Four

## 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. ****Each structure has specific functions within its associated system.**] [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.]

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

**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, data, and/or a model. (4-LS1-1)
- Use a model to test interactions concerning the functioning of a natural system. (4-LS1-2)

### Disciplinary Core Ideas

**LS1.A: Structure and Function**

- Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)

**LS1.D: Information Processing**

- 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)

### Crosscutting Concepts

**Systems and System Models**

- A system can be described in terms of its components and their interactions. (4-LS1-1), (4-LS1-2)

*Connections to other DCIs in fourth grade:* N/A

*Articulation of DCIs across grade-bands:* **1.LS1.A** (4-LS1-1); **1.LS1.D** (4-LS1-1); **3.LS3.B** (4-LS1-1); **MS.LS1.A** (4-LS1-1),(4-LS1-2); **MS.LS1.D** (4-LS1-2)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

**W.4.1.a–d** 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.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. (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 formations and fossils in rock layers for changes in a landscape over time to support an explanation for changes in a landscape over time.** [Clarification Statement: Examples of evidence from patterns could include rock layers with 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.]

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 |
|---|---|---|
| **Constructing Explanations and Designing Solutions**<br>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.<br>▪ Identify the evidence that supports particular points in an explanation. (4-ESS1-1) | **ESS1.C: The History of Planet Earth**<br>▪ 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) | **Patterns**<br>▪ Patterns can be used as evidence to support an explanation. (4-ESS1-1)<br>---<br>***Connections to Nature of Science***<br>***Scientific Knowledge Assumes an Order and Consistency in Natural Systems***<br>▪ Science assumes consistent patterns in natural systems. (4-ESS1-1) |

*Connections to other DCIs in fourth grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

**W.4.7** Conduct short research projects that build knowledge through investigation of different aspects of a topic. (4-ESS1-1)

**W.4.8.a–d** Recall relevant information from experiences or gather relevant information from print and digital sources; take notes, **paraphrase**, and categorize information, and provide a list of sources. **CA** (4-ESS1-1)

**W.4.9** Draw evidence from literary or informational texts to support analysis, reflection, and research. (4-ESS1-1)

*Mathematics –*

**MP.2** Reason abstractly and quantitatively. (4-ESS1-1)

**MP.4** Model with mathematics. (4-ESS1-1)

**4.MD.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)

## 4-ESS2 Earth's Systems

**4-ESS2 Earth's Systems**

Students who demonstrate understanding can:

**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.]

**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.]

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**<br>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.<br>▪ Make observations and/or measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon. (4-ESS2-1)<br>**Analyzing and Interpreting Data**<br>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.<br>▪ Analyze and interpret data to make sense of phenomena using logical reasoning. (4-ESS2-2) | **ESS2.A: Earth Materials and Systems**<br>▪ 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)<br>**ESS2.B: Plate Tectonics and Large-Scale System Interactions**<br>▪ 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)<br>**ESS2.E: Biogeology**<br>▪ Living things affect the physical characteristics of their regions. (4-ESS2-1) | **Patterns**<br>▪ Patterns can be used as evidence to support an explanation. (4-ESS2-2)<br>**Cause and Effect**<br>▪ Cause and effect relationships are routinely identified, tested, and used to explain change. (4-ESS2-1) |

*Connections to other DCIs in fourth grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

**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)

**W.4.7** Conduct short research projects that build knowledge through investigation of different aspects of a topic. (4-ESS2-1)

| | |
|---|---|
| **W.4.8.a–d** | Recall relevant information from experiences or gather relevant information from print and digital sources; take notes, **paraphrase**, and categorize information, and provide a list of sources. **CA** (4-ESS1-1),(4-ESS2-1) |
| *Mathematics* – | |
| **MP.2** | Reason abstractly and quantitatively. (4-ESS2-1) |
| **MP.4** | Model with mathematics. (4-ESS2-1) |
| **MP.5** | Use appropriate tools strategically. (4-ESS2-1) |
| **4.MD.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) |
| **4.MD.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) |

## 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.]

### Science and Engineering Practices

**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)

**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)

### 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)

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***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 Engineering, Technology, and Science 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-bands:* **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) | |
| *California 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.a–d** | Recall relevant information from experiences or gather relevant information from print and digital sources; take notes, **paraphrase**, and categorize information, and provide a list of sources. **CA** (4-ESS3-1) |
| **W.4.9.a,b** | 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.1** | Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 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) |

## 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. [**Clarification Statement: Examples of evidence relating speed and energy could include change of shape on impact or other results of collisions.]** [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.]

### Science and Engineering Practices

**Asking Questions and Defining Problems**

Asking questions and defining problems in grades 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships.

- Ask questions that can be investigated and predict reasonable outcomes based on patterns such as cause and effect relationships. (4-PS3-3)

**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.

- 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)

**Constructing Explanations and Designing Solutions**

Constructing explanations and designing solutions in

### Disciplinary Core Ideas

**PS3.A: Definitions of Energy**

- The faster a given object is moving, the more energy it possesses. (4-PS3-1)
- Energy can be moved from place to place by moving objects or through sound, light, or electric currents. (4-PS3-2),(4-PS3-3)

**PS3.B: Conservation of Energy and Energy Transfer**

- 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)
- Light also transfers energy from place to place. (4-PS3-2)
- Energy can also be transferred from place to

### Crosscutting Concepts

**Energy and Matter**

- Energy can be transferred in various ways and between objects. (4-PS3-1), (4-PS3-2),(4-PS3-3),(4-PS3-4)

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***Connections to Engineering, Technology, and Applications of Science***

**Influence of Engineering, Technology, and Science on Society and the Natural World**

- Engineers improve existing technologies or develop new ones. (4-PS3-4)

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***Connections to Nature of Science***

**Science is a Human Endeavor**

- Most scientists and engineers work in teams.

| | | |
|---|---|---|
| 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.<br>▪ Use evidence (e.g., measurements, observations, patterns) to construct an explanation. (4-PS3-1)<br>▪ Apply scientific ideas to solve design problems. (4-PS3-4) | 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)<br>**PS3.C: Relationship Between Energy and Forces**<br>▪ When objects collide, the contact forces transfer energy so as to change the objects' motions. (4-PS3-3)<br>**PS3.D: Energy in Chemical Processes and Everyday Life**<br>▪ The expression "produce energy" typically refers to the conversion of stored energy into a desired form for practical use. (4-PS3-4)<br>**ETS1.A: Defining Engineering Problems**<br>▪ 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) | (4-PS3-4)<br>▪ Science affects everyday life. (4-PS3-4) |

*Connections to other DCIs in fourth grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California 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-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.a–d** | 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.a–d** | Recall relevant information from experiences or gather relevant information from print and digital sources; take notes, **paraphrase**, and |

| | |
|---|---|
| | categorize information, and provide a list of sources. **CA** (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) |
| *Mathematics* – **4.OA.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

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 models 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.]

### Science and Engineering Practices

**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.

- Develop a model using an analogy, example, or abstract representation to describe a scientific principle. (4-PS4-1)
- Develop a model to describe phenomena. (4-PS4-2)

**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-PS4-3)

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### Disciplinary Core Ideas

**PS4.A: Wave Properties**

- 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 the beach. (Note: This grade band endpoint was moved from K–2.) (4-PS4-1)
- Waves of the same type can differ in amplitude (height of the wave) and wavelength (spacing between wave peaks). (4-PS4-1)

**PS4.B: Electromagnetic Radiation**

- An object can be seen when light reflected from its surface enters the eyes. (4-PS4-2)

**PS4.C: Information Technologies and Instrumentation**

- 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)

**ETS1.C: Optimizing the Design Solution**

### Crosscutting Concepts

**Patterns**

- Similarities and differences in patterns can be used to sort, classify and analyze simple rates of change for natural phenomena.. (4-PS4-1)
- Similarities and differences in patterns can be used to sort and classify designed products. (4-PS4-3)

**Cause and Effect**

- Cause and effect relationships are routinely identified. (4-PS4-2)

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***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-PS4-3)

| | | |
|---|---|---|
| ***Connections to Nature of Science***<br><br>**Scientific Knowledge is Based on Empirical Evidence**<br>▪ Science findings are based on recognizing patterns. (4-PS4-1) | ▪ 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) | |
| *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-bands:* **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) | | |
| *California Common Core State Standards Connections:*<br>*ELA/Literacy –*<br>**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)<br>**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)<br>**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)<br>*Mathematics –*<br>**MP.4** Model with mathematics. (4-PS4-1),(4-PS4-2)<br>**4.G.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) | | |

## 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

### 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)

### 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-ETS-2)

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| the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.<br>▪ 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) | **ETS1.C: Optimizing the Design Solution**<br>▪ 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) | |

*Connections to other DCIs in this grade-band:*

*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)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

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| **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-ETS2) |
| **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.a,b** | Draw evidence from literary or informational texts to support analysis, reflection, and research. (3–5-ETS1-1),(3–5-ETS1-3) |

*Mathematics –*

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| **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.OA.1-4** | Represent and solve problems involving multiplication and division. (3–5-ETS1-1),(3–5-ETS1-2) |
| **3.OA.5-6** | Understand properties of multiplication and the relationship between multiplication and division. (3–5-ETS1-1),(3–5-ETS1-2) |
| **3.OA.7** | Multiply and divide within 100. (3–5-ETS1-1),(3–5-ETS1-2) |
| **3.OA.8-9** | Solve problems involving the four operations, and identify and explain patterns in arithmetic. (3–5-ETS1-1),(3–5-ETS1-2) |

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| **4.OA.1-3** | Use the four operations with whole numbers to solve problems. (3–5-ETS1-1),(3–5-ETS1-2) |
| **4.OA.4** | Gain familiarity with factors and multiples. (3–5-ETS1-1),(3–5-ETS1-2) |
| **4.OA.5** | Generate and analyze patterns. (3–5-ETS1-1),(3–5-ETS1-2) |
| **5.OA.1-2.1** | Write and interpret numerical expressions. (3–5-ETS1-1),(3–5-ETS1-2) |
| **5.OA.3** | Analyze patterns and relationships. (3–5-ETS1-1),(3–5-ETS1-2) |

# Grade Five

## 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.** [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.]

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**<br>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).<br>▪ Support an argument with evidence, data, or a model. (5-LS1-1) | **LS1.C: Organization for Matter and Energy Flow in Organisms**<br>▪ Plants acquire their material for growth chiefly from air and water. (5-LS1-1) | **Energy and Matter**<br>▪ Matter is transported into, out of, and within systems. (5-LS1-1) |

*Connections to other DCIs in fifth grade:* **5.PS1.A** (5-LS1-1)

*Articulation of DCIs across grade-bands:* **K.LS1.C** (5-LS1-1); **2.LS2.A** (5-LS1-1); **MS.LS1.C** (5-LS1-1)

*California 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.a–d** 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.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

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

**Developing and Using Models**

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.

- Develop a model to describe phenomena. (5-LS2-1)

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***Connections to Nature of Science***

**Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena**

- Science explanations describe the mechanisms for natural events. (5-LS2-1)

### Disciplinary Core Ideas

**LS2.A: Interdependent Relationships in Ecosystems**

- 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)

**LS2.B: Cycles of Matter and Energy Transfer in Ecosystems**

- 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)

### Crosscutting Concepts

**Systems and System Models**

- A system can be described in terms of its components and their interactions. (5-LS2-1)

*Connections to other DCIs in fifth grade:* **5.PS1.A** (5-LS2-1); **5.ESS2.A** (5-LS2-1)

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| *Articulation of DCIs across grade-bands:* **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) | |
| *California 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

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. [**Clarification Statement: Absolute brightness of stars is the result of a variety of factors. Relative distance from Earth is one factor that affects apparent brightness and is the one selected to be addressed by the performance expectation.]** [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-bands:* **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);

*California Common Core State Standards Connections:*

**RI.5.1.a–d** 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

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| | 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.a–d** | 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.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.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

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: ****The geosphere, hydrosphere (including ice), atmosphere, and biosphere are each a system and each system is a part of the whole Earth System.** 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

**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.

- Develop a model using an example to describe a scientific principle. (5-ESS2-1)

**Using Mathematics and Computational Thinking**

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.

- Describe and graph quantities such as area and volume to address scientific questions. (5-ESS2-2)

### Disciplinary Core Ideas

**ESS2.A: Earth Materials and Systems**

- 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)

**ESS2.C: The Roles of Water in Earth's Surface Processes**

- 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)

### Crosscutting Concepts

**Scale, Proportion, and Quantity**

- Standard units are used to measure and describe physical quantities such as weight and volume. (5-ESS2-2)

**Systems and System Models**

- A system can be described in terms of its components and their interactions. (5-ESS2-1)

*Connections to other DCIs in fifth grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California Common Core State Standards Connections:*
*ELA/Literacy –*

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|---|---|
| **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.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**

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*:

| Science and Engineering Practices | Disciplinary Core Ideas | Crosscutting Concepts |
|---|---|---|
| **Obtaining, Evaluating, and Communicating Information**<br>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.<br>▪ Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem. (5-ESS3-1) | **ESS3.C: Human Impacts on Earth Systems**<br>▪ 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) | **Systems and System Models**<br>▪ A system can be described in terms of its components and their interactions. (5-ESS3-1)<br>---<br>***Connections to Nature of Science***<br>**Science Addresses Questions About the Natural and Material World.**<br>▪ Science findings are limited to questions that can be answered with empirical evidence. (5-ESS3-1) |

*Connections to other DCIs in fifth grade:* N/A

*Articulation of DCIs across grade-bands:* **MS.ESS3.A** (5-ESS3-1); **MS.ESS3.C** (5-ESS3-1); **MS.ESS3.D** (5-ESS3-1)

*California 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.a,b** 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.a,b** 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)

## 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 supporting a model 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 forms 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.** **[**Clarification Statement: Examples of combinations that do not produce new substances could include sand and water. Examples of combinations that do produce new substances could include baking soda and vinegar or milk and vinegar.]**

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 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.

- Develop a model to describe phenomena. (5-PS1-1)

**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.

- 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)

### Disciplinary Core Ideas

**PS1.A: Structure and Properties of Matter**

- 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 shows 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)
- The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish. (5-PS1-2)
- 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

### Crosscutting Concepts

**Cause and Effect**

- Cause and effect relationships are routinely identified, tested, and used to explain change. (5-PS1-4)

**Scale, Proportion, and Quantity**

- Natural objects exist from the very small to the immensely large. (5-PS1-1)
- Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume. (5-PS1-2),(5-PS1-3)

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***Connections to Nature of Science***

**Scientific Knowledge Assumes an Order and Consistency in Natural Systems**

- Science assumes consistent patterns in natural

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| ▪ Make observations and measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon. (5-PS1-3)<br>**Using Mathematics and Computational Thinking**<br>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.<br>▪ Measure and graph quantities such as weight to address scientific and engineering questions and problems. (5-PS1-2) | mechanism of evaporation and condensation.) (5-PS1-3)<br>**PS1.B: Chemical Reactions**<br>▪ When two or more different substances are mixed, a new substance with different properties may be formed. (5-PS1-4)<br>▪ 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) | systems. (5-PS1-2) |

*Connections to other DCIs in fifth grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California 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.a,b** | 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. (PS1-2),(PS1-3) |
| **5.NBT.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-PS1-1) |
| **5.NF.7.a-c** | 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.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.3.a,b** | Recognize volume as an attribute of solid figures and understand concepts of volume measurement. (5-PS1-1) |
| **5.MD.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**

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 |
|---|---|---|
| **Engaging in Argument from Evidence**<br>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).<br>▪ Support an argument with evidence, data, or a model. (5-PS2-1) | **PS2.B: Types of Interactions**<br>▪ The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center. (5-PS2-1) | **Cause and Effect**<br>▪ Cause and effect relationships are routinely identified and used to explain change. (5-PS2-1) |

*Connections to other DCIs in fifth grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California 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-PS2-1)

**RI.5.9.a,b** Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-PS2-1)

**W.5.1.a–d** Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-PS2-1)

## 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.** [Clarification Statement: Examples of models could include diagrams, and flow charts.]

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 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.

- Use models to describe phenomena. (5-PS3-1)

### Disciplinary Core Ideas

**PS3.D: Energy in Chemical Processes and Everyday Life**

- 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)

**LS1.C: Organization for Matter and Energy Flow in Organisms**

- 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)

### Crosscutting Concepts

**Energy and Matter**

- Energy can be transferred in various ways and between objects. (5-PS3-1)

*Connections to other DCIs in fifth grade:* N/A

*Articulation of DCIs across grade-bands:* **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)

*California 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)

## 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

### 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

### 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-ETS-2)

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| 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.<br>▪ 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) | improved. (3–5-ETS1-3)<br>**ETS1.C: Optimizing the Design Solution**<br>▪ 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) | |

*Connections to other DCIs in this grade-band:*

*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)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

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|---|---|
| **RI.5.1** | Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (3–5-ETS1-2) |
| **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-ETS1-2) |
| **RI.5.9** | Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (3–5-ETS1-2) |
| **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.a,b** | Draw evidence from literary or informational texts to support analysis, reflection, and research. (3–5-ETS1-1), (3–5-ETS1-3) |

*Mathematics –*

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| **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.OA.1-4** | Represent and solve problems involving multiplication and division. (3–5-ETS1-1),(3–5-ETS1-2) |
| **3.OA.5-6** | Understand properties of multiplication and the relationship between multiplication and division. (3–5-ETS1-1),(3–5-ETS1-2) |
| **3.OA.7** | Multiply and divide within 100. (3–5-ETS1-1),(3–5-ETS1-2) |

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| **3.OA.8-9** | Solve problems involving the four operations, and identify and explain patterns in arithmetic. (3–5-ETS1-1),(3–5-ETS1-2) |
| **4.OA.1-3** | Use the four operations with whole numbers to solve problems. (3–5-ETS1-1),(3–5-ETS1-2) |
| **4.OA.4** | Gain familiarity with factors and multiples. (3–5-ETS1-1),(3–5-ETS1-2) |
| **4.OA.5** | Generate and analyze patterns. (3–5-ETS1-1),(3–5-ETS1-2) |
| **5.OA.1-2.1** | Write and interpret numerical expressions. (3–5-ETS1-1),(3–5-ETS1-2) |
| **5.OA.3** | Analyze patterns and relationships. (3–5-ETS1-1),(3–5-ETS1-2) |

# Grade Six – Integrated Course

## MS-LS1 From Molecules to Organisms: Structures and Processes

| MS-LS1 From Molecules to Organisms: Structures and Processes |
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| 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 **(**including Bacteria, Archaea, and Eukarya)** are made of cells, distinguishing between living and non-living things, and understanding that living things may be made of one cell or many and varied cells. ****Viruses, while not cells, have features that are both common with, and distinct from, cellular life.]** |
| **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-LS1-8.** **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*:

## 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-LS1-2)

**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.

- Conduct an investigation to produce data to serve as the basis for evidence that meet the goals of an investigation. (MS-LS1-1)

**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 knowledge, 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-LS1-5)

**Engaging in Argument from Evidence**

Engaging in argument from evidence in 6–8 builds on

## Disciplinary Core Ideas

**LS1.A: Structure and Function**

- 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)
- 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)
- 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)

**LS1.B: Growth and Development of Organisms**

- Animals engage in characteristic behaviors that increase the odds of reproduction. (MS-LS1-4)
- Plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction. (MS-LS1-4)
- Genetic factors as well as local conditions affect the growth of the adult plant. (MS-LS1-5)

**LS1.D: Information Processing**

- Each sense receptor responds to different inputs (electromagnetic, mechanical, chemical), transmitting them as signals that travel along nerve cells to the brain. The

## Crosscutting Concepts

**Cause and Effect**

- Cause and effect relationships may be used to predict phenomena in natural systems. (MS-LS1-8)
- 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)

**Scale, Proportion, and Quantity**

- Phenomena that can be observed at one scale may not be observable at another scale. (MS-LS1-1)

**Systems and System Models**

- Systems may interact with other systems; they may have sub-systems and be a part of larger complex systems. (MS-LS1-3)

**Structure and Function**

- 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 and designed structures/systems can be analyzed to determine how they function. (MS-LS1-2)

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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

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|---|---|---|
| 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).<br>▪ Use an oral and written argument supported by evidence to support or refute an explanation or a model for a phenomenon. (MS-LS1-3)<br>▪ 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)<br>**Obtaining, Evaluating, and Communicating Information**<br>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.<br>▪ 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) | signals are then processed in the brain, resulting in immediate behaviors or memories. (MS-LS1-8) | development of entire industries and engineered systems. (MS-LS1-1)<br>---<br>***Connections to Nature of Science***<br>**Science is a Human Endeavor**<br>▪ 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) |
| *Connections to other DCIs in this grade-band:* **MS.LS2.A** (MS-LS1-4),(MS-LS1-5); **MS.LS3.A** (MS-LS1-2) | | |
| *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); **HS.LS1.A** (MS-LS1-1),(MS-LS1-2),(MS-LS1-3),(MS-LS1-8); **HS.LS2.A** (MS-LS1-4),(MS-LS1-5); **HS.LS2.D** (MS-LS1-4); | | |
| *California Common Core State Standards Connections:*<br>*ELA/Literacy –*<br>**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)<br>**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)<br>**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)<br>**WHST.6–8.1.a–e** Write arguments focused on *discipline-specific content*. (MS-LS1-3),(MS-LS1-4) | | |

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|---|---|
| **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) |
| **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) |
| **WHST.6–8.8** | Gather relevant information from multiple print and digital sources **(primary and secondary)**, 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. **CA** (MS-LS1-8) |
| **WHST.6–8.9** | Draw evidence from informational texts to support analysis, reflection, and research. (MS-LS1-5) |
| **SL.8.5** | Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest. (MS-LS1-2) |
| *Mathematics –* | |
| **6.EE.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) |
| **6.SP.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) |
| **6.SP.4** | Display numerical data in plots on a number line, including dot plots, histograms, and box plots. (MS-LS1-4),(MS-LS1-5) |

**MS-LS3 Heredity: Inheritance and Variation of Traits**

Students who demonstrate understanding can:

**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.**

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 |
|---|---|---|
| **Developing and Using Models**<br>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.<br>▪ Develop and use a model to describe phenomena. (MS-LS3-2) | **LS1.B: Growth and Development of Organisms**<br>▪ Organisms reproduce, either sexually or asexually, and transfer their genetic information to their offspring. (secondary to MS-LS3-2)<br>**LS3.A: Inheritance of Traits**<br>▪ 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)<br>**LS3.B: Variation of Traits**<br>▪ 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) | **Cause and Effect**<br>▪ Cause and effect relationships may be used to predict phenomena in natural systems. (MS-LS3-2) |

*Connections to other DCIs in this grade-band*:

*Articulation across grade-bands:* **3.LS3.A** (MS-LS3-2); **3.LS3.B** (MS-LS3-2); **HS.LS1.B** (MS-LS3-2); **HS.LS3.A** (MS-LS3-2); **HS.LS3-B** (MS-LS3-2)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

**RST.6–8.1** Cite specific textual evidence to support analysis of science and technical texts. (MS-LS3-2)

**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-LS3-2)

**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-LS3-2)

**SL.8.5** Integrate multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. (MS-LS3-2)

*Mathematics –*

**MP.4** Model with mathematics. (MS-LS3-2)

**6.SP.5.a-d** Summarize numerical data sets in relation to their context. (MS-LS3-2)

## MS-ESS2 Earth's Systems

Students who demonstrate understanding can:

**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-ESS2-6)
- 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.

### Disciplinary Core Ideas

**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

### Crosscutting Concepts

**Cause and Effect**

- Cause and effect relationships may be used to predict phenomena in natural or designed systems. (MS-ESS2-5)

**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)

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| ▪ 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) | interconnected ocean currents. (MS-ESS2-6)<br>**ESS2.D: Weather and Climate**<br>▪ 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)<br>▪ Because these patterns are so complex, weather can only be predicted probabilistically. (MS-ESS2-5)<br>▪ The ocean exerts a major influence on weather and climate by 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-ESS2-4),(MS-ESS2-5); **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-ESS2-5),(MS-ESS2-6); **MS.PS3.D** (MS-ESS2-4);

*Articulation of DCIs across grade-bands:* **3.PS2.A** (MS-ESS2-4),(MS-ESS2-6); **3.ESS2.D** (MS-ESS2-5),(MS-ESS2-6); **4.PS3.B** (MS-ESS2-4); **5.PS2.B** (MS-ESS2-4); **5.ESS2.A** (MS-ESS2-5),(MS-ESS2-6); **5.ESS2.C** (MS-ESS2-4); **HS.PS2.B** (MS-ESS2-4),(MS-ESS2-6); **HS.PS3.B** (MS-ESS2-4),(MS-ESS2-6); **HS.PS4.B** (MS-ESS2-4); **HS.ESS1.B** (MS-ESS2-6); **HS.ESS2.A** (MS-ESS2-4),(MS-ESS2-6); **HS.ESS2.C** (MS-ESS2-4),(MS-ESS2-5); **HS.ESS2.D** (MS-ESS2-4),(MS-ESS2-5),(MS-ESS2-6);

*California Common Core State Standards Connections:*

*ELA/Literacy –*

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| **RST.6–8.1** | Cite specific textual evidence to support analysis of science and technical texts. (MS-ESS2-5) |
| **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-ESS2-5) |
| **WHST.6–8.8** | Gather relevant information from multiple print and digital sources **(primary and secondary)**, 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. **CA** (MS-ESS2-5) |
| **SL.8.5** | Integrate multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. (MS-ESS2-6) |

*Mathematics –*

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| **MP.2** | Reason abstractly and quantitatively. (MS-ESS2-5) |
| **6.NS.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) |

## MS-ESS3 Earth and Human Activity

Students who demonstrate understanding can:

**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-ESS3–5.** **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

**Asking Questions and Defining Problems**

Asking questions and defining problems in grades 6–8 builds on grades K–5 experiences and progresses to specifying relationships between variables, clarify arguments and models.

- Ask questions to identify and clarify evidence of an argument. (MS-ESS3–5)

**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 principles to design an object, tool, process or system. (MS-ESS3-3)

### Disciplinary Core Ideas

**ESS3.C: Human Impacts on Earth Systems**

- 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)

**ESS3.D: Global Climate Change**

- 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)

### Crosscutting Concepts

**Cause and Effect**

- Relationships can be classified as causal or correlational, and correlation does not necessarily imply causation. (MS-ESS3-3)

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***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. Thus technology use varies from region to region and over time. (MS-ESS3-3)

*Connections to other DCIs in this grade-band:* **MS.PS3.A** (MS-ESS3–5); **MS.LS2.A** (MS-ESS3-3); **MS.LS2.C** (MS-ESS3-3); **MS.LS4.D** (MS-ESS3-3)

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| *Articulation of DCIs across grade-bands:* **3.LS2.C** (MS-ESS3-3); **3.LS4.D** (MS-ESS3-3); **5.ESS3.C** (MS-ESS3-3); **HS.PS3.B** (MS-ESS3–5); **HS.PS4.B** (MS-ESS3–5); **HS.LS2.C** (MS-ESS3-3); **HS.LS4.C** (MS-ESS3-3); **HS.LS4.D** (MS-ESS3-3); **HS.ESS2.A** (MS-ESS3–5); **HS.ESS2.C** (MS-ESS3-3); **HS.ESS2.D** (MS-ESS3-3),(MS-ESS3–5); **HS.ESS2.E** (MS-ESS3-3); **HS.ESS3.C** (MS-ESS3-3),(MS-ESS3–5); **HS.ESS3.D** (MS-ESS3-3),(MS-ESS3–5) | |
| *California Common Core State Standards Connections:* | |
| *ELA/Literacy –* | |
| **RST.6–8.1** | Cite specific textual evidence to support analysis of science and technical texts. (MS-ESS3–5) |
| **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-ESS3-3) |
| **WHST.6–8.8** | Gather relevant information from multiple print and digital sources **(primary and secondary)**, 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. **CA** (MS-ESS3-3) |
| *Mathematics –* | |
| **MP.2** | Reason abstractly and quantitatively. (MS-ESS3–5) |
| **6.RP.1** | Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. (MS-ESS3-3) |
| **6.EE.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-ESS3-3),(MS-ESS3–5) |

## MS-PS3 Energy

Students who demonstrate understanding can:

**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

**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)

**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

### Disciplinary Core Ideas

**PS3.A: Definitions of Energy**

- 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.

### 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-PS3-4)

**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)

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| solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.<br>▪ Apply scientific ideas or principles to design, construct, and test a design of an object, tool, process or system. (MS-PS3-3)<br>**Engaging in Argument from Evidence**<br>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.<br>▪ 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)<br><br>**----------**<br>***Connections to Nature of Science***<br><br>**Scientific Knowledge is Based on Empirical Evidence**<br>▪ Science knowledge is based upon logical and conceptual connections between evidence and explanations. (MS-PS3-4),(MS-PS3–5) | (MS-PS3-3)<br>**ETS1.A: Defining and Delimiting an Engineering Problem**<br>▪ 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)<br>**ETS1.B: Developing Possible Solutions**<br>▪ 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) | |

*Connections to other DCIs in this grade-band*: **MS.PS1.A** (MS-PS3-4); **MS.PS1.B** (MS-PS3-3); **MS.PS2.A** (MS-PS3-4),(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-PS3-3); **4.PS3.C** (MS-PS3-4),(MS-PS3–5); **HS.PS1.B** (MS-PS3-4); **HS.PS3.A** (MS-PS3-4),(MS-PS3–5); **HS.PS3.B**,(MS-PS3-3),(MS-PS3-4),(MS-PS3–5)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

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| **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-PS3–5) |
| **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) |
| **WHST.6–8.1.a–e** | Write arguments focused on *discipline-specific 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 |

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| | generating additional related, focused questions that allow for multiple avenues of exploration. (MS-PS3-3),(MS-PS3-4) |
| *Mathematics –* | |
| **MP.2** | Reason abstractly and quantitatively. (MS-PS3-4),(MS-PS3–5) |
| **6.RP.1** | Understand the concept of ratio and use ratio language to describe a ratio relationship between two quantities. (MS-PS3–5) |
| **6.SP.5.a-d** | Summarize numerical data sets in relation to their context. (MS-PS3-4) |

## MS-ETS1 Engineering Design

Students who demonstrate understanding can:

**MS-ETS1-1.** **Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.**

**MS-ETS1-2.** **Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.**

**MS-ETS1-3.** **Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.**

**MS-ETS1-4.** **Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.**

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 on grades K–5 experiences and progresses to specifying relationships between variables, clarify arguments and models.

- Define a design problem that can be solved through the development of an object, tool, process or system and includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions. (MS-ETS1-1)

**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 a model to generate data to test ideas about designed systems, including those representing inputs and outputs. (MS-ETS1-4)

**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.

### Disciplinary Core Ideas

**ETS1.A: Defining and Delimiting Engineering Problems**

- 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 are likely to limit possible solutions. (MS-ETS1-1)

**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. (MS-ETS1-4)
- There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem. (MS-ETS1-2), (MS-ETS1-3)
- Sometimes parts of different solutions can be combined to create a solution that is better than any of its predecessors. (MS-ETS1-3)
- Models of all kinds are important for testing solutions. (MS-ETS1-4)

**ETS1.C: Optimizing the Design Solution**

- Although one design may not perform the best

### Crosscutting Concepts

**Influence of Science, Engineering, and Technology on Society and the Natural World**

- 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-ETS1-1)
- The uses of technologies and 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-ETS1-1)

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| ▪ Analyze and interpret data to determine similarities and differences in findings. (MS-ETS1-3)<br>**Engaging in Argument from Evidence**<br>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.<br>▪ Evaluate competing design solutions based on jointly developed and agreed-upon design criteria. (MS-ETS1-2) | 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 those characteristics may be incorporated into the new design. (MS-ETS1-3)<br>▪ 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. (MS-ETS1-4) | |

*Connections to MS-ETS1.A: Defining and Delimiting Engineering Problems include:*
**Physical Science:** MS-PS3-3
*Connections to MS-ETS1.B: Developing Possible Solutions Problems include:*
**Physical Science:** MS-PS1-6, MS-PS3-3, **Life Science:** MS-LS2-5
*Connections to MS-ETS1.C: Optimizing the Design Solution include:*
**Physical Science**: MS-PS1-6

*Articulation of DCIs across grade-bands:* **3–5.ETS1.A** (MS-ETS1-1),(MS-ETS1-2),(MS-ETS1-3); **3–5.ETS1.B** (MS-ETS1-2),(MS-ETS1-3),(MS-ETS1-4); **3–5.ETS1.C** (MS-ETS1-2),(MS-ETS1-3),(MS-ETS1-4); **HS.ETS1.A** (MS-ETS1-1),(MS-ETS1-2); **HS.ETS1.B** (MS-ETS1-1),(MS-ETS1-2),(MS-ETS1-3),(MS-ETS1-4); **HS.ETS1.C** (MS-ETS1-3),(MS-ETS1-4)

*California Common Core State Standards Connections:*

*ELA/Literacy –*

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| **RST.6–8.1** | Cite specific textual evidence to support analysis of science and technical texts. (MS-ETS1-1),(MS-ETS1-2),(MS-ETS1-3) |
| **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-ETS1-3) |
| **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-ETS1-2),(MS-ETS1-3) |
| **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-ETS1-1),(MS-ETS1-1) |
| **WHST.6–8.8** | Gather relevant information from multiple print and digital sources **(primary and secondary)**, 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. **CA** (MS-ETS1-1) |
| **WHST.6–8.9** | Draw evidence from informational texts to support analysis, reflection, and research. (MS-ETS1-2) |
| **SL.8.5** | Integrate multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. (MS-ETS1-4) |

*Mathematics –*

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| **MP.2** | Reason abstractly and quantitatively. (MS-ETS1-1),(MS-ETS1-2),(MS-ETS1-3),(MS-ETS1-4) |

Standards for:

# Social Science

## K3-6

## Historical and Social Sciences Analysis Skills

In kindergarten through grade three, students are introduced to the basic concepts of each discipline: history, geography, civics, and economics. Beginning at grade four, the disciplines are woven together within the standards at each grade.

The critical thinking skills that support the study of history–social science are outlined in the sections for grades five, eight, and ten. To approach subject matter as historians, geographers, economists, and political scientists, students are expected to employ these skills as they master the content. While the State Board recognizes that it will take both time and changes in policies for schools, teachers, and students to meet these standards, we believe it can and must be done. When students master the content and develop the skills contained in these standards, they will be well equipped for the twenty-first century.

The intellectual skills noted below are to be learned through, and applied to, the content standards for kindergarten through grade five. They are to be assessed only in conjunction with the content standards in kindergarten through grade five. In addition to the standards for kindergarten through grade five, students demonstrate the following intellectual, reasoning, reflection, and research skills:

Chronological and Spatial Thinking

1. Students place key events and people of the historical era they are studying in a chronological sequence and within a spatial context; they interpret time lines.
2. Students correctly apply terms related to time, including past, present, future, decade, century, and generation.
3. Students explain how the present is connected to the past, identifying both similarities and differences between the two, and how some things change over time and some things stay the same.
4. Students use map and globe skills to determine the absolute locations of places and interpret information available through a map's or globe's legend, scale, and symbolic representations.
5. Students judge the significance of the relative location of a place (e.g., proximity to a harbor, on trade routes) and analyze how relative advantages or disadvantages can change over time.

Research, Evidence, and Point of View

1. Students differentiate between primary and secondary sources.
2. Students pose relevant questions about events they encounter in historical documents, eyewitness accounts, oral histories, letters, diaries, artifacts, photographs, maps, artworks, and architecture.
3. Students distinguish fact from fiction by comparing documentary sources on historical figures and events with fictionalized characters and events.

Historical Interpretation

1. Students summarize the key events of the era they are studying and explain the historical contexts of those events.
2. Students identify the human and physical characteristics of the places they are studying and explain how those features form the unique character of those places.
3. Students identify and interpret the multiple causes and effects of historical events.
4. Students conduct cost-benefit analyses of historical and current events.

## Historical and Social Sciences Analysis Skills Grade Six

The intellectual skills noted below are to be learned through, and applied to, the content standards for grades six. They are to be assessed only in conjunction with the content standards in grades six. In addition to the standards for grades six through eight, students demonstrate the following intellectual reasoning, reflection, and research skills:

Chronological and Spatial Thinking

1. Students explain how major events are related to one another in time.
2. Students construct various time lines of key events, people, and periods of the historical era they are studying.
3. Students use a variety of maps and documents to identify physical and cultural features of neighborhoods, cities, states, and countries and to explain the historical migration of people, expansion and disintegration of empires, and the growth of economic systems.

Research, Evidence, and Point of View

1. Students frame questions that can be answered by historical study and research.
2. Students distinguish fact from opinion in historical narratives and stories.
3. Students distinguish relevant from irrelevant information, essential from incidental information, and verifiable from unverifiable information in historical narratives and stories.
4. Students assess the credibility of primary and secondary sources and draw sound conclusions from them.
5. Students detect the different historical points of view on historical events and determine the context in which the historical statements were made (the questions asked, sources used, author's perspectives).

Historical Interpretation

1. Students explain the central issues and problems from the past, placing people and events in a matrix of time and place.
2. Students understand and distinguish cause, effect, sequence, and correlation in historical events, including the long- and short-term causal relations.
3. Students explain the sources of historical continuity and how the combination of ideas and events explains the emergence of new patterns.
4. Students recognize the role of chance, oversight, and error in history.
5. Students recognize that interpretations of history are subject to change as new information is uncovered. 6. Students interpret basic indicators of economic performance and conduct cost-benefit analyses of economic and political issues.

# K3

## Learning and Working Now and Long Ago

Students in kindergarten 3 are introduced to basic spatial, temporal, and causal relationships, emphasizing the geographic and historical connections between the world today and the world long ago. The stories of ordinary and extraordinary people help describe the range and continuity of human experience and introduce the concepts of courage, self-control, justice, heroism, leadership, deliberation, and individual responsibility. Historical empathy for how people lived and worked long ago reinforces the concept of civic behavior: how we interact respectfully with each other, following rules, and respecting the rights of others.

K.1 Students understand that being a good citizen involves acting in certain ways.
1. Follow rules, such as sharing and taking turns, and know the consequences of breaking them.
2. Learn examples of honesty, courage, determination, individual responsibility, and patriotism in American and world history from stories and folklore.
3. Know beliefs and related behaviors of characters in stories from times past and understand the consequences of the characters' actions.

K.2 Students recognize national and state symbols and icons such as the national and state flags, the bald eagle, and the Statue of Liberty.

K.3 Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

K.4 Students compare and contrast the locations of people, places, and environments and describe their characteristics.
1. Determine the relative locations of objects using the terms near/far, left/right, and behind/in front.
2. Distinguish between land and water on maps and globes and locate general areas referenced in historical legends and stories.
3. Identify traffic symbols and map symbols (e.g., those for land, water, roads, cities).
4. Construct maps and models of neighborhoods, incorporating such structures as police and fire stations, airports, banks, hospitals, supermarkets, harbors, schools, homes, places of worship, and transportation lines.
5. Demonstrate familiarity with the school's layout, environs, and the jobs people do there.

K.5 Students put events in temporal order using a calendar, placing days, weeks, and months in proper order.

K.6 Students understand that history relates to events, people, and places of other times.
1. Identify the purposes of, and the people and events honored in, commemorative holidays, including the human struggles that were the basis for the events (e.g., Thanksgiving, Independence Day, Washington's and Lincoln's Birthdays, Martin Luther King Jr. Day, Memorial Day, Labor Day, Columbus Day, Veterans Day).
2. Know the triumphs in American legends and historical accounts through the stories of such people as Pocahontas, George Washington, Booker T. Washington, Daniel Boone, and Benjamin Franklin.
3. Understand how people lived in earlier times and how their lives would be different today (e.g., getting water from a well, growing food, making clothing, having fun, forming organizations, living by rules and laws).

# Grade 1

## A Child's Place in Time and Space

Students in grade one continue a more detailed treatment of the broad concepts of rights and responsibilities in the contemporary world. The classroom serves as a microcosm of society in which decisions are made with respect for individual responsibility, for other people, and for the rules by which we all must live: fair play, good sportsmanship, and respect for the rights and opinions of others. Students examine the geographic and economic aspects of life in their own neighborhoods and compare them to those of people long ago. Students explore the varied backgrounds of American citizens and learn about the symbols, icons, and songs that reflect our common heritage.

1.1 Students describe the rights and individual responsibilities of citizenship.

1. Understand the rule-making process in a direct democracy (everyone votes on the rules) and in a representative democracy (an elected group of people make the rules), giving examples of both systems in their classroom, school, and community.
2. Understand the elements of fair play and good sportsmanship, respect for the rights and opinions of others, and respect for rules by which we live, including the meaning of the "Golden Rule."

1.2 Students compare and contrast the absolute and relative locations of places and people and describe the physical and/or human characteristics of places.

1. Locate on maps and globes their local community, California, the United States, the seven continents, and the four oceans.
2. Compare the information that can be derived from a three-dimensional model to the information that can be derived from a picture of the same location.
3. Construct a simple map, using cardinal directions and map symbols.
4. Describe how location, weather, and physical environment affect the way people live, including the effects on their food, clothing, shelter, transportation, and recreation.

1.3 Students know and understand the symbols, icons, and traditions of the United States that provide continuity and a sense of community across time.

1. Recite the Pledge of Allegiance and sing songs that express American ideals (e.g., "My Country 'Tis of Thee").
2. Understand the significance of our national holidays and the heroism and achievements of the people associated with them.
3. Identify American symbols, landmarks, and essential documents, such as the flag, bald eagle, Statue of Liberty, U.S. Constitution, and Declaration of Independence, and know the people and events associated with them.

1.4 Students compare and contrast everyday life in different times and places around the world and recognize that some aspects of people, places, and things change over time while others stay the same.

1. Examine the structure of schools and communities in the past.
2. Study transportation methods of earlier days.
3. Recognize similarities and differences of earlier generations in such areas as work (inside and outside the home), dress, manners, stories, games, and festivals, drawing from biographies, oral histories, and folklore.

1.5 Students describe the human characteristics of familiar places and the varied backgrounds of American citizens and residents in those places.

1. Recognize the ways in which they are all part of the same community, sharing principles, goals, and traditions despite their varied ancestry; the forms of diversity in their school and community; and the benefits and challenges of a diverse population.
2. Understand the ways in which American Indians and immigrants have helped define Californian and American culture.

3. Compare the beliefs, customs, ceremonies, traditions, and social practices of the varied cultures, drawing from folklore.

1.6 Students understand basic economic concepts and the role of individual choice in a free-market economy.
1. Understand the concept of exchange and the use of money to purchase goods and services.
2. Identify the specialized work that people do to manufacture, transport, and market goods and services and the contributions of those who work in the home.

## Grade 2

### People Who Make a Difference

Students in grade two explore the lives of actual people who make a difference in their everyday lives and learn the stories of extraordinary people from history whose achievements have touched them, directly or indirectly. The study of contemporary people who supply goods and services aids in understanding the complex interdependence in our free-market system.

2.1 Students differentiate between things that happened long ago and things that happened yesterday.
1. Trace the history of a family through the use of primary and secondary sources, including artifacts, photographs, interviews, and documents.
2. Compare and contrast their daily lives with those of their parents, grandparents, and/or guardians.
3. Place important events in their lives in the order in which they occurred (e.g., on a time line or storyboard).

2.2 Students demonstrate map skills by describing the absolute and relative locations of people, places, and environments.
1. Locate on a simple letter-number grid system the specific locations and geographic features in their neighborhood or community (e.g., map of the classroom, the school).
2. Label from memory a simple map of the North American continent, including the countries, oceans, Great Lakes, major rivers, and mountain ranges. Identify the essential map elements: title, legend, directional indicator, scale, and date.
3. Locate on a map where their ancestors live(d), telling when the family moved to the local community and how and why they made the trip.
4. Compare and contrast basic land use in urban, suburban, and rural environments in California.

2.3 Students explain governmental institutions and practices in the United States and other countries.
1. Explain how the United States and other countries make laws, carry out laws, determine whether laws have been violated, and punish wrongdoers.
2. Describe the ways in which groups and nations interact with one another to try to resolve problems in such areas as trade, cultural contacts, treaties, diplomacy, and military force.

2.4 Students understand basic economic concepts and their individual roles in the economy and demonstrate basic economic reasoning skills.
1. Describe food production and consumption long ago and today, including the roles of farmers, processors, distributors, weather, and land and water resources.
2. Understand the role and interdependence of buyers (consumers) and sellers (producers) of goods and services.
3. Understand how limits on resources affect production and consumption (what to produce and what to consume).

2.5 Students understand the importance of individual action and character and explain how heroes from long ago and the recent past have made a difference in others' lives (e.g., from biographies of Abraham Lincoln, Louis Pasteur, Sitting Bull, George Washington

Carver, Marie Curie, Albert Einstein, Golda Meir, Jackie Robinson, Sally Ride).

## Grade 3

### Continuity and Change

Students in grade three learn more about our connections to the past and the ways in which particularly local, but also regional and national, government and traditions have developed and left their marks on current society, providing common memories. Emphasis is on the physical and cultural landscape of California, including the study of American Indians, the subsequent arrival of immigrants, and the impact they have had in forming the character of our contemporary society.

3.1 Students describe the physical and human geography and use maps, tables, graphs, photographs, and charts to organize information about people, places, and environments in a spatial context.
1. Identify geographical features in their local region (e.g., deserts, mountains, valleys, hills, coastal areas, oceans, lakes).
2. Trace the ways in which people have used the resources of the local region and modified the physical environment (e.g., a dam constructed upstream changed a river or coastline).

3.2 Students describe the American Indian nations in their local region long ago and in the recent past.
1. Describe national identities, religious beliefs, customs, and various folklore traditions.
2. Discuss the ways in which physical geography, including climate, influenced how the local Indian nations adapted to their natural environment (e.g., how they obtained food, clothing, tools).
3. Describe the economy and systems of government, particularly those with tribal constitutions, and their relationship to federal and state governments.
4. Discuss the interaction of new settlers with the already established Indians of the region.

3.3 Students draw from historical and community resources to organize the sequence of local historical events and describe how each period of settlement left its mark on the land. 1. Research the explorers who visited here, the newcomers who settled here, and the people who continue to come to the region, including their cultural and religious traditions and contributions. 2. Describe the economies established by settlers and their influence on the present-day economy, with emphasis on the importance of private property and entrepreneurship. 3. Trace why their community was established, how individuals and families contributed to its founding and development, and how the community has changed over time, drawing on maps, photographs, oral histories, letters, newspapers, and other primary sources.

3.4 Students understand the role of rules and laws in our daily lives and the basic structure of the U.S. government.
1. Determine the reasons for rules, laws, and the U.S. Constitution; the role of citizenship in the promotion of rules and laws; and the consequences for people who violate rules and laws.
2. Discuss the importance of public virtue and the role of citizens, including how to participate in a classroom, in the community, and in civic life.
3. Know the histories of important local and national landmarks, symbols, and essential documents that create a sense of community among citizens and exemplify cherished ideals (e.g., the U.S. flag, the bald eagle, the Statue of Liberty, the U.S. Constitution, the Declaration of Independence, the U.S. Capitol).
4. Understand the three branches of government, with an emphasis on local government.
5. Describe the ways in which California, the other states, and sovereign American Indian tribes contribute to the making of our nation and participate in the federal system of government.
6. Describe the lives of American heroes who took risks to secure our freedoms (e.g., Anne Hutchinson, Benjamin Franklin, Thomas Jefferson, Abraham Lincoln, Frederick Douglass, Harriet Tubman, Martin Luther King, Jr.).

3.5 Students demonstrate basic economic reasoning skills and an understanding of the economy of the local region.
1. Describe the ways in which local producers have used and are using natural resources, human resources, and capital resources to produce goods and services in the past and the present.
2. Understand that some goods are made locally, some elsewhere in the United States, and some abroad.
3. Understand that individual economic choices involve trade-offs and the evaluation of benefits and costs.
4. Discuss the relationship of students' "work" in school and their personal human capital.

## Grade 4

California: A Changing State

Students learn the story of their home state, unique in American history in terms of its vast and varied geography, its many waves of immigration beginning with pre-Columbian societies, its continuous diversity, economic energy, and rapid growth. In addition to the specific treatment of milestones in California history, students examine the state in the context of the rest of the nation, with an emphasis on the U.S. Constitution and the relationship between state and federal government.

4.1 Students demonstrate an understanding of the physical and human geographic features that define places and regions in California.
1. Explain and use the coordinate grid system of latitude and longitude to determine the absolute locations of places in California and on Earth.
2. Distinguish between the North and South Poles; the equator and the prime meridian; the tropics; and the hemispheres, using coordinates to plot locations.
3. Identify the state capital and describe the various regions of California, including how their characteristics and physical environments (e.g., water, landforms, vegetation, climate) affect human activity.
4. Identify the locations of the Pacific Ocean, rivers, valleys, and mountain passes and explain their effects on the growth of towns. 5. Use maps, charts, and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation.

4.2 Students describe the social, political, cultural, and economic life and interactions among people of California from the pre-Columbian societies to the Spanish mission and Mexican rancho periods.
1. Discuss the major nations of California Indians, including their geographic distribution, economic activities, legends, and religious beliefs; and describe how they depended on, adapted to, and modified the physical environment by cultivation of land and use of sea resources.
2. Identify the early land and sea routes to, and European settlements in, California with a focus on the exploration of the North Pacific (e.g., by Captain James Cook, Vitus Bering, Juan Cabrillo), noting especially the importance of mountains, deserts, ocean currents, and wind patterns. 3. Describe the Spanish exploration and colonization of California, including the relationships among soldiers, missionaries, and Indians (e.g., Juan Crespi, Junipero Serra, Gaspar de Portola).
4. Describe the mapping of, geographic basis of, and economic factors in the placement and function of the Spanish missions; and understand how the mission system expanded the influence of Spain and Catholicism throughout New Spain and Latin America.
5. Describe the daily lives of the people, native and nonnative, who occupied the presidios, missions, ranchos, and pueblos.
6. Discuss the role of the Franciscans in changing the economy of California from a hunter-gatherer economy to an agricultural economy.
7. Describe the effects of the Mexican War for Independence on Alta California, including its effects on the territorial boundaries of North America.
8. Discuss the period of Mexican rule in California and its attributes, including land grants, secularization of the missions, and the rise of the rancho economy.

4.3 Students explain the economic, social, and political life in California from the establishment of the Bear Flag Republic through the Mexican-American War, the Gold Rush, and the granting of statehood.

1. Identify the locations of Mexican settlements in California and those of other settlements, including Fort Ross and Sutter's Fort.
2. Compare how and why people traveled to California and the routes they traveled (e.g., James Beckwourth, John Bidwell, John C. Fremont, Pio Pico).
3. Analyze the effects of the Gold Rush on settlements, daily life, politics, and the physical environment (e.g., using biographies of John Sutter, Mariano Guadalupe Vallejo, Louise Clapp).
4. Study the lives of women who helped build early California (e.g., Biddy Mason).
5. Discuss how California became a state and how its new government differed from those during the Spanish and Mexican periods.

4.4 Students explain how California became an agricultural and industrial power, tracing the transformation of the California economy and its political and cultural development since the 1850s.

1. Understand the story and lasting influence of the Pony Express, Overland Mail Service, Western Union, and the building of the transcontinental railroad, including the contributions of Chinese workers to its construction.
2. Explain how the Gold Rush transformed the economy of California, including the types of products produced and consumed, changes in towns (e.g., Sacramento, San Francisco), and economic conflicts between diverse groups of people.
3. Discuss immigration and migration to California between 1850 and 1900, including the diverse composition of those who came; the countries of origin and their relative locations; and conflicts and accords among the diverse groups (e.g., the 1882 Chinese Exclusion Act).
4. Describe rapid American immigration, internal migration, settlement, and the growth of towns and cities (e.g., Los Angeles).
5. Discuss the effects of the Great Depression, the Dust Bowl, and World War II on California.
6. Describe the development and locations of new industries since the turn of the century, such as the aerospace industry, electronics industry, large-scale commercial agriculture and irrigation projects, the oil and automobile industries, communications and defense industries, and important trade links with the Pacific Basin.
7. Trace the evolution of California's water system into a network of dams, aqueducts, and reservoirs.
8. Describe the history and development of California's public education system, including universities and community colleges.
9. Analyze the impact of twentieth-century Californians on the nation's artistic and cultural development, including the rise of the entertainment industry (e.g., Louis B. Meyer, Walt Disney, John Steinbeck, Ansel Adams, Dorothea Lange, John Wayne).

4.5 Students understand the structures, functions, and powers of the local, state, and federal governments as described in the U.S. Constitution.

1. Discuss what the U.S. Constitution is and why it is important (i.e., a written document that defines the structure and purpose of the U.S. government and describes the shared powers of federal, state, and local governments).
2. Understand the purpose of the California Constitution, its key principles, and its relationship to the U.S. Constitution.
3. Describe the similarities (e.g., written documents, rule of law, consent of the governed, three separate branches) and differences (e.g., scope of jurisdiction, limits on government powers, use of the military) among federal, state, and local governments.
4. Explain the structures and functions of state governments, including the roles and responsibilities of their elected officials.
5. Describe the components of California's governance structure (e.g., cities and towns, Indian rancherias and reservations, counties, school districts).

# Grade 5

**United States History and Geography:**

Making a New Nation Students in grade five study the development of the nation up to 1850, with an emphasis on the people who were already here, when and from where others arrived, and why they came. Students learn about the colonial government founded on Judeo-Christian principles, the ideals of the Enlightenment, and the English traditions of self-government. They recognize that ours is a nation that has a constitution that derives its power from the people, that has gone through a revolution, that once sanctioned slavery, that experienced conflict over land with the original inhabitants, and that experienced a westward movement that took its people across the continent. Studying the cause, course, and consequences of the early explorations through the War for Independence and western expansion is central to students' fundamental understanding of how the principles of the American republic form the basis of a pluralistic society in which individual rights are secured.

5.1 Students describe the major pre-Columbian settlements, including the cliff dwellers and pueblo people of the desert Southwest, the American Indians of the Pacific Northwest, the nomadic nations of the Great Plains, and the woodland peoples east of the Mississippi River.
1. Describe how geography and climate influenced the way various nations lived and adjusted to the natural environment, including locations of villages, the distinct structures that they built, and how they obtained food, clothing, tools, and utensils.
2.Describe their varied customs and folklore traditions.
3. Explain their varied economies and systems of government.

5.2 Students trace the routes of early explorers and describe the early explorations of the Americas.
1. Describe the entrepreneurial characteristics of early explorers (e.g., Christopher Columbus, Francisco Vásquez de Coronado) and the technological developments that made sea exploration by latitude and longitude possible (e.g., compass, sextant, astrolabe, seaworthy ships, chronometers, gunpowder).
2. Explain the aims, obstacles, and accomplishments of the explorers, sponsors, and leaders of key European expeditions and the reasons Europeans chose to explore and colonize the world (e.g., the Spanish Reconquista, the Protestant Reformation, the Counter Reformation).
3. Trace the routes of the major land explorers of the United States, the distances traveled by explorers, and the Atlantic trade routes that linked Africa, the West Indies, the British colonies, and Europe.
4. Locate on maps of North and South America land claimed by Spain, France, England, Portugal, the Netherlands, Sweden, and Russia.

5.3 Students describe the cooperation and conflict that existed among the American Indians and between the Indian nations and the new settlers.
1. Describe the competition among the English, French, Spanish, Dutch, and Indian nations for control of North America.
2. Describe the cooperation that existed between the colonists and Indians during the 1600s and 1700s (e.g., in agriculture, the fur trade, military alliances, treaties, cultural interchanges).
3. Examine the conflicts before the Revolutionary War (e.g., the Pequot and King Philip's Wars in New England, the Powhatan Wars in Virginia, the French and Indian War).
4. Discuss the role of broken treaties and massacres and the factors that led to the Indians' defeat, including the resistance of Indian nations to encroachments and assimilation (e.g., the story of the Trail of Tears).
5. Describe the internecine Indian conflicts, including the competing claims for control of lands (e.g., actions of the Iroquois, Huron, Lakota [Sioux]).
6. Explain the influence and achievements of significant leaders of the time (e.g., John Marshall, Andrew Jackson, Chief Tecumseh, Chief Logan, Chief John Ross, Sequoyah).

5.4 Students understand the political, religious, social, and economic institutions that evolved in the colonial era.

1. Understand the influence of location and physical setting on the founding of the original 13 colonies and identify on a map the locations of the colonies and of the American Indian nations already inhabiting these areas.
2. Identify the major individuals and groups responsible for the founding of the various colonies and the reasons for their founding (e.g., John Smith, Virginia; Roger Williams, Rhode Island; William Penn, Pennsylvania; Lord Baltimore, Maryland; William Bradford, Plymouth; John Winthrop, Massachusetts).
3. Describe the religious aspects of the earliest colonies (e.g., Puritanism in Massachusetts, Anglicanism in Virginia, Catholicism in Maryland, Quakerism in Pennsylvania).
4. Identify the significance and leaders of the First Great Awakening, which marked a shift in religious ideas, practices, and allegiances in the colonial period, the growth of religious toleration, and free exercise of religion.
5. Understand how the British colonial period created the basis for the development of political self-government and a free-market economic system and the differences between the British, Spanish, and French colonial systems.
6. Describe the introduction of slavery into America, the responses of slave families to their condition, the ongoing struggle between proponents and opponents of slavery, and the gradual institutionalization of slavery in the South.
7. Explain the early democratic ideas and practices that emerged during the colonial period, including the significance of representative assemblies and town meetings.

5.5 Students explain the causes of the American Revolution.
1. Understand how political, religious, and economic ideas and interests brought about the Revolution (e.g., resistance to imperial policy, the Stamp Act, the Townshend Acts, taxes on tea, Coercive Acts).
2. Know the significance of the first and second Continental Congresses and of the Committees of Correspondence.
3. Understand the people and events associated with the drafting and signing of the Declaration of Independence and the document's significance, including the key political concepts it embodies, the origins of those concepts, and its role in severing ties with Great Britain.
4. Describe the views, lives, and impact of key individuals during this period (e.g., King George III, Patrick Henry, Thomas Jefferson, George Washington, Benjamin Franklin, John Adams).

5.6 Students understand the course and consequences of the American Revolution.
1. Identify and map the major military battles, campaigns, and turning points of the Revolutionary War, the roles of the American and British leaders, and the Indian leaders' alliances on both sides.
2. Describe the contributions of France and other nations and of individuals to the outcome of the Revolution (e.g., Benjamin Franklin's negotiations with the French, the French navy, the Treaty of Paris, The Netherlands, Russia, the Marquis Marie Joseph de Lafayette, Tadeusz Ko´sciuszko, Baron Friedrich Wilhelm von Steuben).
3. Identify the different roles women played during the Revolution (e.g., Abigail Adams, Martha Washington, Molly Pitcher, Phillis Wheatley, Mercy Otis Warren).
4. Understand the personal impact and economic hardship of the war on families, problems of financing the war, wartime inflation, and laws against hoarding goods and materials and profiteering.
5. Explain how state constitutions that were established after 1776 embodied the ideals of the American Revolution and helped serve as models for the U.S. Constitution.
6. Demonstrate knowledge of the significance of land policies developed under the Continental Congress (e.g., sale of western lands, the Northwest Ordinance of 1787) and those policies' impact on American Indians' land.
7. Understand how the ideals set forth in the Declaration of Independence changed the way people viewed slavery.

5.7 Students describe the people and events associated with the development of the U.S. Constitution and analyze the Constitution's significance as the foundation of the American republic.

1. List the shortcomings of the Articles of Confederation as set forth by their critics.
2. Explain the significance of the new Constitution of 1787, including the struggles over its ratification and the reasons for the addition of the Bill of Rights.
3. Understand the fundamental principles of American constitutional democracy, including how the government derives its power from the people and the primacy of individual liberty.
4. Understand how the Constitution is designed to secure our liberty by both empowering and limiting central government and compare the powers granted to citizens, Congress, the president, and the Supreme Court with those reserved to the states.
5. Discuss the meaning of the American creed that calls on citizens to safeguard the liberty of individual Americans within a unified nation, to respect the rule of law, and to preserve the Constitution.
6. Know the songs that express American ideals (e.g., "America the Beautiful," "The Star-Spangled Banner").

5.8 Students trace the colonization, immigration, and settlement patterns of the American people from 1789 to the mid-1800s, with emphasis on the role of economic incentives, effects of the physical and political geography, and transportation systems.
1. Discuss the waves of immigrants from Europe between 1789 and 1850 and their modes of transportation into the Ohio and Mississippi Valleys and through the Cumberland Gap (e.g., overland wagons, canals, flatboats, steamboats). 2. Name the states and territories that existed in 1850 and identify their locations and major geographical features (e.g., mountain ranges, principal rivers, dominant plant regions).
3. Demonstrate knowledge of the explorations of the trans-Mississippi West following the Louisiana Purchase (e.g., Meriwether Lewis and William Clark, Zebulon Pike, John Fremont).
4. Discuss the experiences of settlers on the overland trails to the West (e.g., location of the routes; purpose of the journeys; the influence of the terrain, rivers, vegetation, and climate; life in the territories at the end of these trails).
5. Describe the continued migration of Mexican settlers into Mexican territories of the West and Southwest. 6. Relate how and when California, Texas, Oregon, and other western lands became part of the United States, including the significance of the Texas War for Independence and the Mexican-American War.

5.9 Students know the location of the current 50 states and the names of their capitals.

# Grade 6

### World History and Geography: Ancient Civilizations

Students in grade six expand their understanding of history by studying the people and events that ushered in the dawn of the major Western and non-Western ancient civilizations. Geography is of special significance in the development of the human story. Continued emphasis is placed on the everyday lives, problems, and accomplishments of people, their role in developing social, economic, and political structures, as well as in establishing and spreading ideas that helped transform the world forever. Students develop higher levels of critical thinking by considering why civilizations developed where and when they did, why they became dominant, and why they declined. Students analyze the interactions among the various cultures, emphasizing their enduring contributions and the link, despite time, between the contemporary and ancient worlds.

6.1 Students describe what is known through archaeological studies of the early physical and cultural development of humankind from the Paleolithic era to the agricultural revolution.
1. Describe the hunter-gatherer societies, including the development of tools and the use of fire.
2. Identify the locations of human communities that populated the major regions of the world and describe how humans adapted to a variety of environments.

3. Discuss the climatic changes and human modifications of the physical environment that gave rise to the domestication of plants and animals and new sources of clothing and shelter.

6.2 Students analyze the geographic, political, economic, religious, and social structures of the early civilizations of Mesopotamia, Egypt, and Kush.

1. Locate and describe the major river systems and discuss the physical settings that supported permanent settlement and early civilizations.
2. Trace the development of agricultural techniques that permitted the production of economic surplus and the emergence of cities as centers of culture and power.
3. Understand the relationship between religion and the social and political order in Mesopotamia and Egypt.
4. Know the significance of Hammurabi's Code.
5. Discuss the main features of Egyptian art and architecture.
6. Describe the role of Egyptian trade in the eastern Mediterranean and Nile valley.
7. Understand the significance of Queen Hatshepsut and Ramses the Great.
8. Identify the location of the Kush civilization and describe its political, commercial, and cultural relations with Egypt.
9. Trace the evolution of language and its written forms.

6.3 Students analyze the geographic, political, economic, religious, and social structures of the Ancient Hebrews.

1. Describe the origins and significance of Judaism as the first monotheistic religion based on the concept of one God who sets down moral laws for humanity.
2. Identify the sources of the ethical teachings and central beliefs of Judaism (the Hebrew Bible, the Commentaries): belief in God, observance of law, practice of the concepts of righteousness and justice, and importance of study; and describe how the ideas of the Hebrew traditions are reflected in the moral and ethical traditions of Western civilization.
3. Explain the significance of Abraham, Moses, Naomi, Ruth, David, and Yohanan ben Zaccai in the development of the Jewish religion.
4. Discuss the locations of the settlements and movements of Hebrew peoples, including the Exodus and their movement to and from Egypt, and outline the significance of the Exodus to the Jewish and other people. 5. Discuss how Judaism survived and developed despite the continuing dispersion of much of the Jewish population from Jerusalem and the rest of Israel after the destruction of the second Temple in A.D. 70.

6.4 Students analyze the geographic, political, economic, religious, and social structures of the early civilizations of Ancient Greece.

1. Discuss the connections between geography and the development of city-states in the region of the Aegean Sea, including patterns of trade and commerce among Greek city-states and within the wider Mediterranean region.
2. Trace the transition from tyranny and oligarchy to early democratic forms of government and back to dictatorship in ancient Greece, including the significance of the invention of the idea of citizenship (e.g., from Pericles' Funeral Oration).
3. State the key differences between Athenian, or direct, democracy and representative democracy.
4. Explain the significance of Greek mythology to the everyday life of people in the region and how Greek literature continues to permeate our literature and language today, drawing from Greek mythology and epics, such as Homer's Iliad and Odyssey, and from Aesop's Fables.
5. Outline the founding, expansion, and political organization of the Persian Empire.
6. Compare and contrast life in Athens and Sparta, with emphasis on their roles in the Persian and Peloponnesian Wars.
7. Trace the rise of Alexander the Great and the spread of Greek culture eastward and into Egypt.
8. Describe the enduring contributions of important Greek figures in the arts and sciences (e.g., Hypatia, Socrates, Plato, Aristotle, Euclid, Thucydides).

6.5 Students analyze the geographic, political, economic, religious, and social structures of the early civilizations of India.

1. Locate and describe the major river system and discuss the physical setting that supported the rise of this civilization.
2. Discuss the significance of the Aryan invasions.
3. Explain the major beliefs and practices of Brahmanism in India and how they evolved into early Hinduism.
4. Outline the social structure of the caste system.
5. Know the life and moral teachings of Buddha and how Buddhism spread in India, Ceylon, and Central Asia.
6. Describe the growth of the Maurya empire and the political and moral achievements of the emperor Asoka.
7. Discuss important aesthetic and intellectual traditions (e.g., Sanskrit literature, including the Bhagavad Gita; medicine; metallurgy; and mathematics, including Hindu-Arabic numerals and the zero).

6.6 Students analyze the geographic, political, economic, religious, and social structures of the early civilizations of China.

1. Locate and describe the origins of Chinese civilization in the Huang-He Valley during the Shang Dynasty.
2. Explain the geographic features of China that made governance and the spread of ideas and goods difficult and served to isolate the country from the rest of the world.
3. Know about the life of Confucius and the fundamental teachings of Confucianism and Taoism.
4. Identify the political and cultural problems prevalent in the time of Confucius and how he sought to solve them.
5. List the policies and achievements of the emperor Shi Huangdi in unifying northern China under the Qin Dynasty.
6. Detail the political contributions of the Han Dynasty to the development of the imperial bureaucratic state and the expansion of the empire.
7. Cite the significance of the trans-Eurasian “silk roads” in the period of the Han Dynasty and Roman Empire and their locations.
8. Describe the diffusion of Buddhism northward to China during the Han Dynasty.

6.7 Students analyze the geographic, political, economic, religious, and social structures during the development of Rome.

1. Identify the location and describe the rise of the Roman Republic, including the importance of such mythical and historical figures as Aeneas, Romulus and Remus, Cincinnatus, Julius Caesar, and Cicero.
2. Describe the government of the Roman Republic and its significance (e.g., written constitution and tripartite government, checks and balances, civic duty).
3. Identify the location of and the political and geographic reasons for the growth of Roman territories and expansion of the empire, including how the empire fostered economic growth through the use of currency and trade routes.
4. Discuss the influence of Julius Caesar and Augustus in Rome’s transition from republic to empire.
5. Trace the migration of Jews around the Mediterranean region and the effects of their conflict with the Romans, including the Romans’ restrictions on their right to live in Jerusalem.
6. Note the origins of Christianity in the Jewish Messianic prophecies, the life and teachings of Jesus of Nazareth as described in the New Testament, and the contribution of St. Paul the Apostle to the definition and spread of Christian beliefs (e.g., belief in the Trinity, resurrection, salvation).
7. Describe the circumstances that led to the spread of Christianity in Europe and other Roman territories. 8. Discuss the legacies of Roman art and architecture, technology and science, literature, language, and law.

Standards for:

# Physical Education

## K3-6

# KINDERGARTEN 3

**STANDARD 1**
**Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities.**

*Movement Concepts*
1.1 Travel within a large group, without bumping into others or falling, while using locomotor skills.
1.2 Travel forward and sideways while changing direction quickly in response to a signal.
1.3 Demonstrate contrasts between slow and fast speeds while using locomotor skills.
1.4 Create shapes at high, medium, and low levels by using hands, arms, torso, feet, and legs in a variety of combinations.

*Body Management*
1.5 Create shapes by using non-locomotor movements.
1.6 Balance on one, two, three, four, and five body parts.
1.7 Balance while walking forward and sideways on a narrow, elevated surface.
1.8 Demonstrate the relationship of *under, over, behind, next to, through, right, left, up, down*, *forward, backward, and in front of* by using the body and an object.

*Locomotor Movement*
1.9 Perform a continuous log roll.
1.10 Travel in straight, curved, and zigzag pathways.
1.11 Jump over a stationary rope several times in succession, using forward-and-back and side-to-side movement patterns.

*Manipulative Skills*
1.12 Strike a stationary ball or balloon with the hands, arms, and feet.
1.13 Toss a ball to oneself, using the underhand throw pattern, and catch it before it bounces twice.
1.14 Kick a stationary object, using a simple kicking pattern.
1.15 Bounce a ball continuously, using two hands.

*Rhythmic Skills*
1.16 Perform locomotor and non-locomotor movements to a steady beat.
1.17 Clap in time to a simple, rhythmic beat.

**STANDARD 2**
**Students demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities.**

*Movement Concepts*
2.1 Explain the difference between under and over, behind and in front of, next to and through, up and down, forward and backward, and sideways.
2.2 Identify and independently use personal space, general space, and boundaries and discuss why they are important.

*Body Management*
2.3 Identify and describe parts of the body: the head, shoulders, neck, back, chest, waist, hips, arms, elbows, wrists, hands, fingers, legs, knees, ankles, feet, and toes.
2.4 Explain base of support.

*Locomotor Movement*
2.5 Identify the locomotor skills of walk, jog, run, hop, jump, slide, and gallop.

*Manipulative Skills*
2.6 Explain the role of the eyes when striking objects with the hands, arms, and feet.
2.7 Identify the point of contact for kicking a ball in a straight line.

2.8 Describe the position of the fingers in the follow-through phase of bouncing a ball continuously.

**STANDARD 3**
**Students assess and maintain a level of physical fitness to improve health and performance**.

*Fitness Concepts*
3.1 Participate in physical activities that are enjoyable and challenging.

*Aerobic Capacity*
3.2 Participate three to four days each week in moderate to vigorous physical activities that increase breathing and heart rate.

*Muscular Strength/Endurance*
3.3 Hang from overhead bars for increasing periods of time.
3.4 Climb a ladder, jungle gym, or apparatus.

*Flexibility*
3.5 Stretch shoulders, legs, arms, and back without bouncing.

*Body Composition*
3.6 Sustain continuous movement for increasing periods of time while participating in moderate to vigorous physical activity.

*Assessment*
3.7 Identify indicators of increased capacity to participate in vigorous physical activity.

**STANDARD 4**
**Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.**

*Fitness Concepts*
4.1 Identify physical activities that are enjoyable and challenging.
4.2 Describe the role of water as an essential nutrient for the body.
4.3 Explain that nutritious food provides energy for physical activity.

*Aerobic Capacity*
4.4 Identify the location of the heart and explain that it is a muscle.
4.5 Explain that physical activity increases the heart rate.
4.6 Identify the location of the lungs and explain the role of the lungs in the collection of oxygen.

*Muscular Strength/Endurance*
4.7Explain that strong muscles help the body to climb, hang, push, and pull.
4.8 Describe the role of muscles in moving the bones.

*Flexibility*
4.9 Identify the body part involved when stretching.
*Body Composition*
4.10 Explain that the body is composed of bones, organs, fat, and other tissues.

**STANDARD 5**
**Students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.**

*Self-Responsibility*
5.1 Identify the feelings that result from participation in physical activity.
5.2 Participate willingly in physical activities.

*Social Interaction*
5.3 Demonstrate the characteristics of sharing in a physical activity.
5.4 Describe how positive social interaction can make physical activity with others more fun.

*Group Dynamics*
5.5 Participate as a leader and a follower during physical activities.

# GRADE ONE

**STANDARD 1**
**Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities.**

*Movement Concepts*
1.1 Demonstrate an awareness of personal space, general space, and boundaries while moving in different directions and at high, medium, and low levels in space.
1.2 Travel over, under, in front of, behind, and through objects and over, under, in front of, and behind partners, using locomotor skills.
1.3 Change speeds in response to tempos, rhythms, and signals while traveling in straight, curved, and zigzag pathways, using the following locomotor movements: walking, running, leaping, hopping, jumping, galloping, sliding, and skipping.
1.4 Change direction from forward and back and right and left in response to tempos, rhythms, and signals while walking, running, hopping, and jumping (i.e., locomotor skills).
1.5 Demonstrate the difference between slow and fast, heavy and light, and hard and soft while moving.

*Body Management*
1.6 Balance oneself, demonstrating momentary stillness, in symmetrical and asymmetrical shapes using body parts other than both feet as a base of support.

*Locomotor Movement*
1.7 Roll smoothly in a forward direction, without stopping or hesitating, emphasizing a rounded form.
1.8 Land on both feet after taking off on one foot and on both feet.
1.9 Jump a swinging rope held by others.

*Manipulative Skills*
1.10 Demonstrate the underhand movement (throw) pattern.
1.11 Demonstrate the overhand movement (throw) pattern.
1.12 Demonstrate the two-handed overhead (throw) pattern.
1.13 Catch, showing proper form, a gently thrown ball.
1.14 Catch a self-tossed ball.
1.15 Catch a self-bounced ball.
1.16 Kick a rolled ball from a stationary position.
1.17 Kick a stationary ball, using a smooth, continuous running approach.
1.18 Strike a balloon upward continuously, using arms, hands, and feet.
1.19 Strike a balloon upward continuously, using a large, short-handled paddle.
1.20 Dribble a ball in a forward direction, using the inside of the foot.
1.21 Dribble a ball continuously with one hand.

*Rhythmic Skills*
1.22 Create or imitate movement in response to rhythms and music.

**STANDARD 2**
**Students demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities**.

*Movement Concepts*
2.1 Identify the right and left sides of the body and movement from right to left and left to right.
2.2 Identify people/objects that are within personal space and within boundaries.

*Body Management*
2.3 Identify the base of support of balanced objects.

*Locomotor Movement*
2.4 Distinguish between a jog and a run, a hop and a jump, and a gallop and a slide and explain the key differences and similarities in those movements.

*Manipulative Skills*

2.5 Identify examples of underhand and overhand movement patterns.

2.6 Explain that in the underhand throw, the position of the fingers at the moment of release can influence.

2.7 Explain that the nonthrowing arm and hand provide balance and can influence the direction a tossed object and a thrown object travel.

2.8 Explain that the point of release influences the direction of a tossed object and of a thrown object.

2.9 Describe the proper hand and finger position for catching a ball.

2.10 Demonstrate and explain how to reduce the impact force while catching an object.

2.11 Identify the placement of the nonkicking foot when kicking with a smooth, running approach.

2.12 Identify the location of the contact point to strike an object upward.

2.13 Determine and analyze how much force is needed to move the ball forward while dribbling with the hand and with the foot.

**STANDARD 3**

**Students assess and maintain a level of physical fitness to improve health and performance.**

*Fitness Concepts*

3.1 Participate in physical activities that are enjoyable and challenging.

*Aerobic Capacity*

3.2 Participate three to four times each week, for increasing periods of time, in moderate to vigorous physical activities that increase breathing and heart rate.

*Muscular Strength/Endurance*

3.3 Demonstrate, for increasing periods of time, a "v" sit position, a push-up position with arms extended, and a squat position.

3.4 Move from a sitting to a standing position and from a lying to a sitting position without using arms to brace oneself while on the floor.

3.5 Travel hand-over-hand along a horizontal ladder or hang from an overhead bar.

*Flexibility*

3.6 Stretch arms, shoulders, back, and legs without hyperflexing or hyperextending the joints.

*Body Composition*

3.7 Sustain continuous movement for increasing periods of time while participating in moderate to vigorous physical activity.

*Assessment*

3.8 Identify and use two indicators of increased capacity for vigorous physical activity to measure a change in activity levels.

**STANDARD 4**

**Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.**

*Fitness Concepts*

4.1 Identify enjoyable and challenging physical activities that one can do for increasing periods of time without stopping.

4.2 Explain the importance of drinking water during and after physical activity.

4.3 Explain that nutritious food provides energy for alertness and mental concentration.

*Aerobic Capacity*

4.4 Recognize that the heart is the most important muscle in the body and is approximately the size of a fist.

4.5 Explain that increasing the heart rate during physical activity strengthens the heart muscle.

4.6Identify physical activities that cause the heart to beat faster.

4.7 Describe the role of blood in transporting oxygen from the lungs.

*Muscular Strength/Endurance*
4.8 Explain that strengthening muscles will help prevent injury and that strong muscles will produce more force.
4.9 Discuss how prolonged physical activity increases endurance, allowing movement to occur for longer periods of time.

*Flexibility*
4.10 Explain that the proper body position while stretching and strengthening will help prevent injury.
4.11 Diagram how flexible muscles allow more range of motion in physical activity.

*Body Composition*
4.12 Identify the body components (e.g., bones, muscles, organs, fat, and other tissues).

**STANDARD 5**
**Students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.**

*Self-Responsibility*
5.1 Participate willingly in new physical activities.
5.2 Identify and demonstrate acceptable responses to challenges, successes, and failures in physical activity.

*Social Interaction*
5.3 Demonstrate the characteristics of sharing and cooperation in physical activity.
5.4 Invite others to use equipment or apparatus before repeating a turn.

*Group Dynamics*
5.5 Identify and demonstrate the attributes of an effective partner in physical activity.
5.6 Identify and demonstrate effective practices for working with a group without interfering with others.

## GRADE TWO

**STANDARD 1**
**Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities.**

*Movement Concepts*
1.1 Move to open spaces within boundaries while traveling at increasing rates of speed.

*Body Management*
1.2 Transfer weight from feet to hands and from hands to feet, landing with control.
1.3 Demonstrate balance on the ground and on objects, using bases of support other than both feet.
1.4 Create a routine that includes two types of body rolls (e.g., log roll, egg roll, shoulder roll, forward roll)

*Locomotor Movement*
1.5 Jump for distance, landing on both feet and bending the hips, knees, and ankles to reduce the impact force.
1.6 Skip and leap, using proper form.

*Manipulative Skills*
1.7 Roll a ball for distance, using proper form.
1.8 Throw a ball for distance, using proper form.
1.9 Catch a gently thrown ball above the waist, reducing the impact force.
1.10 Catch a gently thrown ball below the waist, reducing the impact force.
1.11 Kick a slowly rolling ball.
1.12 Strike a balloon consistently in an upward or forward motion, using a short-handled paddle.

1.13 Strike a ball with a bat from a tee or cone, using correct grip and side orientation.
1.14 Hand-dribble, with control, a ball for a sustained period.
1.15 Foot-dribble, with control, a ball along the ground.
1.16 Jump a rope turned repeatedly.

*Rhythmic Skills*
1.17 Demonstrate a smooth transition between even-beat locomotor skills and uneven-beat locomotor skills in response to music or an external beat.
1.18 Perform rhythmic sequences related to simple folk dance or ribbon routines.
1.19 Perform with a partner rhythmic sequences related to simple folk dance or ribbon routines.

**STANDARD 2**
**Students demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities.**

*Movement Concepts*
2.1 Define *open space.*
2.2 Explain how to reduce the impact force of an oncoming object.

*Body Management*
2.3 Explain the importance of a wide rather than a narrow base of support in balance activities.
2.4 Explain why one hand or foot is often preferred when practicing movement skills.

*Locomotor Movement*
2.5 Compare and contrast locomotor movements conducted to even and uneven beats.

*Manipulative Skills*
2.6 Identify opportunities to use underhand and overhand movement (throw) patterns.
2.7 Identify different opportunities to use striking skills.
2.8 Compare the changes in force applied to a ball and the ball speed when rolling a ball for various distances.
2.9 Explain key elements of throwing for distance.
2.10 Identify the roles of body parts not directly involved in catching objects.
2.11 Identify when to begin the kicking motion when kicking a slowly rolling ball.
2.12 Identify the different points of contact when striking a balloon upward and striking a balloon forward.
2.13 Explain the purpose of using a side orientation when striking a ball from a batting tee.
2.14 Differentiate the effects of varying arm and hand speeds when hand-dribbling a ball.

**STANDARD 3**
**Students assess and maintain a level of physical fitness to improve health and performance.**

*Fitness Concepts*
3.1 Participate in enjoyable and challenging physical activities for increasing periods of time.

*Aerobic Capacity*
3.2 Participate three to four times each week, for increasing periods of time, in moderate to vigorous
physical activities that increase breathing and heart rate.

*Muscular Strength/Endurance*
3.3 Perform abdominal curl-ups, modified push-ups, oblique curl-ups, forward and side lunges, squats,
and triceps push-ups from a chair or bench to enhance endurance and increase muscle efficiency.

3.4 Traverse the overhead ladder one bar at a time.

*Flexibility*
3.5 Demonstrate the proper form for stretching the hamstrings, quadriceps, shoulders, biceps, and triceps.

*Body Composition*
3.6 Engage in moderate to vigorous physical activity for increasing periods of time.

*Assessment*
3.7 Measure improvements in individual fitness levels.

**STANDARD 4**
**Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.**

*Fitness Concepts*
4.1 Explain the fuel requirements of the body during physical activity and inactivity.
4.2 Describe the role of moderate to vigorous physical activity in achieving or maintaining good health.
4.3 Identify ways to increase time for physical activity outside of school.
4.4 Discuss how body temperature and blood volume are maintained during physical activity when an adequate amount of water is consumed.
4.5 Explain how the intensity and duration of exercise, as well as nutritional choices, affect fuel use during physical activity.

*Aerobic Capacity*
4.6 Compare and contrast the function of the heart during rest and during physical activity.
4.7 Describe the relationship between the heart and lungs during physical activity.
4.8 Compare and contrast changes in heart rate before, during, and after physical activity.

*Muscular Strength/Endurance*
4.9 Describe how muscle strength and muscle endurance enhance motor skill performance.
4.10 Identify muscles being strengthened during the performance of particular physical activities.
4.11 Identify which activities or skills would be accomplished more efficiently with stronger muscles.
4.12 Explain the role that weight-bearing activities play in bone strength.

*Flexibility*
4.13 Identify the muscles being stretched during the performance of particular physical activities.
4.14 Explain why it is safer to stretch a warm muscle rather than a cold muscle.

*Body Composition*
4.15 Describe the differences in density and weight between bones, muscles, organs, and fat.

**STANDARD 5**
**Students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.**

*Self-Responsibility*
5.1 Participate in a variety of group settings (e.g., partners, small groups, large groups) without interfering with others.
5.2 Accept responsibility for one's own behavior in a group activity.

*Social Interaction*
5.3 Acknowledge one's opponent or partner before, during, and after an activity or game and give positive feedback on the opponent's or partner's performance.
5.4 Encourage others by using verbal and nonverbal communication.
5.5 Demonstrate respect for self, others, and equipment during physical activities.
5.6 Demonstrate how to solve a problem with another person during physical activity.

*Group Dynamics*
5.7 Participate positively in physical activities that rely on cooperation.

## GRADE THREE

**STANDARD 1**
**Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities.**

*Movement Concepts*
1.1 Chase, flee, and move away from others in a constantly changing environment.

*Body Management*
1.2 Perform an inverted balance (tripod) by evenly distributing weight on body parts.
1.3 Perform a forward roll.
1.4 Perform a straddle roll.

*Locomotor Movement*
1.5 Jump continuously a forward-turning rope and a backward-turning rope.

*Manipulative Skills*
1.6 Balance while traveling and manipulating an object on a ground-level balance beam.
1.7 Catch, while traveling, an object thrown by a stationary partner.
1.8 Roll a ball for accuracy toward a target.
1.9 Throw a ball, using the overhand movement pattern with increasing accuracy.
1.10 Throw and catch an object with a partner, increasing the distance from the partner and maintaining an accurate throw that can be easily caught.
1.11 Kick a ball to a stationary partner, using the inside of the foot.
1.12 Strike a ball continuously upward, using a paddle or racket.
1.13 Hand-dribble a ball continuously while moving around obstacles.
1.14 Foot-dribble a ball continuously while traveling and changing direction.

*Rhythmic Skills*
1.15 Perform a line dance, a circle dance, and a folk dance with a partner.

**STANDARD 2**
**Students demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities.**

*Movement Concepts*
2.1 Describe how changing speed and changing direction can allow one person to move away from another.

*Manipulative Skills*
2.2 Explain and demonstrate the correct hand position when catching a ball above the head, below the waist, near the middle of the body, and away from the body.
2.3 Explain the difference between throwing to a stationary partner and throwing to a moving partner.
2.4 Identify the key elements for increasing accuracy in rolling a ball and throwing a ball.

2.5 Identify the differences between dribbling a ball (with the hand and the foot, separately) while moving forward and when changing direction.

*Rhythmic Skills*

2.6 Define the terms *folk dance, line dance,* and *circle dance.*

2.7 Compare and contrast folk dances, line dances, and circle dances.

**STANDARD 3**

**Students assess and maintain a level of physical fitness to improve health and performance.**

*Fitness Concepts*

3.1 Demonstrate warm-up and cool-down exercises.

3.2 Demonstrate how to lift and carry objects correctly.

*Aerobic Capacity*

3.2 Participate three to four days each week, for increasing periods of time, in continuous moderate to vigorous physical activities that require sustained movement of the large muscle groups to increase breathing and heart rate.

*Muscular Strength/Endurance*

3.4 Perform increasing numbers of each: abdominal curl-ups, oblique curl-ups on each side, modified push-ups or traditional push-ups with hands on a bench, forward lunges, side lunges, and triceps push-ups from a chair.

3.5 Climb a vertical pole or rope.

*Flexibility*

3.6 Hold for an increasing period of time basic stretches for hips, shoulders, hamstrings, quadriceps, triceps, biceps, back, and neck.

*Body Composition*

3.7 Sustain continuous movement for increasing periods of time while participating in moderate to vigorous physical activity.

*Assessment*

3.8 Measure and record improvement in individual fitness activities.

**STANDARD 4**

**Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.**

*Fitness Concepts*

4.1 Identify the body's normal reactions to moderate to vigorous physical activity.

4.2 List and define the components of physical fitness.

4.3 Explain the purpose of warming up before physical activity and cooling down after physical activity.

4.4 Recognize that the body will adapt to increased workloads.

4.5 Explain that fluid needs are linked to energy expenditure.

4.6 Discuss the need for oxygen and fuel to be available during ongoing muscle contraction so that heat and waste products are removed.

*Aerobic Capacity*

4.7 Describe the relationship between the heart, lungs, muscles, blood, and oxygen during physical activity.

4.8 Describe and record the changes in heart rate before, during, and after physical activity.

*Muscular Strength/Endurance*

4.9 Explain that a stronger heart muscle can pump more blood with each beat.

4.10 Identify which muscles are used in performing muscular endurance activities.

4.11 Name and locate the major muscles of the body.

4.12 Describe and demonstrate how to relieve a muscle cramp.

4.13 Describe the role of muscle strength and proper lifting in the prevention of back injuries.

*Flexibility*
4.14 Identify flexibility exercises that are not safe for the joints and should be avoided.
4.15 Explain why a particular stretch is appropriate preparation for a particular physical activity.

*Body Composition*
4.16 Differentiate the body's ability to consume calories and burn fat during periods of inactivity and during long periods of moderate physical activity.

**STANDARD 5**
**Students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.**

*Self-Responsibility*
5.1 Set a personal goal to improve a motor skill and work toward that goal in non-school time.
5.2 Collect data and record progress toward mastery of a motor skill.
5.3 List the benefits of following and the risks of not following safety procedures and rules associated with physical activity.

*Social Interaction*
5.4 Use appropriate cues for movement and positive words of encouragement while coaching others in physical activities.
5.5 Demonstrate respect for individual differences in physical abilities.

*Group Dynamics*
5.6 Work in pairs or small groups to achieve an agreed-upon goal.

## GRADE FOUR

**STANDARD 1**
**Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities.**

*Body Management*
1.1 Perform simple balance stunts with a partner while sharing a common base of support.
1.2 Change direction quickly to maintain the spacing between two players.
1.3 Change direction quickly to increase the spacing between two players.
1.4 Determine the spacing between offensive and defensive players based on the speed of the players.

*Locomotor Movement*
1.5 Jump a self-turned rope.

*Manipulative Skills*
1.6 Throw and catch an object with a partner while both partners are moving.
1.7 Throw overhand at increasingly smaller targets, using proper follow-through.
1.8 Throw a flying disc for distance, using the backhand movement pattern.
1.9 Catch a fly ball above the head, below the waist, and away from the body.
1.10 Kick a ball to a moving partner, using the inside of the foot.
1.11 Kick a stationary ball from the ground into the air.
1.12 Punt a ball dropped from the hands.
1.13 Strike, with a paddle or racket, a lightweight object that has been tossed by a partner.
1.14 Serve a lightweight ball to a partner, using the underhand movement pattern.
1.15 Strike a gently tossed ball with a bat, using a side orientation.
1.16 Keep a foot-dribbled ball away from a defensive partner.
1.17 Keep a hand-dribbled ball away from a defensive partner.
1.18 Manipulate an object by using a long-handled implement.
1.19 Stop a kicked ball by trapping it with the foot while standing still.
1.20 Volley a tossed lightweight ball, using the forearm pass.

*Rhythmic Skills*
1.21 Perform a series of basic square-dance steps.
1.22 Perform a routine to music that includes even and uneven locomotor patterns.

**STANDARD 2**
**Students demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities.**

*Movement Concepts*
2.1 Explain the difference between offense and defense.
2.2 Describe ways to create more space between an offensive player and a defensive player.

*Body Management*
2.3 Describe the appropriate body orientation to serve a ball, using the underhand movement pattern.
2.4 Describe the appropriate body orientation to strike a ball, using the forehand movement pattern.

*Manipulative Skills*
2.5 Explain the similar movement elements of the underhand throw and the underhand volleyball serve.
2.6 Distinguish between punting and kicking and describe the similarities and differences.
2.7 Compare and contrast dribbling a ball without a defender and with a defender.
2.8 Explain the differences in manipulating an object when using a long-handled implement and when using a short-handled implement.
2.9 Identify key body positions used for volleying a ball.

*Rhythmic Skills*
2.10 Design a routine to music that includes even and uneven locomotor patterns.

**STANDARD 3**
**Students assess and maintain a level of physical fitness to improve health and performance.**

*Fitness Concepts*
3.1 Participate in appropriate warm-up and cool-down exercises for particular physical activities.
3.2 Demonstrate the correct body position for pushing and pulling large objects.

*Aerobic Capacity*
3.3 Participate three to four days each week, for increasing periods of time, in continuous moderate to vigorous physical activities at the appropriate intensity to increase aerobic capacity.

*Muscular Strength/Endurance*
3.4 Perform increasing numbers of each: abdominal curl-ups, oblique curl-ups on each side, modified push-ups or traditional push-ups, and triceps push-ups.
3.5 Hang by the hands from an overhead bar with the hips and knees each at a 90-degree angle.

*Flexibility*
3.6 Demonstrate basic stretches using proper alignment for hamstrings, quadriceps, hip flexors, triceps, back, shoulders, hip abductors, and calves.

*Body Composition*
3.7 Sustain continuous movement for increasing periods of time while participating in moderate to vigorous physical activity.

*Assessment*
3.8 Measure and record changes in aerobic capacity and muscular strength, using scientifically based health-related physical fitness assessments.

3.9 Meet minimum requirements for health-related physical fitness, using scientifically based health related physical fitness assessments.

**STANDARD 4**
**Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.**

*Fitness Concepts*
4.1 Identify the correct body alignment for performing lower-body stretches.
4.2 Explain the principles of physical fitness: frequency, intensity, time, and type.
4.3 Set personal short-term goals for aerobic endurance, muscular strength and endurance, and flexibility and monitor progress by measuring and recording personal fitness scores.
4.4 Identify healthful choices for meals and snacks that help improve physical performance.
4.5 Explain why the body needs water before, during, and after physical activity.
4.6 Explain why the body uses a higher percentage of carbohydrates for fuel during high intensity physical activity and a higher percentage of fat for fuel during low-intensity physical activity.
4.7 Explain the purpose of warm-up and cool-down periods.

*Aerobic Capacity*
4.8 Calculate personal heart rate per minute by recording heartbeats for ten-second intervals and 15 second intervals.
4.9 Explain why a strong heart is able to return quickly to its resting rate after exertion.
4.10 Identify two characteristics of physical activity that build aerobic capacity.
4.11 Determine the intensity of personal physical activity by using the concept of perceived exertion.

*Muscular Strength/Endurance*
4.12 Describe the difference between muscular strength and muscular endurance.
4.13 Explain why muscular endurance or muscular strength activities do not increase muscle mass in preadolescent children.
4.14 Recognize how strengthening major muscles can improve performance at work and play.
4.15 Describe the correct form to push and pull heavy objects.

*Flexibility*
4.16 Explain the value of increased flexibility when participating in physical activity.

*Body Composition*
4.17 Explain the effect of regular, sustained physical activity on the body's ability to consume calories and burn fat for energy.

**STANDARD 5**
**Students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.**

*Self-Responsibility*
5.1 Set a personal goal to improve an area of health-related physical fitness and work toward that goal in non-school time.
5.2 Collect data and record progress toward attainment of a personal fitness goal.
5.3 Accept responsibility for one's own performance without blaming others.
5.4 Respond to winning and losing with dignity and respect.

*Social Interaction*
5.5 Include others in physical activities and respect individual differences in skill and motivation.

*Group Dynamics*

5.7 Accept an opponent's outstanding skill, use of strategies, or ability to work effectively with teammates as a challenge of physical fitness.

## GRADE FIVE

**STANDARD 1**

**Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities.**

*Body Management*

1.1 Perform simple small-group balance stunts by distributing weight and base of support.

*Locomotor Movement*

1.2 Jump for height, using proper takeoff and landing form.

1.3 Jump for distance, using proper takeoff and landing form.

*Manipulative Skills*

1.4 Enter, jump, and leave a long rope turned by others.

1.5 Throw a flying disc accurately at a target and to a partner, using the backhand movement pattern.

1.6 Throw and catch an object underhand and overhand while avoiding an opponent.

1.7 Field a thrown ground ball.

1.8 Punt a ball, dropped from the hands, at a target.

1.9 Stop a kicked ball by trapping it with the foot while moving.

1.10 Strike a dropped ball, with a racket or paddle, toward a target by using the forehand movement pattern.

1.11 Hit a softly tossed ball backhanded with a paddle or racket.

1.12 Strike a tossed ball, with different implements, from a side orientation.

1.13 Serve a lightweight ball over a low net, using the underhand movement pattern.

1.14 Dribble a ball (by hand or foot) while preventing another person from stealing the ball.

1.15 Dribble a ball and kick it toward a goal while being guarded.

1.16 Pass a ball back and forth with a partner, using a chest pass and bounce pass.

1.17 Volley a tossed ball to an intended location.

*Rhythmic Skills*

1.18 Design and perform a creative dance, combining locomotor patterns with intentional changes in speed and direction.

1.19 Design and perform a routine to music that involves manipulation of an object.

**STANDARD 2**

**Students demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities.**

*Movement Concepts*

2.1 Explain the importance of open space in playing sport-related games.

2.2 Explain the differences in applying and receiving force when jumping for height and distance.

*Body Management*

2.3 Explain how to adjust body position to catch a ball thrown off-center.

*Manipulative Skills*

2.4 Identify the following phases for striking a ball: preparation, application of force, follow-through, and recovery.

*Rhythmic Skills*

2.5 Design a routine to music, changing speed and direction while manipulating an object.

**STANDARD 3**
**Students assess and maintain a level of physical fitness to improve health and performance.**

*Fitness Concepts*
3.1 Demonstrate how to warm up muscles and joints before running, jumping, kicking, throwing, and striking.
3.2 Plan a day of healthful balanced meals and snacks designed to enhance the performance of physical activities.

*Aerobic Capacity*
3.3 Participate three to four days each week, for increasing periods of time, in continuous moderate to vigorous physical activities at the appropriate intensity for increasing aerobic capacity.

*Muscular Strength/Endurance*
3.4 Perform an increasing number of oblique curl-ups on each side.
3.5 Perform increasing numbers of triceps push-ups.

*Flexibility*
3.6 Perform flexibility exercises that will stretch particular muscle areas for given physical activities.

*Body Composition*
3.7 Sustain continuous movement for an increasing period of time while participating in moderate to vigorous physical activities.

*Assessment*
3.8 Assess health-related physical fitness by using a scientifically based health-related fitness assessment.
3.9 Meet age- and gender-specific fitness standards for aerobic capacity, muscular strength, flexibility, and body composition, using a scientifically based health-related fitness assessment.

**STANDARD 4**
**Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.**

*Fitness Concepts*
4.1 Record and analyze food consumption for one day and make a plan to replace foods with healthier choices and adjust quantities to enhance performance in physical activity.
4.2 Explain why dehydration impairs temperature regulation and physical and mental performance.
4.3 Develop and describe three short-term and three long-term fitness goals.
4.4 Examine personal results of a scientifically based health-related physical fitness assessment and identify one or more ways to improve performance in areas that do not meet minimum standards.
4.5 Explain the elements of warm-up and cool-down activities.
4.6 Record water intake before, during, and after physical activity.
4.7 Describe the principles of training and the application to each of the components of health-related physical fitness.

*Aerobic Capacity*
4.8 Identify the heart rate intensity (target heart-rate range) that is necessary to increase aerobic capacity.
4.9 Determine the intensity of personal physical activity, using the concept of perceived exertion.
4.10 Compare target heart rate and perceived exertion during physical activity.
4.11 Measure and record the heart rate before, during, and after vigorous physical activity.
4.12 Explain how technology can assist in the pursuit of physical fitness.

*Muscular Strength/Endurance*
4.13 Explain the benefits of having strong arm, chest, and back muscles.

*Flexibility*
4.14 Explain the benefits of stretching after warm-up activities.

*Body Composition*
4.15 Explain why body weight is maintained when calorie intake is equal to the calories expended.
4.16 Describe the short- and long-term benefits of maintaining body composition within the healthy fitness zone.

**STANDARD 5**
**Students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.**

*Self-Responsibility*
5.1 Improve the level of performance on one component of health-related physical fitness and one identified motor skill by participating in fitness and skill development activities outside school.
5.2 Work toward a long-term physical activity goal and record data on one's progress.
5.3 Distinguish between acts of physical courage and physically reckless acts and explain the key characteristics of each.
5.4 Act in a safe and healthy manner when confronted with negative peer pressure during physical activity.

*Social Interaction*
5.5 Contribute ideas and listen to the ideas of others in cooperative problem-solving activities.
5.6 Acknowledge orally the contributions and strengths of others.

*Group Dynamics*
5.7 Accommodate individual differences in others' physical abilities in small-group activities.
5.8 Appreciate physical games and activities reflecting diverse heritages.

# GRADE SIX

**STANDARD 1**
**Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities.**

*Manipulative Skills*
1.1 Volley an object repeatedly with a partner, using the forearm pass.
1.2 Strike a ball continuously against a wall and with a partner, using a paddle for the forehand stroke and the backhand stroke.
1.3 Strike an object consistently, using a body part, so that the object travels in the intended direction at the desired height.
1.4 Strike an object consistently, using an implement, so that the object travels in the intended direction at the desired height.
1.5 Dribble and pass a ball to a partner while being guarded.
1.6 Throw an object accurately and with applied force, using the underhand, overhand, and sidearm movement (throw) patterns.

*Rhythmic Skills*
1.7 Perform folk and line dances.
1.8 Develop, refine, and demonstrate routines to music.

*Combinations of Movement Patterns and Skills*
1.9 Combine relationships, levels, speed, direction, and pathways in complex individual and group physical activities.
1.10 Combine motor skills to play a lead-up or modified game.
1.11 Design and perform smooth, flowing sequences of stunts, tumbling, and rhythmic patterns that combine traveling, rolling, balancing, and transferring weight.

**STANDARD 2**
**Students demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities.**

*Movement Concepts*

2.1 Explain how to increase force based on the principles of biomechanics.

2.2 Explain how impact force is reduced by increasing the duration of impact.

2.3 Analyze and correct errors in movement patterns.

2.4 Provide feedback to a partner to assist in developing and improving movement skills.

2.5 Identify practices and procedures necessary for safe participation in physical activities.

*Manipulative Skills*

2.6 Explain the role of the legs, shoulders, and forearm in the forearm pass.

2.7 Identify the time necessary to prepare for and begin a forehand stroke and a backhand stroke.

2.8 Illustrate how the intended direction of an object is affected by the angle of the implement or body part at the time of contact.

2.9 Identify opportunities to pass or dribble while being guarded.

*Rhythmic Skills*

2.10 Identify steps and rhythm patterns for folk and line dances.

2.11 Explain how movement qualities contribute to the aesthetic dimension of physical activity.

*Combination of Movement Patterns and Skills*

2.12 Develop a cooperative movement game that uses locomotor skills, object manipulation, and an offensive strategy and teach the game to another person.

**STANDARD 3**

**Students assess and maintain a level of physical fitness to improve health and performance.**

3.1 Assess the components of health-related physical fitness (muscle strength, muscle endurance, flexibility, aerobic capacity, and body composition) by using a scientifically based health-related fitness assessment.

3.2 Compare individual physical fitness results with research-based standards for good health.

3.3 Develop individual goals for each of the components of health-related physical fitness (muscle strength, muscle endurance, flexibility, aerobic capacity, and body composition).

3.4 Participate in moderate to vigorous physical activity a minimum of four days each week.

3.5 Measure and evaluate changes in health-related physical fitness based on physical activity patterns.

3.6 Monitor the intensity of one's heart rate during physical activity.

**STANDARD 4**

**Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance.**

4.1 Distinguish between effective and ineffective warm-up and cool-down techniques.

4.2 Develop a one-day personal physical fitness plan specifying the intensity, time, and types of physical activities for each component of health-related physical fitness.

4.3 Identify contraindicated exercises and their adverse effects on the body.

4.4 Classify physical activities as aerobic or anaerobic.

4.5 Explain methods of monitoring heart rate intensity.

4.6 List the long-term benefits of participation in regular physical activity.

4.7 Compile and analyze a log noting the food intake/calories consumed and energy expended through physical activity.

**STANDARD 5**

**Students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.**

*Self-Responsibility*

5.1 Participate productively in group physical activities.

5.2 Evaluate individual responsibility in group efforts.

*Social Interaction*

5.3 Identify and define the role of each participant in a cooperative physical activity.

*Group Dynamics*

5.4 Identify and agree on a common goal when participating in a cooperative physical activity.

5.5 Analyze possible solutions to a movement problem in a cooperative physical activity and come to a consensus on the best solution.

Standards for:

# Dance, Music, Visual Art

## K3-6

**Academic content standards for Visual and Performing Arts adopted by the California State Board of Education.**

# Kindergarten Dance Content Standards

## 1.0 ARTISTIC PERCEPTION

### Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Dance

Students perceive and respond, using the elements of dance. They demonstrate movement skills, process sensory information, and describe movement, using the vocabulary of dance.

*Development of Motor Skills and Technical Expertise*

1.1 Build the range and capacity to move in a variety of ways.

1.2 Perform basic locomotor skills (e.g., walk, run, gallop, jump, hop, and balance).

*Comprehension and Analysis of Dance Elements*

1.3 Understand and respond to a wide range of opposites (e.g., high/low, forward/backward, wiggle/freeze).

*Development of Dance Vocabulary*

1.4 Perform simple movements in response to oral instructions (e.g., walk, turn, reach).

## 2.0 CREATIVE EXPRESSION

### Creating, Performing, and Participating in Dance

Students apply choreographic principles, processes, and skills to create and communicate meaning through the improvisation, composition, and performance of dance.

*Creation/Invention of Dance Movements*

2.1 Create movements that reflect a variety of personal experiences (e.g., recall feeling happy, sad, angry, excited).

2.2 Respond to a variety of stimuli (e.g., sounds, words, songs, props, and images) with original movements.

2.3 Respond spontaneously to different types of music, rhythms, and sounds.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

### Understanding the Historical Contributions and Cultural Dimensions of Dance

Students analyze the function and development of dance in past and present cultures throughout the world, noting human diversity as it relates to dance and dancers.

*Development of Dance*

3.1 Name and perform folk/traditional dances from the United States and other countries.

## 4.0 AESTHETIC VALUING

### Responding to, Analyzing, and Making Judgments About Works of Dance

Students critically assess and derive meaning from works of dance, performance of dancers, and original works based on the elements of dance and aesthetic qualities.

*Description, Analysis, and Criticism of Dance*

4.1 Explain basic features that distinguish one kind of dance from another (e.g., speed, force/ energy use, costume, setting, music).

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in Dance to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in dance to learning across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to dance.

*Connections and Applications Across Disciplines*

5.1 Give examples of the relationship between everyday movement in school and dance movement.

# Dance Grade One

## 1.0 ARTISTIC PERCEPTION

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Dance**

Students perceive and respond, using the elements of dance. They demonstrate movement skills, process sensory information, and describe movement, using the vocabulary of dance.

*Development of Motor Skills and Technical Expertise*

1.1 Demonstrate the ability to vary control and direct force/energy used in basic locomotor and axial movements (e.g., skip lightly, turn strongly, fall heavily).

*Comprehension and Analysis of Dance Elements*

1.2 Perform short movement problems, emphasizing the element of space (e.g., shapes/lines, big/small, high/low).

*Development of Dance Vocabulary*

1.3 Name basic locomotor and axial movements (e.g., skip, slide, stretch, roll).

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Dance**

Students apply choreographic principles, processes, and skills to create and communicate meaning through the improvisation, composition, and performance of dance.

*Creation/Invention of Dance Movements*

2.1 Use improvisation to discover movements in response to a specific movement problem (e.g., find a variety of ways to walk; create five types of circular movement).

2.2 Respond in movement to a wide range of stimuli (e.g., music, books, pictures, rhymes, fabrics, props).

*Application of Choreographic Principles and Processes to Creating Dance*

2.3 Create a short movement sequence with a beginning, a middle, and an end.

2.4 Create shapes and movements at low, middle, and high levels.

2.5 Imitate simple movement patterns.

*Communication of Meaning in Dance*

2.6 Express basic emotional qualities (e.g., angry, sad, excited, happy) through movement.

2.7 Perform improvised movement ideas for peers.

*Development of Partner and Group Skills*

2.8 Work with others in a group to solve a specific dance problem (e.g., design three shapes—high, medium, and low; create slow and fast movements).

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Dance**

Students analyze the function and development of dance in past and present cultures throughout the world, noting human diversity as it relates to dance and dancers.

*Development of Dance*

3.1 Name and perform folk/traditional dances from other countries.

3.2 Describe aspects of the style, costumes, and music of a dance.

3.3 List commonalities among basic locomotor movements in dances from various countries.

*History and Function of Dance*

3.4 Identify where and when people dance.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works of Dance**

Students critically assess and derive meaning from works of dance, performance of dancers, and original works based on the elements of dance and aesthetic qualities.

*Description, Analysis, and Criticism of Dance*

4.1 Use basic dance vocabulary to identify and describe a dance observed or performed (e.g., shapes, levels, directions, tempo/fast-slow).

*Meaning and Impact of Dance*

4.2 Describe the experience of dancing two different dances (e.g., Seven Jumps, La Raspa).

4.3 Describe how they communicate an idea or a mood in a dance (e.g., with exaggerated everyday gesture or emotional energies).

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in Dance to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in dance to learning across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to dance.

*Connections and Applications Across Disciplines*

5.1 Demonstrate curricular concepts through dance (e.g., growth cycle, animal movement).

5.2 Give examples of how dance relates to other subjects (e.g., mathematics—shape, counting; language arts—beginning, middle, and end).

# Dance Grade Two

## 1.0 ARTISTIC PERCEPTION

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Dance**

Students perceive and respond, using the elements of dance. They demonstrate movement skills, process sensory information, and describe movement, using the vocabulary of dance.

*Development of Motor Skills and Technical Expertise*

1.1 Show a variety of combinations of basic locomotor skills (e.g., walk and run, gallop and jump, hop and skip, slide and roll).

1.2 Show a variety of combinations of axial movements (e.g., swing and balanced shapes, turn and stretch, bend and twist).

*Comprehension and Analysis of Dance Elements*

1.3 Perform short movement problems, emphasizing the element of time (e.g., varied tempos, rhythmic patterns, counting).

1.4 Expand the ability to incorporate spatial concepts with movement problems.

*Development of Dance Vocabulary*

1.5 Name a large number of locomotor and axial movements used in dance.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Dance**

Students apply choreographic principles, processes, and skills to create and communicate meaning through improvisation, composition, and performance of dance.

*Creation/Invention of Dance Movements*

2.1 Create and improvise movement patterns and sequences.

2.2 Demonstrate multiple solutions in response to a given movement problem (e.g., In how many ways can you travel from point A to point B?).

*Application of Choreographic Principles and Processes to Creating Dance*

2.3 Create a simple sequence of movement with a beginning, a middle, and an end, incorporating level and directional changes.

2.4 Create shapes and movements, using fast and slow tempos.

2.5 Develop a dance phrase that has a sense of unity.

*Communication of Meaning in Dance*

2.6 Create, memorize, and perform original expressive movements for peers.

*Development of Partner and Group Skills*

2.7 Work cooperatively in small and large groups.

2.8 Demonstrate partner skills (e.g., imitating and leading/following).

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Dance**

Students analyze the function and development of dance in past and present cultures throughout the world, noting human diversity as it relates to dance and dancers.

*Development of Dance*

3.1 Name and perform social and traditional dances from various cultures.

3.2 Explain commonalities among basic locomotor and axial movements in dances from various countries.

3.3 Name and perform rhythms from different cultures (e.g., through clapping, stamping, using whole body movement).

*History and Function of Dance*

3.4 Describe dances seen in celebrations and community events.

**4.0 AESTHETIC VALUING**

**Responding to, Analyzing, and Making Judgments About Works of Dance**

Students critically assess and derive meaning from works of dance, performance of dancers, and original works based on the elements of dance and aesthetic qualities.

*Description, Analysis, and Criticism of Dance*

4.1 Use basic dance vocabulary to name and describe a dance observed or performed (e.g., levels, rhythm patterns, type of energy).

4.2 Describe how the movement in dances of peers communicates ideas or moods to the viewer (e.g., ocean environment or a sad or joyous dance).

*Meaning and Impact of Dance*

4.3 Describe the similarities and differences in performing various dances (e.g., direction changes, steps, type of energy and tempo).

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in Dance to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in dance to learning across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to dance.

*Connections and Applications Across Disciplines*

5.1 Use literature to inspire dance ideas (e.g., poem, cartoon, nursery rhyme).

5.2 Demonstrate language arts concepts through dance (e.g., show different punctuation marks through movement).

*Development of Life Skills and Career Competencies*

5.3 Describe how choreographers create dances.

5.4 Describe how dancing requires good health-related habits (e.g., adequate nutrition, water, and rest; proper preparation for physical activity).

## Dance Grade Three

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Dance**

Students perceive and respond, using the elements of dance. They demonstrate movement skills, process sensory information, and describe movement, using the vocabulary of dance.

*Development of Motor Skills and Technical Expertise*

1.1 Combine and perform basic locomotor skills, moving on a specific pathway (e.g., skip in circles, slide in zigzags, run in a variety of linear paths). Combine and perform

locomotor and axial movements (e.g., walk and turn, stretch and slide).

1.2 Demonstrate the ability to start, change, and stop movement.

*Comprehension and Analysis of Dance Elements*

1.3 Perform short movement problems, emphasizing the element of force/energy (e.g., swing, melt, explode, quiver).

1.4 Expand the ability to incorporate spatial and time concepts in movement problems (e.g., select and combine three locomotor movements traveling in three different pathways and using three different tempos).

*Development of Dance Vocabulary*

1.5 Describe dance elements used in personal work and that of others.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Dance**

Students apply choreographic principles, processes, and skills to create and communicate meaning through the improvisation, composition, and performance of dance.

*Creation/Invention of Dance Movements*

2.1 Create and perform complex improvised movement patterns, dance sequences, and studies.

2.2 Improvise and select multiple possibilities to solve a given movement problem (e.g., find four different ways to combine a turn, stretch, and jump).

*Application of Choreographic Principles and Processes to Creating Dance*

2.3 Create a sequence that has a beginning, a middle, and an end. Name and refine the parts of the sequence.

2.4 Create a wide variety of shapes and movements, using different levels in space.

*Communication of Meaning in Dance*

2.5 Perform dances to communicate personal meaning, using focus and expression.

2.6 Compare and contrast the role of the performer with that of a member of the audience.

*Development of Partner and Group Skills*

2.7 Demonstrate a variety of partner skills (e.g., imitation, leading/following, mirroring).

2.8 Create, memorize, and perform original movement sequences with a partner or a small group.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Dance**

Students analyze the function and development of dance in past and present cultures throughout the world, noting human diversity as it relates to dance and dancers.

*Development of Dance*

3.1 Describe commonalities among and differences between dances from various countries.

3.2 Describe and demonstrate ceremonial and folk/traditional dances that show work activities (e.g., harvesting, fishing, weaving).

*History and Function of Dance*

3.3 Explain the function of dance in ceremonial and social community events in Native American cultures.

3.4 Describe how costumes and shoes influence dance movement.

*Diversity of Dance*

3.5 Name and demonstrate dances of Native Americans.

**4.0 AESTHETIC VALUING**

**Responding to, Analyzing, and Making Judgments About Works of Dance**

Students critically assess and derive meaning from works of dance, performance of dancers, and original works based on the elements of dance and aesthetic qualities.

*Description, Analysis, and Criticism of Dance*

4.1 Name specific criteria to assess the quality of a dance performance of peers (e.g., focus, level of personal involvement, physical control).

4.2 Explain and demonstrate what it means to be a good audience member.

*Meaning and Impact of Dance*

4.3 Explain how a performer's dance skills contribute to communication of ideas and moods when performing a dance (e.g., focus, strength, coordination).

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in Dance to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in dance to learning across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to dance.

*Connections and Applications Across Disciplines*

5.1 Explain relationships between dance elements and other subjects (e.g., spatial path-ways—maps and grids; geometric shapes—body shapes).

5.2 Describe how dancing develops physical and mental well-being (e.g., control, flexibility, posture, strength, risk taking).

*Development of Life Skills and Career Competencies*

5.3 Explain how the time management, problem solving, and self-discipline skills required for composing a dance apply to other school activities.

5.4 Give examples of ways in which the activities of professionals in the performing arts are similar to each other (e.g., observing discipline, practicing skills, rehearsing performances).

## Dance Grade Four

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Dance**

Students perceive and respond, using the elements of dance. They demonstrate movement skills, process sensory information, and describe movement, using the vocabulary of dance.

*Development of Motor Skills and Technical Expertise*

1.1 Demonstrate mental concentration and physical control in performing dance skills.

1.2 Demonstrate the ability to use smooth transitions when connecting one movement phrase to another.

*Comprehension and Analysis of Dance Elements*

1.3 Demonstrate increased range and use of space, time, and force/energy concepts (e.g., pulse/accents, melt/collapse, weak/strong).

1.4 Explain the principles of variety, contrast, and unity and apply to a dance sequence.

*Development of Dance Vocabulary*

1.5 Describe a specific movement, using appropriate dance vocabulary.

1.6 Identify, define, and use *phrasing* in dances learned or observed.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Dance**

Students apply choreographic principles, processes, and skills to create and communicate meaning through the improvisation, composition, and performance of dance.

*Creation/Invention of Dance Movements*

2.1 Create, develop, and memorize set movement patterns and sequences.

2.2 Improvise extended movement phrases.

*Application of Choreographic Principles and Processes to Creating Dance*

2.3 Describe, discuss, and analyze the process used by choreographers to create a dance.

2.4 Create a dance study that has a beginning, a middle, and an end. Review, revise, and refine.

*Communication of Meaning in Dance*

2.5 Convey a range of feelings through shape/postures and movements when performing for peers.

2.6 Perform improvised movement and dance studies with focus and expression.

*Development of Partner and Group Skills*

2.7 Demonstrate additional partner and group skills (e.g., imitating, leading/following, mirroring, calling/responding, echoing).

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Dance**

Students analyze the function and development of dance in past and present cultures throughout the world, noting human diversity as it relates to dance and dancers.

*Development of Dance*

3.1 Perform and identify dances from various countries with different arrangements of dancers (e.g., lines, circles, couples).

3.2 Name the musical accompaniment and explain how it relates to the dances they have studied.

*History and Function of Dance*

3.3 Perform and describe dances that reflect the geographical place in which the dances are performed (e.g., deserts, rain forests, islands).

*Diversity of Dance*

3.4 Perform and identify folk/traditional and social dances from California history.

**4.0 AESTHETIC VALUING**

**Responding to, Analyzing, and Making Judgments About Works of Dance**

Students critically assess and derive meaning from works of dance, performance of dancers, and original works based on the elements of dance and aesthetic qualities.

*Description, Analysis, and Criticism of Dance*

4.1 Use dance vocabulary to describe unique characteristics of dances they have watched or performed from countries studied in the history–social science curriculum (e.g., rhythms, spatial patterns, gestures, intent).

4.2 Name and use specific criteria in assessing personal and professional dance choreography (e.g., contrast, phrasing, unity).

*Meaning and Impact of Dance*

4.3 Describe ways in which a dancer effectively communicates ideas and moods (strong technique, projection, and expression).

4.4 List the expectations the audience has for a performer and vice versa.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in Dance to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in dance to learning across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to dance.

*Connections and Applications Across Disciplines*

5.1 Explain how dance practice relates to and uses the vocabulary of other art subjects (e.g., positive and negative space, shape, line, rhythm, character).

5.2 Describe how dancing develops strength, flexibility, and endurance in accordance with physical education standards.

5.3 Demonstrate a recognition of personal space and respect for the personal space of others.

*Development of Life Skills and Career Competencies*

5.4 Analyze the choreographic process and its relation to the writing process (e.g., brainstorming, exploring and developing ideas, putting ideas into a form, sequencing).

## Dance Grade Five

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Dance**

Students perceive and respond, using the elements of dance. They demonstrate movement skills, process sensory information, and describe movement, using the vocabulary of dance.

*Development of Motor Skills and Technical Expertise*

1.1 Demonstrate focus, physical control (e.g., proper alignment, balance), and coordination in performing locomotor and axial movement.

1.2 Name and use a wide variety of movements (e.g., isolations/whole body).

*Comprehension and Analysis of Dance Elements*

1.3 Demonstrate a greater dynamic range in movement utilizing space, time, and force/ energy concepts.

1.4 Incorporate the principles of variety, contrast, and unity with dance studies.

*Development of Dance Vocabulary*

1.5 Use appropriate dance vocabulary to describe dances.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Dance**

Students apply choreographic principles, processes, and skills to create and communicate meaning through the improvisation, composition, and performance of dance.

*Creation/Invention of Dance Movement*

2.1 Create, memorize, and perform complex sequences of movement with greater focus, force/energy, and intent.

2.2 Invent multiple possibilities to solve a given movement problem and analyze problem-solving strategies and solutions.

*Application of Choreographic Principles and Processes to Creating Dance*

2.3 Describe and incorporate simple dance forms in dance studies (e.g., AB form, canon).

2.4 Demonstrate principles of opposing weight and force/energy, balance and counterbalance, or cantilever.

*Communication of Meaning in Dance*

2.5 Convey a wide range of feeling and expression through gestures, posture, and movement.

*Development of Partner and Group Skills*

2.6 Demonstrate cooperation, collaboration, and empathy in working with partners and in groups (e.g., leading/following, mirroring, calling/responding, echoing, opposing).

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Dance**

Students analyze the function and development of dance in past and present cultures throughout the world, noting human diversity as it relates to dance and dancers.

*Development of Dance*

3.1 Describe how and why a traditional dance may be changed when performed on stage for an audience.

*History and Function of Dance*

3.2 Identify and perform folk/traditional, social, and theatrical dances done by Americans in the eighteenth and nineteenth centuries.

*Diversity of Dance*

3.3 Select traditional dances that men, women, or children perform and explain the purpose(s) of the dances.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works of Dance**

Students critically assess and derive meaning from works of dance, performance of dancers, and original works according to the elements of dance and aesthetic qualities.

*Description, Analysis, and Criticism of Dance*

4.1 Use dance vocabulary to identify and support personal preferences for dances observed or performed.

4.2 Apply specific criteria to analyze and assess the quality of a dance performance by well-known dancers or dance companies (e.g., technical skill, musicality, dynamics, mood).

*Meaning and Impact of Dance*

4.3 Identify the special and challenging characteristics of the experience of dancing for an audience.

4.4 Explain how outstanding dancers affect audience members emotionally or intellectually.

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in Dance to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in dance to learning across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to dance.

*Connections and Applications Across Disciplines*

5.1 Describe how historical events relate to dance forms (e.g., the rebellion of the 1960s was represented in popular social dances with a move from partners to individual expression).

5.2 Describe how dancing requires good health-related habits (e.g., individual and group goals for flexibility, strength, endurance, stress management, nutrition).

5.3 Cite examples of the use of technology in the performing arts.

*Development of Life Skills and Career Competencies*

5.4 Demonstrate social skills that enable students to become leaders/teachers and followers/ learners.

# Dance Grade Six

## 1.0 ARTISTIC PERCEPTION

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Dance**

Students perceive and respond, using the elements of dance. They demonstrate movement skills, process sensory information, and describe movement, using the vocabulary of dance.

*Development of Motor Skills and Technical Expertise*

1.1 Demonstrate focus, physical control, coordination, and accurate reproduction in performing locomotor and axial movement.

1.2 Incorporate a variety of force/energy qualities into executing a full range of movements.

*Comprehension and Analysis of Dance Elements*

1.3 Identify and use force/energy variations when executing gesture and locomotor and axial movements.

1.4 Use the principles of contrast, unity, and variety in phrasing in dance studies and dances.

*Development of Dance Vocabulary*

1.5 Describe and analyze movements observed and performed, using appropriate dance vocabulary.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Dance**

Students apply choreographic principles, processes, and skills to create and communicate meaning through the improvisation, composition, and performance of dance.

*Creation/Invention of Dance Movement*

Article I. 2.1 Invent multiple possibilities to solve a given movement problem and develop the material into a short study.

2.2 Compare and demonstrate the difference between imitating movement and creating original material.

*Application of Choreographic Principles and Processes to Creating Dance*

2.3 Describe and incorporate dance forms in dance studies.

2.4 Demonstrate the ability to coordinate movement with different musical rhythms and styles (e.g., ABA form, canon).

2.5 Use the elements of dance to create short studies that demonstrate the development of ideas and thematic material.

*Communication of Meaning in Dance Through Dance Performance*

2.6 Demonstrate an awareness of the body as an instrument of expression when rehearsing and performing.

2.7 Revise, memorize, and rehearse dance studies for the purpose of performing for others.

*Development of Partner and Group Skills*

2.8 Demonstrate an ability to cooperate and collaborate with a wide range of partners and groups (e.g., imitating, leading/following, mirroring, calling/responding, echoing, sequence building).

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Dance**

Students analyze the function and development of dance in past and present cultures throughout the world, noting human diversity as it relates to dance and dancers.

*Development of Dance*

3.1 Compare and contrast features of dances already performed from different countries.

*History and Function of Dance*

3.2 Explain the importance and function of dance in students' lives.

*Diversity of Dance*

3.3 Explain the various ways people have experienced dance in their daily lives (e.g., Roman entertainments, Asian religious ceremonies, baby naming in Ghana, Latin American celebrations).

**4.0 AESTHETIC VALUING**

**Responding to, Analyzing, and Making Judgments About Works of Dance**

Students critically assess and derive meaning from works of dance, performance of dancers, and original works based on the elements of dance and aesthetic qualities.

*Description, Analysis, and Criticism of Dance*

4.1 Apply knowledge of the elements of dance and the craft of choreography to critiquing (spatial design, variety, contrast, clear structure).

4.2 Propose ways to revise choreography according to established assessment criteria.

*Meaning and Impact of Dance*

4.3 Discuss the experience of performing personal work for others.

4.4 Distinguish the differences between viewing live and recorded dance performances.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in Dance to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in dance to learning across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to dance.

*Connections and Applications Across Disciplines*

5.1 Describe how other arts disciplines are integrated into dance performances (e.g., music, lighting, set design).

5.2 Describe the responsibilities a dancer has in maintaining health-related habits (e.g., balanced nutrition, regular exercise, adequate sleep).

*Development of Life Skills and Career Competencies*

5.3 Identify careers in dance and dance-related fields (e.g., teacher, therapist, videographer, dance critic, choreographer, notator).

## *Kindergarten Music Content Standards*

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music**

Students read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music.

*Read and Notate Music*

1.1 Use icons or invented symbols to represent beat.

*Listen to, Analyze, and Describe Music*

1.2 Identify and describe basic elements in music (e.g., high/low, fast/slow, loud/soft, beat).

**2.0 CREATIVE EXPRESSION**

**Creating, Performing, and Participating in Music**

Students apply vocal and instrumental musical skills in performing a varied repertoire of music. They compose and arrange music and improvise melodies, variations, and accompaniments, using digital/electronic technology when appropriate.

*Apply Vocal and Instrumental Skills*

2.1 Use the singing voice to echo short melodic patterns.

2.2 Sing age-appropriate songs from memory.

2.3 Play instruments and move or verbalize to demonstrate awareness of beat, tempo, dynamics, and melodic direction.

*Compose, Arrange, and Improvise*

2.4 Create accompaniments, using the voice or a variety of classroom instruments.

**3.0 HISTORICAL AND CULTURAL CONTEXT**

**Understanding the Historical Contributions and Cultural Dimensions of Music**

Students analyze the role of music in past and present cultures throughout the world, noting cultural diversity as it relates to music, musicians, and composers.

*Role of Music*

3.1 Identify the various uses of music in daily experiences.

*Diversity of Music*

3.2 Sing and play simple singing games from various cultures.

3.3 Use a personal vocabulary to describe voices and instruments from diverse cultures.

3.4 Use developmentally appropriate movements in responding to music from various genres and styles (rhythm, melody).

**4.0 AESTHETIC VALUING**

**Responding to, Analyzing, and Making Judgments About Works of Music**

Students critically assess and derive meaning from works of music and the performance of musicians according to the elements of music, aesthetic qualities, and human responses.

*Derive Meaning*

4.1 Create movements that correspond to specific music.

4.2 Identify, talk about, sing, or play music written for specific purposes (e.g., work song, lullaby).

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in music across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to music.

*Connections and Applications*

5.1 Use music, together with dance, theatre, and the visual arts, for storytelling.

*Careers and Career-Related Skills*

5.2 Identify and talk about the reasons artists have for creating dances, music, theatre pieces, and works of visual art.

## Music Grade One

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music**

Students read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music.

*Read and Notate Music*

1.1 Read, write, and perform simple patterns of rhythm and pitch, using beat, rest, and divided beat (two sounds on one beat).

*Listen to, Analyze, and Describe Music*

1.2 Identify simple musical forms (e.g., phrase, AB, echo).

1.3 Identify common instruments visually and aurally in a variety of music.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Music**

Students apply vocal and instrumental musical skills in performing a varied repertoire of music. They compose and arrange music and improvise melodies, variations, and accompaniments, using digital/electronic technology when appropriate.

*Apply Vocal and Instrumental Skills*

2.1 Sing with accuracy in a developmentally appropriate range.

2.2 Sing age-appropriate songs from memory.

2.3 Play simple accompaniments on classroom instruments.

*Compose, Arrange, and Improvise*

2.4 Improvise simple rhythmic accompaniments, using body percussion or classroom instruments.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Music**

Students analyze the role of music in past and present cultures throughout the world, noting cultural diversity as it relates to music, musicians, and composers.

*Role of Music*

3.1 Recognize and talk about music and celebrations of the cultures represented in the school population.

*Diversity of Music*

3.2 Sing and play simple singing games from various cultures.

3.3 Use a personal vocabulary to describe voices, instruments, and music from diverse cultures.

3.4 Use developmentally appropriate movements in responding to music from various genres, periods, and styles (rhythm, melody, form).

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works of Music**

Students critically assess and derive meaning from works of music and the performance of musicians according to the elements of music, aesthetic qualities, and human responses.

*Derive Meaning*

4.1 Create movements to music that reflect focused listening.

4.2 Describe how ideas or moods are communicated through music.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in music across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to music.

*Connections and Applications*

5.1 Recognize and explain how people respond to their world through music.

*Careers and Career-Related Skills*

5.2 Describe how the performance of songs and dances improves after practice and rehearsal.

## Music Grade Two

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music**

Students read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music.

*Read and Notate Music*

1.1 Read, write, and perform simple rhythmic patterns, using eighth notes, quarter notes, half notes, and rests.

1.2 Read, write, and perform simple patterns of pitch, using solfège.

*Listen to, Analyze, and Describe Music*

1.3 Identify ascending/descending melody and even/uneven rhythm patterns in selected pieces of music.

1.4 Identify simple musical forms, emphasizing verse/refrain, AB, ABA.

1.5 Identify visually and aurally individual wind, string, brass, and percussion instruments used in a variety of music.

**2.0 CREATIVE EXPRESSION**

**Creating, Performing, and Participating in Music**

Students apply vocal and instrumental musical skills in performing a varied repertoire of music. They compose and arrange music and improvise melodies, variations, and accompaniments, using digital/electronic technology when appropriate.

*Apply Vocal and Instrumental Skills*

2.1 Sing with accuracy in a developmentally appropriate range.

2.2 Sing age-appropriate songs from memory.

2.3 Play rhythmic ostinatos on classroom instruments.

*Music Compose, Arrange, and Improvise*

2.4 Improvise simple rhythmic and melodic accompaniments, using voice and a variety of classroom instruments.

**3.0 HISTORICAL AND CULTURAL CONTEXT**

**Understanding the Historical Contributions and Cultural Dimensions of Music**

Students analyze the role of music in past and present cultures throughout the world, noting cultural diversity as it relates to music, musicians, and composers.

*Role of Music*

3.1 Identify the uses of specific music in daily or special events.

*Diversity of Music*

3.2 Sing simple songs and play singing games from various cultures.

3.3 Describe music from various cultures.

**4.0 AESTHETIC VALUING**

**Responding to, Analyzing, and Making Judgments About Works of Music**

Students critically assess and derive meaning from works of music and the performance of musicians according to the elements of music, aesthetic qualities, and human responses.

*Analyze and Critically Assess*

4.1 Use the terminology of music in discussing individual preferences for specific music.

*Derive Meaning*

4.2 Create developmentally appropriate movements to express pitch, tempo, form, and dynamics in music.

4.3 Identify how musical elements communicate ideas or moods.

4.4 Respond to a live performance with appropriate audience behavior.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in music across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to music.

*Connections and Applications*

5.1 Identify similar themes in stories, songs, and art forms (e.g., patterns, texture).

*Careers and Career-Related Skills*

5.2 Identify and discuss who composes and performs music.

## Music Grade Three

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music**

Students read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music.

*Read and Notate Music*

1.1 Read, write, and perform simple rhythmic patterns using eighth notes, quarter notes, half notes, dotted half notes, whole notes, and rests.

1.2 Read, write, and perform pentatonic patterns, using solfège.

*Listen to, Analyze, and Describe Music*

1.3 Identify melody, rhythm, harmony, and timbre in selected pieces of music when presented aurally.

1.4 Identify visually and aurally the four families of orchestral instruments and male and female adult voices.

1.5 Describe the way in which sound is produced on various instruments.

1.6 Identify simple musical forms (e.g., AABA, AABB, round).

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Music**

Students apply vocal and instrumental musical skills in performing a varied repertoire of music. They compose and arrange music and improvise melodies, variations, and accompaniments, using digital/electronic technology when appropriate.

*Apply Vocal and Instrumental Skills*

2.1 Sing with accuracy in a developmentally appropriate range.

2.2 Sing age-appropriate songs from memory, including rounds, partner songs, and ostinatos.

2.3 Play rhythmic and melodic ostinatos on classroom instruments.

*Compose, Arrange, and Improvise*

2.4 Create short rhythmic and melodic phrases in question-and-answer form.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Music**

Students analyze the role of music in past and present cultures throughout the world, noting cultural diversity as it relates to music, musicians, and composers.

*Role of Music*

3.1 Identify the uses of music in various cultures and time periods.

*Diversity of Music*

3.2 Sing memorized songs from diverse cultures.

3.3 Play memorized songs from diverse cultures.

3.4 Identify differences and commonalities in music from various cultures.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works of Music**

Students critically assess and derive meaning from works of music and the performance of musicians according to the elements of music, aesthetic qualities, and human responses.

*Analyze and Critically Assess*

4.1 Select and use specific criteria in making judgments about the quality of a musical performance.

*Derive Meaning*

4.2 Create developmentally appropriate movements to express pitch, tempo, form, and dynamics.

4.3 Describe how specific musical elements communicate particular ideas or moods in music.

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in music across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to music.

*Connections and Applications*

5.1 Identify the use of similar elements in music and other art forms (e.g., form, pattern, rhythm).

*Careers and Career-Related Skills*

5.2 Identify what musicians and composers do to create music.

# Music Grade Four

## 1.0 ARTISTIC PERCEPTION

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music**

Students read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music.

*Read and Notate Music*

1.1 Read, write, and perform melodic notation for simple songs in major keys, using solfège.

1.2 Read, write, and perform diatonic scales.

1.3 Read, write, and perform rhythmic notation, including sixteenth notes, dotted notes, and syncopation (e.g., eighth/quarter/eighth note and eighth-rest/quarter/eighth note).

*Listen to, Analyze, and Describe Music*

1.4 Describe music according to its elements, using the terminology of music.

1.5 Classify how a variety of instruments from diverse cultures produce sound (e.g., idiophone, aerophone, chordaphone, membranophone).

1.6 Recognize and describe aural examples of musical forms, including rondo.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Music**

Students apply vocal and instrumental musical skills in performing a varied repertoire of music. They compose and arrange music and improvise melodies, variations, and accompaniments, using digital/electronic technology when appropriate.

*Music Apply Vocal and Instrumental Skills*

2.1 Sing a varied repertoire of music from diverse cultures, including rounds, descants, and songs with ostinatos, alone and with others.

2.2 Use classroom instruments to play melodies and accompaniments from a varied repertoire of music from diverse cultures, including rounds, descants, and ostinatos, by oneself and with others.

*Compose, Arrange, and Improvise*

2.3 Compose and improvise simple rhythmic and melodic patterns on classroom instruments.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Music**

Students analyze the role of music in past and present cultures throughout the world, noting cultural diversity as it relates to music, musicians, and composers.

*Role of Music*

3.1 Explain the relationship between music and events in history.

*Diversity of Music*

3.2 Identify music from diverse cultures and time periods.

3.3 Sing and play music from diverse cultures and time periods.

3.4 Compare musical styles from two or more cultures.

3.5 Recognize the influence of various cultures on music in California.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works of Music**

Students critically assess and derive meaning from works of music and the performance of musicians according to the elements of music, aesthetic qualities, and human responses.

*Analyze and Critically Assess*

4.1 Use specific criteria when judging the relative quality of musical performances.

*Derive Meaning*

4.2 Describe the characteristics that make a performance a work of art.

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in music across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to music.

*Connections and Applications*

5.1 Identify and interpret expressive characteristics in works of art and music.

5.2 Integrate several art disciplines (dance, music, theatre, or the visual arts) into a well-organized presentation or performance.

5.3 Relate dance movements to express musical elements or represent musical intent in specific music.

*Careers and Career-Related Skills*

5.4 Evaluate improvement in personal musical performances after practice or rehearsal.

# Music Grade Five

## 1.0 ARTISTIC PERCEPTION

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music**

Students read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music.

*Read and Notate Music*

1.1 Read, write, and perform simple melodic notation in treble clef in major and minor keys.

1.2 Read, write, and perform major and minor scales.

1.3 Read, write, and perform rhythmic notation, including quarter-note triplets and tied syncopation.

*Listen to, Analyze, and Describe Music*

1.4 Analyze the use of music elements in aural examples from various genres and cultures.

1.5 Identify vocal and instrumental ensembles from a variety of genres and cultures.

1.6 Identify and describe music forms, including theme and variations and twelve-bar blues.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in Music**

Students apply vocal and instrumental musical skills in performing a varied repertoire of music. They compose and arrange music and improvise melodies, variations, and accompaniments, using digital/electronic technology when appropriate.

*Apply Vocal and Instrumental Skills*

2.1 Sing a varied repertoire of music, including rounds, descants, and songs with ostinatos and songs in two-part harmony, by oneself and with others.

2.2 Use classroom instruments to play melodies and accompaniments from a varied repertoire of music from diverse cultures, including rounds, descants, and ostinatos and two-part harmony, by oneself and with others.

*Compose, Arrange, and Improvise*

2.3 Compose, improvise, and perform basic rhythmic, melodic, and chordal patterns independently on classroom instruments.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Music**

Students analyze the role of music in past and present cultures throughout the world, noting cultural diversity as it relates to music, musicians, and composers.

*Role of Music*

3.1 Describe the social functions of a variety of musical forms from various cultures and time periods (e.g., folk songs, dances).

*Diversity of Music*

3.2 Identify different or similar uses of musical elements in music from diverse cultures.

3.3 Sing and play music from diverse cultures and time periods.

3.4 Describe the influence of various cultures and historical events on musical forms and styles.

3.5 Describe the influences of various cultures on the music of the United States.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works of Music**

Students critically assess and derive meaning from works of music and the performance of musicians according to the elements of music, aesthetic qualities, and human responses.

*Analyze and Critically Assess*

4.1 Identify and analyze differences in tempo and dynamics in contrasting music selections.

*Derive Meaning*

4.2 Develop and apply appropriate criteria to support personal preferences for specific musical works.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in music across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to music.

*Connections and Applications*

5.1 Explain the role of music in community events.

*Careers and Career-Related Skills*

5.2 Identify ways in which the music professions are similar to or different from one another.

## Music Grade Six

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music**

Students read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music.

*Read and Notate Music*

1.1 Read, write, and perform intervals and triads.

1.2 Read, write, and perform rhythmic and melodic notation, using standard symbols for pitch, meter, rhythm, dynamics, and tempo in duple and triple meters.

1.3 Transcribe simple aural examples into rhythmic notation.

1.4 Sight-read simple melodies in the treble clef or bass clef.

*Listen to, Analyze, and Describe Music*

1.5 Analyze and compare the use of musical elements representing various genres and cultures, emphasizing meter and rhythm.

1.6 Describe larger music forms (sonata-allegro form, concerto, theme and variations).

**2.0 CREATIVE EXPRESSION**

**Creating, Performing, and Participating in Music**

Students apply vocal and instrumental musical skills in performing a varied repertoire of music. They compose and arrange music and improvise melodies, variations, and accompaniments, using digital/electronic technology when appropriate.

*Music Apply Vocal and Instrumental Skills*

2.1 Sing a repertoire of vocal literature representing various genres, styles, and cultures with expression, technical accuracy, good posture, tone quality, and vowel shape—written and memorized, by oneself and in ensembles (level of difficulty: 1 on a scale of 1–6).

2.2 Sing music written in two parts.

2.3 Perform on an instrument a repertoire of instrumental literature representing various genres, styles, and cultures with expression, technical accuracy, tone quality, and articulation, by oneself and in ensembles (level of difficulty: 1 on a scale of 1–6).

*Compose, Arrange, and Improvise*

2.4 Compose short pieces in duple and triple meters.

2.5 Arrange simple pieces for voices or instruments, using traditional sources of sound.

2.6 Improvise simple melodies.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of Music**

Students analyze the role of music in past and present cultures throughout the world, noting cultural diversity as it relates to music, musicians, and composers.

*Role of Music*

3.1 Compare music from two or more cultures of the world as to the functions the music serves and the roles of musicians.

3.2 Listen to and describe the role of music in ancient civilizations (e.g., Chinese, Egyptian, Greek, Indian, Roman).

*Diversity of Music*

3.3 Describe distinguishing characteristics of representative musical genres and styles from two or more cultures.

3.4 Listen to, describe, and perform music of various styles from a variety of cultures.

3.5 Classify by style and genre a number of exemplary musical works and explain the characteristics that make each work exemplary.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works of Music**

Students critically assess and derive meaning from works of music and the performance of musicians in a cultural context according to the elements of music, aesthetic qualities, and human responses.

*Analyze and Critically Assess*

4.1 Develop criteria for evaluating the quality and effectiveness of musical performances and compositions, including arrangements and improvisations, and apply the criteria in personal listening and performing.

*Derive Meaning*

4.2 Explain how various aesthetic qualities convey images, feeling, or emotion.

4.3 Identify aesthetic qualities in a specific musical work.

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in music across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and

resources that contribute to lifelong learning and career skills. They also learn about careers in and related to music.

*Connections and Applications*

5.1 Describe how knowledge of music connects to learning in other subject areas.

*Careers and Career-Related Skills*

5.2 Identify career pathways in music.

## Visual Arts Kindergarten

### 1.0 ARTISTIC PERCEPTION

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts**

Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

*Develop Perceptual Skills and Visual Arts Vocabulary*

1.1 Recognize and describe simple patterns found in the environment and works of art.

1.2 Name art materials (e.g., clay, paint, crayons) introduced in lessons.

*Analyze Art Elements and Principles of Design*

1.3 Identify the elements of art (line, color, shape/form, texture, value, space) in the environment and in works of art, emphasizing line, color, and shape/form.

### 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in the Visual Arts**

Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

*Skills, Processes, Materials, and Tools*

2.1 Use lines, shapes/forms, and colors to make patterns.

2.2 Demonstrate beginning skill in the use of tools and processes, such as the use of scissors, glue, and paper in creating a three-dimensional construction.

2.3 Make a collage with cut or torn paper shapes/forms.

*Communication and Expression Through Original Works of Art*

2.4 Paint pictures expressing ideas about family and neighborhood.

2.5 Use lines in drawings and paintings to express feelings.

2.6 Use geometric shapes/forms (circle, triangle, square) in a work of art.

2.7 Create a three-dimensional form, such as a real or imaginary animal.

### 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of the Visual Arts**

Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.

*Role and Development of the Visual Arts*

3.1 Describe functional and nonutilitarian art seen in daily life; that is, works of art that are used versus those that are only viewed.

3.2 Identify and describe works of art that show people doing things together.

*Diversity of the Visual Arts*

3.3 Look at and discuss works of art from a variety of times and places.

**4.0 AESTHETIC VALUING**

**Responding to, Analyzing, and Making Judgments About Works in the Visual Arts**

Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

*Derive Meaning*

4.1 Discuss their own works of art, using appropriate art vocabulary (e.g., color, shape/form, texture).

4.2 Describe what is seen (including both literal and expressive content) in selected works of art.

*Make Informed Judgments*

4.3 Discuss how and why they made a specific work of art.

4.4 Give reasons why they like a particular work of art they made, using appropriate art vocabulary.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in the Visual Arts to Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in the visual arts across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to the visual arts.

*Connections and Applications*

5.1 Draw geometric shapes/forms (e.g., circles, squares, triangles) and repeat them in dance/movement sequences.

5.2 Look at and draw something used every day (e.g., scissors, toothbrush, fork) and de-scribe how the object is used.

*Visual Literacy*

5.3 Point out images (e.g., photographs, paintings, murals, ceramics, sculptures) and symbols found at home, in school, and in the community, including national and state symbols and icons.

*Careers and Career-Related Skills*

5.4 Discuss the various works of art (e.g., ceramics, paintings, sculpture) that artists create and the type of media used.

## Visual Arts Grade One

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts**

Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

*Develop Perceptual Skills and Visual Arts Vocabulary*

1.1 Describe and replicate repeated patterns in nature, in the environment, and in works of art.

1.2 Distinguish among various media when looking at works of art (e.g., clay, paints, drawing materials).

*Analyze Art Elements and Principles of Design*

1.3 Identify the elements of art in objects in nature, in the environment, and in works of art, emphasizing line, color, shape/form, and texture.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in the Visual Arts**

Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

*Skills, Processes, Materials, and Tools*

2.1 Use texture in two-dimensional and three-dimensional works of art.

2.2 Mix secondary colors from primary colors and describe the process.

2.3 Demonstrate beginning skill in the manipulation and use of sculptural materials (clay, paper, and papier maché) to create form and texture in works of art.

*Communication and Expression Through Original Works of Art*

2.4 Plan and use variations in line, shape/form, color, and texture to communicate ideas or feelings in works of art.

2.5 Create a representational sculpture based on people, animals, or buildings.

2.6 Draw or paint a still life, using secondary colors.

2.7 Use visual and actual texture in original works of art.

2.8 Create artwork based on observations of actual objects and everyday scenes.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of the Visual Arts**

Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.

*Role and Development of the Visual Arts*

3.1 Recognize and discuss the design of everyday objects from various time periods and cultures.

3.2 Identify and describe various subject matter in art (e.g., landscapes, seascapes, portraits, still life).

*Diversity of the Visual Arts*

3.3 View and then describe art from various cultures.

3.4 Identify art objects from various cultures (e.g., Japanese screen painting, Mexican tin art, African masks) and describe what they have in common and how they differ.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works in the Visual Arts**

Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

*Derive Meaning*

4.1 Discuss works of art created in the classroom, focusing on selected elements of art (e.g., shape/form, texture, line, color).

4.2 Identify and describe various reasons for making art.

*Make Informed Judgments*

4.3 Describe how and why they made a selected work of art, focusing on the media and technique.

4.4 Select something they like about their work of art and something they would change.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in the Visual Arts to Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in the visual arts across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to the visual arts.

*Connections and Applications*

5.1 Clap out rhythmic patterns found in the lyrics of music and use symbols to create visual representations of the patterns.

5.2 Compare and contrast objects of folk art from various time periods and cultures.

*Visual Literacy*

5.3 Identify and sort pictures into categories according to the elements of art emphasized in the works (e.g., color, line, shape/form, texture).

*Careers and Career-Related Skills*

5.4 Describe objects designed by artists (e.g., furniture, appliances, cars) that are used at home and at school.

## Visual Arts Grade Two

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts**

Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

*Develop Perceptual Skills and Visual Arts Vocabulary*

1.1 Perceive and describe repetition and balance in nature, in the environment, and in works of art.

1.2 Perceive and discuss differences in mood created by warm and cool colors.

*Analyze Art Elements and Principles of Design*

1.3 Identify the elements of art in objects in nature, the environment, and works of art, emphasizing line, color, shape/form, texture, and space.

**2.0 CREATIVE EXPRESSION**

**Creating, Performing, and Participating in the Visual Arts**

Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

*Skills, Processes, Materials, and Tools*

2.1 Demonstrate beginning skill in the use of basic tools and art-making processes, such as printing, crayon rubbings, collage, and stencils.

2.2 Demonstrate beginning skill in the use of art media, such as oil pastels, watercolors, and tempera.

*Communication and Expression Through Original Works of Art*

2.3 Depict the illusion of depth (space) in a work of art, using overlapping shapes, relative size, and placement within the picture.

2.4 Create a painting or drawing, using warm or cool colors expressively.

2.5 Use bilateral or radial symmetry to create visual balance.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of the Visual Arts**

Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.

*Role and Development of the Visual Arts*

3.1 Explain how artists use their work to share experiences or communicate ideas.

3.2 Recognize and use the vocabulary of art to describe art objects from various cultures and time periods.

*Diversity of the Visual Arts*

3.3 Identify and discuss how art is used in events and celebrations in various cultures, past and present, including the use in their own lives.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works in the Visual Arts**

Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

*Derive Meaning*

4.1 Compare ideas expressed through their own works of art with ideas expressed in the work of others.

4.2 Compare different responses to the same work of art.

*Make Informed Judgments*

4.3 Use the vocabulary of art to talk about what they wanted to do in their own works of art and how they succeeded.

4.4 Use appropriate vocabulary of art to describe the successful use of an element of art in a work of art.

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in the Visual Arts to Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in the visual arts across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to the visual arts.

*Connections and Applications*

5.1 Use placement, overlapping, and size differences to show opposites (e.g., up/down, in/out, over/under, together/apart, fast/slow, stop/go).

5.2 Select and use expressive colors to create mood and show personality within a portrait of a hero from long ago or the recent past.

*Visual Literacy*

5.3 Identify pictures and sort them into categories according to expressive qualities (e.g., theme and mood).

*Careers and Career-Related Skills*

5.4 Discuss artists in the community who create different kinds of art (e.g., prints, ceramics, paintings, sculpture).

## Visual Arts Grade Three

### 1.0 ARTISTIC PERCEPTION

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts**

Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

*Develop Perceptual Skills and Visual Arts Vocabulary*

1.1 Perceive and describe rhythm and movement in works of art and in the environment.

1.2 Describe how artists use tints and shades in painting.

1.3 Identify and describe how foreground, middle ground, and background are used to create the illusion of space.

1.4 Compare and contrast two works of art made by the use of different art tools and media (e.g., watercolor, tempera, computer).

*Analyze Art Elements and Principles of Design*

1.5 Identify and describe elements of art in works of art, emphasizing line, color, shape/ form, texture, space, and value.

### 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in the Visual Arts**

Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

*Skills, Processes, Materials, and Tools*

2.1 Explore ideas for art in a personal sketchbook.

2.2 Mix and apply tempera paints to create tints, shades, and neutral colors.

*Communication and Expression Through Original Works of Art*

2.3 Paint or draw a landscape, seascape, or cityscape that shows the illusion of space.

2.4 Create a work of art based on the observation of objects and scenes in daily life, emphasizing value changes.

2.5 Create an imaginative clay sculpture based on an organic form.

2.6 Create an original work of art emphasizing rhythm and movement, using a selected printing process.

### 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of the Visual Arts**

Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.

*Role and Development of the Visual Arts*

3.1 Compare and describe various works of art that have a similar theme and were created at different time periods.

3.2 Identify artists from his or her own community, county, or state and discuss local or regional art traditions.

3.3 Distinguish and describe representational, abstract, and nonrepresentational works of art.

*Diversity of the Visual Arts*

3.4 Identify and describe objects of art from different parts of the world observed in visits to a museum or gallery (e.g., puppets, masks, containers).

3.5 Write about a work of art that reflects a student's own cultural background.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works in the Visual Arts**

Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

*Derive Meaning*

4.1 Compare and contrast selected works of art and describe them, using appropriate vocabulary of art.

*Make Informed Judgments*

4.2 Identify successful and less successful compositional and expressive qualities of their own works of art and describe what might be done to improve them.

4.3 Select an artist's work and, using appropriate vocabulary of art, explain its successful compositional and communicative qualities.

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in the Visual Arts to Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in the visual arts across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to the visual arts.

*Connections and Applications*

5.1 Describe how costumes contribute to the meaning of a dance.

5.2 Write a poem or story inspired by their own works of art.

*Visual Literacy*

5.3 Look at images in figurative works of art and predict what might happen next, telling what clues in the work support their ideas.

*Careers and Career-Related Skills*

5.4 Describe how artists (e.g., architects, book illustrators, muralists, industrial designers) have affected people's lives.

# Visual Arts Grade Four

## 1.0 ARTISTIC PERCEPTION

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts**

Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

*Develop Visual Arts Vocabulary*

1.1 Perceive and describe contrast and emphasis in works of art and in the environment.

1.2 Describe how negative shapes/forms and positive shapes/forms are used in a chosen work of art.

1.3 Identify pairs of complementary colors (e.g., yellow/violet; red/green; orange/blue) and discuss how artists use them to communicate an idea or mood.

1.4 Describe the concept of proportion (in face, figure) as used in works of art.

*Analyze Art Elements and Principles of Design*

1.5 Describe and analyze the elements of art (e.g., color, shape/form, line, texture, space, value), emphasizing form, as they are used in works of art and found in the environment.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in the Visual Arts**

Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

*Skills, Processes, Materials, and Tools*

2.1 Use shading (value) to transform a two-dimensional shape into what appears to be a three-dimensional form (e.g., circle to sphere).

2.2 Use the conventions of facial and figure proportions in a figure study.

2.3 Use additive and subtractive processes in making simple sculptural forms.

2.4 Use fibers or other materials to create a simple weaving.

*Communication and Expression Through Original Works of Art*

2.5 Use accurate proportions to create an expressive portrait or a figure drawing or painting.

2.6 Use the interaction between positive and negative space expressively in a work of art.

2.7 Use contrast (light and dark) expressively in an original work of art.

2.8 Use complementary colors in an original composition to show contrast and emphasis.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of the Visual Arts**

Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.

*Role and Development of the Visual Arts*

3.1 Describe how art plays a role in reflecting life (e.g., in photography, quilts, architecture).

*Diversity of the Visual Arts*

3.2 Identify and discuss the content of works of art in the past and present, focusing on the different cultures that have contributed to California's history and art heritage.

3.3 Research and describe the influence of religious groups on art and architecture, focusing primarily on buildings in California both past and present.

**4.0 AESTHETIC VALUING**

**Responding to, Analyzing, and Making Judgments About Works in the Visual Arts**

Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

*Derive Meaning*

4.1 Describe how using the language of the visual arts helps to clarify personal responses to works of art.

4.2 Identify and describe how a person's own cultural context influences individual responses to works of art.

4.3 Discuss how the subject and selection of media relate to the meaning or purpose of a work of art.

*Make Informed Judgments*

4.4 Identify and describe how various cultures define and value art differently.

4.5 Describe how the individual experiences of an artist may influence the development of specific works of art.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in the Visual Arts to Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in the visual arts across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to the visual arts.

*Connections and Applications*

5.1 Select a nonobjective painting, work in small groups to interpret it through dance/movement, and then write a paragraph reporting on the arts experience.

5.2 Identify through research twentieth-century artists who have incorporated symmetry as a part of their work and then create a work of art, using bilateral or radial symmetry.

*Visual Literacy*

5.3 Construct diagrams, maps, graphs, timelines, and illustrations to communicate ideas or tell a story about a historical event.

*Careers and Career-Related Skills*

5.4 Read biographies and stories about artists and summarize the readings in short reports, telling how the artists mirrored or affected their time period or culture.

## Visual Arts Grade Five

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts**

Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

*Develop Perceptual Skills and Visual Arts Vocabulary*

1.1 Identify and describe the principles of design in visual compositions, emphasizing unity and harmony.

1.2 Identify and describe characteristics of representational, abstract, and nonrepresentational works of art.

*Analyze Art Elements and Principles of Design*

1.3 Use their knowledge of all the elements of art to describe similarities and differences in works of art and in the environment.

## 2.0 CREATIVE EXPRESSION

**Creating, Performing, and Participating in the Visual Arts**

Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

*Skills, Processes, Materials, and Tools*

2.1 Use one-point perspective to create the illusion of space.

2.2 Create gesture and contour observational drawings.

2.3 Demonstrate beginning skill in the manipulation of digital imagery (e.g., computer-generated art, digital photography, or videography).

*Communication and Expression Through Original Works of Art*

2.4 Create an expressive abstract composition based on real objects.

2.5 Assemble a found object sculpture (as assemblage) or a mixed media two-dimensional composition that reflects unity and harmony and communicates a theme.

2.6 Use perspective in an original work of art to create a real or imaginary scene.

2.7 Communicate values, opinions, or personal insights through an original work of art.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of the Visual Arts**

Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.

*Role and Development of the Visual Arts*

3.1 Describe how local and national art galleries and museums contribute to the conservation of art.

3.2 Identify and describe various fine, traditional, and folk arts from historical periods worldwide.

*Diversity of the Visual Arts*

3.3 Identify and compare works of art from various regions of the United States.

3.4 View selected works of art from a major culture and observe changes in materials and styles over a period of time.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works in the Visual Arts**

Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

*Derive Meaning*

4.1 Identify how selected principles of design are used in a work of art and how they affect personal responses to and evaluation of the work of art.

4.2 Compare the different purposes of a specific culture for creating art.

*Make Informed Judgments*

4.3 Develop and use specific criteria as individuals and in groups to assess works of art.

4.4 Assess their own works of art, using specific criteria, and describe what changes they would make for improvement.

**5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS**

**Connecting and Applying What Is Learned in the Visual Arts to Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in the visual arts across subject areas. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to the visual arts.

*Connections and Applications*

5.1 Use linear perspective to depict geometric objects in space.

*Visual Literacy*

5.2 Identify and design icons, logos, and other graphic devices as symbols for ideas and information.

*Careers and Career-Related Skills*

5.3 Research and report on what various types of artists (e.g., architects, designers, graphic artists, animators) produce and how their works play a role in our everyday environment.

## Visual Arts Grade Six

**1.0 ARTISTIC PERCEPTION**

**Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts**

Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

*Develop Visual Arts Knowledge and Vocabulary*

1.1 Identify and describe *all* the elements of art found in selected works of art (e.g., color, shape/form, line, texture, space, value).

1.2 Discuss works of art as to theme, genre, style, idea, and differences in media.

1.3 Describe how artists can show the same theme by using different media and styles.

*Analyze Art Elements and Principles of Design*

1.4 Describe how balance is effectively used in a work of art (e.g., symmetrical, asymmetrical, radial*)*.

**2.0 CREATIVE EXPRESSION**

**Creating, Performing, and Participating in the Visual Arts**

Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

*Skills, Processes, Materials, and Tools*

2.1 Use various observational drawing skills to depict a variety of subject matter.

2.2 Apply the rules of two-point perspective in creating a thematic work of art.

2.3 Create a drawing, using varying tints, shades, and intensities.

*Communication and Expression Through Original Works of Art*

2.4 Create increasingly complex original works of art reflecting personal choices and in-creased technical skill.

2.5 Select specific media and processes to express moods, feelings, themes, or ideas.

2.6 Use technology to create original works of art.

## 3.0 HISTORICAL AND CULTURAL CONTEXT

**Understanding the Historical Contributions and Cultural Dimensions of the Visual Arts**

Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.

*Role and Development of the Visual Arts*

3.1 Research and discuss the role of the visual arts in selected periods of history, using a variety of resources (both print and electronic).

3.2 View selected works of art from a culture and describe how they have changed or not changed in theme and content over a period of time.

*Diversity of the Visual Arts*

3.3 Compare, in oral or written form, representative images or designs from at least two selected cultures.

## 4.0 AESTHETIC VALUING

**Responding to, Analyzing, and Making Judgments About Works in the Visual Arts**

Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

*Derive Meaning*

4.1 Construct and describe plausible interpretations of what they perceive in works of art.

4.2 Identify and describe ways in which their culture is being reflected in current works of art.

*Make Informed Judgments*

4.3 Develop specific criteria as individuals or in groups to assess and critique works of art.

4.4 Change, edit, or revise their works of art after a critique, articulating reasons for their changes.

## 5.0 CONNECTIONS, RELATIONSHIPS, APPLICATIONS

**Connecting and Applying What Is Learned in the Visual Arts to Other Art Forms and Subject Areas and to Careers**

Students apply what they learn in the visual arts across subject areas. They develop competencies and creative skills in

problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to the visual arts.

*Connections and Applications*

5.1 Research how art was used in theatrical productions in the past and in the present.

5.2 Research how traditional characters (such as the *trickster*) found in a variety of cultures past and present are represented in illustrations.

5.3 Create artwork containing visual metaphors that express the traditions and myths of selected cultures.

*Visual Literacy*

5.4 Describe tactics employed in advertising to sway the viewer's thinking and provide examples.

*Careers and Career-Related Skills*

5.5 Establish criteria to use in selecting works of art for a specific type of art exhibition.

Standards for:

# Foreign Language

The *World Language Content Standards for California Public Schools*

## K3-6

**Organization of the Standards**

The World Language Content Standards for California Public Schools, represents a strong consensus that the study of a wide variety of world languages and cultures is part of the core curriculum.

The content standards were developed to accommodate all languages and describe the various stages a learner goes through to become proficient. Therefore, the content standards are not language-specific. The content standards that follow are not tied to specific grade levels; instead, they describe the stages of linguistic and cultural acquisition. For ease of presentation, the standards are separated into five categories: Content, Communication, Cultures, Structures, and Settings. The categories should be taught together and, in practice, merge into seamless instruction within the various stages of the Language Learning Continuum.

**Content**
Language users address a wide variety of topics that are appropriate to their age and stage. As students develop their ability to communicate in the target language and culture, they are able to more fully address topics that increase in complexity along the Language Learning Continuum.

**Communication**
Real-world communication takes place in a variety of ways. It may be interpersonal: culturally appropriate listening, reading, viewing, speaking, signing, and writing take place as a shared activity among language users. It may be interpretive: language users listen, view, and read by using knowledge of cultural products, practices, and perspectives. It may be presentational: speaking, signing, and writing take place in culturally appropriate ways.

**Cultures**
Culturally appropriate language use requires an understanding of the relationship between the products and practices of the culture and its underlying perspectives. Students must acquire the ability to interact appropriately with target culture bearers in order to communicate successfully. This category allows students to make connections and comparisons between languages and cultures.

**Structures**
The content standards use the term structures to capture the multiple components of grammar that learners must control in order to successfully communicate in linguistically and culturally appropriate ways. Students need to acquire orthography, the writing systems of languages that have them; phonology, the sound systems of languages or parameters in ASL; morphology, the rules for word formation; syntax, the principles of sentence structure; semantics, language-based meaning systems; and pragmatics, meaning systems connected to language use.

**Settings**
Language users need to carry out tasks in a variety of situations representative of those they will experience in the target culture. The success of learner communication will depend on the situation in which the language is used. Understanding social linguistic norms will assist learners in communicating effectively in real-world encounters.

## Content

As students become literate in the target language, they acquire relevant content through the study of various topics. This in turn expands their access to information from around the globe. Moreover, the content that students acquire in the language classroom enables them to make connections and reinforce knowledge from other content areas of the curriculum. As they progress along the Language Learning Continuum,* students address a wide variety of content that is age- and stage-appropriate.

**Stage I**

1.0 Students acquire information, recognize distinctive viewpoints, and further their knowledge of other disciplines.

1.1 Students address discrete elements of daily life, including:

a. Greetings and introductions
b. Family and friends
c. Pets
d. Home and neighborhood
e. Celebrations, holidays, and rites of passage
f. Calendar, seasons, and weather
g. Leisure, hobbies and activities, songs, toys and games, sports
h. Vacations and travel, maps, destinations, and geography
i. School, classroom, schedules, subjects, numbers, time, directions
j. Important dates in the target culture
k. Jobs
l. Food, meals, restaurants
m. Shopping, clothes, colors, and sizes
n. Parts of the body, illness
o. Technology

**Stage II**

2.0 Students acquire information, recognize distinctive viewpoints, and further their knowledge of other disciplines.

2.1 Students address topics related to self and the immediate environment, including:

a. Social relationships
b. People in the communities
c. Zoo and farm animals, fables
d. Care of the home, interacting with people in the communities
e. Holiday customs and transition points in life
f. Climate
g. Cultural and leisure-time activities, outdoor, recreational activities, music
h. Transportation, lodging, itineraries, geographic features and landmarks
i. Curricular and extracurricular interests and events
j. Significant historical figures
k. Professions and the working world
l. Cuisine and recipes
m. Clothing and fashion
n. Health, medical care
o. Technological advances and innovation

**Stage III**

3.0 Students acquire information, recognize distinctive viewpoints, and further their knowledge of other disciplines.

3.1 Students address concrete and factual topics related to the immediate and external environment, including:

a. Social norms
b. Historical and cultural figures, stereotypes
c. Animals and their habitats
d. Community issues, current events
e. Origins of rites of passage, social and regional customs
f. Environmental concerns
g. Media, Internet, television, radio, film
h. Cultural, historical, and geographic aspects of travel
i. Curricular and extracurricular subjects
j. Significant historical events
k. Careers and future plans
l. Nutrition, fitness, and health
m. Geographically and culturally appropriate clothing
n. Cultural differences in health care
o. Effects of technology on the modern world

**Stage IV**

4.0 Students acquire information, recognize distinctive viewpoints, and further their knowledge of other disciplines.

4.1 Students address complex, concrete, factual, and abstract topics related to the immediate and external environment, including:

a. Societal expectations
b. Cultural and literary archetypes
c. Endangered species
d. World events, social and political issues
e. Belief systems
f. International environmental issues
g. The visual and performing arts
h. The nature of an interdependent world
i. Issues in curricular and extracurricular subjects
j. Authors and their times
k. Transnational careers and economies
l. Issues of world hunger and health
m. Design, production, and marketing of clothing
n. Policy issues in health care
o. The promise and challenge of technology

## Communication

To achieve communicative competence, students convey and receive messages effectively. Students actively use language to transmit meaning while responding to real situations. Moreover, they process language in linguistically and culturally appropriate ways while interacting with a wide variety of audiences. As they progress along the Language Learning Continuum, students engage in communication that is age- and stage-appropriate.

### Stage I

1.0 Students use **formulaic language** (learned words, signs [ASL], and phrases).

1.1 Engage in oral, written, or signed (ASL) conversations.
1.2 Interpret written, spoken, or signed (ASL) language.
1.3 Present to an audience of listeners, readers, or ASL viewers.

**Functions**

1.4 List, name, identify, and enumerate.
1.5 Identify learned words, signs (ASL), and phrases in authentic texts.
1.6 Reproduce and present a written, oral, or signed (ASL) product in a culturally authentic way.

### Stage II

2.0 Students use **created language** (sentences and strings of sentences).

2.1 Engage in oral, written, or signed (ASL) conversations.
2.2 Interpret written, spoken, or signed (ASL) language.
2.3 Present to an audience of listeners, readers, or ASL viewers.

**Functions**

2.4 Initiate, participate in, and close a conversation; ask and answer questions.
2.5 Demonstrate understanding of the general meaning, key ideas, and some details in authentic texts.
2.6 Produce and present a simple written, oral, or signed (ASL) product in a culturally authentic way.

### Stage III

3.0 Students use **planned language** (paragraphs and strings of paragraphs).

3.1 Engage in oral, written, or signed (ASL) conversations.
3.2 Interpret written, spoken, or signed (ASL) language.
3.3 Present to an audience of listeners, readers, or ASL viewers.

**Functions**

3.4 Describe, narrate, explain, and state an opinion.

3.5 Demonstrate understanding of the main idea and key details in authentic texts.
3.6 Produce and present a written, oral, or signed (ASL) product in a culturally authentic way.

**Stage IV**

4.0 Students use **extended language** (coherent and cohesive multiparagraph texts).
4.1 Engage in oral, written, or signed (ASL) conversations.
4.2 Interpret written, spoken, or signed (ASL) language.
4.3 Present to an audience of listeners, readers, or ASL viewers.

**Functions**

4.4 Discuss, compare and contrast, and support an opinion; persuade.
4.5 Demonstrate understanding of the main ideas and most details in authentic texts.
4.6 Produce and present a complex written, oral, or signed (ASL) product in a culturally authentic way.

## Cultures

To understand the connection between language and culture, students discern how a culture views the world. Students comprehend the ideas, attitudes, and values that shape the target culture. Those shared common perspectives, practices, and products incorporate not only formal aspects of a culture such as contributions of literature, the arts, and science, but also the daily living practices, shared traditions, and common patterns of behavior acceptable to a society. As they progress along the Language Learning Continuum, students demonstrate their understanding of cultural perspectives by behaving in culturally appropriate ways.

**Stage I**

1.0 Students use appropriate responses to rehearsed cultural situations.
1.1 Associate products, practices, and perspectives with the target culture.
1.2 Recognize similarities and differences in the target cultures and between students' own cultures.
1.3 Identify cultural borrowings.

**Stage II**

2.0 Students choose an appropriate response to a variety of situations.
2.1 Demonstrate understanding of the roles that products, practices, and perspectives play in the culture.
2.2 State similarities and differences in the target cultures and between students' own cultures.
2.3 State reasons for cultural borrowings.

**Stage III**

3.0 Students determine appropriate responses to situations with complications.
3.1 Use products, practices, and perspectives in culturally appropriate ways.
3.2 Describe similarities and differences in the target cultures and between students' own cultures.
3.3 Describe how products and practices change when cultures come in contact.

**Stage IV**

4.0 Students improvise appropriate responses to unpredictable situations.

4.1 Demonstrate culturally appropriate use of products, practices, and perspectives to others.
4.2 Explain similarities and differences in the target cultures and between students' own cultures.
4.3 Explain the changes in perspectives when cultures come in contact.

## Structures

Languages vary considerably in the structures that learners use to convey meaning; therefore, the following standards are general in order to apply to all languages. It is expected that the curriculum will feature language-specific structures essential to accurate communication. As students acquire vocabulary in the target language, they grasp the associated concepts and comprehend the structures the language uses to convey meaning. Moreover, students discover patterns in the language system. A language system consists of grammar rules, vocabulary, and elements such as gestures and other forms of nonverbal communication. A language system also includes discourse, whereby speakers learn what to say to whom and when. As they progress along the Language Learning Continuum, students use linguistically and grammatically appropriate structures to comprehend and produce messages. Students identify similarities and differences among the languages they know.

### Stage I

1.0 Students use orthography, phonology, or ASL parameters to understand words, signs (ASL), and phrases in context.
1.1 Use orthography, phonology, or ASL parameters to produce words or signs (ASL) and phrases in context.
1.2 Identify similarities and differences in the orthography, phonology, or ASL parameters of the languages the students know.

### Stage II

2.0 Students use sentence-level elements (morphology or syntax or both) to understand concrete and factual topics.
2.1 Use sentence-level elements (morphology or syntax or both) to produce informal communications.
2.2 Identify similarities and differences in the sentence-level elements (morphology or syntax or both) of the languages the students know.

### Stage III

3.0 Students use knowledge of text structure to understand topics related to the external environment.
3.1 Use paragraph-level discourse (text structure) to produce formal communications.
3.2 Identify similarities and differences in the paragraph-level discourse (text structure) of the languages the students know.

### Stage IV

4.0 Students use knowledge of extended discourse to understand abstract and academic topics.
4.1 Use extended discourse (native-like text structure) to produce formal communications.
4.2 Identify similarities and differences in the extended discourse (native-like text structure) of the languages the students know.

## Settings

For students to communicate effectively, they use elements of language appropriate to a given situation. Language conveys meaning best when the setting, or context, in which it is used, is known. This knowledge of context assists students not only in comprehending meaning but also in using language that is culturally appropriate.

Context also helps define and clarify the meaning of language that is new to the learner. As students' progress along the Language Learning Continuum, they carry out tasks in stage- and age-appropriate situations that reflect the target culture.

**Stage I**

1.0 Students use language in highly predictable common daily settings.
1.1 Recognize age-appropriate cultural or language-use opportunities outside the classroom.

**Stage II**

2.0 Students use language in interpersonal settings.
2.1 Participate in age-appropriate cultural or language-use opportunities outside the classroom.

**Stage III**

3.0 Students use language in informal and some formal settings.
3.1 Initiate age-appropriate cultural or language-use opportunities outside the classroom.

**Stage IV**

4.0 Students use language in informal and formal settings.
4.1 Sustain age-appropriate cultural or language-use opportunities outside the classroom.

Standards for:

# Chinese Language
## K3-6

## Instructional Design

The Chinese language program at the Americana Chinese International School is specially designed to help each student develop a Chinese language center in their brain that is independent of other languages, so that learning multiple languages does not lead to slowed progress with language mixture and confusion. The Chinese classes focus on listening and speaking, supplemented by reading and writing, emphasizing an engaging learning process that is enjoyable and successful. In the classroom, students enjoy learning through interactive group activities which provide reinforcement through immediate application in natural contexts.

Americana Chinese International School's Chinese language program is for children coming from diverse language backgrounds, from multicultural or cross-cultural families, who want to learn practical Chinese. The learning process is designed to be entertaining, carefully combining challenging work with more restful activities, bringing personal enrichment through broadening knowledge. As they say, "coming upon a good teacher is very fortunate. Finding that one has selected a good school is happiness indeed."

The Chinese content of Americana Chinese International School's program for pre-kindergarten, kindergarten, and first-grade up to sixth-grade students includes school life, family life, and familiar people, objects, and situations. Students learn to understand and speak Chinese vocabulary and sentence patterns through learning activities such as games, nursery rhymes, drawing, singing, dialogues, and stories and other texts.

## Instructional Focus

Americana Chinese International School Chinese course syllabus covers: self, family, friends, school, society and culture.

Chinese language learning objectives in the Americana Chinese International School are as follows:

First, to truly understand natural Chinese, students need many opportunities for listening. Only with that foundation will they be able to speak well and with understanding. After repeatedly practicing the learning cycle of listening, understanding and speaking, students will soon form an accurate and reliable sense of natural usage in Chinese.

Second, when the students have mastered the natural spelling of Chinese, the teacher will begin to correctly teach pinyin and pronunciation according to the students' readiness at any given time. But pinyin is just a tool for pronunciation. Use of a tool is best perfected through much use.

Third, when the students are able read Chinese naturally without relying on the help of pinyin. They will be ready to study reading and writing.

Finally, students attending the Americana Chinese International School will have mastered the four skills of listening, speaking, reading and writing in Chinese.

## Pre-Kindergarten

Annual teaching objectives:

In Pre-kindergarten Chinese, class time is used to help students develop the following skills:

1. Listening: New language nucleus formation.
   Understand the content of the textbook and the teacher's classroom language.
   Understand in listening of 50 Chinese characters.

2. Speaking: Simple imitation with understanding.
   Can sing 3 simple songs.

3. Reading: Recognize simple Chinese characters.

Overview:

In Pre-Kindergarten Chinese, practical courses are dedicated to helping students combine and use real life situations to strengthen and consolidate their vocabulary, songs, sentence patterns, dialogue, literacy, storytelling and games.

Instruction Time: 30 minutes per day

## Framework:

| **Level** | **Pre-Kindergarten** |
|---|---|
| **Prerequisite** | None |
| **Teaching materials** | * Textbooks<br>* Topics<br>* Songs<br>* Stories<br>* Games<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | 30 Minutes Per day |
| **Teaching content** | * Understanding simple commands and following instructions<br>* Names<br>* Family members<br>* Age<br>* Nationality<br>* Introduce Chinese<br>* Creating a Chinese learning foundation |
| **Assessment** | Record student's learning through daily observation |
| **Testing** | None |

## Kindergarten 1

Annual teaching objectives:

In Kindergarten 1 Chinese, class time is used to help students develop the following skills:

1. Listening: New language nucleus formation.
Understanding the content of the textbook and the teacher's classroom
language.
Listening comprehension of 100 Chinese characters.

2. Speaking: Simple imitation with understanding.
Sing 5 simple songs.
Speak out 50 simple words.

3. Reading: Recognizes simple Chinese characters.

Overview:

Learning Chinese Kindergarten 1. Uses these practical life courses. Students can combine and use real life to strengthen and consolidate their vocabulary, songs, sentence patterns, dialogue, literacy, storytelling and games. This will broaden their knowledge.

Instruction Time: 30 minutes per day

## Framework:

| **Level** | **Kindergarten 1** |
|---|---|
| **Prerequisite** | None |
| **Teaching materials** | *Textbooks<br>* Topics<br>* Songs<br>* Stories<br>* Pictures<br>* Games<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | 30 Minutes Per day |
| **Teaching content** | * 5 songs<br>* Understanding about family and home<br>* Sports<br>* What is this?<br>* Where is…？<br>* Clothes |
| **Assessment** | Record student's learning through daily observation |
| **Testing** | None |

## Kindergarten 2

Annual teaching objectives:

In Kindergarten 2 Chinese, class time is used to help students develop the following skills:

1. Listening: New language nucleus formation.
   Understand the content of the textbook and the teacher's classroom language.
   Understand in listening of 200 Chinese characters.

2. Speaking: Simple imitation in understanding.
   Can sing 5 simple songs.
   Can speak out 100 simple words.

3. Reading: Recognize simple Chinese characters.

4. Counting: Can count from 1 to 20 in Chinese.

Overview:

Learning Chinese Kindergarten 2. Uses these practical life courses, students can combine and use real life to strengthen and consolidate their vocabulary, songs, sentence patterns, dialogue, literacy, storytelling and games. Broaden knowledge.

Instruction Time: __30__ minutes per day

## Framework:

| **Level** | **Kindergarten 2** |
|---|---|
| **Prerequisite** | None |
| **Teaching materials** | * Textbooks<br>* topics<br>* Songs<br>* Stories<br>* Pictures<br>* Games<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | 30 Minutes Per day |
| **Teaching content** | * 5 songs<br>* Animals<br>* Drawing<br>* Mirror<br>* Colors<br>* Where are you from?<br>* What are you doing?<br>* Counting 1-20<br>* Multiple words, phrases, shot sentences |
| **Assessment** | Record student's learning through daily observation |
| **Testing** | Oral and multiple-choice testing |

# Kindergarten 3

Annual teaching objectives:

In Kindergarten 3 Chinese, class time is used to help students develop the following skills:

1. Listening: New language nucleus formation.
   Understanding the content of the textbook and the teacher's classroom language.
   Comprehending 300 Chinese characters.

2. Speaking: Simple imitation in understanding.
   Sing 5 simple songs.
   Speak out 150 simple words.
   Recite 2 simple Chinese poems.

3. Reading: Read 50 simple Chinese characters and completed Chinese Pinyin in correct pronunciation.

4. Writing: Chinese Pinyin.

5. Counting: Count from 1 to 100 in Chinese.

Overview:
Learning Chinese Kindergarten 3. Uses these practical courses. Students can combine and use real life to strengthen and consolidate their learning by learning vocabulary, songs, sentence patterns, dialogue, literacy, listening to stories and games.

Skill: At the end of the year, students can read Chinese with Pinyin.

Instruction Time: 45 minutes per day

| | |
|---|---|
| **Level** | **Kindergarten 3** |
| **Prerequisite** | None |
| **Teaching materials** | * Textbooks<br>* topics<br>* Songs<br>* Stories<br>* Pictures<br>* Pin-yin table and card<br>* Games<br>* Poems<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | 45 Minutes Per day |
| **Teaching content** | * Basic conversations<br>* 5 songs<br>* Complete Pin-yin study<br>* Finish 2 poems<br>* Counting 1-100<br>* Complete Pin-yin<br>* Complete Chinese tones<br>* School is fun<br>* Big and small<br>* Raining<br>* Shopping<br>* Introduction stoke orders<br>* Speak Multiple words, phrases, short sentence |
| **Assessment** | Record student's learning through daily observation |
| **Testing** | Two midterm tests<br>Two semester final examinations |

## Grade 1

Annual teaching objectives:

In Grade 1 Chinese, class time is used to help students develop the following skills:

1. Listening: Understand and follow the teacher's instructions.
Understand the content of the textbook and the teacher's classroom language.
Understand simple conversations.
Concentrate on listening.
Recognize after hearing the pronunciation of 150 Chinese characters.

2. Speaking: Answer the teacher's question with an appropriate sentence.
Express a picture in a simple sentence.
Speak in public.
Speak out 150 simple words.
Sing 5 simple songs.
Recite 3 simple Chinese poems.

3. Reading: Accurately read the phonetic symbols / letters and pinyin.
Read out the 5 tones in Chinese.
Read 150 words.
Can read the text and understand its meaning.
Knows the basic radicals.
Knows stroke order.

4. Writing: Write 50 Chinese characters.
To make simple sentences.

5. Math: Complete the 20-internal addition and subtraction operations with mental arithmetic.

Overview:
Courses in Chinese Grade 1. Uses practical courses. Students can combine and use real life and strengthen and consolidate by learning vocabulary, songs, sentence patterns, dialogue, literacy, listening to stories and games.

Youth Chinese Test (YCT)
Hanyu Shuiping Kaoshi (HSK)
On-campus examination

Instruction Time:
50 minutes per day;
100 minutes per week for Chinese Math (2 times)

## Framework

| | | |
|---|---|---|
| **Level** | **Grade 1** | |
| **Prerequisite** | Fully master the kindergarten course | |
| **Teaching materials** | * Textbooks<br>* Topics<br>* Songs<br>* Stories<br>* Pictures<br>* Pin-yin table and card | * Home work in writing<br>* Games<br>* Poems<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | Chinese 50 Minutes Per day & Chinese Math 100 Minutes Per week (2 times) | |
| **Teaching content** | * Simple conversations<br>* 5 songs<br>* Repeat pinyin<br>* Repeat Chinese tones<br>* Finish 3 poems<br>* Chinese mental arithmetic in addition and subtraction<br>* Stroke orders<br>* Writing characters<br>* Self-introduction<br>* Numbers in Chinese characters<br>* Chinese culture<br>* Knowledge of the human body | |
| **Assessment** | Record student's learning through daily observation | |
| **Testing** | Two midterm tests<br>Two end of semester tests<br>Annual YCT/HSK exams are based on the student’s enrollment level and study progress, and the responsible teacher will arrange the corresponding levels of exams and exam selection for the student. | |

## Grade 2

Annual teaching objectives:

In Grade 2 Chinese, class time is used to help students develop the following skills:

1. Listening: Follow the teacher's instructions.
Understand the content of the textbook and the teacher's classroom language.
Simple conversations.
Understand descriptions of a physical object.
Understand 300 Chinese characters.

2. Speaking: Answer the teacher's question with an appropriate sentence.
Describe a picture or event in a simple sentence.
Speak in public with complete sentences.
Speak out 300 simple words.
Sing 5 simple songs.
Recite 3 simple Chinese poems.

3. Reading: Accurately read the phonetic symbols / letters and pinyin.
Correctly read out the 5 tones in Chinese.
Read 300 words.
Understand the meaning of the text.
Basic radicals and stroke order.

4. Writing: Write 100 Chinese characters.
Complete simple sentences.

5. Math: Complete the 100-internal addition and subtraction with mental arithmetic.

Overview:

Learning Chinese Grade 2. Uses these practical courses, students can combine and use real life and strengthen and consolidate by learning vocabulary, songs, sentence patterns, dialogue, literacy, listening to stories and games.

Testing:
Youth Chinese Test (YCT)
Hanyu Shuiping Kaoshi (HSK)
On-campus examination

Instruction Time:
50 minutes per day
100 minutes per week for Chinese Math (2 times)

## Framework

| | | |
|---|---|---|
| **Level** | **Grade 2** | |
| **Prerequisite** | Fully master first grade course | |
| **Teaching materials** | * Textbooks<br>* Topics<br>* Songs<br>* Stories<br>* Pictures<br>* Pin-yin table and card<br>* After school reading | * Home work in writing<br>* Games<br>* Poems<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | Chinese 50 Minutes Per day & Chinese Math 100 Minutes Per week (2 times) | |
| **Teaching content** | * Conversations<br>* 5 songs<br>* Use Pin-yin<br>* Use Chinese tones<br>* Finish 3 poems<br>* Chinese mental arithmetic in addition and subtraction<br>* Stroke order<br>* Character writing<br>* Fill in the short sentences<br>* Including country, language, subject, make phone call, weather, season, sick, hobby, vegetables and fruits | |
| **Assessment** | Record student's learning through daily observation | |
| **Testing** | Two midterm tests<br>Two end of semester examinations<br><br>Annual YCT/HSK exams are based on the student’s enrollment level and study progress. The responsible teacher will arrange the corresponding levels of exam and exam selection for the student. | |

## Grade 3

Annual teaching objectives:

In Grade 3 Chinese, class time is used to help students develop the following skills:

1. Listening: Follow the teacher’s instructions.
Fully understand the content of the textbook and the teacher's classroom language.
Understand conversations.
Understand descriptions of situation.
Understand 450 Chinese characters.

2. Speaking: Answer the teacher's question with an appropriate sentence.
Simple descriptions in pictures or events.
Speak in public with complete in short statement.
Speak out 450 simple words.
Sing 5 simple songs.
Recite 3 Chinese poems.

3. Reading: Reading book with Pinyin.
Read 450 words.
Read the text and understand its meaning.
Radicals and stroke order.

4. Writing: Write 150 Chinese characters.
Make simple sentences.

5. Math: Repeat addition and subtraction, and learn multiplication with mental arithmetic.

Overview:

Learning Chinese Grade 3. Uses these practical courses, students can combine and use real life and strengthen and consolidate by learning vocabulary, songs, sentence patterns, dialogue, literacy, listening to stories and games.

Testing
Youth Chinese Test (YCT)
Hanyu Shuiping Kaoshi (HSK)
On-campus examination

Instruction Time:
_50_ minutes per day
_100_ minutes per week for Chinese Math (2 times)

# Framework

| | | |
|---|---|---|
| **Level** | **Grade 3** | |
| **Prerequisite** | Fully master the second-grade course | |
| **Teaching materials** | * Textbooks<br>* Topics<br>* Songs<br>* Stories<br>* Pictures<br>* Homework | * Games<br>* Poems<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | Chinese 50 Minutes Per day & Chinese Math 100 Minutes Per week (2 times) | |
| **Teaching content** | * Conversation<br>* 5 songs<br>* Using pinyin<br>* Using Chinese tones<br>* Finish 3 poems<br>* Chinese mental arithmetic in addition, subtraction and multiplication<br>* Stroke order<br>* Writing short sentences<br>* Making a story based on pictures<br>* Including: Relatives, looks, see doctor, season, occupation, hobbies, school facilities, stationery, vegetable market, snacks, dining out, community | |
| **Assessment** | Record student's learning through daily observation | |
| **Testing** | Two midterm tests<br>Two semester final examinations<br><br>Annual YCT/HSK exams are based on the student’s enrollment level and study progress. The responsible teacher will arrange the corresponding level of exams and exam selection for the student. | |

## Grade 4

Annual teaching objectives:

In Grade 4 Chinese, class time is used to help students develop the following skills:

1. Listening: Follow the teacher's instructions.
Understand the content of the textbook and the teacher's classroom language.
Understand a stretch of speech or the description of a physical object.
Understand the stories.
Understand 600 Chinese characters in listening

2. Speaking: Answer the teacher's question with a complete sentence.
Describe a picture or event in long sentences.
Speak in public in complete sentences.
To be able to repeat stories.
600 Chinese characters.
Sing 5 songs.
Recite 3 simple Chinese poems.

3. Reading: Read 600 characters.
Read the text with understanding.
Reading book with Pinyin.
Completed radicals and stroke order.

4. Writing: Write 200 Chinese characters that have been learned.
Make long sentences.

5. Math: Repeat addition and subtraction, and learn multiplication and division with mental arithmetic.

Overview:

Learning Chinese Grade 4. Uses these practical courses, students can combine and use real life and strengthen and consolidate by learning vocabulary, songs, sentence patterns, dialogue, literacy, listening to stories and games.

Testing
Youth Chinese Test (YCT)
Hanyu Shuiping Kaoshi (HSK)
On-campus examination

Instruction Time:
50 minutes per day
100 minutes per week for Chinese Math (2 times)

# Framework

| | | |
|---|---|---|
| **Level** | **Grade 4** | |
| **Prerequisite** | Fully master third grade course | |
| **Teaching materials** | * Textbooks<br>* Topics<br>* Songs<br>* Stories<br>* Pictures<br>* After school reading | * Home work in writing<br>* Games<br>* Poems<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | Chinese 50 Minutes Per day & Chinese Math 100 Minutes Per week (2 times) | |
| **Teaching content** | * Conversation<br>* 5 songs<br>* Use pinyin<br>* Use Chinese tones<br>* Finish 3 poems<br>* Chinese mental arithmetic in addition, subtraction, multiplication and division<br>* Writing long sentences<br>* Including: Appearance, occupation, character, daily life, housework, pets, school, exam, travel, accident | |
| **Assessment** | Record student's learning through daily observation | |
| **Testing** | Two midterm tests<br>Two semester final examinations<br><br>Annual YCT/HSK exam is based on the student’s enrollment level and study progress, and the responsible teacher will arrange the corresponding level of exams. | |

## Grade 5

Annual teaching objectives:

In Grade 5 Chinese, class time is used to help students develop the following skills:

1. Listening: Follow the teacher's instructions.
Understand the content of the textbook and the teacher's classroom language.
Understand a stretch of speech or the description of a physical object.
Understand stories told by others.
Understand 800 Chinese characters.

2. Speaking: Answer the teacher's question with a complete sentence.
Describe a picture or event in detail.
Speak complete sentences.
To be able to repeat a long story told by someone else.
Speaking out 800 characters.
Sing 5 simple songs.
Recite 3 simple Chinese poems.

3. Reading: Read 800 words.
Read the text with understanding.
Read Chinese book without pinyin.

4. Writing: Write 250 Chinese characters.
Be able to make long sentences.

5. Math: Repeat multiplication and division with mental arithmetic.

Overview:

Learning Chinese in Grade 5. Uses these practical courses. Students can combine and use real life and strengthen and consolidate by learning vocabulary, songs, sentence patterns, dialogue, literacy, listening to stories and games.

Testing:
Youth Chinese Test (YCT)
Hanyu Shuiping Kaoshi (HSK)
On-campus examination

Instruction Time:
50 minutes per day
100 minutes per week for Chinese Math (2 times)

# Framework

| | | |
|---|---|---|
| **Level** | **Grade 5** | |
| **Prerequisite** | Fully master fourth grade course | |
| **Teaching materials** | * Textbooks<br>* Topics<br>* Songs<br>* Stories<br>* Pictures<br>* After school reading | * Home work in writing<br>* Games<br>* Poems<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | Chinese 50 Minutes Per day & Chinese Math 100 Minutes Per week (2 times) | |
| **Teaching content** | * Conversation<br>* 5 songs<br>* Finish 3 poems<br>* Chinese mental arithmetic in addition, subtraction, multiplication and division<br>* Character writing<br>* Including: Family, hobbies, friends, climate, booking air tickets, shopping, learning Chinese, summer work, partying, volunteering, China, New Year's Eve<br>* Writing small essays | |
| **Assessment** | Record student's learning through daily observation | |
| **Testing** | Two midterms<br>Two semester-final examinations<br><br>Annual YCT/HSK exams are based on the student’s enrollment level and study progress. The responsible teacher will arrange the corresponding levels of exams and exam selection for the student. | |

## Grade 6

Annual teaching objectives:

In Grade 6 Chinese, class time is used to help students develop the following skills:

1. Listening: Follow the teacher's instructions.
Understand the content of the textbook and the teacher's classroom language.
Understand a stretch of speech or the description of a physical object.
Understand short stories told by others.
Understand 1000 Chinese characters in listening.

2. Speaking: Answer the teacher's question with a complete sentence.
Describe a picture or event.
Speaking out 1000 characters.
Sing 5 songs.
Recite 3 simple Chinese poems.

3. Reading: Read 1000 words.
Read the text with understanding.
Read Chinese book without Pinyin.
Know the basic radicals and stroke order.

4. Writing: Write 250 Chinese characters.
Writing small essays.

5. Math: Repeat multiplication and division with mental arithmetic.

Overview:

Learning Chinese Grade 6. Uses these practical courses, students can combine and use real life and strengthen and consolidate by learning vocabulary, songs, sentence patterns, dialogue, literacy, listening to stories and games.

Testing
Youth Chinese Test (YCT)
Hanyu Shuiping Kaoshi (HSK)
On-campus examination

Instruction Time:
50 minutes per day
100 minutes per week for Chinese Math (2 times)

# Framework

| | | |
|---|---|---|
| **Level** | **Grade 6** | |
| **Prerequisite** | Fully master fifth grade course | |
| **Teaching materials** | * Textbooks<br>* Topics<br>* Songs<br>* Stories<br>* Pictures<br>* After school reading | * Home work in writing<br>* Games<br>* Poems<br>* Audiovisuals and videos; cartoons<br>* Chinese culture<br>* Chinese immersion |
| **Class time** | Chinese 50 Minutes Per day & Chinese Math 100 Minutes Per week (2 times) | |
| **Teaching content** | * Conversations<br>* 5 songs<br>* Finish 3 poems<br>* Chinese mental arithmetic in addition, subtraction, multiplication and division<br>* Stroke order<br>* Character writing<br>* Including: Community's furniture, dining out, neighbor occupation<br>* Writing essays | |
| **Assessment** | Record student's learning through daily observation | |
| **Testing** | Two midterm tests<br>Two semester-final examinations<br><br>Annual YCT/HSK exams are based on the student's enrollment level and study progress, and the responsible teacher will arrange the corresponding levels of exams and exam selection for the student. | |

Standards for:

# English as a Second Language

*https://www.cde.ca.gov/sp/el/er/documents/eldstndspublication14.pdf*

## K3-6

## Kindergarten 3 Overview

**Goal:** English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing tasks, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.

***Critical Principles for Developing Language and Cognition in Academic Contexts:*** While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.

| **Part I: Interacting in Meaningful Ways** | **Corresponding CA CCSS for ELA/Literacy*** |
|---|---|
| **A. Collaborative** | |
| 1. Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics | |
| 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) | • SL.K.1, 6; L.K.1, 6 |
| 3. Offering and supporting opinions and negotiating with others in communicative exchanges | • W.K.6; L.K.1, 6 |
| 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) | • SL.K.1, 6; L.K.1, 6<br>• Not applicable at kindergarten |

*The California English Language Development Standards correspond to the California Common Core State Standards for English Language Arts and Literacy in History/Social Science and Technical Subjects (CA CCSS for ELA/Literacy). English learners should have full access to opportunities to learn ELA, mathematics, science, history/social studies, and other content at the same time they are progressing toward full proficiency in English.

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| **B. Interpretive** | |
| 5. Listening actively to spoken English in a range of social and academic contexts | • SL.K.1–3 |
| 6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language | • RL.K.1–7, 9, 10; RI.K.1–7, 9–10; SL.K.2–3; L.K.4, 6 |
| 7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area | • RL.K.3–4, 6; RI.K.2, 6, 8; L.K.4–6 |
| 8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area | • RL.K.4–5; RI.K.4; L.K.4–6 |
| **C. Productive** | |
| 9. Expressing information and ideas in formal oral presentations on academic topics | • SL.K.4–6; L.K.1, 6 |
| 10. Composing/writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology | • W.K.1-3, 5–8; L.K.1–2, 6 |
| 11. Supporting own opinions and evaluating others' opinions in speaking and writing | • W.K.1; SL.K.4, 6; L.K.1–2, 6 |
| 12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas | • W.K.5; SL.K.4, 6; L.K.1, 5–6 |
| **Part II: Learning About How English Works** | **Corresponding CA CCSS for ELA/Literacy** |
| **A. Structuring Cohesive Texts** | |
| 1. Understanding text structure | • RL.K.5; RI.K.5; W.K.1–3, 5; SL.K.4 |
| 2. Understanding cohesion | • RL.K.5; RI.K.5; W.K.1–3,5; SL.K.4; L.K.1 |
| **B. Expanding and Enriching Ideas** | |
| 3. Using verbs and verb phrases | • W.K.5; SL.K.6; L.K.1, 6 |
| 4. Using nouns and noun phrases | • W.K.5; SL.K.6; L.K.1, 6 |
| 5. Modifying to add details | • W.K.5; SL.K.4, 6; L.K.1, 6 |
| **C. Connecting and Condensing Ideas** | |
| 6. Connecting ideas | • W.K.1–3, 5; SL.K.4, 6; L.K.1, 6 |
| 7. Condensing ideas | • Not applicable at kindergarten |
| **Part III: Using Foundational Literacy Skills** | RF.K.1–4 |

## Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts

### Part I: Interacting in Meaningful Ways

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Purposes for using language include but are not limited to:** Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:** Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:** Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | ***1. Exchanging information and ideas*** Contribute to conversations and express ideas by asking and answering *yes-no* and *wh-* questions and responding using gestures, words, and simple phrases.<br><br>***2. Interacting via written English*** Collaborate with the teacher and peers on joint composing projects of short informational and literary texts that include minimal writing (labeling with a few words), using technology, where appropriate, for publishing, graphics, and the like.<br><br>***3. Offering opinions*** Offer opinions and ideas in conversations using a small set of learned phrases (e.g., *I think X*), as well as open responses.<br><br>***4. Adapting language choices*** No standard for kindergarten. | ***1. Exchanging information and ideas*** Contribute to class, group, and partner discussions by listening attentively, following turn-taking rules, and asking and answering questions.<br><br>***2. Interacting via written English***<br><br>Collaborate with the teacher and peers on joint composing projects of informational and literary texts that include some writing (e.g., short sentences), using technology, where appropriate, for publishing, graphics, and the like.<br><br>***3. Offering opinions***<br><br>Offer opinions in conversations using an expanded set of learned phrases (e.g., *I think/don't think X. I agree with X*), as well as open responses, in order to gain and/or hold the door.<br><br>***4. Adapting language choices*** No standard for kindergarten. | ***1. Exchanging information and ideas*** Contribute to class, group, and partner discussions by listening attentively, following turn-taking rules, and asking and answering questions.<br><br>***2. Interacting via written English***<br><br>Collaborate with the teacher and peers on joint composing projects of informational and literary texts that include a greater amount of writing (e.g., a very short story), using technology, where appropriate, for publishing, graphics, and the like.<br><br>***3. Offering opinions***<br><br>Offer opinions in conversations using an expanded set of learned phrases (e.g., *I think/don't think X. I agree with X, but . . .*), as well as open responses, in order to gain and/or hold the door or add information to an idea.<br><br>***4. Adapting language choices*** No standard for kindergarten. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging → |
|---|---|---|---|
| **Part I, strands 5–8, corresponding**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | ***5. Listening actively***<br><br>Demonstrate active listening to read alouds and oral presentations by asking and answering *yes-no* and *wh-* questions with oral sentence frames and substantial prompting and support.<br><br>***6. Reading/viewing***<br><br>Describe ideas, phenomena (e.g., parts of a plant), and text elements (e.g., characters) based on understanding of a select set of grade-level texts and viewing of multimedia, with substantial support.<br><br>***7. Evaluating language***<br>Describe the language an author uses to present an idea (e.g., the words and phrases used when a character is introduced), with prompting and substantial support.<br><br>***8. Analyzing language***<br><br>Distinguish how two different frequently used words (e.g., describing an action with the verb *walk* versus *run*) produce a different effect. | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations by asking and answering questions with oral sentence frames and occasional prompting and support.<br><br>***6. Reading/viewing closely***<br><br>Describe ideas, phenomena (e.g., how butterflies eat), and text elements (e.g., setting, characters) in greater detail based on understanding of a variety of grade-level texts and viewing of multimedia, with moderate support.<br><br>***7. Evaluating language choices***<br><br>Describe the language an author uses to present an idea (e.g., the adjectives used to describe a character), with prompting and moderate support.<br><br>***8. Analyzing language choices***<br><br>Distinguish how two different words with similar meaning (e.g., describing an action as *walk* versus *march*). | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations by asking and answering detailed questions, with minimal prompting and light support.<br><br>***6. Reading/viewing closely***<br><br>Describe ideas, phenomena (e.g., insect metamorphosis), and text elements (e.g., major events, characters, setting) using key details based on understanding of a variety of grade-level texts and viewing of multimedia, with light support.<br><br>***7. Evaluating language choices***<br><br>Describe the language an author uses to present or support an idea (e.g., the vocabulary used to describe people and places), with prompting and light support.<br><br>***8. Analyzing language choices***<br><br>Distinguish how multiple different words with similar meaning (e.g., *walk, march, strut, prance*). |

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA**<br><br>9. SL.K.4–6; L.K.1, 6<br><br>10. W.K.1-3, 5–8; L.K.1–2, 6<br><br>11. W.K.1; SL.K.4, 6; L.K.1–2, 6<br><br>12. W.K.5; SL.K.4, 6; L.K.1, 5–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br>**Literary text types include but are not** | ***9. Presenting***<br><br>Plan and deliver very brief oral presentations<br><br>(e.g., show and tell, describing a picture)<br><br>***10. Composing/Writing***<br>Draw, dictate, and write to compose very short literary texts (e.g., story) and informational texts (e.g., a description of a dog), using familiar vocabulary collaboratively in shared language activities with an adult (e.g., joint construction of texts), with peers, and sometimes<br><br>independently.<br><br>***11. Supporting opinions***<br>Offer opinions and provide good reasons (e.g., *My favorite book is X because X.*) referring to the text or to relevant back-<br><br>ground knowledge.<br><br>***12. Selecting language resources***<br>a. Retell texts and recount experiences | ***9. Presenting***<br><br>Plan and deliver brief oral presentations<br>on a variety of topics (e.g., show and tell,<br>author's chair, recounting an experience,<br>describing an animal).<br><br>***10. Composing/Writing***<br>Draw, dictate, and write to compose short literary texts (e.g., story) and informational texts (e.g., a description of dogs), collaboratively with an adult (e.g., joint construction of texts), with peers, and with increasing independence.<br><br>***11. Supporting opinions***<br>Offer opinions and provide good reasons and some textual evidence or relevant background knowledge (e.g., paraphrased examples<br>from text or knowledge of content).<br><br>***12. Selecting language resources***<br>a. Retell texts and recount | ***9. Presenting***<br><br>Plan and deliver longer oral presentations<br>on a variety of topics in a variety of content<br>areas (e.g., retelling a story, describing a<br>science experiment).<br><br>***10. Composing/Writing***<br>Draw, dictate, and write to compose longer literary texts (e.g., story) and informational texts (e.g., an information report on dogs), collaboratively with an adult (e.g., joint construction of texts), with peers, and independently using appropriate text organization.<br><br>***11. Supporting opinions***<br>Offer opinions and provide good reasons with detailed textual evidence or relevant background knowledge (e.g., specific examples from text or knowledge of content).<br><br>***12. Selecting language resources***<br>a. Retell texts and recount |

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| **limited to:**<br><br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audience include but are not limited to:**<br>Peers (one to one)<br><br>Small group (one to a group)<br><br>Whole group (one to many) | | using a select set of key words.<br><br>b. Use a select number of general academic and domain-specific words to add detail (e.g., adding the word *spicy* to<br><br>describe a favorite food, using the word<br><br>*larva* when explaining insect metamorphosis<br><br>while speaking and composing. | experiences<br>using complete sentences and key words.<br><br>b. Use a growing number of general academic and domain-specific words in order to add detail or to create shades of meaning<br><br>(e.g., using the word *scurry* versus *run*)<br>while speaking and composing. | experiences<br>using increasingly detailed complete<br><br>sentences and key words.<br><br>b. Use a wide variety of general academic and domain-specific words, synonyms, antonyms<br>and non-literal language to create<br><br>an effect (e.g., using the word *suddenly*<br>to signal a change) or to create shades of<br>meaning (e.g., The cat's fur was *as white as snow*) while speaking and composing. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
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| **Part II, strands 1–2, corresponding to the**<br><br>**CA CCSS for ELA/Literacy**<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying,<br><br>**Purposes for using language include but are not limited to:**<br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g.,<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | ***1. Understanding text structure***<br><br>Apply understanding of how text types<br>are organized (e.g., how a story is<br><br>organized by a sequence of events) to comprehending and composing texts<br><br>***2. Understanding cohesion***<br>Apply basic understanding of how ideas, events, or reasons are linked throughout a text using more everyday connecting words or phrases (e.g., *one time, then*) to comprehending texts and composing texts in shared language activities guided by the teacher, with peers, and sometimes independently. | ***1. Understanding text structure***<br><br>Apply understanding of how different text<br>types are organized to express ideas (e.g.,<br>how a story is organized sequentially with predictable stages versus how an informative text is organized by topic and details to comprehending tests in shared languages.<br><br>***2. Understanding cohesion***<br>Apply understanding of how ideas, events, or reasons are linked throughout a text using a growing number of connecting words or phrases (e.g., *next, after a long time*) to comprehending texts and composing texts in shared language activities guided by the teacher, collaboratively with peers, and with increasing independence. | ***1. Understanding text structure***<br><br>Apply understanding of how different text<br>types are organized predictably (e.g., a narrative test versus<br>an informative text versus an opinion text in shared languages.<br><br>***2. Understanding cohesion***<br>Apply understanding of how ideas, events, or reasons are linked throughout a text using a variety of connecting words or phrases (e.g., *first/second/third, once, at the end*) to comprehending texts and composing texts in shared language activities guided by the teacher, with peers, and independently. |

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
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| **Part II, strands 3–5, corresponding to the CA CCSS for ELA/Literacy**<br><br>3. W.K.5; SL.K.6; L.K.1, 6<br><br>4. W.K.5; SL.K.6; L.K.1, 6<br><br>5. W.K.5; SL.K.4, 6; L.K.1, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting,<br>analyzing, recounting, explaining,<br><br>persuading, negotiating, justifying,<br><br>evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:** | ***3. Using verbs and verb phrases***<br><br>a. Use frequently used verbs (e.g., go, eat, run) and verb types (e.g., doing, saying, being/having, thinking/feeling) in shared language activities guided by the teacher and with increasing independence.<br><br>b. Use simple verb tenses appropriate for the text type and discipline to convey time (e.g., simple past for recounting an experience) in shared language activities guided by the teacher and with increasing independence.<br><br>***4. Using nouns and noun phrases***<br>Expand noun phrases in simple ways (e.g., adding a familiar adjective to describe a noun) in order to enrich the meaning of sentences and add details about ideas, people, things, and so on, in shared language activities guided by the teacher and sometimes independently. | ***3. Using verbs and verb phrases***<br><br>a. Use a growing number of verbs and verb types (e.g., doing, saying, being/having, thinking/feeling) in shared language activities guided by the teacher and independently.<br><br>b. Use a growing number of verb tenses appropriate for the text type and discipline to convey time (e.g., simple past tense for retelling, simple present for a science description) in shared language activities guided by the teacher and independently.<br><br>***4. Using nouns and noun phrases***<br>Expand noun phrases in a growing number of ways (e.g., adding a newly learned adjective to a noun) in order to enrich the meaning of sentences and add details about ideas, people, things, and so on, in shared language activities guided by the teacher and with increasing independence. | ***3. Using verbs and verb phrases***<br><br>a. Use a wide variety of verbs and verb types (e.g., doing, saying, being/having, thinking/feeling) in shared language activities guided by the teacher and independently.<br><br>b. Use a wide variety of verb tenses appropriate for the text type and discipline to convey time (e.g., simple present for a science description, simple future to predict in shared language activities guided by the teacher and independently.<br><br>***4. Using nouns and noun phrases***<br>Expand noun phrases in a wide variety of ways (e.g., adding a variety of adjectives to noun phrases) in order to enrich the meaning of phrases/sentences and add details about ideas, people, things, and so on, in shared language activities guided by the teacher and independently. |

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| Stories (e.g., fantasy, legends, fables),<br><br>drama (e.g., readers' theater), poetry,<br><br>retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br><br>Small group (one to a group)<br><br>Whole group (one to many) | | ***5. Modifying to add details***<br><br>Expand sentences with frequently used<br>prepositional phrases (such as *in the house, on the boat*) to provide details (e.g., time, manner, place, cause) about<br>a familiar activity or process in shared<br><br>language activities guided by the teacher and sometimes independent. | ***5. Modifying to add details***<br><br>Expand sentences with prepositional<br><br>phrases to provide details (e.g., time, manner, place, cause) about a familiar or new activity or process in shared language<br>activities guided by the teacher and with increasing independence. | ***5. Modifying to add details***<br><br>Expand simple and compound sentences<br>with prepositional phrases to provide details (e.g., time, manner, place, cause) in shared language activities guided by the teacher and independently. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum | | | |
|---|---|---|---|---|
| | | → Emerging → | → Expanding → | → Bridging → |
| **Part II, strands 6–7, corresponding to the CA CCSS for ELA/Literacy**<br>6. W.K.1–3, 5; SL.K.4, 6; L.K.1, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***6. Connecting ideas***<br><br>Combine clauses in a few basic ways to make connections between and join ideas (e.g., creating compound sentences using *and, but, so*) in shared language activities guided by the teacher and sometimes independently.<br><br>***7. Condensing ideas***<br><br>No standard for kindergarten. | ***6. Connecting ideas***<br><br>Combine clauses in an increasing variety of ways to make connections between and join ideas, for example, to express cause/effect (e.g., *She jumped because the dog barked*) in shared language activities guided by the teacher and with increasing independence.<br><br>***7. Condensing ideas***<br><br>No standard for kindergarten. | ***6. Connecting ideas***<br><br>Combine clauses in a wide variety of ways (e.g., rearranging complete simple sentences to form compound sentences) to make connections between and join ideas (e.g., *The boy was hungry. The boy ate a sandwich.* → *The boy was hungry, so he ate a sandwich*) in shared language activities guided by the teacher and independently.<br><br>***7. Condensing ideas***<br><br>No standard for kindergarten. |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>**Part III: Using Foundational Literacy Skills** | |
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| **Foundational literacy skills in an alphabetic writing system**<br>● Print concepts<br>● Phonological awareness<br>● Phonics and word recognition<br>● Fluency | See chapter 6 for information on teaching foundational reading skills to English learners of various profiles based on age, native language, native language writing system, schooling experience, and literacy experience and proficiency. Some considerations are as follows:<br>● Native language and literacy (e.g., phoneme awareness or print concept skills in native language) should be assessed for potential transference to English language and literacy.<br>● Similarities between the native language and English should be highlighted (e.g., phonemes or letters that are the same in both languages).<br>● Differences between the native language and English should be highlighted (e.g., some phonemes in English may not exist in the student's native language; native language syntax may be different from English syntax). |

## GRADE 1

***Goal:*** English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing tasks, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.

***Critical Principles for Developing Language and Cognition in Academic Contexts:*** While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy* |
|---|---|
| **A. Collaborative** | |
| 1. Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics | • SL.1.1, 6; L.1.1, 6 |
| 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) | • W.1.6; L.1.1, 6 |
| 3. Offering and supporting opinions and negotiating with others in communicative exchanges | • SL.1.1, 6; L.1.1, 6 |
| 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) | • Not applicable at grade 1 |

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| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy |
|---|---|
| **B. Interpretive** | |
| 5. Listening actively to spoken English in a range of social and academic contexts | • SL.1.1–3 |
| 6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language | • RL.1.1–7, 9, 10; RI.1.1–7, 9–10; SL.1.2–3; L.1.4, 6 |
| 7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area | • RL.1.3–4, 6; RI.1.2, 6, 8; L.1.4–6 |
| 8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area | • RL.1.4–5; RI.1.4; L.1.4–6 |
| **C. Productive** | |
| 9. Expressing information and ideas in formal oral presentations on academic topics | • SL.1.4–6; L.1.1, 6 |
| 10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology | • W.1.1–3, 5–8; L.1.1–2, 6 |
| 11. Supporting own opinions and evaluating others' opinions in speaking and writing | • W.1.1; SL.1.4, 6; L.1.1–2, 6 |
| 12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas | • W.1.5; SL.1.4, 6; L.1.1, 5–6 |
| **Part II: Learning About How English Works** | **Corresponding CA CCSS for ELA/Literacy** |
| **A. Structuring Cohesive Texts** | |
| 1. Understanding text structure | • RL.1.5; RI.1.5; W.1.1–3, 5; SL.1.4 |
| 2. Understanding cohesion | • RL.1.5; RI.1.5; W.1.1–3, 5; SL.1.4; L.1.1 |
| **B. Expanding and Enriching Ideas** | |
| 3. Using verbs and verb phrases | • W.1.5; SL.1.6; L.1.1, 6 |
| 4. Using nouns and noun phrases | • W.1.5; SL.1.6; L.1.1, 6 |
| 5. Modifying to add details | • W.1.5; SL.1.4, 6; L.1.1, 6 |
| **C. Connecting and Condensing Ideas** | |
| 6. Connecting ideas | • W.1.1–3, 5; SL.1.4, 6; L.1.1, 6 |
| 7. Condensing ideas | • W.1.1–3, 5; SL.1.4, 6; L.1.1, 6 |
| **Part III: Using Foundational Literacy Skills** | RF.K-1.1–4 (as appropriate) |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|---|
| **Part I, strands 1–4**<br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | **A. Collaborative** | ***1. Exchanging information and ideas*** Contribute to conversations and express ideas by asking and answering *yes-no* and *wh-* questions and responding using gestures, words, and simple phrases.<br><br>***2. Interacting via written English*** Collaborate with teacher and peers on joint writing projects of short informational and literary texts, using technology where appropriate for publishing, graphics, and the like.<br><br>***3. Offering opinions***<br><br>Offer opinions and ideas in conversations using a small set of learned phrases (e.g., *I think X*), as well as open responses in order to gain and/or hold the floor. | ***1. Exchanging information and ideas*** Contribute to class, group, and partner discussions by listening attentively, following turn-taking rules, and asking and answering questions.<br><br>***2. Interacting via written English*** Collaborate with peers on joint writing projects of longer informational and literary texts, using technology where appropriate for publishing, graphics, and the like.<br><br>***3. Offering opinions***<br><br>Offer opinions and negotiate with others in conversations using an expanded set of learned phrases (e.g., *I think/don't think X. I agree with X*), as well as open responses in order to gain and/or hold the floor, elaborate on an idea, and so on. | ***1. Exchanging information and ideas*** Contribute to class, group, and partner discussions by listening attentively, following turn-taking rules, and asking and answering questions.<br><br>***2. Interacting via written English*** Collaborate with peers on joint writing projects of longer informational and literary texts, using technology where appropriate for publishing, graphics, and the like.<br><br>***3. Offering opinions***<br><br>Offer opinions and negotiate with others in conversations using an expanded set of learned phrases (e.g., *I think/don't think X. I agree with X*), and open responses in order to gain and/or hold the floor, elaborate on an idea, provide different opinions, and so on. |

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part I, strands 5–8**RL.1.1–7, 9, 10; RI.1.1–7,<br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater); poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | ***5. Listening actively***<br><br>Demonstrate active listening to read alouds and oral presentations by asking and answering *yes-no* and *wh-* questions with oral sentence frames and substantial prompting and support.<br><br>***6. Reading/viewing closely***<br><br>Describe ideas, phenomena (e.g., plant life cycle), and text elements (e.g., characters) based on understanding of a select set of grade-level texts and viewing of multimedia, with substantial support.<br><br>***7. Evaluating language choice***s Describe the language writers or speakers use to present an idea (e.g., the words and phrases used to describe a character), with prompting and substantial support.<br><br>***8. Analyzing language choice***s<br><br>Distinguish how two different frequently used words (e.g., *large* versus *small*) produce a different effect on the audience. | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations by asking and answering questions, with oral sentence frames and occasional prompting and support.<br><br>***6. Reading/viewing closely***<br><br>Describe ideas, phenomena (e.g., how earthworms eat), and text elements (e.g., setting, main idea) in greater detail based on understanding of a variety of grade-level texts and viewing of multimedia, with moderate support.<br><br>***7. Evaluating language choices***<br><br>Describe the language writers or speakers use to present or support an idea (e.g., the adjectives used to describe people and places), with prompting and moderate support.<br><br>***8. Analyzing language choices***<br><br>Distinguish how two different words with similar meaning (e.g., *large* versus *enormous*) produce shades of meaning and a different effect on the audience. | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations by asking and answering detailed questions, with minimal prompting and light support.<br><br>***6. Reading/viewing closely***<br><br>Describe ideas, phenomena (e.g., erosion), and text elements (e.g., central message, character traits) using key details based on understanding of a variety of grade-level texts and viewing of multimedia, with light support.<br><br>***7. Evaluating language choices***<br><br>Describe the language writers or speakers use to present or support an idea (e.g., the author's choice of vocabulary to portray characters, places, or real people) with prompting and light support.<br><br>***8. Analyzing language choices***<br><br>Distinguish how multiple different words with similar meaning produce shades of meaning and a different effect on the audience. |

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy**<br><br>9. SL.1.4–6; L.1.1, 6<br><br>10. W.1.1–3, 5-8; L.1.1–2, 6<br><br>11. W.1.1; SL.1.4, 6; L.1.1–2, 6<br><br>12. W.1.5; SL.1.4, 6; L.1.1, 5–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on. | ***9. Presenting***<br><br>Plan and deliver very brief oral presentations (e.g., show and tell, describing a picture)<br><br>***10. Writing***<br>Write very short literary texts (e.g., story) and informational texts (e.g., a description of an insect) using familiar vocabulary collaboratively with an adult (e.g., joint construction of texts), with peers, and sometimes independently.<br><br>***11. Supporting opinions***<br>Offer opinions and provide good reasons (e.g., *My favorite book is X because X*) referring to the text or to relevant background knowledge.<br><br>***12. Selecting language resources***<br>a. Retell texts and recount experiences, using key words.<br><br>b. Use a select number of general academic and domain-specific words to add detail (e.g., adding the word *scrumptious* to describe a favorite food, using the word *thorax* to refer to insect | ***9. Presenting***<br><br>Plan and deliver brief oral presentations on a variety of topics (e.g., show and tell, author's chair, recounting an experience, describing an animal, and the like).<br><br>***10. Writing***<br>Write short literary texts (e.g., a story) and informational texts (e.g., an informative text on the life cycle of an insect) collaboratively with an adult (e.g., joint construction of texts), with peers, and with increasing independence.<br><br>***11. Supporting opinions***<br>Offer opinions and provide good reasons and some textual evidence or relevant background knowledge (e.g., paraphrased examples from text or knowledge of content).<br><br>***12. Selecting language resources***<br>a. Retell texts and recount experiences, using complete sentences and key words.<br><br>b. Use a growing number of general academic and domain-specific words in order to add detail, create an effect (e.g., using the word *suddenly* to signal a change), or create shades of meaning | ***9. Presenting***<br><br>Plan and deliver longer oral presentations on a variety of topics in a variety of content areas (e.g., retelling a story, describing a science experiment).<br><br>***10. Writing***<br>Write longer literary texts (e.g., a story) and informational texts (e.g., an informative text on the life cycle of insects) collaboratively with an adult (e.g., joint construction), with peers, and independently.<br><br>***11. Supporting opinions***<br>Offer opinions and provide good reasons with detailed textual evidence or relevant background knowledge (e.g., specific examples from text or knowledge of content).<br><br>***12. Selecting language resources***<br>a. Retell texts and recount experiences, using increasingly detailed complete sentences and key words.<br><br>b. Use a wide variety of general academic and domain-specific words, synonyms, antonyms, and non-literal language (e.g., The dog was *as big as a house*) to create |

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| **Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | anatomy) while speaking and writing. | (e.g., *prance versus walk*) while speaking and writing. | an effect, precision, and shades of meaning while speaking and writing. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part II: Learning About How English Works**

| Texts and Discourse in Context | | ELD Proficiency Level Continuum → Emerging → Expanding → Bridging | | |
|---|---|---|---|---|
| **Part II, strands 1–2, corresponding to the CA CCSS for ELA/Literacy**<br><br>1. RL.1.5; RI.1.5; W.1.1–3, 5; SL.1.4<br><br>2. RL.1.5; RI.1.5; W.1.1–3, 5; SL.1.4; L.1.1 | | ***1. Understanding text structure***<br><br>Apply understanding of how text types are organized (e.g., how a story is organized by a sequence of events) to Comprehending texts and composing basic texts with substantial support (e.g., using drawings, through joint construction with a peer or teacher) to comprehending texts and writing texts in shared language activities guided by the teacher, with peers, and sometimes independently. | ***1. Understanding text structure***<br><br>Apply understanding of how different text types are organized to express ideas (e.g., how a story is organized sequentially with | ***1. Understanding text structure***<br><br>Apply understanding of how different text types are organized predictably to express ideas (e.g., how a story is organized versus |
| **Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on. | | | predictable stages versus how an informative text is organized by topic and details) to comprehending texts and writing texts in shared language activities guided by the teacher and with increasing independence. | an informative/ explanatory text versus an opinion text) to comprehending texts and writing texts in shared language activities guided by the teacher and independently. |

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| **Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***2. Understanding cohesion***<br>Apply basic understanding of how ideas, events, or reasons are linked throughout a text using more everyday connecting words or phrases (e.g., *one day, after, then*) to comprehending texts and writing texts in shared language activities guided by the teacher, with peers, and sometimes independently. | ***2. Understanding cohesion***<br>Apply understanding of how ideas, events, or reasons are linked throughout a text using a growing number of connecting words or phrases (e.g., *a long time ago, suddenly*) to comprehending texts and writing texts in shared language activities guided by the teacher and with increasing independence. | ***2. Understanding cohesion***<br>Apply understanding of how ideas, events, or reasons are linked throughout a text using a variety of connecting words or phrases (e.g., *for example, after that, first/ second/third*) to comprehending texts and writing texts in shared language activities guided by the teacher and independently. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part II: Learning About How English Works**

| **Texts and Discourse in Context** | | **ELD Proficiency Level Continuum** → **Emerging** → | → **Expanding** → | → **Bridging** → |
|---|---|---|---|---|
| **Part II, strands 3–5, corresponding to the CA CCSS for ELA/Literacy**<br><br>3. W.1.5; SL.1.6; L.1.1, 6<br><br>4. W.1.5; SL.1.6; L.1.1, 6<br><br>5. W.1.5; SL.1.4, 6; L.1.1, 6 | | ***3. Using verbs and verb phrases***<br><br>a. Use frequently used verbs (e.g., go, eat, run) and verb types (e.g., doing, saying, being/having, thinking/feeling) in shared language activities guided by the teacher | ***3. Using verbs and verb phrases***<br><br>a. Use a growing number of verbs and verb types (e.g., doing, saying, being/having, thinking/feeling) in shared language activities guided by the teacher and with increasing independence. | ***3. Using verbs and verb phrases***<br><br>a. Use a wide variety of verbs and verb types (e.g., doing, saying, being/having, thinking/feeling) in shared language activities guided by the teacher and |

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| **Purposes for using language include but are not limited to:**<br><br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining,<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | teacher and sometimes independently.<br>b. Use simple verb tenses appropriate for the text type and discipline to convey time (e.g., simple past for recounting an experience) in shared language activities guided by the teacher and sometimes independently.<br><br>***4. Using nouns and noun phrases***<br>Expand noun phrases in simple ways (e.g., adding a familiar adjective to describe a noun) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like, in shared language activities guided by the teacher and sometimes independently.<br><br>***5. Modifying to add details***<br>Expand sentences with frequently used prepositional phrases (such as *in the house, on the boat*) to provide details (e.g., time, manner, place, cause) about a familiar activity or process in shared language activities guided by the teacher and sometimes independently. | b. Use a growing number of verb tenses appropriate for the text type and discipline to convey time (e.g., simple past tense for retelling, simple present for a science description) in shared language activities guided by the teacher and with increasing independence.<br><br>***4. Using nouns and noun phrases***<br>Expand noun phrases in a growing number of ways (e.g., adding a newly learned adjective to a noun) to enrich the meaning of sentences and add details about ideas, people, things, and the like, in shared language activities guided by the teacher and with increasing independence.<br><br>***5. Modifying to add details***<br>Expand sentences with prepositional phrases to provide details (e.g., time, manner, place, cause) about a familiar or new activity or process in shared language activities guided by the teacher and with increasing independence. | independently.<br>b. Use a wide variety of verb tenses appropriate for the text type and discipline to convey time (e.g., simple present for a science description, simple future to predict in shared language activities guided by the teacher and independently.<br><br>***4. Using nouns and noun phrases***<br>Expand noun phrases in a wide variety of ways (e.g., adding a variety of adjectives to noun phrases) in order to enrich the meaning of phrases/ sentences and add details about ideas, people, things, and the like, in shared language activities guided by the teacher and independently.<br><br>***5. Modifying to add details***<br>Expand simple and compound sentences with prepositional phrases to provide details (e.g., time, manner, place, cause) in shared language activities guided by the teacher and independently. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part II, strands 6–7, corresponding to the CA CCSS for ELA/Literacy**<br><br>6. W.1.1–3, 5; SL.1.4, 6; L.1.1, 6<br><br>7. W.1.1–3, 5; SL.1.4, 6; L.1.1, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, | ***6. Connecting ideas***<br><br>Combine clauses in a few basic ways to make connections between and to join ideas (e.g., creating compound sentences using *and, but, so*) in shared language activities guided by the teacher and sometimes independently. | ***6. Connecting ideas***<br><br>Combine clauses in an increasing variety of ways to make connections between and to join ideas, for example, to express cause/effect (e.g., *She jumped because the dog barked*), in shared language activities guided by the teacher and with increasing independence. | ***6. Connecting ideas***<br><br>Combine clauses in a wide variety of ways (e.g., rearranging complete, simple-to-form compound sentences) to make connections between and to join ideas (e.g., *The boy was hungry. The boy ate a sandwich.* → *The boy was hungry, so he ate a sandwich*) in shared language activities guided by the teacher and independently. |

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| evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***7. Condensing ideas***<br>Condense clauses in simple ways (e.g., changing: *I like blue. I like red. I like purple* → *I like blue, red, and purple*) to create precise and detailed sentences in shared language activities guided by the teacher and sometimes independently. | ***7. Condensing ideas***<br>Condense clauses in a growing number of ways (e.g., through embedded clauses as in, *She's a doctor. She saved the animals.* → *She's the doctor who saved the animals*) to create precise and detailed sentences in shared language activities guided by the teacher and with increasing independence. | ***7. Condensing ideas***<br>Condense clauses in a variety of ways (e.g., through embedded clauses and other condensing, for example, through embedded clauses as in She's a doctor. *She's amazing. She saved the animals.* → *She's the amazing doctor who saved the animals*) to create precise and detailed sentences in shared language activities guided by the teacher and independently. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part III: Using Foundational Literacy Skills**

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|---|---|
| **Foundational literacy skills in an alphabetic writing system**<br>● Print concepts<br>● Phonological awareness<br>● Phonics and word recognition<br>● Fluency | See chapter 6 for information on teaching foundational reading skills to English learners of various profiles based on age, native language, native language writing system, schooling experience, and literacy experience and proficiency. Some considerations are as follows:<br>● Native language and literacy (e.g., phoneme awareness or print concept skills in native language) should be assessed for potential transference to English language and literacy.<br>● Similarities between the native language and English should be highlighted (e.g., phonemes or letters that are the same in both languages).<br>● Differences between the native language and English should be highlighted (e.g., some phonemes in English may not exist in the student's native language; native language syntax may be different from English syntax). |

## Grade 2 Overview

***Goal:*** English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing tasks, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.

***Critical Principles for Developing Language and Cognition in Academic Contexts:*** While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy* |
|---|---|
| **A. Collaborative** | |
| 1. Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics | • SL.2.1, 6; L.2.1, 3, 6 |
| 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) | • W.2.6; L.2.1, 3, 6 |
| 3. Offering and supporting opinions and negotiating with others in communicative exchanges | • SL.2.1, 6; L.2.1, 3, 6 |
| 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) | • W.2.4–5; SL.2.1, 6; L.2.1, 3, 6 |

*The California English Language Development Standards correspond to the California Common Core State Standards for English Language Arts and Literacy in History/Social Science and Technical Subjects (CA CCSS for ELA/Literacy). English learners should have full access to opportunities to learn ELA, mathematics, science, history/social studies, and other content at the same time they are progressing toward full proficiency in English.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy |
|---|---|
| **B. Interpretive**<br>5. Listening actively to spoken English in a range of social and academic contexts<br>6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language<br>7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area<br>8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area | • SL.2.1–3; L.2.3<br>• RL.2.1–7, 9–10; RI.2.1–7, 9–10; SL.2.2–3; L.2.3, 4, 6<br>• RL.2.3–4, 6; RI.2.2, 6, 8; SL.2.3; L.2.3–6<br>• RL.2.4–5; RI.2.4–5; SL.2.3; L.2.3–6 |
| **C. Productive**<br>9. Expressing information and ideas in formal oral presentations on academic topics<br>10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology<br>11. Supporting own opinions and evaluating others' opinions in speaking and writing<br>12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas | • SL.2.4–6; L.2.1, 3, 6<br>• W.2.1–8, 10; L.2.1–3, 6<br>• W.2.1, 4, 10; SL.2.4, 6; L.2.1–3, 6<br>• W.2.4–5; SL.2.4, 6; L.2.1, 3, 5–6 |
| **Part II: Learning About How English Works** | **Corresponding CA CCSS for ELA/Literacy** |
| **A. Structuring Cohesive Texts**<br>1. Understanding text structure<br>2. Understanding cohesion | • RL.2.5; RI.2.5; W.2.1–5; SL.2.4<br>• RL.2.5; RI.2.5; W.2.1–4; SL.2.4; L.2.1, 3 |
| **B. Expanding and Enriching Ideas**<br>3. Using verbs and verb phrases<br>4. Using nouns and noun phrases<br>5. Modifying to add details | • W.2.5; SL.2.6; L.2.1, 3, 6<br>• W.2.5; SL.2.6; L.2.1, 3, 6<br>• W.2.5; SL.2.4, 6; L.2.1, 3, 6 |

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| **C. Connecting and Condensing Ideas** | |
| 6. Connecting ideas | • W.2.1–3, 5; SL.2.4, 6; L.2.1, 3, 6 |
| 7. Condensing ideas | • W.2.1–3, 5; SL.2.4, 6; L.2.1, 3, 6 |
| **Part III: Using Foundational Literacy Skills** | RF.K–1.1–4; RF.2.3–4 (as appropriate) |

*Note:* **Examples** provided in specific standards are offered ***only as illustrative possibilities*** and should not be misinterpreted as the only objectives of instruction or as the only types of language that English learners might or should be able to understand or produce.

## Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts

### Part I: Interacting in Meaningful Ways

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|
| **Part I, strands 1–4, corresponding to the CA CCSS for ELA/Literacy**<br><br>1. SL.2.1, 6; L.2.1, 3, 6<br><br>2. W.2.6; L.2.1, 3, 6<br><br>3. SL.2.1, 6; L.2.1, 3, 6<br><br>4. W.2.4–5; SL.2.1, 6; L.2.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:** | ***1. Exchanging information and ideas***<br><br>Contribute to conversations and express ideas by asking and answering *yes-no* and *wh-* questions and responding using gestures, words, and learned phrases.<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of short informational and literary texts, using technology where appropriate for publishing, graphics, and the like. | ***1. Exchanging information and ideas***<br><br>Contribute to class, group, and partner discussions, including sustained dialogue, by listening attentively, following turn-taking rules, asking relevant questions, affirming others, and adding information<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of longer informational and literary texts, using technology where appropriate for publishing, graphics, and the like. | ***1. Exchanging information and ideas***<br><br>Contribute to class, group, and partner discussions, including sustained dialogue, by listening attentively, following turn-taking rules, asking relevant questions, affirming others, adding information<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of a variety of longer informational and literary texts, using technology where appropriate for publishing, graphics, and the like. |

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| Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something<br><br>happened), exposition (e.g., opinion), response<br>(e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***3. Offering opinions***<br>Offer opinions and negotiate with others in conversations using learned phrases (e.g., *I think X.*), as well as open responses, in order to gain and/or hold the floor.<br><br>***4. Adapting language choices***<br>Recognize that language choices (e.g., vocabulary) vary according to social setting (e.g., playground versus classroom), with substantial support from peers or<br>adults. | ***3. Offering opinions***<br>Offer opinions and negotiate with others in conversations using an expanded set of learned phrases (e.g., *I agree with X, but X.*), as well as open responses, in order to gain<br>and/or hold the floor, provide counterarguments and the like.<br><br>***4. Adapting language choices***<br>Adjust language choices (e.g., vocabulary, use of dialogue, and so on) according to purpose (e.g., persuading, entertaining), task, and audience (e.g., peers versus<br>adults), with moderate support from peers<br>or adults. | ***3. Offering opinions***<br>Offer opinions and negotiate with others in conversations using a variety of learned phrases (e.g., *That's a good idea, but X*), as well as open responses, in order to gain<br><br>and/or hold the floor, provide counterarguments<br>elaborate on an idea, and the like.<br><br>***4. Adapting language choices***<br>Adjust language choices according to purpose (e.g., persuading, entertaining), task, and audience (e.g., peer-to-peer versus peer-to-teacher), with light support from<br>peers or adults. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part I: Interacting in Meaningful Ways**

| **Texts and Discourse in Context** | | **ELD Proficiency Level Continuum** → **Emerging** → | → **Expanding** → | → **Bridging** → |
|---|---|---|---|---|
| **Part I, strands 5–8, corresponding to the**<br>**CA CCSS for ELA/Literacy**<br><br>5. SL.2.1–3; L.2.3 | | ***5. Listening actively***<br><br>Demonstrate active listening to read-<br><br>alouds and oral presentations by asking and answering | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations<br>by asking and | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations<br>by asking and |

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| 6. RL.2.1–7, 9–10; RI.2.1–7, 9–10;<br><br>SL.2.2–3; L.2.3, 4, 6<br><br>7. RL.2.3–4, 6; RI.2.2, 6, 8; SL.2.3;<br><br>L.2.3–6<br>8. RL.2.4–5; RI.2.4–5; SL.2.3; L.2.3–6<br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater); poetry; retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group) | **B. Interpretive** | basic questions, with<br><br>oral sentence frames and substantial prompting and support.<br><br>***6. Reading/viewing closely***<br>Describe ideas, phenomena (e.g., plant life cycle), and text elements (e.g., main idea, characters, events) based on understanding of a select set of grade-level texts and viewing of multimedia, with substantial support.<br><br>***7. Evaluating language choices***<br>Describe the language writers or speakers use to present an idea (e.g., the words and phrases used to describe a character), with prompting and substantial support.<br><br>***8. Analyzing language choices***<br>Distinguish how two different frequently used words (e.g., describing a character as *happy* versus *angry*) produce a different effect on the audience. | answering detailed questions, with oral<br><br>sentence frames and occasional prompting and support.<br><br>***6. Reading/viewing closely***<br>Describe ideas, phenomena (e.g., how earthworms eat), and text elements (e.g., setting, events) in greater detail based on understanding of a variety of grade-level texts and viewing of multimedia, with moderate support.<br><br>***7. Evaluating language choices***<br>Describe the language writers or speakers use to present or support an idea (e.g., the author's choice of vocabulary or phrasing to portray characters, places, or real people), with prompting and moderate support.<br><br>***8. Analyzing language choices***<br>Distinguish how two different words with similar meaning (e.g., describing a character as *happy* versus *ecstatic*) produce shades of meaning and different effects on the audience. | answering detailed questions, with minimal prompting and light support.<br><br>***6. Reading/viewing closely***<br>Describe ideas, phenomena (e.g., erosion), and text elements (e.g., central message, character traits) using key details based on understanding of a variety of grade-level texts and viewing of multimedia, with light support.<br><br>***7. Evaluating language choices***<br>Describe how well writers or speakers use specific language resources to support an opinion or present an idea (e.g., whether the vocabulary used to present evidence is strong enough), with light support.<br><br>***8. Analyzing language choices***<br>Distinguish how multiple different words with similar meaning (e.g., *pleased versus happy versus ecstatic, heard* or *knew* versus *believed*) produce shades of meaning and different effects on the audience. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy**<br><br>9. SL.2.4–6; L.2.1, 3, 6<br><br>10. W.2.1-8, 10; L.2.1–3, 6<br><br>11. W.2.1, 4, 10; SL.2.4, 6; L.2.1–3, 6<br><br>12. W.2.4–5; SL.2.4, 6; L.2.1, 3, 5–6<br><br>**Purposes for using language include but are not limited to:**<br><br>Describing, entertaining, informing, interpreting analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., | ***9. Presenting***<br><br>Plan and deliver very brief oral presentations (e.g., recounting an experience, retelling a story, describing a picture).<br><br>***10. Writing***<br>Write very short literary texts (e.g., story) and informational texts (e.g., descriptions of a volcano) using familiar vocabulary collaboratively with an adult (e.g., joint construction of texts), with peers, and sometimes independently.<br><br>***11. Supporting opinions***<br>Support opinions by providing good reasons and some textual evidence or relevant background knowledge (e.g., referring to textual evidence | ***9. Presenting***<br><br>Plan and deliver brief oral presentations on a variety of topics (e.g., retelling a story, describing an animal).<br><br>***10. Writing***<br>Write short literary texts (e.g., a story) and informational texts (e.g., an explanatory text explaining how a volcano erupts) collaboratively with an adult (e.g., joint construction of texts), with peers, and with increasing independence.<br><br>***11. Supporting opinions***<br>Support opinions by providing good reasons and increasingly detailed textual evidence (e.g., providing examples from the text) or relevant background | ***9. Presenting***<br><br>Plan and deliver longer oral presentations on a variety of topics and content areas (e.g., retelling a story, recounting a science experiment, describing how to solve a mathematics problem).<br><br>***10. Writing***<br>Write longer literary texts (e.g., a story) and informational texts (e.g., an explanatory text explaining how a volcano erupts) collaboratively with an adult (e.g., joint construction with peers and independently.<br><br>***11. Supporting opinions***<br>Support opinions or persuade others by providing good reasons and detailed textual evidence (e.g., specific events or graphics from text) |

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| science or history report),<br><br>Explanation.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***12. Selecting language resources***<br>a. Retell texts and recount experiences by using key words.<br><br>b. Use a select number of general academic and domain-specific words to add detail (e.g., adding the word *generous to describe character* using the word lava to explain volcanic eruptions. | ***12. Selecting language resources***<br>a. Retell texts and recount experiences using complete sentences and key words.<br><br>b. Use a growing number of general academic and domain-specific words in order to add detail, create an effect (e.g., using the word *suddenly* to signal a change), or create shades of meaning (e.g., *scurry* versus *dash*) while speaking and writing. | ***12. Selecting language resources***<br>a. Retell texts and recount experiences using increasingly detailed complete sentences and key words.<br><br>b. Use a wide variety of general academic and domain-specific words, synonyms, antonyms, and non-literal language (e.g., He was *as quick as a cricket*) to create an effect, precision, and shades of meaning while speaking and writing. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part II: Learning About How English Works**

| Texts and Discourse in Context | | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|---|
| **Part II, strands 1–2, corresponding to the CA CCSS for ELA/Literacy** | | ***1. Understanding text structure***<br>Apply understanding of how different | ***1. Understanding text structure***<br>Apply understanding of how different text | ***1. Understanding text structure***<br>Apply understanding of how different text |

| | | | | |
|---|---|---|---|---|
| 1. RL.2.5; RI.2.5; W.2.1–5; SL.2.4<br><br>2. RL.2.5; RI.2.5; W.2.1–4; SL.2.4;<br><br>L.2.1, 3<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting<br>analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | text types are organized to express ideas<br>(e.g., how a story is organized sequentially<br>to comprehending and composing texts in shared language<br>activities guided by the teacher, with peers, and sometimes independently.<br><br>***2. Understanding cohesion***<br>Apply basic understanding of how ideas, events, or reasons are linked throughout a text using more everyday connecting words or phrases (e.g., *today, then*) to comprehending and composing texts in shared language activities guided by the teacher, with peers, and sometimes independently. | types are organized to express ideas (e.g.,<br>how a story is organized sequentially with<br>predictable stages versus how an information report is organized<br>by topic and details) to comprehending texts and composing texts with increasing independence<br><br>***2. Understanding cohesion***<br>Apply understanding of how ideas, events, or reasons are linked throughout a text using a growing number of connecting words or phrases (e.g., *after a long time, first/ next*) to comprehending texts and writing texts with increasing independence. | types are organized predictably to express<br>ideas (e.g., a narrative versus an<br><br>informative/explanatory text versus an<br><br>opinion text) to comprehending and writing texts independently.<br><br>***2. Understanding cohesion***<br>Apply understanding of how ideas, events, or reasons are linked throughout a text using a variety of connecting words or phrases (e.g., *for example, after that, suddenly*) to comprehending and writing texts independently. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part II, strands 3–5, corresponding to the CA CCSS for ELA/Literacy**<br><br>3. W.2.5; SL.2.6; L.2.1, 3, 6<br><br>4. W.2.5; SL.2.6; L.2.1, 3, 6<br><br>5. W.2.5; SL.2.4, 6; L.2.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br><br>Describing, entertaining, informing, interpreting, analyzing recounting, explaining, persuading, negotiating, justifying, evaluating, and so on. | ***3. Using verbs and verb phrases***<br><br>a. Use frequently used verbs (e.g., walk, run) and verb types (e.g., doing, saying, being/having, thinking/feeling) in shared language activities guided by the teacher and sometimes independently.<br><br>b. Use simple verb tenses appropriate to the text type and discipline to convey time (e.g., simple past tense for recounting experience | ***3. Using verbs and verb phrases***<br><br>a. Use a growing number of verb types (e.g., doing, saying, being/having, thinking/feeling) with increasing independence.<br><br>b. Use a growing number of verb tenses appropriate to the text type and discipline to convey time (e.g., simple past tense for retelling, simple present for a science description) with increasing independence. | ***3. Using verbs and verb phrases***<br><br>a. Use a variety of verb types (e.g., doing, saying, being/having, thinking/feeling) independently.<br><br>b. Use a wide variety of verb tenses appropriate to the text type and discipline to convey time (e.g., simple present tense for a science description, simple future to predict) independently. |

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| **Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedures (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br>**Literary text types include but are not limited to:**<br><br>Stories (e.g., fantasy, legends, fables),<br>drama (e.g., readers' theater); poetry,<br>retelling a story, and so on.<br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | activities guided by the teacher and sometimes independently.<br><br>***4. Using nouns and noun phrases***<br><br>Expand noun phrases in simple ways (e.g., adding a familiar adjective to describe a noun) in order to enrich the meaning of sentences and to add details about ideas, people, things, and the like, in shared language activities guided by the teacher and sometimes independently.<br><br>***5. Modifying to add details***<br><br>Expand sentences with frequently used adverbials (e.g., prepositional phrases, such as *at school, with my friend*) to provide details (e.g., time, manner, place, cause) about a familiar activity or process in shared language activities guided by the teacher and sometimes independently. | ***4. Using nouns and noun phrases***<br>Expand noun phrases in a growing number of ways (e.g., adding a newly learned adjective to a noun) in order to enrich the meaning of sentences and to add details about ideas, people, things, and the like, with increasing independence.<br><br>***5. Modifying to add details***<br>Expand sentences with a growing number of adverbials (e.g., adverbs, prepositional phrases) to provide details (e.g., time, manner, place, cause) about a familiar or new activity or process with increasing independence. | ***4. Using nouns and noun phrases***<br><br>Expand noun phrases in a variety of ways (e.g., adding comparative/superlative adjectives to nouns) in order to enrich the meaning of phrases/sentences and to add details about ideas, people, things, and the like, independently<br><br>***5. Modifying to add details***<br><br>Expand sentences with:<br><br>(e.g., adverbs, adverb phrases, prep-<br><br>to provide details |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|
| **Part II, strands 6–7, corresponding to the CA CCSS for ELA/Literacy**<br><br>6. W.2.1–3, 5; SL.2.4, 6; L.2.1, 3, 6<br><br>7. W.2.1–3, 5; SL.2.4, 6; L.2.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining,<br>persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on. | ***6. Connecting ideas***<br><br>Combine clauses in a few basic ways to make connections between and to join ideas (e.g., creating compound sentences using *and, but, so*) in shared language activities guided by the teacher and sometimes independently.<br><br>***7. Condensing ideas***<br>Condense clauses in simple ways (e.g., changing: *It's green. It's red.* → *It's green and red*) to create precise and detailed sentences in shared language activities guided by the teacher and sometimes independently. | ***6. Connecting ideas***<br><br>Combine clauses in an increasing variety of ways to make connections between and to join ideas, for example, to express cause/effect (e.g., *She jumped because the dog barked*) with increasing independence.<br><br>***7. Condensing ideas***<br>Condense clauses in a growing number of ways (e.g., through embedded clauses as in, *It's a plant. It's found in the rain forest.* → *It's a green and red plant that's found in the rain forest*) to create precise and detailed sentences with increasing independence. | ***6. Connecting ideas***<br><br>Combine clauses in a wide variety of ways (e.g., rearranging complete simple to form compound sentences) to make connections between and to join ideas (e.g., *The boy was hungry. The boy ate a sandwich.* → *The boy was hungry, so he ate a sandwich*) independently.<br><br>***7. Condensing ideas***<br>Condense clauses in a variety of ways (e.g., through embedded clauses and other condensing as in, *It's a plant. It's green and red. It's found in the tropical rain forest.* → *It's a green and red plant that's found in the tropical rain forest*) to create precise and detailed sentences independently. |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>**Part III: Using Foundational Literacy Skills** | |
|---|---|
| **Foundational literacy skills in an alphabetic writing system**<br>● Print concepts<br>● Phonological awareness<br>● Phonics and word recognition<br>● Fluency | See chapter 6 for information on teaching foundational reading skills to English learners of various profiles based on age, native language, native language writing system, schooling experience, and literacy experience and proficiency . Some considerations are as follows:<br>● Native language and literacy (e.g., phoneme awareness or print concept skills in native language) should be assessed for potential transference to English language and literacy.<br>● Similarities between the native language and English should be highlighted (e.g., phonemes or letters that are the same in both languages).<br>● Differences between the native language and English should be highlighted (e.g., some phonemes in English may not exist in the student's native language; native language syntax may be different from English syntax). |

## Grade 3 Overview

***Goal:*** English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and also to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing tasks, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.

***Critical Principles for Developing Language and Cognition in Academic Contexts:*** While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy* |
|---|---|
| **A. Collaborative** | |
| 1. Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics | • SL.3.1, 6; L.3.1, 3, 6 |
| 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) | • W.3.6; L.3.1, 3, 6 |
| 3. Offering and supporting opinions and negotiating with others in communicative exchanges | • SL.3.1, 6; L.3.1, 3, 6 |
| 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) | • W.3.4–5; SL.3.1, 6; L.3.1, 3, 6 |

*The California English Language Development Standards correspond to the California Common Core State Standards for English Language Arts and Literacy in History/Social Science and Technical Subjects (CA CCSS for ELA/Literacy). English learners should have full access to opportunities to learn ELA, mathematics, science, history/social studies, and other content at the same time they are progressing toward full proficiency in English.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy |
|---|---|
| **B. Interpretive**<br>5. Listening actively to spoken English in a range of social and academic contexts<br>6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language<br>7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area<br>8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area | • SL.3.1–3; L.3.3<br>• RL.3.1–7,9–10; RI.3.1–7,9-10; SL.3.2–3; L.3.3, 4, 6<br>• RL.3.3–4, 6; RI.3.2, 6, 8; SL.3.3; L.3.3–6<br>• RL.3.4–5; RI.3.4–5; SL.3.3; L.3.3–6 |
| **C. Productive**<br>9. Expressing information and ideas in formal oral presentations on academic topics<br>10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology<br>11. Supporting own opinions and evaluating others' opinions in speaking and writing<br>12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas | • SL.3.4–6; L.3.1, 3, 6<br>• W.3.1–8, 10; L.3.1–3, 6<br>• W.3.1, 4, 10; SL.3.4, 6; L.3.1–3, 6<br>• W.3.4–5; SL.3.4, 6; L.3.1, 3, 5–6 |
| **Part II: Learning About How English Works** | **Corresponding CA CCSS for ELA/Literacy** |
| **A. Structuring Cohesive Texts**<br>1. Understanding text structure<br>2. Understanding cohesion | • RL.3.5; RI.3.5; W.3.1–5; SL.3.4<br>• RL.3.5; RI.3.5; W.3.1–4; SL.3.4; L.3.1, 3 |
| **B. Expanding and Enriching Ideas**<br>3. Using verbs and verb phrases<br>4. Using nouns and noun phrases<br>5. Modifying to add details | • W.3.5; SL.3.6; L.3.1, 3, 6<br>• W.3.5; SL.3.6; L.3.1, 3, 6<br>• W.3.5; SL.3.4, 6; L.3.1, 3, 6 |

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| **C. Connecting and Condensing Ideas** | |
| 6. Connecting ideas | • W.3.1-3, 5; SL.3.4, 6; L.3.1, 3, 6 |
| 7. Condensing ideas | • W.3.1-3, 5; SL.3.4, 6; L.3.1, 3, 6 |
| **Part III: Using Foundational Literacy Skills** | RF.K–3.1–4 (as appropriate) |

*Note:* **Examples** provided in specific standards are offered ***only as illustrative possibilities*** and should not be misinterpreted as the only objectives of instruction or as the only types of language that English learners might or should be able to understand or produce.

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part I: Interacting in Meaningful Ways**

| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** | | |
|---|---|---|---|
| | **→ Emerging →** | **→ Expanding →** | **→ Bridging →** |
| **Part I, strands 1–4, corresponding to the CA CCSS for ELA**<br><br>1. SL.3.1,6; L.3.1, 3, 6<br><br>2. W.3.6; L.3.1, 3, 6<br><br>3. SL.3.1,6; L.3.1, 3, 6<br><br>4. W.3.4–5; SL.3.1, 6; L.3.1, 3, 6<br><br>**Purposes for using language include but not limited to:** | ***1. Exchanging information and ideas***<br><br>Contribute to conversations and express<br><br>ideas by asking and answering *yes-no*<br><br>and *wh*- questions and responding using<br>short phrases. | ***1. Exchanging information and ideas***<br><br>Contribute to class, group, and partner discussions including sustained dialogue following turn-taking rules, asking relevant questions, affirming others, and adding relevant information. | ***1. Exchanging information and ideas***<br><br>Contribute to class, group, and partner discussions including sustained<br><br>dialogue, by following turn-taking rules, asking relevant questions, affirming others, adding relevant information, building on responses, and providing useful feedback. |

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| Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response<br>(e.g., literary analysis), and so on.<br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of short informational and literary texts, using technology where appropriate for publishing, graphics, and<br>the like.<br><br>***3. Offering opinions***<br>Offer opinions and negotiate with others in conversations using basic learned phrases (e.g., *I think . . .*), as well as open responses in order to gain and/or hold the door.<br><br>***4. Adapting language choices***<br>Recognize that language choices (e.g., vocabulary) vary according to social setting (e.g., playground versus classroom), with substantial support from peers or adults. | ***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of longer informational and literary texts, using technology where appropriate for publishing, graphics, and the like.<br><br>***3. Offering opinions***<br>Offer opinions and negotiate with others in conversations using an expanded set of learned phrases (e.g., *I agree with X, and . . .*), as well as open responses in order to gain and/or hold the door, provide counter-arguments, and the like.<br><br>***4. Adapting language choices***<br>Adjust language choices (e.g., vocabulary, use of dialogue, and the like) according to purpose (e.g., persuading, entertaining), social setting, and audience (e.g., peers versus adults), with moderate support from<br>peers or adults. | ***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of a variety of longer informational and literary texts, using technology where appropriate for publishing, graphics, and<br>the like.<br><br>***3. Offering opinions***<br>Offer opinions and negotiate with others in conversations using a variety of learned phrases (e.g., *That's a good idea, but . . .*), as well as open responses in order to gain and/or hold the door, provide counterarguments elaborate on an idea, and the like.<br><br>***4. Adapting language choices***<br>Adjust language choices according to purpose (e.g., persuading, entertaining), task, and audience (e.g., peer-to-peer versus peer-to-teacher), with light support from peers or adults. |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>Part I: Interacting in Meaningful Ways | | | | |
|---|---|---|---|---|
| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** | | | |
| | | → **Emerging** → | → **Expanding** → | → **Bridging** → |
| **Part I, strands 5–8, corresponding to the CA CCSS for ELA/Literacy:**<br><br>5. SL.3.1-3; L.3.3<br><br>6. RL.3.1–7, 9–10; RI.3.1–7, 9–10;<br><br>SL.3.2–3; L.3.3, 4, 6<br><br>7. RL.3.3–4, 6; RI.3.2, 6, 8; SL.3.3; L.3.3–6<br>8. RL.3.4–5; RI.3.4–5; SL.3.3; L.3.3–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report) | | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations by asking and answering basic questions, with prompting and substantial support.<br><br>***6. Reading/viewing closely***<br>Describe ideas, phenomena (e.g., insect metamorphosis), and text elements (e.g., main idea, characters, setting) based on understanding of a select set of grade-level texts and viewing of multimedia, with substantial support.<br><br>***7. Evaluating language choices***<br>Describe the language writers or speakers use to support an opinion or present an idea (e.g., by identifying the phrases or words in the text that provide evidence), with prompting and substantial support. | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations asking and answering detailed questions, with occasional prompting and moderate support.<br><br>***6. Reading/viewing closely***<br>Describe ideas, phenomena (e.g., how cows digest food), and text elements (e.g., main idea, characters, events) in greater detail based on understanding of a variety of grade-level texts and viewing of multimedia, with moderate support.<br><br>***7. Evaluating language choices***<br>Describe the specific language writers or speakers use to present or support an idea (e.g., the specific vocabulary or phrasing used to provide evidence), with prompting and moderate support. | ***5. Listening actively***<br><br>Demonstrate active listening to read-alouds and oral presentations by asking and answering detailed questions, with minimal prompting and light support.<br><br>***6. Reading/viewing closely***<br>Describe ideas, phenomena (e.g., volcanic eruptions), and text elements (e.g., central message, character traits, major events) using key details based on understanding of a variety of grade-level texts and viewing of multimedia, with light support.<br><br>***7. Evaluating language choices***<br>Describe how well writers or speakers use specific language resources to support an opinion or present an idea (e.g., whether the vocabulary or phrasing used to provide evidence is strong enough), with light support. |

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| explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group) | | ***8. Analyzing language choices***<br>Distinguish how different words produce different effects on the audience (e.g., describing a character as *happy* versus *sad*). | ***8. Analyzing language choices***<br>Distinguish how different words with similar meanings (e.g., describing a character as *happy* versus *ecstatic*) produce shades of meaning and different effects on the audience. | ***8. Analyzing language choices***<br>Distinguish how multiple different words with similar meanings (e.g., *pleased* versus *happy* versus *ecstatic, heard* versus knew versus *believed*) produce shades of meaning and different effects on the audience. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part I: Interacting in Meaningful Ways**

| **Texts and Discourse in Context** | | **ELD Proficiency Level Continuum** → **Emerging** → | → **Expanding** → | → **Bridging** → |
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| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy:**<br>9. SL.3.4–6; L.3.1, 3, 6<br>10. W.3.1–8, 10; L.3.1–3,<br>11. W.3.1, 4, 10; SL.3.4, 6; L.3.1–3, 6 | | ***9. Presenting***<br>Plan and deliver very brief oral presentations (e.g., retelling a story, describing an animal, and the like). | ***9. Presenting***<br>Plan and deliver brief oral presentations on a variety of topics and content areas (e.g., retelling a story, explaining a science process, and the like). | ***9. Presenting***<br>Plan and deliver longer oral presentations on a variety of topics and content areas (e.g., retelling a story, explaining a science process or historical event, and the like). |

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| 12. W.3.4–5; SL.3.4, 6; L.3.1, 3, 5–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br><br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report),<br><br>explanation (e.g., how or why something<br>happened), exposition (e.g., opinion), response<br><br>**Literary text types include but are not**<br><br>**limited to:**<br><br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br><br>Small group (one to a group) | | ***10. Writing***<br>a. Write short literary and informational texts (e.g., a description of a flashlight) collaboratively (e.g., joint construction of texts with an adult or with peers) and sometimes independently.<br><br>b. Paraphrase texts<br><br>***11. Supporting opinions***<br><br>Support opinions by providing good<br><br>reasons and some textual evidence or<br><br>relevant background knowledge<br><br>(e.g., referring to textual evidence or<br><br>knowledge of content).<br><br>***12. Selecting language resources***<br>Use a select number of general academic and domain-specific words to add detail<br>(e.g., adding the word *dangerous* to<br><br>describe a place, using the word *habitat*<br>when describing animal behavior) | ***10. Writing***<br>a. Write longer literary and informational texts (e.g., an explanatory text on how flashlights work) collaboratively (e.g., joint construction of texts with an adult or with peers) and with increasing independence using appropriate text organization.<br><br>***11. Supporting opinions***<br><br>Support opinions by providing good reasons<br>and increasingly detailed textual evidence<br>(e.g., providing examples from the text) or<br>relevant background knowledge about the<br>content.<br><br>***12. Selecting language resources***<br>Use a growing number of general academic and domain-specific words in order to add<br>detail, create an effect (e.g., using the word<br>*suddenly* to signal a change), or create<br><br>shades of meaning (e.g., *scurry* versus | ***10. Writing***<br>a. Write longer and more detailed literary and informational texts (e.g., an explanatory text on how flashlights work) collaboratively (e.g., joint construction of texts with an adult or with peers) and independently using appropriate text organization and growing understanding of register.<br><br>b. Paraphrase texts and recount experiences using increasingly detailed complete sentences and key words from notes or graphic organizers.<br><br>***11. Supporting opinions***<br><br>Support opinions or persuade others<br><br>by providing good reasons and detailed<br><br>textual evidence (e.g., specific events or<br><br>graphics from text) or relevant background<br>knowledge about the content.<br><br>***12. Selecting language resources***<br>Use a wide variety of general academic and domain-specific words, synonyms,<br><br>antonyms, and non-literal language to<br><br>create an effect, precision, and shades of<br>meaning while speaking and writing. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part II, strands 1–2, corresponding to the CA CCSS for ELA/Literacy**<br><br>1. RL.3.5; RI.3.5; W.3.1–5; SL.3.4<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion) | ***1. Understanding text structure***<br><br>Apply understanding of how different text types are organized to express ideas (e.g., how a story is organized sequentially to comprehending texts<br><br>***2. Understanding cohesion***<br>a. Apply basic understanding of language | ***1. Understanding text structure***<br><br>Apply understanding of how different text types are organized to express ideas how a story is organized sequentially predictable stages) to comprehending<br><br>***2. Understanding cohesion***<br>a. Apply growing understanding of language | ***1. Understanding text structure***<br><br>Apply understanding of how different text types are organized to express ideas (e.g., how a story is organized sequentially with predictable stages versus how opinion/<br><br>***2. Understanding cohesion***<br>a. Apply increasing understanding of |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>Part II: Learning About How English Works | | | | |
|---|---|---|---|---|
| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** | | | |
| | → **Emerging** → | → **Expanding** → | → **Bridging** → | |
| **Part II, strands 3–5, corresponding to the**<br><br>**CA CCSS for ELA/Literacy**<br><br>3. W.3.5; SL.3.6; L.3.1, 3, 6<br><br>4. W.3.5; SL.3.6; L.3.1, 3, 6<br><br>5. W.3.5; SL.3.4, 6; L.3.1, 3, 6<br><br>**Purposes for using language include but are not limited to:** | | ***3. Using verbs and verb phrases***<br><br>Use frequently used verbs, different verb types (e.g., doing, saying, being/having, thinking/feeling), and verb tenses appropriate to the text type and to convey time (e.g., simple past for recounting an experience). | ***3. Using verbs and verb phrases***<br><br>Use a growing number of verb types (e.g., doing, saying, being/having, thinking/ feeling) and verb tenses appropriate to the text type and discipline to convey time (e.g., simple past for retelling, simple present for a science description). | ***3. Using verbs and verb phrases***<br><br>Use a variety of verb types (e.g., doing, saying, being/having, thinking/feeling) and verb tenses appropriate to the text type and discipline to convey time (e.g., simple present for a science description, simple future to predict). |

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| Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on. | | ***4. Using nouns and noun phrases***<br><br>Expand noun phrases in simple ways (e.g., adding an adjective to a noun) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>***5. Modifying to add details***<br><br>Expand sentences with adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details<br>(e.g., time, manner, place, cause, and the like) about a familiar activity or process (e.g., They walked *to the soccer field*). | ***4. Using nouns and noun phrases***<br><br>Expand noun phrases in a growing number of ways (e.g., adding comparative/superlative adjectives to nouns) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>***5. Modifying to add details***<br><br>Expand sentences with adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details (e.g., time, manner, place, cause, and the like) about a familiar or new activity or process (e.g., They worked *quietly;* they ran *across the soccer field*). | **4. Using nouns and noun phrases**<br><br>Expand noun phrases in a variety of ways (e.g., adding comparative/ superlative adjectives to noun phrases, simple clause embedding) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>**5. *Modifying to add details***<br><br>Expand sentences with adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details (e.g., time, manner, place, cause, and the like) about a range of familiar and new activities or processes (e.g., They worked *quietly all night in their room*). |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>Part II: Learning About How English Works | | | | |
|---|---|---|---|---|
| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** | | | |
| | | → **Emerging** → | → **Expanding** → | → **Bridging** → |
| **Part II, strands 6–7, corresponding to the CA CCSS for ELA/Literacy**<br><br>6. W.3.1-3,5; SL.3.4,6; L.3.1, 3, 6<br><br>7. W.3.1-3,5; SL.3.4,6; L.3.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on. | | ***6. Connecting ideas***<br><br>Combine clauses in a few basic ways to make connections between and join ideas (e.g., creating compound sentences using *and, but, so*).<br><br>***7. Condensing ideas***<br>Condense clauses in simple ways (e.g., changing: *It's green. It's red.* → *It's green and red*) to create precise and detailed sentences. | ***6. Connecting ideas***<br><br>Combine clauses in an increasing variety of ways (e.g., creating compound and complex sentences) to make connections between and join ideas, for example, to express cause/effect (e.g., *The deer ran because the mountain lion came*) or to make a concession (e.g., *She studied all night even though she wasn't feeling well*).<br><br>***7. Condensing ideas***<br>Condense clauses in a growing number of ways (e.g., through embedded clauses as in, *It's a plant. It's found in the rain forest.* → *It's a green and red plant that's found in the tropical rain forest*) to create precise and detailed sentences. | ***6. Connecting ideas***<br><br>Combine clauses in a wide variety of ways (e.g., creating compound and complex sentences) to make connections between and join ideas, for example, to express cause/effect (e.g., *The deer ran because the mountain lion approached them*), to make a concession (e.g., *She studied all night even though she wasn't feeling well*), or to link two ideas that happen at the same time (e.g., *The cubs played while their mother hunted*).<br><br>***7. Condensing ideas***<br>Condense clauses in a variety of ways (e.g., through embedded clauses and other condensing as in, *It's a plant. It's green and red. It's found in the tropical rain forest.* → *It's a green and red plant that's found in the tropical rain forest*) to create precise and detailed sentences. |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>**Part III: Using Foundational Literacy Skills** | |
|---|---|
| **Foundational literacy skills in an alphabetic writing system**<br>• Print concepts<br>• Phonological awareness<br>• Phonics and word recognition<br>• Fluency | See chapter 6 for information on teaching foundational reading skills to English learners of various profiles based on age, native language, native language writing system, schooling experience, and literacy experience and proficiency . Some considerations are as follows:<br>• Native language and literacy (e.g., phoneme awareness or print concept skills in native language) should be assessed for potential transference to English language and literacy.<br>• Similarities between the native language and English should be highlighted (e.g., phonemes or letters that are the same in both languages).<br>• Differences between the native language and English should be highlighted (e.g., some phonemes in English may not exist in the student's native language; native language syntax may be different from English syntax). |

# Grade 4 Overview

***Goal:*** English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and also to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing tasks, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.

***Critical Principles for Developing Language and Cognition in Academic Contexts:*** While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy* |
|---|---|
| **A. Collaborative** | |
| 1. Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics | SL.4.1, 6; L.4.1, 3, 6 |
| 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) | W.4.6; L.4.1, 3, 6 |
| 3. Offering and supporting opinions and negotiating with others in communicative exchanges | SL.4.1, 6; L.4.1, 3, 6 |
| 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) | W.4.4–5; SL.4.1, 6; L.4.1, 3, 6 |

*The California English Language Development Standards correspond to the California Common Core State Standards for English Language Arts and Literacy in History/Social Science and Technical Subjects (CA CCSS for ELA/Literacy). English learners should have full access to opportunities to learn ELA, mathematics, science, history/social studies, and other content at the same time they are progressing toward full proficiency in English.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy |
|---|---|
| **B. Interpretive**<br>5. Listening actively to spoken English in a range of social and academic contexts<br>6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language<br>7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area<br>8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area | • SL.4.1–3; L.4.3<br>• RL.4.1–7, 9–10; RI.4.1–7, 9–10; SL.4.2–3; L.4.3, 4, 6<br>• RL.4.3–4, 6; RI.4.2, 6, 8; SL.4.3; L.4.3–6<br>• RL.4.4–5; RI.4.4–5; SL.4.3; L.4.3–6 |
| **C. Productive**<br>9. Expressing information and ideas in formal oral presentations on academic topics<br>10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology<br>11. Supporting own opinions and evaluating others' opinions in speaking and writing<br>12. Selecting and applying varied and precise vocabulary and other language resources to effectively convey ideas | • SL.4.4–6; L.4.1, 3, 6<br>• W.4.1–10; L.4.1–3, 6<br>• W.4.1, 4, 9–10; SL.4.4, 6; L.4.1–3, 6<br>• W.4.4–5; SL.4.4, 6; L.4.1, 3, 5–6 |
| **Part II: Learning About How English Works** | **Corresponding CA CCSS for ELA/Literacy** |
| **A. Structuring Cohesive Texts**<br>1. Understanding text structure<br>2. Understanding cohesion | • RL.4.5; RI.4.5; W.4.1–5; SL.4.4<br>• RL.4.5; RI.4.5; W.4.1–4; SL.4.4; L.4.1, 3 |
| **B. Expanding and Enriching Ideas**<br>3. Using verbs and verb phrases<br>4. Using nouns and noun phrases<br>5. Modifying to add details | • W.4.5; SL.4.6; L.4.1, 3, 6<br>• W.4.5; SL.4.6; L.4.1, 3, 6<br>• W.4.5; SL.4.4, 6; L.4.1, 3, 6 |

| | |
|---|---|
| **C. Connecting and Condensing Ideas** | |
| 6. Connecting ideas | • W.4.1–3, 5; SL.4.4, 6; L.4.1, 3, 6 |
| 7. Condensing ideas | • W.4.1–3, 5; SL.4.4, 6; L.4.1, 3, 6 |
| **Part III: Using Foundational Literacy Skills** | RF.K–1.1–4; RF.2–4.3–4 (as appropriate) |

*Note:* **Examples** provided in specific standards are offered ***only as illustrative possibilities*** and should not be misinterpreted as the only objectives of instruction or as the only types of language that English learners might or should be able to understand or produce.

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part I, strands 1–4, corresponding to the CA CCSS for ELA/Literacy**<br><br>1. SL.4.1, 6; L.4.1, 3, 6<br>2. W.4.6; L.4.1, 3, 6<br>3. SL.4.1, 6; L.4.1, 3, 6<br>4. W.4.4–5; SL.4.1, 6; L.4.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on. | ***1. Exchanging information/ideas***<br>Contribute to conversations and express ideas by asking and answering *yes-no* and *wh*- questions and responding using short phrases.<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of short informational and literary texts, using technology where appropriate for publishing, graphics, and | ***1. Exchanging information/ideas***<br>Contribute to class, group, and partner discussions, including sustained dialogue, by following turn-taking rules, asking relevant questions<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of longer informational and literary texts, using technology where appropriate for publishing, graphics, and the like. | ***1. Exchanging information/ideas***<br>Contribute to class, group, and partner discussions by including sustained dialogue, by following turn-taking rules, asking relevant questions, affirming others, adding relevant information, building on responses, and providing useful feedback.<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of a variety of longer informational and literary texts, using technology where appropriate for publishing, graphics, and |

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| **Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened); exposition (e.g., opinion), response (e.g., literary analysis), and so on<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | the like.<br><br>***3. Offering opinions***<br>Negotiate with or persuade others in conversations using basic learned phrases (e.g., *I think . . .*), as well as open responses, in order to gain and/or hold the door.<br><br>***4. Adapting language choices***<br>Adjust language choices according to social setting (e.g., playground, classroom) and audience (e.g., peers, teacher), with substantial support. | ***3. Offering opinions***<br>Negotiate with or persuade others in conversations using an expanded set of learned phrases (e.g., *I agree with X, but . . .*), as well as open responses, in order to gain and/or hold the door, provide counterarguments, and so on.<br><br>***4. Adapting language choices*** Adjust language choices according to purpose (e.g., persuading, entertaining), task (e.g., telling a story versus explaining a science experiment), and audience, with moderate support. | the like.<br><br>***3. Offering opinions***<br>Negotiate with or persuade others in conversations using a variety of learned phrases (e.g., *That's a good idea. However, . . .*), as well as open responses, in order to gain and/or hold the door, provide counterarguments, elaborate on an idea,<br><br>and so on.<br><br>***4. Adapting language choices*** Adjust language choices according to purpose, task (e.g., facilitating a science experiment), and audience, with light support. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part I, strands 5–8, corresponding to the CA CCSS for ELA/Literacy:** | ***5. Listening actively***<br><br>Demonstrate active listening of read- | ***5. Listening actively***<br><br>Demonstrate active listening of read-alouds and oral presentations by asking and answering detailed questions, with | ***5. Listening actively***<br><br>Demonstrate active listening of read-alouds |

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| | | | occasional prompting and moderate support. | |
| 5. SL.4.1–3; L.4.3 | | alouds and oral presentations by asking and answering basic questions, with prompting and substantial support. | | and oral presentations by asking and |
| 6. RL.4.1–7, 9–10; RI.4.1–7, 9–10; SL.4.2–3; L.4.3, 4, 6 | | | | answering detailed questions, with minimal prompting and light support. |
| 7. RL.4.3–4, 6; RI.4.2, 6, 8; SL.4.3; L.4.3–6 | | ***6. Reading/viewing closely*** | ***6. Reading/viewing closely*** | ***6. Reading/viewing closely*** |
| 8. RL.4.4–5; RI.4.4–5; SL.4.3; L.4.3–6 | | a. Describe ideas, phenomena (e.g., volcanic eruptions), and text elements (main idea, characters, events, and the like) based on close reading of a select set of grade-level texts, with substantial support. | a. Describe ideas, phenomena (e.g., animal migration), and text elements (main idea, central message, and the like) in greater detail based on close reading of a variety of grade-level texts, with moderate support. b. Use knowledge of morphology (e.g., | a. Describe ideas, phenomena (e.g., pollination), and text elements (main idea, character traits, event sequence, and the like) in detail based on close reading of a variety of grade-level texts, with light support. |
| **Purposes for using language include but are not limited to:** Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on. | | b. Use knowledge of frequently used affixes (e.g., *un-, mis-*) and linguistic context, reference materials, and visual cues to determine the meaning of unknown words on familiar topics. | affixes, roots, and base words), linguistic context, and reference materials to determine the meaning of unknown words on familiar topics. | b. Use knowledge of morphology (e.g., affixes, roots, and base words) and linguistic context to determine the meaning of unknown and multiple-meaning words on familiar and new topics. |
| **Informational text types include but are not limited to:** Description (e.g., science log entry), procedures (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response | | ***7. Evaluating language choices*** Describe the specific language writers or speakers use to present or support an idea (e.g., the specific vocabulary or phrasing used to provide evidence), with prompting and substantial support. | ***7. Evaluating language choices*** Describe how well writers or speakers use specific language resources to support an opinion or present an idea (e.g., whether the vocabulary or phrasing used to provide evidence is strong enough), with prompting | ***7. Evaluating language choices*** Describe how well writers and speakers use specific language resources to support an opinion or present an idea (e.g., the clarity or appealing nature of language used to present evidence), with prompting and light |

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| **Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br><br>Small group (one to a group)<br>Whole group (one to many) | | ***8. Analyzing language choices***<br>Distinguish how different words with similar meanings produce different effects on the audience (e.g., describing a character) | ***8. Analyzing language choices***<br>Distinguish how different words with similar meanings (e.g., describing a character as *smart* versus *an expert*) and figurative language (e.g., *as big as a whale*) produce shades of meaning and different effects on the audience. | ***8. Analyzing language choices***<br>Distinguish how different words with related meanings (e.g., *fun* versus *entertaining* versus *thrilling, possibly* versus *certainly*) and figurative language produce shades of meaning and different effects on the audience. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|---|
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy**<br><br>9. SL.4.4–6; L.4.1, 3, 6<br><br>10. W.4.1–10; L.4.1–3, 6<br><br>11. W.4.1,4, 9–10; SL.4.4, 6; L.4.1–3, 6<br><br>12. W.4.4–5; SL.4.4, 6; L.4.1, 3, 5–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing | | ***9. Presenting***<br>Plan and deliver brief oral presentations on a variety of topics and content areas (e.g., retelling a story, explaining a science process, reporting on a current event, recounting a memorable experience- and so on), with substantial support.<br><br>***10. Writing*** | ***9. Presenting***<br>Plan and deliver longer oral presentations on a variety of topics and content areas (e.g., retelling a story, explaining a science process, reporting on a current event, recounting a memorable experience, and so on), with moderate support.<br><br>***10. Writing*** | ***9. Presenting***<br>Plan and deliver oral presentations on a variety of topics in a variety of content areas (e.g., retelling a story, explaining a science process, reporting on a current event, recounting a memorable experience, and so on), with light support.<br><br>***10. Writing*** |

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| **Informational text types include but are not limited to:**<br><br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on. | | a. Write short literary and informational texts (e.g., a description of a flashlight) collaboratively (e.g., joint construction of texts with an adult or with peers) and sometimes independently.<br>b. Write brief summaries of texts and experiences using complete sentences and key words (e.g., from notes or graphic organizers).<br><br>***11. Supporting opinions*** | a. Write longer literary and informational texts (e.g., an explanatory text on how flashlights work) collaboratively (e.g., joint construction of texts with an adult or with peers) and with increasing independence using appropriate text organization.<br>b. Write increasingly concise summaries of texts and experiences using complete sentences and key words (e.g., from notes or graphic organizers).<br><br>***11. Supporting opinions*** | a. Write longer and more detailed literary and informational texts (e.g., an explanatory text on how flashlights work) collaboratively (e.g., joint construction of texts with an adult or with peers) and independently using appropriate text organization and growing understanding of register.<br>b. Write clear and coherent summaries of texts and experiences using complete and concise sentences and key words (e.g., from notes or graphic organizers).<br><br>***11. Supporting opinions*** |

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| **Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | a. Support opinions by expressing appropriate/accurate reasons using textual evidence (e.g., referring to text) or relevant background knowledge about content, with substantial support.<br><br>b. Express ideas and opinions or temper statements using basic modal expressions (e.g., *can, will, maybe*). | a Support opinions or persuade others by expressing appropriate/accurate reasons using some textual evidence (e.g., paraphrasing facts) or relevant background knowledge about content, with moderate support.<br><br>b. Express attitude and opinions or temper statements with familiar modal expressions (e.g., *maybe/probably, can/must*). | a. Support opinions or persuade others by expressing appropriate/accurate reasons using detailed textual evidence (e.g., quotations or specific events from text) or relevant background knowledge about content, with light support.<br><br>b. Express attitude and opinions or temper statements with nuanced modal expressions |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>Part I: Interacting in Meaningful Ways | | | | |
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| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** | | | |
| | | → **Emerging** → | → **Expanding** → | → **Bridging** → |
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy**<br>9. SL.4.4–6; L.4.1, 3, 6<br>10. W.4.1–10; L.4.1–3, 6<br>11. W.4.1,4, 9–10; SL.4.4, 6; L.4.1–3, 6<br>12. W.4.4–5; SL.4.4, 6; L.4.1, 3, 5–6<br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report | **C. Productive** | ***12. Selecting language resources***<br>a. Use a select number of general academic and domain-specific words to create precision while speaking and writing.<br>b. Select a few frequently used affixes for accuracy and precision (e.g., She walks, I'm *un*happy). | ***12. Selecting language resources***<br>a. Use a growing number of general academic and domain-specific words, synonyms, and antonyms to create precision and shades of meaning while speaking and writing.<br>b. Select a growing number of frequently used affixes for accuracy and precision (e.g., She walk*ed*. He likes . . . , I'm *un*happy). | ***12. Selecting language resources***<br>a. Use a wide variety of general academic and domain-specific words, synonyms, antonyms, and figurative language to create precision and shades of meaning while speaking and writing.<br>b. Select a variety of appropriate affixes for accuracy and precision (e.g., She's walk*ing*.<br>I'm *un*comfortable. They left reluctant*ly*). |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>Part II: Learning About How English Works | | | | |
|---|---|---|---|---|
| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** | | | |
| | → **Emerging** → | | → **Expanding** → | → **Bridging** → |
| **Part II, strands 1–2, corresponding to the CA CCSS for ELA/Literacy**<br><br>1. RL.4.5; RI.4.5; W.4.1–5; SL.4.4<br><br>2. RL.4.5; RI.4.5; W.4.1–4; SL.4.4;<br><br>L.4.1, 3<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on. | | ***1. Understanding text structure***<br><br>Apply understanding of how different<br><br>text types are organized to express<br><br>ideas (e.g., how a narrative is organized<br>sequentially) to comprehending texts and<br><br>writing basic texts.<br><br>***2. Understanding cohesion***<br>a. Apply basic understanding of language | ***1. Understanding text structure***<br><br>Apply increasing understanding of how<br><br>different text types are organized to express<br>ideas (e.g., how a narrative is organized<br><br>sequentially with predictable stages versus<br><br>how an explanation is organized around ideas) to comprehending texts and writing texts with increasing cohesion.<br><br>***2. Understanding cohesion***<br>a. Apply growing understanding of language | ***1. Understanding text structure***<br><br>Apply understanding of how different text<br>types are organized to express ideas (e.g.,<br>how a narrative is organized sequentially<br>with predictable stages versus how opinions/arguments are structured logically, grouping related ideas) to comprehending texts and writing cohesive texts.<br><br>***2. Understanding cohesion***<br>a. Apply increasing understanding of |

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| **Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report); explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on. | | resources for referring the reader back or forward in text (e.g., how pronouns refer back to nouns in text) to comprehending texts and writing basic texts.<br><br>b. Apply basic understanding of how ideas, events, or reasons are linked throughout a text using everyday connecting words or phrases (e.g., *first, yesterday*) to comprehending texts and writing basic texts. | resources for referring the reader back or forward in text (e.g., how pronouns or synonyms refer back to nouns in text) to comprehending texts and writing texts with increasing cohesion.<br><br>b. Apply growing understanding of how ideas, events, or reasons are linked throughout a text using a variety of connecting words or phrases (e.g., *since, next, for example*) to comprehending texts and writing texts with increasing cohesion. | language resources for referring the reader back or forward in text (e.g., how pronouns, synonyms, or nominalizations refer back to nouns in text) to comprehending texts and writing cohesive texts.<br><br>b. Apply increasing understanding of how ideas, events, or reasons are linked throughout a text using an increasing variety of academic connecting and transitional words or phrases (e.g., *for instance, in addition, at the end*) to comprehending texts and writing cohesive texts. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part II: Learning About How English Works**

| Texts and Discourse in Context | | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|---|
| **Part II, strands 3–5, corresponding to the CA CCSS for ELA/Literacy**<br><br>3. W.4.5; SL.4.6; L.4.1, 3, 6<br><br>4. W.4.5; SL.4.6; L.4.1, 3, 6<br><br>5. W.4.5; SL.4.4,6; L.4.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, | | ***3. Using verbs and verb phrases***<br><br>Use various verbs/verb types (e.g., doing, saying, being/having, thinking/ feeling) and tenses appropriate to the text type and discipline (e.g., simple past for recounting an experience) for familiar topics. | ***3. Using verbs and verb phrases***<br><br>Use various verbs/verb types (e.g., doing, saying, being/having, thinking/feeling) and tenses appropriate to the task, text type, and discipline (e.g., simple past for retelling, timeless present for science explanation) for an increasing variety of familiar and new topics. | ***3. Using verbs and verb phrases***<br><br>Use various verbs/verb types (e.g., doing, saying, being/having, thinking/feeling) and tenses appropriate to the task and text type (e.g., timeless present for science explanation, mixture of past and present for historical information report) for a variety of familiar and new topics. |

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| analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables) | | ***4. Using nouns and noun phrases***<br><br>Expand noun phrases in simple ways (e.g., adding an adjective) in order to enrich the meaning of sentences and add details about ideas, people, things, and so on.<br><br>***5. Modifying to add details***<br><br>Expand sentences with familiar adverbials (e.g., basic prepositional phrases) to provide details (e.g., time, manner, place, cause, and so on) about a familiar activity or process *the soccer field*). | ***4. Using nouns and noun phrases***<br><br>Expand noun phrases in a variety of ways (e.g., adding adjectives to noun phrases or simple clause embedding) in order to enrich the meaning of sentences and add details about ideas, people, things, and so on.<br><br>***5. Modifying to add details***<br><br>Expand sentences with a growing variety of adverbials (e.g., adverbs, prepositional phrases) to provide details (e.g., time, manner, place, cause worked *quietly*. | ***4. Using nouns and noun phrases***<br><br>Expand noun phrases in an increasing variety of ways (e.g., adding general academic adjectives and adverbs to noun phrases or more complex clause embedding) in order to enrich the meaning of sentences and add details about ideas, people, things, and so on.<br><br>***5. Modifying to add details***<br><br>Expand sentences with a variety of adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details (e.g., time, manner, place, cause, and so on) about a variety activities and processes |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part II: Learning About How English Works**

| Texts and Discourse in Context | | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|---|
| **Part II, strands 6–7, corresponding to the CA CCSS for ELA/Literacy**<br><br>6. W.4.1-3, 5; SL.4.4, 6; L.4.1, 3, 6<br><br>7. W.4.1-3, 5; SL.4.4, 6; L.4.1, 3, 6 | | ***6. Connecting ideas***<br><br>Combine clauses in a few basic ways to make connections between and join ideas in sentences (e.g., creating | ***6. Connecting ideas***<br><br>Combine clauses in an increasing variety of ways (e.g., creating complex sentences using familiar subordinate conjunctions) to | ***6. Connecting ideas***<br><br>Combine clauses in a wide variety of ways (e.g., creating complex sentences using a variety of subordinate conjunctions) to |

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| **Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on. | | compound sentences using coordinate conjunctions, such as *and, but, so*).<br><br>***7. Condensing ideas***<br>Condense clauses in simple ways (e.g., through simple embedded clauses, as in, The woman is a doctor. She helps children. → The woman is a doctor *who helps children*) to create precise and detailed sentences. | make connections between and join ideas in sentences, for example, to express cause/ effect (e.g., *The deer ran because the mountain lion came*) or to make a concession (e.g., She studied all night *even though* she wasn't feeling well).<br><br>***7. Condensing ideas***<br>Condense clauses in an increasing variety of ways (e.g., through a growing number of embedded clauses and other condensing, as in, The dog ate quickly. The dog choked.<br>→ The dog ate so quickly *that it choked*) to create precise and detailed sentences. | make connections between and join ideas, for example, to express cause/effect (e.g., *Since the lion was at the waterhole, the deer ran away*), to make a concession, or to link two ideas that happen at the same time (e.g., *The cubs played while their mother hunted*).<br><br>***7. Condensing ideas***<br>Condense clauses in a variety of ways (e.g., through various types of embedded clauses and other ways of condensing as in, There was a Gold Rush. It began in the 1850s. It brought a lot of people to California. → The Gold Rush *that began in the 1850s* brought a lot of people to California) to create precise and detailed sentences. |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>**Part III: Using Foundational Literacy Skills** | |
|---|---|
| **Foundational literacy skills in an alphabetic writing system**<br>• Print concepts<br>• Phonological awareness<br>• Phonics and word recognition<br>• Fluency | See chapter 6 for information on teaching foundational reading skills to English learners of various profiles based on age, native language, native language writing system, schooling experience, and literacy experience and proficiency. Some considerations are as follows:<br>• Native language and literacy (e.g., phoneme awareness or print concept skills in native language) should be assessed for potential transference to English language and literacy.<br>• Similarities between the native language and English should be highlighted (e.g., phonemes or letters that are the same in both languages).<br>• Differences between the native language and English should be highlighted (e.g., some phonemes in English may not exist in the student's native language; native language syntax may be different from English syntax). |

## Grade 5 Overview

***Goal:*** English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and also to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing tasks, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.

***Critical Principles for Developing Language and Cognition in Academic Contexts:*** While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy* |
|---|---|
| **A. Collaborative** | |
| 1. Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics | SL.5.1, 6; L.5.1, 3, 6 |
| 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) | W.5.6; L.5.1, 3, 6 |
| 3. Offering and supporting opinions and negotiating with others in communicative exchanges | SL.5.1, 6; L.5.1, 3, 6 |
| 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) | W.5.4–5; SL.5.1, 6; L.5.1, 3, 6 |

*The California English Language Development Standards correspond to the California Common Core State Standards for English Language Arts and Literacy in History/Social Science and Technical Subjects (CA CCSS for ELA/Literacy). English learners should have full access to opportunities to learn ELA, mathematics, science, history/social studies, and other content at the same time they are progressing toward full proficiency in English.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy |
|---|---|
| **B. Interpretive**<br>5. Listening actively to spoken English in a range of social and academic contexts<br>6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language<br>7. Evaluating how well writers and speakers use language to support ideas and opinions with details or reasons depending on modality, text type, purpose, audience, topic, and content area<br>8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area | • SL.5.1–3; L.5.3<br>• RL.5.1–7, 9–10; RI.5.1–7, 9–10; SL.5.2–3; L.5.3, 4, 6<br>• RL.5.3–4, 6; RI.5.2, 6, 8; SL.5.3; L.5.3–6<br>• RL.5.4—5; RI.5.4–5; SL.5.3; L.5.3–6 |
| **C. Productive**<br>9. Expressing information and ideas in formal oral presentations on academic topics<br>10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology<br>11. Supporting own opinions and evaluating others' opinions in speaking and writing<br>12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas | • SL.5.4–6; L.5.1, 3, 6<br>• W.5.1–10; L.5.1–3, 6<br>• W.5.1, 4, 9–10; SL.5.4, 6; L.5.1–3, 6<br>• W.5.4–5; SL.5.4, 6; L.5.1, 3, 5–6 |
| **Part II: Learning About How English Works** | **Corresponding CA CCSS for ELA/Literacy** |
| **A. Structuring Cohesive Texts**<br>1. Understanding text structure<br>2. Understanding cohesion | • RL.5.5; RI.5.5; W.5.1–5; SL.5.4<br>• RL.5.5; RI.5.5; W.5.1–4; SL.5.4; L.5.1, 3 |
| **B. Expanding and Enriching Ideas**<br>3. Using verbs and verb phrases<br>4. Using nouns and noun phrases<br>5. Modifying to add details | • W.5.5; SL.5.6; L.5.1, 3, 6<br>• W.5.5; SL.5.6; L.5.1, 3, 6<br>• W.5.5; SL.5.4, 6; L.5.1, 3, 6 |

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| **C. Connecting and Condensing Ideas**<br>6. Connecting ideas<br>7. Condescending ideas | • W.5.1–3, 5; SL.5.4, 6; L.5.1, 3, 6<br>• W.5.1–3, 5; SL.5.4, 6; L.5.1, 3, 6 |
| **Part III: Using Foundational Literacy Skills** | RF.K–1.1–4; RF.2–5.3–4 (as appropriate) |

*Note:* **Examples** provided in specific standards are offered ***only as illustrative possibilities*** and should not be misinterpreted as the only objectives of instruction or as the only types of language that English learners might or should be able to understand or produce.

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part I, strands 1–4, corresponding to the CA CCSS for ELA/Literacy**<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are** | ***1. Exchanging information/ideas***<br>Contribute to conversations and express ideas by asking and answering yes-no and wh- questions and responding using short phrases.<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of short informational and literary texts, using technology where appropriate for publishing, graphics, and the like. | ***1. Exchanging information/ideas***<br>Contribute to class, group, and partner discussions, including sustained dialogue, by following turn-taking rules, asking relevant questions, affirming others, and adding relevant information.<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of longer informational and literary texts, using technology where appropriate for publishing, graphics, and the like. | ***1. Exchanging information/ideas***<br>Contribute to class, group, and partner discussions, including sustained dialogue, by following turn-taking rules, asking relevant questions, affirming others, adding relevant information, building on responses, and providing useful feedback.<br><br>***2. Interacting via written English***<br>Collaborate with peers on joint writing projects of a variety of longer informational and literary texts, using technology where appropriate for publishing, graphics, and the like. |

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| **not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***3. Offering opinions***<br>Negotiate with or persuade others in conversations using basic learned phrases (e.g., *I think . . .*), as well as open responses, in order to gain and/or hold the door.<br><br>***4. Adapting language choices***<br>Adjust language choices according to social setting (e.g., playground, classroom) and audience (e.g., peers, teacher), with substantial support. | ***3. Offering opinions***<br>Negotiate with or persuade others in conversations using an expanded set of learned phrases (e.g., *I agree with X, but . . .*), as well as open responses, in order to gain and/or hold the door, provide counterarguments, and so on.<br><br>***4. Adapting language choices***<br>Adjust language choices according to purpose (e.g., persuading, entertaining), task (e.g., telling a story versus explaining a science experiment), and audience, with moderate support. | ***3. Offering opinions***<br>Negotiate with or persuade others in conversations using a variety of learned phrases (e.g., *That's an interesting idea. However, . . .*), as well as open responses, in order to gain and/or hold the door, provide counterarguments, elaborate on an idea, and so on.<br><br>***4. Adapting language choices***<br>Adjust language choices according to purpose, task (e.g., facilitating a science experiment), and audience, with light support. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part I: Interacting in Meaningful Ways**

| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** → **Emerging** → | → **Expanding** → | → **Bridging** → |
|---|---|---|---|
| **Part I, strands 5–8, corresponding to the CA CCSS for ELA/Literacy** | ***5. Listening actively***<br>Demonstrate active listening of read- | ***5. Listening actively***<br>Demonstrate active listening of read-alouds | ***5. Listening actively***<br>Demonstrate active listening of read-alouds |

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| 5. SL.5.1–3; L.5.3<br><br>6. RL.5.1–7, 9–10; RI.5.1–7, 9–10;<br><br>SL.5.2–3; L.5.3, 4, 6<br><br>7. RL.5.3–4, 6; RI.5.2, 6, 8; SL.5.3; L.5.3–6<br>8. RL.5.4–5; RI.5.4–5; SL.5.3; L.5.3–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying,<br>evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information<br>report (e.g., science or history report),<br><br>explanation (e.g., how or why something<br><br>happened), exposition (e.g., opinion), response (e.g., literary analysis); and so on. | | alouds and oral presentations by asking<br>and answering basic questions, with<br><br>prompting and substantial support.<br><br>***6. Reading/viewing closely***<br>a. Explain ideas, phenomena, processes, and text relationships (e.g., compare/ contrast, cause/effect, problem/solution) based on close reading of a variety of grade-level texts and viewing of multi- media, with substantial support.<br>b. Use knowledge of frequently-used<br><br>affixes (e.g., *un-, mis-*), linguistic context, reference materials, and visual cues to determine the meaning of unknown words on familiar topics.<br><br>***7. Evaluating language choices***<br>Describe the specific language writers<br><br>or speakers use to present or support<br><br>an idea (e.g., the specific vocabulary or<br><br>phrasing used to provide evidence), with<br><br>prompting and substantial support. | and oral presentations by asking and<br><br>answering detailed questions, with occasional prompting and moderate support.<br><br>***6. Reading/viewing closely***<br>a. Explain ideas, phenomena, processes, and text relationships (e.g., compare/ contrast, cause/effect, problem/solution) based on close reading of a variety of grade-level texts and viewing of multimedia, with moderate support.<br>b. Use knowledge of morphology (e.g.,<br><br>affixes, roots, and base words), linguistic context, and reference materials to determine the meaning of unknown words on familiar and new topics.<br><br>***7. Evaluating language choices***<br>Explain how well writers and speakers use<br>language resources to support an opinion or<br>present an idea (e.g., whether the vocabulary used to provide evidence is strong<br>enough, or if the phrasing used to signal a shift in meaning does this well), with moderate support. | and oral presentations by asking and<br><br>answering detailed questions, with minimal<br><br>prompting and light support.<br><br>***6. Reading/viewing closely***<br>a. Explain ideas, phenomena, processes, and text relationships (e.g., compare/ contrast, cause/effect, problem/solution) based on close reading of a variety of grade-level texts and viewing of multi- media, with light support.<br>b. Use knowledge of morphology (e.g.,<br><br>affixes, roots, and base words), linguistic context, and reference materials to determine the meaning of unknown words on familiar and new topics.<br><br>***7. Evaluating language choices***<br>Explain how well writers and speakers use<br>specific language resources to support an<br>opinion or present an idea (e.g., the clarity<br><br>or appealing nature of language used to<br><br>provide evidence or describe characters, or |

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| **Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***8. Analyzing language choices***<br>Distinguish how different words with similar meanings produce different effects on the audience (e.g., describing a character as *angry* versus *furious*). | ***8. Analyzing language choices***<br>Distinguish how different words with similar meanings (e.g., describing an event as *sad* versus *tragic*) and figurative language (e.g., *she ran like a cheetah*) produce shades of meaning and different effects on the audience. | if the phrasing used to introduce a topic is appropriate), with light support.<br>***8. Analyzing language choices***<br>Distinguish how different words with related meanings (e.g., *fun* versus *thrilling, possibly* versus *certainly*) and figurative language (e.g., *the stream slithered through the parched land*) produce shades of meaning and different effects on the audience. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part I: Interacting in Meaningful Ways**

| **Texts and Discourse in Context** | | **ELD Proficiency Level Continuum**<br>→ Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|---|
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy**<br><br>9. SL.5.4–6; L.5.1, 3, 6<br><br>10. W.5.1–10; L.5.1–3, 6<br><br>11. W.5.1, 4, 9–10; SL.5.4, 6; L.5.1–3, 6<br><br>12. W.5.4–5; SL.5.4, 6; L.5.1, 3, 5–6<br><br>**Purposes for using language include but are not limited to:** | | ***9. Presenting***<br>Plan and deliver brief oral presentations on a variety of topics and content areas (e.g., providing a report on a current event, reciting a poem, recounting an experience, explaining a science process), with moderate support, such as graphic organizers | ***9. Presenting***<br>Plan and deliver longer oral presentations on a variety of topics and content areas (e.g., providing an opinion speech on a current event, reciting a poem, recounting an experience, explaining a science process), with moderate support. | ***9. Presenting***<br>Plan and deliver oral presentations on a variety of topics in a variety of content areas (e.g., providing an opinion speech on a current event, reciting a poem, recounting an experience, explaining a science process), with light support. |

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| Describing, entertaining, informing, interpreting, analyzing, recounting, explaining,<br>persuading, negotiating, justifying.<br><br>**Informational text types include but are not limited to:**<br><br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br><br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on. | | ***10. Writing***<br><br>a. Write short literary and informational texts (e.g., a description of a camel) collaboratively (e.g., joint construction of texts with an adult or with peers) and sometimes independently.<br><br>b. Write brief summaries of texts and experiences using complete sentences and key words (e.g., from notes or graphic organizers).<br><br>***11. Supporting opinions***<br>a. Support opinions by expressing appropriate/accurate reasons using textual evidence (e.g., referring to text) or relevant background knowledge about content, with substantial support. | ***10. Writing***<br><br>a. Write longer literary and informational texts (e.g., an informative report on different kinds of camels) collaboratively (e.g., joint construction of texts with an adult or with peers) and with increasing independence by using appropriate text organization.<br><br>b. Write increasingly concise summaries of texts and experiences using complete sentences and key words (e.g., from notes or graphic organizers).<br><br>***11. Supporting opinions***<br>a. Support opinions or persuade others by expressing appropriate/accurate reasons using some textual evidence (e.g., para-phrasing facts from a text) or relevant background knowledge about content, with | ***10. Writing***<br><br>a. Write longer and more detailed literary and informational texts (e.g., an explanation of how camels survive without water for a long time) collaboratively (e.g., joint construction of texts with an adult or with peers) and independently by using appropriate text organization and growing understanding of register.<br><br>b. Write clear and coherent summaries of texts and experiences using complete and concise sentences and key words (e.g., from notes or graphic organizers).<br><br>***11. Supporting opinions***<br>a. Support opinions or persuade others by expressing appropriate/accurate reasons using detailed textual evidence (e.g., quoting the text directly or specific events from text) or relevant background knowledge |

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| **Audiences include but are not limited to:**<br>Peers (one to one)<br><br>Small group (one to a group) | | b. Express ideas and opinions or temper<br>statements using basic modal expressions (e.g., *can, has to, maybe*). | moderate support.<br><br>b. Express attitude and opinions or temper<br>statements with familiar modal expressions | about content, with mild support.<br><br>b. Express attitude and opinions or temper<br>statements with nuanced modal |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part I: Interacting in Meaningful Ways**

| **Texts and Discourse in Context** | | **ELD Proficiency Level Continuum** | | |
|---|---|---|---|---|
| | | → **Emerging** → | → **Expanding** → | → **Bridging** → |
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy**<br>9. SL.5.4–6; L.5.1, 3, 6<br><br>10. W.5.1–10; L.5.1–3, 6<br><br>11. W.5.1, 4, 9–10; SL.5.4, 6; L.5.1–3, 6<br><br>12. W.5.4–5; SL.5.4, 6; L.5.1, 3, 5–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:** | | ***12. Selecting language resources***<br>a. Use a select number of general academic and domain-specific words to create precision while speaking and writing.<br><br>b. Select a few frequently used affixes for accuracy and precision (e.g., She walks, I'm *un*happy). | ***12. Selecting language resources***<br>a. Use a growing number of general academic and domain-specific words, synonyms, and antonyms to create precision and shades of meaning while speaking and writing.<br><br>b. Select a growing number of frequently used affixes for accuracy and precision (e.g., She walk*ed*. He likes . . . , I'm *un*happy). | ***12. Selecting language resources***<br>a. Use a wide variety of general academic and domain-specific words, synonyms, antonyms, and figurative language to create precision and shades of meaning while speaking and writing.<br><br>b. Select a variety of appropriate affixes for accuracy and precision (e.g., She's walk*ing*.<br><br>I'm *un*comfortable. They left reluctant*ly*). |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part II, strands 1–2, corresponding to the CA CCSS for ELA/Literacy**<br><br>1. RL.5.5; RI.5.5; W.5.1–5; SL.5.4<br><br>2. RL.5.5; RI.5.5; W.5.1–4; SL.5.4;<br><br>L.5.1, 3<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not** | ***1. Understanding text structure***<br><br>Apply basic understanding of how different text types are organized to express ideas (e.g., how a narrative is organized sequentially with predictable stages versus how opinions/arguments are organized around ideas) to comprehending texts and writing basic texts.<br><br>***2. Understanding cohesion***<br>a. Apply basic understanding of language resources for referring the reader back or forward in text (e.g., how pronouns refer back to nouns in text) to comprehending texts and writing basic texts.<br><br>b. Apply basic understanding of how ideas, events, or reasons are linked throughout a text using a select set of everyday connecting words or phrases | ***1. Understanding text structure***<br><br>Apply growing understanding of how different text types are organized to express ideas (e.g., how a narrative is organized sequentially with predictable stages versus how opinions/arguments are structured logically around reasons and evidence) to comprehending texts and writing texts with increasing cohesion.<br><br>***2. Understanding cohesion***<br>a. Apply growing understanding of language resources for referring the reader back or forward in text (e.g., how pronouns or synonyms refer back to nouns in text) to comprehending texts and writing texts with increasing cohesion.<br><br>b. Apply growing understanding of how ideas, events, or reasons are linked throughout a text using a variety of connecting words or phrases (e.g., *for example, in the first place, as a result*) to comprehending texts and writing texts with increasing | ***1. Understanding text structure***<br><br>Apply increasing understanding of how different text types are organized to express ideas (e.g., how a historical account is organized chronologically versus how opinions/arguments are structured logically around reasons and evidence) to comprehending texts and writing cohesive texts.<br><br>***2. Understanding cohesion***<br>a. Apply increasing understanding of language resources for referring the reader back or forward in text (e.g., how pronouns, synonyms, or nominalizations refer back to nouns in text) to comprehending texts and writing cohesive texts.<br><br>b. Apply increasing understanding of how ideas, events, or reasons are linked throughout a text using an increasing variety of academic connecting and transitional words or phrases (e.g., *consequently, specifically, however*) to comprehending |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part II, strands 3–5, corresponding to the CA CCSS for ELA/Literacy**<br><br>3. W.5.5; SL.5.6; L.5.1, 3, 6<br><br>4. W.5.5; SL.5.6; L.5.1, 3, 6<br><br>5. W.5.5; SL.5.4,6; L.5.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, analyzing, recounting, explaining, persuading, negotiating, justifying, valuating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on. | ***3. Using verbs and verb phrases***<br><br>Use frequently used verbs (e.g., take, like, eat) and various verb types (e.g., doing, saying, being/having, thinking/ feeling) and tenses appropriate to the text type and discipline (e.g., simple past for recounting an experience) on familiar topics.<br><br>***4. Using nouns and noun phrases***<br><br>Expand noun phrases in simple ways (e.g., adding an adjective to a noun) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>***5. Modifying to add details***<br><br>Expand and enrich sentences with adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details (e.g., time, manner) | ***3. Using verbs and verb phrases***<br><br>Use various verb types (e.g., doing, saying, being/having, thinking/feeling) and tenses appropriate to the task, text type, and discipline (e.g., simple past for recounting an experience, timeless present for a science description) on an increasing variety of topics.<br><br>***4. Using nouns and noun phrases***<br><br>Expand noun phrases in a variety of ways (e.g., adding comparative/ superlative adjectives to noun phrases or simple clause embedding) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>***5. Modifying to add details***<br><br>Expand and enrich sentences with adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details (e.g., time, manner, place, cause) | ***3. Using verbs and verb phrases***<br><br>Use various verb types (e.g., doing, saying, being/having, thinking/feeling) and tenses appropriate to the task and text type (e.g., timeless present for science description, mixture of past and present for narrative or history explanation) on a variety of topics.<br><br>***4. Using nouns and noun phrases*** Expand noun phrases in an increasing variety of ways (e.g., adding comparative/ superlative and general academic adjectives to noun phrases or more complex clause embedding) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>***5. Modifying to add details*** Expand and enrich sentences with adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details (e.g., time, manner, place, cause, and the like) |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum | | |
|---|---|---|---|
| | → Emerging → | → Expanding → | → Bridging → |
| **Part II, strands 6–7, corresponding to the CA CCSS for ELA/Literacy**<br><br>6. W.5.1–3, 5; SL.5.4, 6; L.5.1, 3, 6<br><br>7. W.5.1–3, 5; SL.5.4, 6; L.5.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Description (e.g., science log entry), procedure (e.g., how to solve a mathematics problem), recount (e.g., autobiography, science experiment results), information report (e.g., science or history report), explanation (e.g., how or why something happened), exposition (e.g., opinion), response (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., fantasy, legends, fables), drama (e.g., readers' theater), poetry, retelling a story, and so on. | | ***6. Connecting ideas***<br><br>Combine clauses in a few basic ways<br><br>to make connections between and join<br>ideas (e.g., You must X because X) or<br><br>to provide evidence to support ideas or opinions (e.g., creating compound sentences using *and, but, so*).<br><br>***7. Condensing ideas***<br>Condense clauses in simple ways (e.g., through simple embedded clauses as in, *The book is on the desk. The book is mine.* → *The book that is on the desk is mine*) to create precise an detailed sentences. | ***6. Connecting ideas***<br><br>Combine clauses in an increasing variety of<br>ways (e.g., creating compound and complex<br>sentences) to make connections between<br>and join ideas, for example, to express cause/effect (e.g., *The deer ran because the mountain lion came*), to make a concession (e.g., *She studied all night even though she wasn't feeling well*), or to provide<br>reasons to support ideas (e.g., X is an *extremely good book because* ).<br><br>***7. Condensing ideas***<br>Condense clauses in an increasing variety of ways (e.g., through a growing number of types of embedded clauses and other condensing as in, *The book is mine. The book is about science. The book is on the desk.* → *The science book that's on the desk is mine*) to create precise and detailed sentences. | ***6. Connecting ideas***<br><br>Combine clauses in a wide variety of ways<br>(e.g., creating compound and complex<br><br>sentences) to make connections between<br>and join ideas, for example, to express cause/effect (e.g., *The deer ran because the mountain lion approached them*), to make a concession (e.g., *She studied all night even though she wasn't feeling well*), to link two ideas that happen at the same time (e.g., *The cubs played while their mother hunted*), or to provide reasons to<br>support ideas (e.g., *The author persuades the reader by* _____).<br><br>***7. Condensing ideas***<br>Condense clauses in a variety of ways (e.g., through various types of embedded clauses and some nominalizations as in, *They were a very strong army. They had a lot of enemies. They crushed their enemies because they were strong.* → Their strength helped them crush their numerous enemies) to create precise and detailed sentences. |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>**Part III: Using Foundational Literacy Skills** | |
|---|---|
| **Foundational literacy skills in an alphabetic writing system**<br>● Print concepts<br>● Phonological awareness<br>● Phonics and word recognition<br>● Fluency | See chapter 6 for information on teaching foundational reading skills to English learners of various profles based on age, native language, native language writing system, schooling experience, and literacy experience and proficiency . Some considerations are as follows:<br>● Native language and literacy (e.g., phoneme awareness or print concept skills in native language) should be assessed for potential transference to English language and literacy.<br>● Similarities between the native language and English should be highlighted (e.g., phonemes or letters that are the same in both languages).<br>● Differences between the native language and English should be highlighted (e.g., some phonemes in English may not exist in the student's native language; native language syntax may be different from English syntax). |

## Grade 6 Overview

***Goal:*** English learners read, analyze, interpret, and create a variety of literary and informational text types. They develop an understanding of how language is a complex, dynamic, and social resource for making meaning, as well as how content is organized in different text types and across disciplines using text structure, language features, and vocabulary depending on purpose and audience. They are aware that different languages and variations of English exist, and they recognize their home languages and cultures as resources to value in their own right and also to draw upon in order to build proficiency in English. English learners contribute actively to class and group discussions, asking questions, responding appropriately, and providing useful feedback. They demonstrate knowledge of content through oral presentations, writing tasks, collaborative conversations, and multimedia. They develop proficiency in shifting language use based on task, purpose, audience, and text type.

***Critical Principles for Developing Language and Cognition in Academic Contexts:*** While advancing along the continuum of English language development levels, English learners at all levels engage in intellectually challenging literacy, disciplinary, and disciplinary literacy tasks. They use language in meaningful and relevant ways appropriate to grade level, content area, topic, purpose, audience, and text type in English language arts, mathematics, science, social studies, and the arts. Specifically, they use language to gain and exchange information and ideas in three communicative modes (collaborative, interpretive, and productive), and they apply knowledge of language to academic tasks via three cross-mode language processes (structuring cohesive texts, expanding and enriching ideas, and connecting and condensing ideas) using various linguistic resources.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy* |
|---|---|
| **A. Collaborative** | |
| 1. Exchanging information and ideas with others through oral collaborative discussions on a range of social and academic topics | • SL.6.1, 6; L.6.3, 6 |
| 2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia) | • W.6.6; WHST.6.6; SL.6.2; L.6.3, 6 |
| 3. Offering and justifying opinions, negotiating with and persuading others in communicative exchanges | • W.6.1; WHST.6.1; SL.6.1, 4, 6; L.6.3, 6 |
| 4. Adapting language choices to various contexts (based on task, purpose, audience, and text type) | • W.6.4–5; WHST.6.4–5; SL.6.6; L.6.1, 3, 6 |

*The California English Language Development Standards correspond to the California Common Core State Standards for English Language Arts and Literacy in History/Social Science and Technical Subjects (CA CCSS for ELA/Literacy). English learners should have full access to opportunities to learn ELA, mathematics, science, history/social studies, and other content at the same time they are progressing toward full proficiency in English.

| Part I: Interacting in Meaningful Ways | Corresponding CA CCSS for ELA/Literacy |
|---|---|
| **B. Interpretive** | |
| 5. Listening actively to spoken English in a range of social and academic contexts | • SL.6.1, 3, 6; L.6.1, 3, 6 |
| 6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language | • RL.6.1–7, 9–10; RI.6.1–10; RH.6.1–10; RST.6.1–10; SL.6.2; L.6.1, 3, 6 |
| 7. Evaluating how well writers and speakers use language to support ideas and arguments with details or evidence depending on modality, text type, purpose, audience, topic, and content area | • RL.6.4–5; RI.6.4, 6, 8; RH.6.4–6, 8; RST.6.4–6, 8; SL.6.3; L.6.3, 5–6 |
| 8. Analyzing how writers and speakers use vocabulary and other language resources for specific purposes (to explain, persuade, entertain, etc.) depending on modality, text type, purpose, audience, topic, and content area | • RL.6.4–5; RI.6.4–5; RH.6.4–5; RST.6.4–5; SL.6.3; L.6.3, 5–6 |
| **C. Productive** | |
| 9. Expressing information and ideas in formal oral presentations on academic topics | • SL.6.4–6; L.6.1, 3 |
| 10. Writing literary and informational texts to present, describe, and explain ideas and information, using appropriate technology | • W.6.1–10; WHST.6.1–2, 4–10; L.6.1–6 |
| 11. Justifying own arguments and evaluating others' arguments in writing | • W.6.1, 8–9; WHST.6.1, 8–9; L.6.13, 6 |
| 12. Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas | • W.6.4–5; WHST.6.4–5; SL.6.4, 6; L.6.1, 3, 5–6 |
| **Part II: Learning About How English Works** | **Corresponding CA CCSS for ELA/Literacy** |
| **A. Structuring Cohesive Texts** | |
| 1. Understanding text structure | RL.6.5; RI.6.5; RH.6.5; RST.6.5; W.6.1–5, 10; WHST.6.1–2, 4–5, 10; SL.6.4 |
| 2. Understanding cohesion | RI.6.5; RH.6.5; RST.6.5; W.6.1–5, 10; WHST.6.1–2, 4–5, 10; L.6.1, 3–6 |
| **B. Expanding and Enriching Ideas** | |
| 3. Using verbs and verb phrases | W.6.5; WHST.6.5; SL.6.6; L.6.1, 3–6 |
| 4. Using nouns and noun phrases | W.6.5; WHST.6.5; SL.6.6; L.6.1, 3–6 |
| 5. Modifying to add details | W.6.4–5; WHST.6.4–5; SL.6.6; L.6.1, 3–6 |
| **C. Connecting and Condensing Ideas** | |
| 6. Connecting ideas | • W.6.1–5; WHST.6.1–2, 4–5; SL.6.4, 6; L.6.1, 3–6 |
| 7. Condensing ideas | • W.6.1–5; WHST.6.1–2, 4-5; SL.6.4, 6; |

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| | L.6.1, 3–6 |
| **Part III: Using Foundational Literacy Skills** | RF.K–1.1–4; RF.2–5.3–4 (as appropriate) |

*Note:* **Examples** provided in specific standards are offered ***only as illustrative possibilities*** and should not be misinterpreted as the only objectives of instruction or as the only types of language that English learners might or should be able to understand or produce.

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part I, strands 1–4, corresponding to the CA CCSS for ELA/Literacy**<br><br>1. SL.6.1,6; L.6.3, 6<br><br>2. W.6.6; WHST.6.6; SL.6.2; L.6.3, 6<br><br>3. W.6.1; WHST.6.1; SL.6.1, 4, 6; L.6.3, 6<br>4. W.6.4–5; WHST.6.4–5; SL.6.6;<br><br>L.6.1, 3, 6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on. | ***1. Exchanging information/ideas***<br><br>Engage in conversational exchanges and<br>express ideas on familiar topics by asking<br>and answering *yes-no* and *wh-* questions<br>and responding using simple phrases.<br><br>***2. Interacting via written English***<br>Engage in short written exchanges with peers and collaborate on simple written texts on familiar topics, using technology when appropriate. | ***1. Exchanging information/ideas***<br><br>Contribute to class, group, and partner<br><br>discussions by following turn-taking rules,<br>asking relevant questions, affirming others,<br>adding relevant information, and<br><br>paraphrasing key ideas.<br><br>***2. Interacting via written English***<br>Engage in longer written exchanges with peers and collaborate on more detailed written texts on a variety of topics, using technology when appropriate. | ***1. Exchanging information/ideas***<br><br>Contribute to class, group, and partner<br><br>discussions by following turn-taking rules,<br>asking relevant questions, affirming others,<br>adding relevant information and evidence,<br>paraphrasing key ideas, building on<br><br>responses, and providing useful feedback.<br><br>***2. Interacting via written English***<br>Engage in extended written exchanges with peers and collaborate on complex written texts on a variety of topics, using technology when appropriate. |

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| **Informational text types include but are not limited to:**<br>Descriptions or accounts (e.g., scientific, historical, economic, technical), recounts (e.g., biography, memoir), information reports, explanations (e.g., causal, factual), expositions (e.g., speeches, opinion pieces, argument, debate), responses (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., historical fiction, myths, graphic novels), poetry, drama, and so on.<br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***3. Supporting opinions and persuading others***<br>Negotiate with or persuade others in conversations (e.g., to gain and hold the floor or ask for clarification) using basic learned phrases (e.g., *I think . . . , Would you please repeat that?*), as well as open responses.<br><br>***4. Adapting language choices***<br>Adjust language choices according to social setting (e.g., classroom, break time) and audience (e.g., peers, teacher). | ***3. Supporting opinions and persuading others***<br>Negotiate with or persuade others in conversations (e.g., to provide counterarguments) using an expanded set of learned phrases (*I agree with X, but . . .* ), as well as open responses.<br><br>***4. Adapting language choices***<br>Adjust language choices according to purpose (e.g., explaining, persuading, entertaining), task, and audience. | ***3. Supporting opinions and persuading others***<br>Negotiate with or persuade others in conversations using appropriate register (e.g., to reflect on multiple perspectives) using a variety of learned phrases, indirect reported speech (e.g., *I heard you say X, and Gabriel just pointed out Y*), as well as open responses.<br><br>***4. Adapting language choices***<br>Adjust language choices according to task (e.g., facilitating a science experiment, providing peer feedback on a writing assignment), purpose, task, and audience. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part I: Interacting in Meaningful Ways**

| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** → **Emerging** → | → **Expanding** → | → **Bridging** → |
|---|---|---|---|
| **Part I, strands 5–8 corresponding to the CA CCSS for ELA/Literacy** | ***5. Listening actively***<br>Demonstrate active listening in oral presentation activities by asking and answering basic questions, with prompting and substantial support. | ***5. Listening actively***<br>Demonstrate active listening in oral presentation activities by asking and answering de tailed questions, with occasional prompting | ***5. Listening actively***<br>Demonstrate active listening in oral presentation activities by asking and answering detailed questions, with minimal prompting and support. |

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| 5. SL.6.1, 3, 6; L.6.1, 3, 6<br><br>6. RL.6.1–7, 9–10; RI.6.1–10; RH.6.1–10;<br>RST.6.1–10; SL.6.2; L.6.1, 3, 6<br><br>7. RL.6.4–5; RI.6.4, 6, 8; RH.6.4–6, 8; RST.6.4–6, 8; SL.6.3; L.6.3, 5–6<br>8. RL.6.4–5; RI.6.4–5; RH.6.4–5;<br><br>RST.6.4–5; SL.6.3; L.6.3, 5–6<br><br>**Purposes for using language include but are not limited to:**<br><br>Describing, entertaining, informing,<br><br>analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Descriptions or accounts (e.g., scientific, historical, economic, technical), recounts (e.g., biography, memoir), information<br><br>reports, explanations (e.g., causal, factual), expositions (e.g., speeches, opinion pieces, argument, debate), responses<br>(e.g., literary analysis), and so on. | | ***6. Reading/viewing closely***<br>a. Explain ideas, phenomena, processes,<br>and text relationships (e.g., compare/ contrast, cause/effect,<br>problem/solution) based on close reading of a variety of grade-level texts and viewing of<br>multimedia, with substantial support.<br><br>b. Express inferences and conclusions drawn based on close reading of grade-level texts and viewing of multimedia using some frequently used verbs (e.g., *shows that, based on*).<br><br>c. Use knowledge of morphology (e.g., affixes, roots, and base words), context,<br>reference materials, and visual cues<br><br>to determine the meaning of unknown | and moderate support.<br><br>***6. Reading/viewing closely***<br>a. Explain ideas, phenomena, processes,<br><br>and text relationships (e.g., compare/ contrast, cause/effect,<br>problem/solution) based on close reading of a variety of grade-level texts and viewing of multimedia,<br>with moderate support.<br><br>b. Express inferences and conclusions drawn based on close reading of grade-level texts and viewing of multimedia using a variety of verbs (e.g., *suggests that, leads to*). c. Use knowledge of morphology (e.g., affixes, roots, and base words), context, reference materials, and visual cues to<br><br>determine the meaning of unknown and<br><br>multiple-meaning words on familiar and | ***6. Reading/viewing closely***<br>a. Explain ideas, phenomena, processes,<br><br>and text relationships (e.g., compare/ contrast, cause/effect,<br>problem/solution) based on close reading of a variety of grade-level texts and viewing of multimedia,<br>with light support.<br><br>b. Express inferences and conclusions drawn based on close reading of grade- level texts and viewing of multimedia using a variety of precise academic verbs (e.g., *indicates that, influences*).<br><br>c. Use knowledge of morphology (e.g., affixes, roots, and base words), context,<br><br>reference materials, and visual cues to<br><br>determine the meaning, including figurative and connotative meanings, of unknown and<br>multiple-meaning words on a variety of new<br>topics. |

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| | | and multiple-meaning words on familiar topics. | new topics. | |
| **Literary text types include but are not limited to:**<br>Stories (e.g., historical fiction, myths, graphic novels), poetry, drama, and so on.<br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | ***7. Evaluating language choices***<br>Explain how well writers and speakers use language to support ideas and arguments with detailed evidence (e.g., identifying the precise vocabulary used to present evidence, or the phrasing used to signal a shift in meaning) with substantial support. | ***7. Evaluating language choices***<br>Explain how well writers and speakers use specific language to present ideas or support arguments and provide detailed evidence (e.g., showing the clarity of the phrasing used to present an argument) with moderate support. | ***7. Evaluating language choices***<br>Explain how well writers and speakers use specific language resources to present ideas or support arguments and provide detailed evidence (e.g., identifying the specific language used to present ideas and claims that are well supported and distinguishing them from those that are not) with light support. |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>Part I: Interacting in Meaningful Ways | | | | |
|---|---|---|---|---|
| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** | | | |
| | | → **Emerging** → | → **Expanding** → | → **Bridging** → |
| **Part I, strands 5–8 corresponding to the CA CCSS for ELA/Literacy**<br>5. SL.6.1, 3, 6; L.6.1, 3, 6<br><br>6. RL.6.1–7, 9–10; RI.6.1–10; RH.6.1–10; RST.6.1–10; SL.6.2; L.6.1, 3, 6<br><br>7. RL.6.4–5; RI.6.4, 6, 8; RH.6.4–6, 8; RST.6.4–6, 8; SL.6.3; L.6.3, 5–6<br><br>8. RL.6.4–5; RI.6.4–5; | **B. Interpretive** | ***8. Analyzing language choices***<br>Explain how phrasing or different common words with similar meaning (e.g., choosing to use the word *cheap* versus the phrase *a good saver*) produce different effects on the audience. | ***8. Analyzing language choices***<br>Explain how phrasing, different words with similar meaning (e.g., describing a character as *stingy* versus *economical*), or figurative language (e.g., *The room was like a dank cave, littered with food wrappers, soda cans, and piles of laundry*) produce shades of meaning and different effects on the audience. | ***8. Analyzing language choices***<br>Explain how phrasing, different words with similar meaning (e.g., *stingy, economical, frugal, thrifty*), or figurative language (e.g., *The room was depressed and gloomy. The room was like a dank cave, littered with food wrappers, soda cans, and piles of laundry*) produce shades of meaning, nuances, and different effects on the audience. |

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy**<br><br>9. SL.6.4–6; L.6.1, 3, 5, 6<br><br>10. W.6.1–10; WHST.6.1–10; L.6.1–3, 6<br><br>11. W.6.1, 4, 8–10; WHST.6.1, 4, 8–10;<br><br>SL.6.3, 6; L.6.1–3, 6<br><br>12. RL.6.1–4; RI.6.1, 2, 4; W.6.1–10; WHST.6.1–10; SL.6.1, 2, 4, 6; L.6.3–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br>**Informational text types include but are not limited to:**<br>Descriptions or accounts (e.g., scientific, historical, economic, technical), recounts (e.g., biography, memoir), information reports, explanations (e.g., causal, factual), expositions (e.g., speeches, opinion pieces, argument, debate), responses | ***9. Presenting***<br><br>Plan and deliver brief oral presentations on a variety of topics and content areas.<br><br>***10. Writing***<br>a. Write short literary and informational texts (e.g., an argument for protecting the rain forests) collaboratively (e.g., with peers) and independently.<br><br>b. Write brief summaries of texts and experiences using complete sentences<br><br>and key words (e.g., from notes or graphic organizers).<br><br>***11. Justifying/arguing***<br>a. Justify opinions by providing some textual evidence (e.g., quoting from the text) or relevant background | ***9. Presenting***<br><br>Plan and deliver longer oral presentations on a variety of topics and content areas,<br><br>using details and evidence to support ideas.<br><br>***10. Writing***<br>a. Write longer literary and informational texts (e.g., an argument for protecting the rain forests) collaboratively (e.g., with peers) and independently using appropriate text organization.<br><br>b. Write increasingly concise summaries<br><br>of texts and experiences using complete sentences and key words (e.g., from notes or graphic organizers).<br><br>***11. Justifying/arguing***<br>a. Justify opinions or persuade others by providing relevant textual evidence (e.g., quoting from the text or referring to | ***9. Presenting***<br><br>Plan and deliver longer oral presentations on a variety of topics and content areas,<br><br>using reasoning and evidence to support<br><br>ideas, as well as growing understanding of<br>register.<br><br>***10. Writing***<br>a. Write longer and more detailed literary and informational texts (e.g., an argument for protecting the rain forests) collaboratively (e.g., with peers) and independently using appropriate text organization and growing understanding of register.<br><br>b. Write clear and coherent summaries of texts and experiences using complete and concise sentences and key words (e.g., from notes or graphic organizers).<br><br>***11. Justifying/arguing***<br>a. Justify opinions or persuade others by providing detailed and relevant textual evidence (e.g., quoting from the text |

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| (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br>Stories (e.g., historical fiction, myths, graphic novels), poetry, drama, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br><br>Small group (one to a group)<br>Whole group (one to many) | | knowledge, with substantial support.<br><br>b Express attitude and opinions or temper statements with some basic modal expressions (e.g., *can, has to*). | what the text says) or relevant background<br><br>knowledge, with moderate support.<br><br>b. Express attitude and opinions or temper statements with a variety of familiar modal expressions (e.g., *maybe/probably, can/*<br><br>*could, must*). | directly or referring to specific textual<br><br>evidence) or relevant background knowledge, with light support.<br><br>b. Express attitude and opinions or temper statements with nuanced modal expressions (e.g., probably/certainly/definitely, should/would, might) and phrasing (e.g., In my opinion . . .). |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**

**Part I: Interacting in Meaningful Ways**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part I, strands 9–12, corresponding to the CA CCSS for ELA/Literacy**<br>9. SL.6.4–6; L.6.1, 3, 5, 6<br>10. W.6.1–10; WHST.6.1–10; L.6.1–3, 6<br>11. W.6.1, 4, 8–10; WHST.6.1, 4, 8–10; SL.6.3, 6; L.6.1–3, 6<br>12. RL.6.1–4; RI.6.1, 2, 4; W.6.1–10; WHST.6.1–10; SL.6.1, 2, 4, 6; L.6.3–6<br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br>**Informational text types include but are not limited to:**<br>Descriptions or accounts (e.g., scientific, historical, economic, technical), recounts (e.g., biography, memoir), information reports, explanations (e.g., causal, factual), expositions (e.g., speeches, opinion pieces, argument, debate), responses | ***12. Selecting language resources***<br>a. Use a select number of general academic words (e.g., *author, chart*) and domain-specific words (e.g., *scene, cell, fraction*) to create some precision while speaking and writing.<br>b. Use knowledge of morphology to appropriately select affixes in basic ways (e.g., *She likes X*). | ***12. Selecting language resources***<br>a. Use a growing set of academic words (e.g., *author, chart, global, affect*), domain-specific words (e.g., *scene, setting, plot, point of view, fraction, cell membrane, democracy*), synonyms, and antonyms to create precision and shades of meaning while speaking and writing.<br>b. Use knowledge of morphology to appropriately select affixes in a growing number of ways to manipulate language (e.g., She likes X. That's impossible). | ***12. Selecting language resources***<br>a. Use an expanded set of general academic words (e.g., *affect, evidence, demonstrate, reluctantly*), domain-specific words (e.g., *scene, setting, plot, point of view, fraction, cell membrane, democracy*), synonyms, antonyms, and figurative language to create precision and shades of meaning while speaking and writing.<br>b. Use knowledge of morphology to appropriately select affixes in a variety of ways to manipulate language (e.g., changing *observe observation, reluctant → reluctantly, produce production,* and so on). |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>Part II: Learning About How English Works | | | | |
|---|---|---|---|---|
| **Texts and Discourse in Context** | **ELD Proficiency Level Continuum** | | | |
| | → **Emerging** → | → **Expanding** → | → **Bridging** → | |
| **Part II, strands 1–2, corresponding to the CA CCSS for ELA/Literacy**<br>1. RL.6.5; RI.6.5; RH.6.5; RST.6.5;<br>W.6.1–5, 10; WHST.6.1–2, 4–5,10;<br>SL.6.4<br>2. RI.6.5; RH.6.5; RST.6.5; W.6.1–5, 10;<br>WHST.6.1–2, 4-5, 10; L.6.1, 3–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, | | ***1. Understanding text structure***<br>Apply basic understanding of how different text types are organized to express ideas (e.g., how a narrative is organized sequentially with predictable stages versus how arguments are organized around ideas) to comprehending texts and writing basic texts.<br><br>***2. Understanding cohesion*** | ***1. Understanding text structure***<br>Apply growing understanding of how different text types are organized to express ideas (e.g., how a narrative is organized sequentially with predictable stages versus how arguments are structured logically around reasons and evidence) to comprehending texts and writing texts with increasing cohesion.<br><br>***2. Understanding cohesion*** | ***1. Understanding text structure***<br>Apply increasing understanding of how different text types are organized to express ideas (e.g., how a historical account is organized chronologically versus how arguments are structured logically around reasons and evidence) to comprehending texts and writing cohesive texts.<br><br>***2. Understanding cohesion*** |

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| persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Descriptions or accounts (e.g., scientific, historical, economic, technical), recounts (e.g., biography, memoir), information reports, explanations (e.g., causal, factual), expositions (e.g., speeches, opinion pieces, argument, debate), responses (e.g., literary analysis), and so on. | | a. Apply basic understanding of language resources for referring the reader back or forward in text (e.g., how pronouns refer back to nouns in text) to comprehending texts and writing basic texts.<br><br>b. Apply basic understanding of how ideas, events, or reasons are linked throughout a text using a select set of everyday connecting words or phrases (e.g., *first/next, at the beginning*) to comprehending texts and writing basic texts. | a. Apply growing understanding of language resources for referring the reader back or forward in text (e.g., how pronouns or synonyms refer back to nouns in text) to comprehending texts and writing texts with increasing cohesion.<br><br>b. Apply growing understanding of how ideas, events, or reasons are linked throughout a text using a variety of connecting words or phrases (e.g., *for example, in the first place, as a result, on the other hand*) to comprehending texts and writing texts with | a. Apply increasing understanding of language resources for referring the reader back or forward in text (e.g., how pronouns, synonyms, or nominalizations refer back to nouns in text) to comprehending texts and writing cohesive texts.<br><br>b. Apply increasing understanding of how ideas, events, or reasons are linked throughout a text using an increasing variety of academic connecting and transitional words or phrases (e.g., *consequently, specifically, however, moreover*) |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part II: Learning About How English Works**

| Texts and Discourse in Context | | ELD Proficiency Level Continuum → Emerging → | → Expanding → | → Bridging → |
|---|---|---|---|---|
| **Part II, strands 3–5, corresponding to the CA CCSS for ELA/Literacy**<br><br>3. W.6.5; WHST.6.5; SL.6.6; L.6.1, 3–6<br><br>4. W.6.5; WHST.6.5; SL.6.6; L.6.1, 3–6<br><br>5. W.6.4–5; WHST.6.4–5; SL.6.6;<br><br>L.6.1, 3–6 | | ***3. Using verbs and verb phrases***<br><br>Use a variety of verb types (e.g., doing, saying, being/having, thinking/feeling), tenses (e.g., present, past, future, simple, progressive) appropriate to the text type and discipline (e.g., simple past | ***3. Using verbs and verb phrases***<br><br>Use various verb types (e.g., doing, saying, being/having, thinking/feeling, reporting), tenses (e.g., present, past, future, simple, progressive, perfect) appropriate to the task, text type, and discipline (e.g., simple | ***3. Using verbs and verb phrases***<br><br>Use various verb types (e.g., doing, saying, being/having, thinking/feeling, reporting), tenses (e.g., present, past, future, simple, progressive, perfect) appropriate to the task, text type, and discipline (e.g., the |

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| **Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Descriptions or accounts (e.g., scientific, historical, economic, technical), recounts (e.g., biography, memoir), information reports, explanations (e.g., causal, factual), expositions (e.g., speeches, opinion pieces, argument, debate), responses (e.g., literary analysis), and so on.<br><br>**Literary text types include but are not limited to:**<br><br>Stories (e.g., historical fiction, myths,<br><br>graphic novels), poetry, drama, and so on.<br><br>**Audiences include but are not limited to:**<br>Peers (one to one)<br>Small group (one to a group)<br>Whole group (one to many) | | and past progressive for recounting an experience) on familiar topics.<br><br>***4. Using nouns and noun phrases***<br><br>Expand noun phrases in simple ways (e.g., adding a sensory adjective to a noun) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>***5. Modifying to add details***<br><br>Expand sentences with simple adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details (e.g., time, manner, place, cause) about a familiar activity or process. | present for literary analysis) on an increasing variety of topics.<br><br>***4. Using nouns and noun phrases***<br><br>Expand noun phrases in a variety of ways (e.g., adding comparative/ superlative adjectives to noun phrases or simple clause embedding) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>***5. Modifying to add details***<br><br>Expand sentences with an increasing variety of adverbials (e.g., adverbs, adverb phrases, prepositional phrases) to provide details (e.g., time, manner, place, cause) about a familiar or new activity or process. | present perfect to describe previously made claims or conclusions) on a variety of topics.<br><br>***4. Using nouns and noun phrases*** Expand noun phrases in an increasing variety of ways (e.g., adding comparative/ superlative and general academic adjectives to noun phrases or more complex clause embedding) in order to enrich the meaning of sentences and add details about ideas, people, things, and the like.<br><br>***5. Modifying to add details***<br><br>Expand sentences with a variety of adverbials (e.g., adverbs, adverb phrases and clauses, prepositional phrases) to provide details (e.g., time, manner, place,<br>cause) about a variety of familiar and new<br>activities and processes. |

**Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts**
**Part II: Learning About How English Works**

| Texts and Discourse in Context | ELD Proficiency Level Continuum → Emerging | → Expanding | → Bridging |
|---|---|---|---|
| **Part II, strands 6–7, corresponding to the CA CCSS for ELA/Literacy**<br><br>6. W.6.1–5; WHST.6.1–2, 4-5; SL.6.4, 6; L.6.1, 3–6<br><br>7. W.6.1–5; WHST.6.1–2, 4–5; SL.6.4, 6; L.6.1, 3–6<br><br>**Purposes for using language include but are not limited to:**<br>Describing, entertaining, informing, interpreting, analyzing, recounting, explaining, persuading, negotiating, justifying, evaluating, and so on.<br><br>**Informational text types include but are not limited to:**<br>Descriptions or accounts (e.g., scientific, historical, economic, technical), recounts (e.g., biography, memoir), information reports, explanations (e.g., causal, factual), expositions (e.g., speeches, opinion pieces, argument, debate), responses (e.g., literary analysis), and so on. | ***6. Connecting ideas***<br><br>Combine clauses in a few basic ways to make connections between and join ideas (e.g., creating compound sentences using *and, but, so*).<br><br>***7. Condensing ideas***<br>Condense ideas in simple ways (e.g., by compounding verbs, adding prepositional phrases, or through simple embedded clauses or other ways of condensing as in, This is a story about a girl. The girl changed the world. This is a story about a girl *who changed the world*) to create precise and detailed sentences. | ***6. Connecting ideas***<br><br>Combine clauses in an increasing variety of ways (e.g., creating compound and complex sentences) to make connections between and join ideas, for example, to express a reason (e.g., *He stayed at home on Sunday to study for Monday's exam*) or to make a concession (e.g., *She studied all night even though she wasn't feeling well*).<br><br>***7. Condensing ideas***<br>Condense ideas in an increasing variety of ways (e.g., through various types of embedded clauses and other ways of condensing, as in, Organic vegetables are food. They're made without chemical fertilizers. They're made without chemical insecticides) → Organic vegetables are foods *that are made without chemical fertilizers or insecticides*) to create precise and detailed sentences. | ***6. Connecting ideas***<br><br>Combine clauses in a wide variety of ways (e.g., creating compound and complex sentences) to make connections between and join ideas, for example, to express a reason (e.g., *He stayed at home on Sunday because he had an exam on Monday*), to make a concession (e.g., *She studied all night even though she wasn't feeling well*), or to link two ideas that happen at the same time (e.g., *The students worked in groups while their teacher walked around the room*).<br><br>***7. Condensing ideas***<br>Condense ideas in a variety of ways (e.g., through various types of embedded clauses, ways of condensing, and nominalization as in, They *destroyed* the rain forest. Lots of animals *died* → The *destruction* of the rain forest led to *the death* of many animals) to create precise and detailed sentences. |

| Section 2: Elaboration on Critical Principles for Developing Language and Cognition in Academic Contexts<br>**Part III: Using Foundational Literacy Skills** | |
|---|---|
| **Foundational literacy skills in an alphabetic writing system**<br>● Print concepts<br>● Phonological awareness<br>● Phonics and word recognition<br>● Fluency | See chapter 6 for information on teaching foundational reading skills to English learners of various profiles based on age, native language, native language writing system, schooling experience, and literacy experience and proficiency . Some considerations are as follows:<br>● Native language and literacy (e.g., phoneme awareness or print concept skills in native language) should be assessed for potential transference to English language and literacy.<br>● Similarities between native language and English should be highlighted (e.g., phonemes or letters that are the same in both languages).<br>● Differences between native language and English should be highlighted (e.g., some phonemes in English may not exist in the student's native language; native language syntax may be different from English syntax). |

# School Colors and Mascot

## K3-6

# School Uniforms:


ACIS school colors will be maroon, grey and white.

ACIS mascot is the Phoenix.
The Sports team name will be the Phoenix Flames.


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