

# Common Core State Standards Alignment

## English Language Arts



### Legend

•	The standard is clearly addressed by program activities.
-	This standard potentially could be addressed as part of FIRST® LEGO® League Explore either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

### Kindergarten

Cluster	Indicator	Indicator Statement	Addressed
Reading: Literature	RL.K.1	With prompting and support, ask and answer questions about key details in a text.	•
	RL.K.2	With prompting and support, retell familiar stories, including key details.	-
	RL.K.3	With prompting and support, identify characters, settings, and major events in a story.	-
	RL.K.4	Ask and answer questions about unknown words in a text	-
	RL.K.5	Recognize common types of texts (e.g. storybooks, poems).	-
	RL.K.6	With prompting and support, name the author and illustrator of a story and define the role of each on telling a story.	-
	RL.K.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).	-
	RL.K.8	(not applicable to literature)	n/a
	RL.K.9	With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.	-
	RL.K.10	Actively engage in group reading activities with purpose and understanding.	-
Reading: Informational Text	RI.K.1	With prompting and support, ask and answer questions about key details in a text.	•
	RI.K.2	With prompting and support, identify the main topic and retell key details of a text.	•
	RI.K.3	With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.	•
	RI.K.4	With prompting and support, ask and answer questions about unknown words in text.	•
	RI.K.5	Identify the front cover, back cover, and title page of a book.	-
	RI.K.6	Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.	-
	RI.K.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).	-
	RI.K.8	With prompting and support, identify the reasons an author gives to support points in a text.	-
	RI.K.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).	•
	RI.K.10	Actively engage in group reading activities with purpose and understanding.	-
Reading: Foundational Skills	RF.K.1	Demonstrate understanding of the organization and basic features of print.	•
	RF.K.1.A	Follow words from left to right, top to bottom, and page by page.	•
	RF.K.1.B	Recognize that spoken words are represented in written language by specific sequences of letters.	•
	RF.K.1.C	Understand that words are separated by spaces in print.	•
	RF.K.1.D	Recognize and name all upper- and lowercase letters of the alphabet.	-
	RF.K.2	Demonstrate understanding of spoken words, syllables, and sounds (phonemes).	-
	RF.K.2.A	Recognize and produce rhyming words.	-
	RF.K.2.B	Count, pronounce, blend, and segment syllables in spoken words.	-
	RF.K.2.C	Blend and segment onsets and rimes of single syllable spoken words.	-
	RF.K.2.D	Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words.	-

	RF.K.2.E	Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.	-
	RF.K.3	Know and apply grade-level phonics and word analysis skills in decoding words.	-
	RF.K.3.A	Demonstrate basic knowledge of letter-sound correspondences by producing the primary or most frequent sound for each consonant.	-
	RF.K.3.B	Associate the long and short sounds with the common spellings (graphemes) for the five major vowels.	-
	RF.K.3.C	Read common high-frequency words by sight (e.g., the, of, to, you, she, my, is, are, do, does).	-
	RF.K.3.D	Distinguish between similarly spelled words by identifying the sounds of the letters that differ.	-
	RF.K.4	Read emergent reader texts with purpose and understanding.	-
Writing	W.K.1	Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell the reader the topic or 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...)	-
	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.	-
	W.K.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.	-
	W.K.4	(begins in grade 3)	n/a
	W.K.5	With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.	●
	W.K.6	With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.	
	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).	●
	W.K.8	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.	●
	W.K.9	(begins in grade 4)	n/a
	W.K.10	(begins in grade 3)	n/a
Speaking & Listening	SL.K.1	Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.	●
	SL.K.1.A	Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).	●
	SL.K.1.B	Continue a conversation through multiple exchanges.	●
	SL.K.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.	●
	SL.K.3	Ask and answer questions in order to seek help, get information, or clarify something that is not understood.	●
	SL.K.4	Describe familiar people, places, things, and events with prompting and support, provide additional detail.	●
	SL.K.5	Add drawings or other visual displays to descriptions as desired to provide additional detail.	●
SL.K.6	Speak audibly and express thoughts, feelings, and ideas clearly.	●	
Language	L.K.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	-
	L.K.1.A	Print many upper- and lowercase letters.	-
	L.K.1.B	Use frequently occurring nouns and verbs.	-
	L.K.1.C	Form regular plural nouns orally by adding /s/ or /es/ (e.g., dog, dogs; wish, wishes).	-
	L.K.1.D	Understand and use question words (interrogatives) (e.g., who, what, where, when, why, how).	-
	L.K.1.E	Use the most frequently occurring prepositions (e.g., to, from, in, out, on, off, for, of, by, with).	-
	L.K.1.F	Produce and expand complete sentences in shared language activities.	-
	L.K.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	-
	L.K.2.A	Capitalize the first word in a sentence and the pronoun I.	-
L.K.2.B	Recognize and name end punctuation.	-	

	L.K.2.C	Write a letter or letters for most consonant and short-vowel sounds (phonemes).	-
	L.K.2.D	Spell simple words phonetically, drawing on knowledge of sound-letter relationships.	-
	L.K.3	This standard is not addressed at the kindergarten level.	n/a
	L.K.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on kindergarten reading and content.	-
	L.K.4.A	Identify new meanings for familiar words and apply them accurately (e.g., knowing duck is a bird and learning the verb to duck).	-
	L.K.4.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.	-
	L.K.5	With guidance and support from adults, explore word relationships and nuances in word meanings.	-
	L.K.5.A	Sort common objects into categories (e.g., shapes, food) to gain a sense of the concepts the categories represent.	-
	L.K.5.B	Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).	-
	L.K.5.C	Identify real-life connections between words and their use (e.g., note places at school that are colorful).	-
	L.K.5.D	Distinguish shades of meaning among verbs describing the same general action (e.g., walk, march, strut, prance) by acting out the meanings.	-
	L.K.6	Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.	●

**Grade 1**

Cluster	Indicator	Indicator Statement	Addressed
<b>Reading: Literature</b>	RL.1.1	Ask and answer questions about key details in a text.	-
	RL.1.2	Retell stories, including key details, and demonstrate understanding of their central message or lesson.	-
	RL.1.3	Describe characters, settings, and major events in a story, using key details.	-
	RL.1.4	Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.	-
	RL.1.5	Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of text types.	-
	RL.1.6	Identify who is telling the story at various points in a text.	-
	RL.1.7	Use illustrations and details in a story to describe its characters, setting, or events.	-
	RL.1.8	(not applicable to literature)	n/a
	RL.1.9	Compare and contrast the adventures and experiences of characters in stories.	-
	RL.1.10	With prompting and support, read prose and poetry of appropriate complexity for grade 1.	-
<b>Reading: Informational Text</b>	RI.1.1	Ask and answer questions about key details in a text.	●
	RI.1.2	Identify the main topic and retell key details of a text.	●
	RI.1.3	Describe the connection between two individuals, events, ideas, or pieces of information in a text.	●
	RI.1.4	Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.	●
	RI.1.5	Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.	●
	RI.1.6	Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.	-
	RI.1.7	Use the illustrations and details in a text to describe its key ideas.	●
	RI.1.8	Identify the reasons an author gives to support points in a text.	-
	RI.1.9	Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).	●
	RI.1.10	With prompting and support, read informational texts appropriately complex for grade 1.	-
<b>Reading: Foundational Skills</b>	RF.1.1	Demonstrate understanding of the organization and basic features of print.	-
	RF.1.1.A	Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation).	-
	RF.1.2	Demonstrate understanding of spoken words, syllables, and sounds (phonemes).	-
	RF.1.2.A	Distinguish long from short vowel sounds in spoken single-syllable words.	-
	RF.1.2.B	Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.	-

	RF.1.2.C	Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.	-
	RF.1.2.D	Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes).	-
	RF.1.3	Know and apply grade-level phonics and word analysis skills in decoding words.	-
	RF.1.3.A	Know the spelling-sound correspondences for common consonant digraphs.	-
	RF.1.3.B	Decode regularly spelled one-syllable words.	-
	RF.1.3.C	Know final -e and common vowel team conventions for representing long vowel sounds.	-
	RF.1.3.D	Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.	-
	RF.1.3.E	Decode two-syllable words following basic patterns by breaking the words into syllables.	-
	RF.1.3.F	Read words with inflectional endings.	-
	RF.1.3.G	Recognize and read grade-appropriate irregularly spelled words.	-
	RF.1.4	Read with sufficient accuracy and fluency to support comprehension.	-
	RF.1.4.A	Read grade-level text with purpose and understanding.	-
	RF.1.4.B	Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.	-
	RF.1.4.C	Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	-
Writing	W.1.1	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.	-
	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.	-
	W.1.3	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.	-
	W.1.4	(begins in grade 3)	n/a
	W.1.5	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.	●
	W.1.6	With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.	-
	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).	●
	W.1.8	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.	●
	W.1.9	(begins in grade 4)	n/a
	W.1.10	(begins in grade 3)	n/a
Speaking & Listening	SL.1.1	Participate in collaborative conversations with diverse partners about Grade 1 topics and texts with peers and adults in small and larger groups.	●
	SL.1.1.A	Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).	●
	SL.1.1.B	Build on others' talk in conversations by responding to the comments of others through multiple exchanges.	●
	SL.1.1.C	Ask questions to clear up any confusion about the topics and texts under discussion.	●
	SL.1.2	Ask and answer questions about key details in a text read aloud or information presented orally or through other media.	●
	SL.1.3	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.	●
	SL.1.4	Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.	●
	SL.1.5	Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	●
	SL.1.6	Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 here for specific expectations.)	-
L.1.1	L.1.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	-
	L.1.1.A	Print all upper- and lowercase letters.	-
	L.1.1.B	Use common, proper, and possessive nouns.	-

<b>Language</b>	L.1.1.C	Use singular and plural nouns with matching verbs in basic sentences (e.g., <i>He hops; We hop</i> ).	-
	L.1.1.D	Use personal, possessive, and indefinite pronouns (e.g., <i>I, me, my; they, them, their, anyone, everything</i> ).	-
	L.1.1.E	Use verbs to convey a sense of past, present, and future (e.g., <i>Yesterday I walked home; Today I walk home; Tomorrow I will walk home</i> ).	-
	L.1.1.F	Use frequently occurring adjectives.	-
	L.1.1.G	Use frequently occurring conjunctions (e.g., <i>and, but, or, so, because</i> ).	-
	L.1.1.H	Use determiners (e.g., <i>articles, demonstratives</i> ).	-
	L.1.1.I	Use frequently occurring prepositions (e.g., <i>during, beyond, toward</i> ).	-
	L.1.1.J	Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts.	-
	L.1.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	-
	L.1.2.A	Capitalize dates and names of people.	-
	L.1.2.B	Use end punctuation for sentences.	-
	L.1.2.C	Use commas in dates and to separate single words in a series.	-
	L.1.2.D	Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words.	-
	L.1.2.E	Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.	-
	L.1.3	This standard is not addressed at this grade level.	n/a
	L.1.4	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.	-
	L.1.4.A	Use sentence-level context as a clue to the meaning of a word or phrase.	-
	L.1.4.B	Use frequently occurring affixes as a clue to the meaning of a word.	-
	L.1.4.C	Identify frequently occurring root words (e.g., <i>look</i> ) and their inflectional forms (e.g., <i>looks, looked, looking</i> ).	-
	L.1.5	With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings.	-
	L.1.5.A	Sort words into categories (e.g., <i>colors, clothing</i> ) to gain a sense of the concepts the categories represent.	-
	L.1.5.B	Define words by category and by one or more key attributes (e.g., <i>a duck is a bird that swims; a tiger is a large cat with stripes</i> ).	-
	L.1.5.C	Identify real-life connections between words and their use (e.g., <i>note places at home that are cozy</i> ).	-
L.1.5.D	Distinguish shades of meaning among verbs differing in manner (e.g., <i>look, peek, glance, stare, glare, scowl</i> ) and adjectives differing in intensity (e.g., <i>large, gigantic</i> ) by defining or choosing them or by acting out the meanings.	-	
L.1.6	Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., <i>because</i> ).	-	

## Grade 2

Cluster	Indicator	Indicator Statement	Addressed
<b>Reading: Literature</b>	RL.2.1	Ask and answer such questions as who, what where, when, why, and how to demonstrate understanding of key details in a text.	-
	RL.2.2	Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.	-
	RL.2.3	Describe how characters in a story respond to major events and Challenges.	-
	RL.2.4	Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.	-
	RL.2.5	Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.	-
	RL.2.6	Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.	-
	RL.2.7	Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.	-
	RL.2.8	RL.2.8 (not applicable to literature)	n/a

	RL.2.9	Compare and contrast two or more versions of the same story (e.g. Cinderella stories) by different authors or from different cultures.	
	RL.2.10	By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
Reading: Informational Text	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.	●
	RI.2.2	Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.	-
	RI.2.3	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.	-
	RI.2.4	Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.	-
	RI.2.5	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.	●
	RI.2.6	Identify the main purpose of a text, including what the author wants to answer, explain, or describe.	●
	RI.2.7	Explain how specific images (e.g., a diagram showing how a machine works) contribute to clarify a text.	-
	RI.2.8	Describe how reasons support specific points the author makes in a text.	
	RI.2.9	Compare and contrast the most important points presented by two texts on the same topic.	●
	RI.2.10	By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	-
Reading: Foundational Skills	RF.2.3	Know and apply grade-level phonics and word analysis skills in decoding words.	-
	RF.2.3.A	<i>Distinguish long and short vowels when reading regularly spelled one-syllable words.</i>	-
	RF.2.3.B	<i>Know spelling-sound correspondences for additional common vowel teams.</i>	-
	RF.2.3.C	<i>Decode regularly spelled two-syllable words with long vowels.</i>	-
	RF.2.3.D	<i>Decode words with common prefixes and suffixes.</i>	-
	RF.2.3.E	<i>Identify words with inconsistent but common spelling-sound correspondences.</i>	-
	RF.2.3.F	<i>Recognize and read grade-appropriate irregularly spelled words.</i>	-
	RF.2.4	Read with sufficient accuracy and fluency to support comprehension.	-
	RF.2.4.A	<i>Read grade-level text with purpose and understanding.</i>	-
	RF.2.4.B	<i>Read grade-level text orally with accuracy, appropriate rate, and expression.</i>	-
	RF.2.4.C	<i>Use context to confirm or self-correct word recognition and understanding rereading as necessary.</i>	-
Writing	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.	●
	W.2.2	Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.	-
	W.2.3	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.2.4	(begins in grade 3)	n/a
	W.2.5	With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.	●
	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.	-
	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).	●
	W.2.8	Recall information from experiences or gather information from provided sources to answer a question.	●
	W.2.9	(begins in grade 4)	n/a
	W.2.10	(begins in grade 3)	n/a



Speaking & Listening	SL.2.1	Participate in collaborative conversations with diverse partners about Grade 2 topics and texts with peers and adults in small and larger groups.	•
	SL.2.1.A	<i>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).</i>	•
	SL.2.1.B	<i>Build on others' talk in conversations by linking their comments to the remarks of others.</i>	•
	SL.2.1.C	<i>Ask for clarification and further explanation as needed about the topics and texts under discussion.</i>	•
	SL.2.2	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.	•
	SL.2.3	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.2.4	Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.	•
	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.	•
SL.2.6	Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.	•	
Language	L.2.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	-
	L.2.1.A	<i>Use collective nouns (e.g., groups)</i>	-
	L.2.1.B	<i>Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish).</i>	-
	L.2.1.C	<i>Use reflective pronouns (e.g., myself, ourselves).</i>	-
	L.2.1.D	<i>Form and use past tense of frequently occurring irregular verbs (e.g., sat, hid, told).</i>	-
	L.2.1.E	<i>Use adjectives and adverbs and choose between them depending on what is to be modified.</i>	-
	L.2.1.F	<i>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).</i>	-
	L.2.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	-
	L.2.2.A	<i>Capitalize holidays, product names, and geographic names.</i>	-
	L.2.2.B	<i>Use commas in greetings and closings of letters.</i>	-
	L.2.2.C	<i>Use an apostrophe to form contractions and frequently occurring possessives.</i>	-
	L.2.2.D	<i>Generalize learned spelling patterns when writing words (e.g. cage â€¢ badge; boy â€¢ boil).</i>	-
	L.2.2.E	<i>Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.</i>	-
	L.2.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.	-
	L.2.3.A	<i>Compare formal and informal uses of English.</i>	-
	L.2.4	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.	-
	L.2.4.A	<i>Use sentence-level context as a clue to the meaning of a word or phrase.</i>	-
	L.2.4.B	<i>Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., happy/unhappy, tell/retell).</i>	-
	L.2.4.C	<i>Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., addition, additional).</i>	-
	L.2.4.D	<i>Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., birdhouse, lighthouse, housefly; bookshelf, notebook, bookmark).</i>	-
	L.2.4.E	<i>Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.</i>	-
	L.2.5	Demonstrate understanding of figurative language, word relationships and nuances in word meanings.	-
	L.2.5.A	<i>Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy).</i>	-
	L.2.5.B	<i>Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny).</i>	-
L.2.6	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).	-	

## Grade 3

Cluster	Indicator	Indicator Statement	Addressed
Reading: Literature	RL.3.1	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	-
	RL.3.2	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.	
	RL.3.3	Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.	
	RL.3.4	Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.	
	RL.3.5	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.	
	RL.3.6	Distinguish their own point of view from that of the narrator or those of the characters.	
	RL.3.7	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).	
	RL.3.8	(not applicable to literature)	n/a
	RL.3.9	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 forma series).	
	RL.3.10	By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	
Reading: Informational Text	RI.3.1	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as basis for the answers.	●
	RI.3.2	Determine the main idea of a text, recount the key details and explain how they support the main idea.	●
	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.	-
	RI.3.4	Determine the meaning of general academic and domain specific words and phrases in a text relevant to a grade 3 topic or subject area.	-
	RI.3.5	Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.	-
	RI.3.6	Distinguish their own point of view from that of the author of a text.	-
	RI.3.7	Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understandings of the text (e.g., where when, why, and how key events occur).	●
	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).	-
	RI.3.9	Compare and contrast the most important points and key details presented in two texts on the same topic.	●
	RI.3.10	By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	-
Reading: Foundational Skills	RF.3.3	Know and apply grade-level phonics and word analysis skills in decoding words.	-
	RF.3.3.A	Identify and know the meaning of the most common prefixes and derivational suffixes.	-
	RF.3.3.B	Decode words with common Latin suffixes.	-
	RF.3.3.C	Decode multisyllable words.	-
	RF.3.3.D	Read grade-appropriate irregularly spelled words.	-
	RF.3.4	Read with sufficient accuracy and fluency to support comprehension.	-
	RF.3.4.A	Read grade-level text with purpose and understanding.	-
	RF.3.4.B	Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression.	-



	<i>RF.3.4.C</i>	<i>Use context to confirm or self-correct word recognition and understanding rereading as necessary.</i>	-
<b>Writing</b>	W.3.1	Write opinion pieces on topics or texts supporting a point of view with reasons.	-
	<i>W.3.1.A</i>	<i>Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.</i>	-
	<i>W.3.1.B</i>	<i>Provide reasons that support the opinion.</i>	-
	<i>W.3.1.C</i>	<i>Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.</i>	-
	<i>W.3.1.D</i>	<i>Provide a concluding statement or section.</i>	-
	W.3.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	-
	<i>W.3.2.A</i>	<i>Introduce a topic and group related information together; include illustrations when useful in aiding comprehension.</i>	-
	<i>W.3.2.B</i>	<i>Develop the topic with facts, definitions, and details.</i>	-
	<i>W.3.2.C</i>	<i>Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.</i>	-
	<i>W.3.2.D</i>	<i>Provide a concluding statement or section.</i>	-
	W.3.3	Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	-
	<i>W.3.3.A</i>	<i>Establish a situation and introduce a narrator and /or characters; organize an event sequence that unfolds naturally.</i>	-
	<i>W.3.3.B</i>	<i>Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.</i>	-
	<i>W.3.3.C</i>	<i>Use temporal words and phrases to signal event order.</i>	-
	<i>W.3.3.D</i>	<i>Provide a sense of closure.</i>	-
	W.3.4	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 for 3rd Grade).	●
	W.3.5	With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.	-
	W.3.6	With guidance and support from adults, use technology to produce and publish writing (using key boarding skills) as well as to interact and collaborate with others.	-
W.3.7	Conduct short research projects that build knowledge about a topic.	●	
W.3.8	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provide categories.	●	
W.3.9	(begins in grade 4)	n/a	
W.3.10	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.	-	
<b>Speaking &amp; Listening</b>	SL.3.1	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.	●
	<i>SL.3.1.A</i>	<i>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.</i>	●
	<i>SL.3.1.B</i>	<i>Follow agreed-upon rules for discussions (e.g., gaining the floor on respectful ways, listening to others with care, speaking one at a tome about the topics and texts under discussion).</i>	●
	<i>SL.3.1.C</i>	<i>Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.</i>	●
	<i>SL.3.1.D</i>	<i>Explain their own ideas and understanding in light of the discussion.</i>	-
	SL.3.2	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.	-
	SL.3.3	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.	-
	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.	●

	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.	
	SL.3.6	Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.	•
Language	L.3.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	-
	L.3.1.A	<i>Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.</i>	-
	L.3.1.B	<i>Form and use regular and irregular plural nouns.</i>	-
	L.3.1.C	<i>Use abstract nouns (e.g., childhood).</i>	-
	L.3.1.D	<i>Form and use regular and irregular verbs.</i>	-
	L.3.1.E	<i>Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses.</i>	-
	L.3.1.F	<i>Ensure subject-verb and pronoun-antecedent agreement.</i>	-
	L.3.1.G	<i>Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what it to be modified.</i>	-
	L.3.1.H	<i>Use coordinating and subordinating conjunctions.</i>	-
	L.3.1.I	<i>Produce simple, compound, and complex sentences.</i>	-
	L.3.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	-
	L.3.2.A	<i>Capitalize appropriate words in titles.</i>	-
	L.3.2.B	<i>Use commas in addresses.</i>	-
	L.3.2.C	<i>Use commas and quotation marks in dialogue.</i>	-
	L.3.2.D	<i>Form and use possessives.</i>	-
	L.3.2.E	<i>Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., sitting, smiled, cries, happiness).</i>	-
	L.3.2.F	<i>Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.</i>	-
	L.3.2.G	<i>Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.</i>	-
	L.3.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.	-
	L.3.3.A	<i>Choose words and phrases for effect.</i>	-
	L.3.3.B	<i>Recognize and observe differences between the conventions of spoken and written standard English.</i>	-
	L.3.4	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.	-
	L.3.4.A	<i>Use sentence-level context as a clue to the meaning of a word or phrase.</i>	-
	L.3.4.B	<i>Determine the meaning of the new word formed when a known affix is added to a know word (e.g., agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat).</i>	-
L.3.4.C	<i>Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., company, companion).</i>	-	
L.3.4.D	<i>Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.</i>	-	
L.3.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	-	
L.3.5.A	<i>Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps).</i>	-	
L.3.5.B	<i>Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful).</i>	-	
L.3.5.C	<i>Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., knew, believed, suspected, heard, wondered).</i>	-	
	L.3.6	Acquire and use accurately a range of general academic and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., <i>After dinner that night we went looking for them</i> ).	-

**Grade 4**

Cluster	Indicator	Indicator Statement	Addressed
	RL.4.1	Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	

Reading: Literature	RL.4.2	Determine a theme of a story, drama, or poem from details in the text; summarize the text.	
	RL.4.3	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).	
	RL.4.4	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).	
	RL.4.5	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.	
	RL.4.6	Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.	
	RL.4.7	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.	
	RL.4.8	(not applicable to literature)	n/a
	RL.4.9	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.	
	RL.4.10	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.	
	Reading: Informational Text	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.
RI.4.2		Determine the main idea of a text and explain how it is supported by key details; summarize the text.	●
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.	-
RI.4.4		Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.	-
RI.4.5		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.	-
RI.4.6		Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.	-
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.	-
RI.4.8		Explain how an author uses reasons and evidence to support particular points in a text.	-
RI.4.9		Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.	●
RI.4.10		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.	-
Reading: Foundational Skills	RF.4.3	Know and apply grade-level phonics and word analysis skills in decoding words.	-
	RF.4.3.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.	-
	RF.4.4	Read with sufficient accuracy and fluency to support comprehension.	-
	RF.4.4.A	Read on-level text with purpose and understanding.	-
	RF.4.4.B	Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.	-
	RF.4.4.C	Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	-
Writing	W.4.1	Write opinion pieces on topics or texts, supporting a point of view with reasons and information.	-
	W.4.1.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.	-

	W.4.1.B	Provide reasons that are supported by facts and details.	-
	W.4.1.C	Link opinion and reasons using words and phrases (e.g., for instance, in order to, in addition).	-
	W.4.1.D	Provide a concluding statement or section related to the opinion presented.	-
	W.4.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	-
	W.4.2.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.	-
	W.4.2.B	Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.	-
	W.4.2.C	Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).	-
	W.4.2.D	Use precise language and domain-specific vocabulary to inform about or explain the topic.	-
	W.4.2.E	Provide a concluding statement or section related to the information or explanation presented.	-
	W.4.3	Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	-
	W.4.3.A	Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.	-
	W.4.3.B	Use dialogue and description to develop experiences and events or show the responses of characters to situations.	-
	W.4.3.C	Use a variety of transitional words and phrases to manage the sequence of events.	-
	W.4.3.D	Use concrete words and phrases and sensory details to convey experiences and events precisely.	-
	W.4.3.E	Provide a conclusion that follows from the narrated experiences or events.	-
	W.4.4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	●
	W.4.5	With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 4 on page 29.)	-
	W.4.6	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.	-
	W.4.7	Conduct short research projects that build knowledge through investigation of different aspects of a topic.	●
	W.4.8	Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.	●
	W.4.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.	-
	W.4.9.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].”).	-
	W.4.9.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”).	-
	W.4.10	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.	-
Speaking & Listening	SL.4.1	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.	●
	SL.4.1.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.	●
	SL.4.1.B	Follow agreed-upon rules for discussions and carry out assigned roles.	●
	SL.4.1.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.	●
	SL.4.1.D	Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.	●

	SL.4.2	Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.	-
	SL.4.3	Identify the reasons and evidence a speaker provides to support particular points.	-
	SL.4.4	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.	●
	SL.4.5	Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.	-
	SL.4.6	Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See grade 4 Language standards 1 on page 28 for specific expectations.)	-
Language	L.4.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	-
	L.4.1.A	Use relative pronouns ( <i>who, whose, whom, which, that</i> ) and relative adverbs ( <i>where, when, why</i> ).	-
	L.4.1.B	Form and use the progressive (e.g., <i>I was walking; I am walking; I will be walking</i> ) verb tenses.	-
	L.4.1.C	Use modal auxiliaries (e.g., <i>can, may, must</i> ) to convey various conditions.	-
	L.4.1.D	Order adjectives within sentences according to conventional patterns (e.g., <i>a small red bag rather than a red small bag</i> ).	-
	L.4.1.E	Form and use prepositional phrases.	-
	L.4.1.F	Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.	-
	L.4.1.G	Correctly use frequently confused words (e.g., <i>to, too, two; there, their</i> ).	-
	L.4.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	-
	L.4.2.A	Use correct capitalization.	-
	L.4.2.B	Use commas and quotation marks to mark direct speech and quotations from a text.	-
	L.4.2.C	Use a comma before a coordinating conjunction in a compound sentence.	-
	L.4.2.D	Spell grade-appropriate words correctly, consulting references as needed.	-
	L.4.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.	-
	L.4.3.A	Choose words and phrases to convey ideas precisely.	-
	L.4.3.B	Choose punctuation for effect.	-
	L.4.3.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).	-
	L.4.4	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.	-
	L.4.4.A	Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.	-
	L.4.4.B	Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., <i>telegraph, photograph, autograph</i> ).	-
	L.4.4.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.	-
	L.4.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	-
	L.4.5.A	Explain the meaning of simple similes and metaphors (e.g., <i>as pretty as a picture</i> ) in context.	-
	L.4.5.B	Recognize and explain the meaning of common idioms, adages, and proverbs.	-
	L.4.5.C	Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms)	-
	L.4.6	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., <i>quizzed, whined, stammered</i> ) and that are basic to a particular topic (e.g., <i>wildlife, conservation, and endangered</i> when discussing animal preservation).	-

# Common Core State Standards Alignment

## Mathematics



EXPLORE

### Legend

•	The standard is clearly addressed by program activities.
-	This standard potentially could be addressed as part of FIRST® LEGO® League Explore either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

### All Grades

Cluster	Indicator	Indicator Statement	Addressed
Mathematical Practice	MP1	Make sense of problems and persevere in solving them.	-
	MP2	Reason abstractly and quantitatively.	•
	MP3	Construct viable arguments and critique the reasoning of others.	•
	MP4	Model with mathematics.	-
	MP5	Use appropriate tools strategically.	-
	MP6	Attend to precision.	-
	MP7	Look for and make use of structure.	•
	MP8	Look for and express regularity in repeated reasoning.	-

### Kindergarten

Cluster	Indicator	Indicator Statement	Addressed
Counting & Cardinality	K.CC.A.1	Count to 100 by ones and tens.	-
	K.CC.A.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	-
	K.CC.A.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).	-
	K.CC.B.4	Understand the relationship between numbers and quantities; connect counting to cardinality.	-
	K.CC.B.4.A	<i>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.</i>	-
	K.CC.B.4.B	<i>Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangements or the order in which they were counted.</i>	-
	K.CC.B.4.C	<i>Understand that each successive number name refers to a quantity that is one larger.</i>	-
	K.CC.B.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.	-
	K.CC.C.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.	-
	K.CC.C.7	Compare two numbers between 1 and 10 presented as written numerals.	-
Operations and Algebraic Thinking	K.OA.A.1	Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	-
	K.OA.A.2	Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	-
	K.OA.A.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 drawing or equation (e.g., $5=2+3$ and $5=4+1$ ).	-



	K.OA.A.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.	-
	K.OA.A.5	Fluently add and subtract within 5.	-
<b>Number and Operations in Base Ten</b>	K.NBT.A.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 (such as $18=10+8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	-
<b>Measurement and Data</b>	K.MD.A.1	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	•
	K.MD.A.2	Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference.	•
	K.MD.B.3	Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	-
<b>Geometry</b>	K.G.A.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.	•
	K.G.A.2	Correctly name shapes regardless of their orientations or overall size.	-
	K.G.A.3	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	-
	K.G.B.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).	-
	K.G.B.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	•
	K.G.B.6	Compose simple shapes to form larger shapes.	•

### Grade 1

Cluster	Indicator	Indicator Statement	Addressed
<b>Operations and Algebraic Thinking</b>	1.OA.A.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	-
	1.OA.A.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.	-
	1.OA.B.3	Apply properties of operations as strategies to add and subtract.2 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.)	-
	1.OA.B.4	Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.	-
	1.OA.C.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	-
	1.OA.C.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 $6 + 6 + 1 = 12 + 1 = 13$ ).	-

	1.OA.D.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? $6 = 6$ , $7 = 8 - 1$ , $5 + 2 = 2 + 5$ , $4 + 1 = 5 + 2$ .	-
	1.OA.D.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.A.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.	-
	1.NBT.B.2	Understand that the two digits of a two-digit number represent amounts of tens and ones.	-
	1.NBT.B.2.A	<i>10 can be thought of as a bundle of ten ones — called a “ten.”</i>	-
	1.NBT.B.2.B	<i>The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</i>	-
	1.NBT.B.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$ , $=$ , and $<$ .	-
	1.NBT.2	Understand that the two digits of a two-digit number represent amounts of tens and ones.	-
	1.NBT.2.C	<i>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).</i>	-
	1.NBT.C.4	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning 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.	-
	1.NBT.C.5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	-
	1.NBT.C.6	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (+ 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.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.	●
	1.MD.A.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.	●
	1.MD.B.3	Tell and write time in hours and half-hours using analog and digital clocks.	-
	1.MD.C.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	-
Geometry	1.G.A.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.	●
	1.G.A.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.	●
	1.G.A.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

Cluster	Indicator	Indicator Statement	Addressed
Operations and Algebraic Thinking	2.OA.A.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.	-
	2.OA.B.2	Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.	-
	2.OA.C.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.	-
	2.OA.C.4	Use addition to find the total number 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.A.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:	-
	2.NBT.A.1.A	<i>100 can be thought of as a bundle of ten tens - called a "hundred".</i>	-
	2.NBT.A.1.B	<i>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).</i>	-
	2.NBT.A.2	Count within 1000; skip-count by 5s, 10s, and 100s.	-
	2.NBT.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	-
	2.NBT.A.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	-
	2.NBT.B.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or relationship between addition and subtraction.	-
	2.NBT.B.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	-
	2.NBT.B.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.	-
	2.NBT.B.8	Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.	-
2.NBT.B.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.	-	
Measurement and Data	2.MD.A.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	-
	2.MD.A.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.	-
	2.MD.A.3	Estimate lengths using units of inches, feet, centimeters, and meters.	-
	2.MD.A.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	-
	2.MD.B.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	-
	2.MD.B.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.	-

	2.MD.C.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	-
	2.MD.C.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately.	
	2.MD.D.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.	-
	2.MD.D.10	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	-
<b>Geometry</b>	2.G.A.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.G.A.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	-
	2.G.A.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

Cluster	Indicator	Indicator Statement	Addressed
<b>Operations and Algebraic Thinking</b>	3.OA.A.1	Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each.	-
	3.OA.A.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.	-
	3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurements quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	-
	3.OA.A.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers.	-
	3.OA.B.5	Apply properties of operations as strategies to multiply and divide.	
	3.OA.B.6	Understand division as an unknown-factor problem.	
	3.OA.C.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$ , one knows $40/5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	
	3.OA.D.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.	
	3.OA.D.A.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.	
<b>Number and Operations in Base Ten</b>	3.NBT.A.1	Use place value understanding to round whole numbers to the nearest 10 or 100.	-
	3.NBT.A.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.NBT.A.3	Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., $9 \times 80$ , $5 \times 60$ ) using strategies based on place value and properties of operations.	-

Number and Operations - Fractions	3.NF.A.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 by $a$ parts of the size $1/b$ .	-
	3.NF.A.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram.	-
	3.NF.A.2.A	<i>Represent a fraction <math>1/b</math> on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into <math>b</math> equal parts. Recognize that each part has size <math>1/b</math> and that the endpoint of the part based at 0 locates the number <math>1/b</math> on the number line.</i>	-
	3.NF.A.2.B	<i>Represent a fraction <math>a/b</math> on a number line diagram by marking off a lengths <math>1/b</math> from 0. Recognize that the resulting interval has size <math>a/b</math> and that its endpoint locates the number <math>a/b</math> on the number line.</i>	-
	3.NF.A.3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	-
	3.NF.A.3.A	<i>Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.</i>	-
	3.NF.A.3.B	<i>Recognize and generate simple equivalent fractions, e.g., <math>1/2 = 2/4</math>, <math>4/6 = 2/3</math>. Explain why the fractions are equivalent, e.g., by using a visual fraction model.</i>	-
	3.NF.A.3.C	<i>Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.</i>	-
	3.NF.A.3.D	<i>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 <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model.</i>	-
Measurement and Data	3.MD.A.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.	-
	3.MD.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as beaker with a measurement scale) to represent the problem.	-
	3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.	-
	3.MD.B.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units - whole numbers, halves, or quarters.	-
	3.MD.C.5	Recognize area as an attribute of plane figures and understand the concepts of area measurement.	-
	3.MD.C.5.A	<i>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.</i>	-
	3.MD.C.5.B	<i>A plane figure which can be covered without gaps or overlaps by unit squares is said to have an area of square units.</i>	-
	3.MD.C.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	-
	3.MD.C.7	Relate area to the operations of multiplication and addition.	-
	3.MD.C.7.A	<i>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.</i>	-
	3.MD.C.7.B	<i>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.</i>	-
	3.MD.C.7.C	<i>Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths <math>a</math> and <math>b + c</math> is the sum of <math>a \times b</math> and <math>a \times c</math>. Use area models to represent the distributive property in mathematical reasoning.</i>	-
	3.MD.C.7	Relate area to the operations of multiplication and addition.	-

	3.MD.C.7.D	Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding areas of the non-overlapping parts, applying this technique to solve real world problems.	-
	3.MD.D.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.A.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that 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.	-
	3.G.A.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.	-

## Grade 4

Cluster	Indicator	Indicator Statement	Addressed
Operations and Algebraic Thinking	4.OA.A.1	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	-
	4.OA.A.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.	-
	4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	-
	4.OA.B.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.	-
	4.OA.C.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. <i>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.</i>	-
Number and Operations in Base Ten	4.NBT.A.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. <i>For example, recognize that <math>700 \div 70 = 10</math> by applying concepts of place value and division.</i>	-
	4.NBT.A.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.	-
	4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.	-
	4.NBT.B.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	-
	4.NBT.B.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.	-



	4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	-
Number and Operations - Fractions	4.NF.A.1	Explain why a fraction $a/b$ is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	-
	4.NF.A.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.	-
	4.NF.B.3	Understand a fraction $a/b$ with $a > 1$ as a sum of fractions $1/b$ .	-
	4.NF.B.3.A	<i>Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.</i>	-
	4.NF.B.3.B	<i>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: <math>3/8 = 1/8 + 1/8 + 1/8</math>; <math>3/8 = 1/8 + 2/8</math>; <math>2\ 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8</math>.</i>	-
	4.NF.B.3.C	<i>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.</i>	-
	4.NF.B.3.D	<i>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.</i>	-
	4.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	-
	4.NF.B.4.A	<i>Understand a fraction <math>a/b</math> as a multiple of <math>1/b</math>. For example, use a visual fraction model to represent <math>5/4</math> as the product <math>5 \times (1/4)</math>, recording the conclusion by the equation <math>5/4 = 5 \times (1/4)</math>.</i>	-
	4.NF.B.4.B	<i>Understand a multiple of <math>a/b</math> as a multiple of <math>1/b</math>, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express <math>3 \times (2/5)</math> as <math>6 \times (1/5)</math>, recognizing this product as <math>6/5</math>. (In general, <math>n \times (a/b) = (n \times a)/b</math>.)</i>	-
	4.NF.B.4.C	<i>Apply and extend previous understandings of multiplication to multiply a fraction by 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 <math>3/8</math> 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?</i>	-
	4.NF.C.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 $3/10 + 4/100 = 34/100$ .	
	4.NF.C.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.	
	4.NF.C.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 a visual model.	

<b>Measurement and Data</b>	4.MD.A.1	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. 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)	-
	4.MD.A.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	-
	4.MD.A.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.	-
	4.MD.B.4	Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.	-
	4.MD.C.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:	-
	4.MD.C.5.A	<i>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 <math>\frac{1}{360}</math> of a circle is called a "one-degree angle," and can be used to measure angles.</i>	-
	4.MD.C.5.B	<i>An angle that turns through <math>n</math> one-degree angles is said to have an angle measure of <math>n</math> degrees.</i>	-
	4.MD.C.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	-
	4.MD.C.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.	-
<b>Geometry</b>	4.G.A.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	-
	4.G.A.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.	-
	4.G.A.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	-

## Next Generation Science Standards Alignment

### Performance Expectations



EXPLORE

#### Legend

•	The standard is clearly addressed by program activities.
-	This standard potentially could be addressed as part of FIRST® LEGO® League Explore either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

#### Kindergarten

Cluster	Indicator	Indicator Statement	Addressed
<b>Motion and Stability: Forces and Interactions</b>	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.	•
	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.	•
<b>Energy</b>	K-PS3-1	Make observations to determine the effect of sunlight on Earth's surface.	
	K-PS3-2	Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	
<b>From Molecules to Organisms: Structures and Processes</b>	K-LS1-1	Use observations to describe patterns of what plants and animals (including humans) need to survive.	
<b>Earth's Systems</b>	K-ESS2-1	Use and share observations of local weather conditions to describe patterns over time.	
	K-ESS2-2	Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	
<b>Earth and Human Activity</b>	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.	
	K-ESS3-2	Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, 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.	

#### Grade 1

Cluster	Indicator	Indicator Statement	Addressed
<b>Waves and Their Applications in Technologies for Information Transfer</b>	1-PS4-1	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	
	1-PS4-2	Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.	
	1-PS4-3	Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam 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.	
<b>From Molecules to Organisms: Structures and Processes</b>	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.	
	1-LS1-2	Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.	

<b>Heredity: Inheritance and Variation of Traits</b>	1-LS3-1	Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	
<b>Earth's Place in the Universe</b>	1-ESS1-1	Use observations of the sun, moon, and stars to describe patterns that can be predicted.	
	1-ESS1-2	Make observations at different times of year to relate the amount of daylight to the time of year.	

## Grade 2

Cluster	Indicator	Indicator Statement	Addressed
<b>Matter and its Interactions</b>	2-PS1-1	Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	
	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.	•
	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.	•
	2-PS1-4	Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	
<b>Ecosystems: Interactions, Energy, and Dynamics</b>	2-LS2-1	Plan and conduct an investigation to determine if plants need sunlight and water to grow.	
	2-LS2-2	Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	
<b>Biological Evolution: Unity and Diversity</b>	2-LS4-1	Make observations of plants and animals to compare the diversity of life in different habitats.	
<b>Earth's Place in the Universe</b>	2-ESS1-1	Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	
<b>Earth's Systems</b>	2-ESS2-1	Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	
	2-ESS2-2	Develop a model to represent the shapes and kinds of land and bodies of water in an area.	
	2-ESS2-3	Obtain information to identify where water is found on Earth and that it can be solid or liquid.	

## Grades K-2

Cluster	Indicator	Indicator Statement	Addressed
<b>Engineering Design</b>	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.	•

## Grade 3

Cluster	Indicator	Indicator Statement	Addressed
<b>Motion and Stability: Forces and Interactions</b>	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.	-
	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.	-

	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.	-
	3-PS2-4	Define a simple design problem that can be solved by applying scientific ideas about magnets.	
<b>From Molecules to Organisms: Structures and Processes</b>	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.	
<b>Ecosystems: Interactions, Energy, and Dynamics</b>	3-LS2-1	Construct an argument that some animals form groups that help members survive.	
<b>Heredity: Inheritance and Variation of Traits</b>	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.	
	3-LS3-2	Use evidence to support the explanation that traits can be influenced by the environment.	
<b>Biological Evolution: Unity and Diversity</b>	3-LS4-1	Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	
	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.	
	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.	
	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.	
<b>Earth's Systems</b>	3-ESS2-1	Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	
	3-ESS2-2	Obtain and combine information to describe climates in different regions of the world	
<b>Earth and Human Activity</b>	3-ESS3-1	Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	

#### Grade 4

Cluster	Indicator	Indicator Statement	Addressed
<b>Energy</b>	4-PS3-1	Use evidence to construct an explanation relating the speed of an object to the energy of that object.	-
	4-PS3-2	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	
	4-PS3-3	Ask questions and predict outcomes about the changes in energy that occur when objects collide.	-
	4-PS3-4	Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	-
<b>Waves and Their Applications in Technologies for Information Transfer</b>	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.	
	4-PS4-2	Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	
	4-PS4-3	Generate and compare multiple solutions that use patterns to transfer information.	

<b>From Molecules to Organisms: Structures and Processes</b>	4-LS1-1	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	
	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.	
<b>Earth's Place in the Universe</b>	4-ESS1-1	Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	
<b>Earth's Systems</b>	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.	
	4-ESS2-2	Analyze and interpret data from maps to describe patterns of Earth's features.	
<b>Earth and Human Activity</b>	4-ESS3-1	Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	
	4-ESS3-2	Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	

### Grades 3-5

Cluster	Indicator	Indicator Statement	Addressed
<b>Engineering Design</b>	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.	-



## 21<sup>st</sup> Century Skills Alignment

### Student Outcomes



EXPLORE

#### Legend

•	The standard is clearly addressed by program activities.
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#### Core Subjects

Cluster	Indicator Statement	Addressed
Global Awareness	Using 21st century skills to understand and address global issues	•
	Learning from and working collaboratively with individuals representing diverse cultures, religions and lifestyles in a spirit of mutual respect and open dialogue in personal, work and community contexts	•
	Understanding other nations and cultures, including the use of non-English languages	
Financial, economic, business and entrepreneurial literacy	Knowing how to make appropriate personal economic choices	
	Understanding the role of the economy in society	
	Using entrepreneurial skills to enhance workplace productivity and career options	
Civic literacy	Participating effectively in civic life through knowing how to stay informed and understanding governmental processes	
	Exercising the rights and obligations of citizenship at local, state, national and global levels	
	Understanding the local and global implications of civic decisions	
Health literacy	Obtaining, interpreting and understanding basic health information and services and using such information and services in ways that are health enhancing	-
	Understanding preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance and stress reduction	-
	Using available information to make appropriate health-related decisions	-
	Establishing and monitoring personal and family health goals	
	Understanding national and international public health and safety issues	-
Environmental literacy	Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water and ecosystems	-
	Demonstrate knowledge and understanding of society's impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.)	-
	Investigate and analyze environmental issues, and make accurate conclusions about effective solutions	-
	Take individual and collective action towards addressing environmental Challenges (e.g., participating in global actions, designing solutions that inspire action on environmental issues)	

#### Learning and Innovation Skills

Cluster	Indicator Statement	Addressed
Creativity and Innovation	Use a wide range of idea creation techniques (such as brainstorming)	•
	Create new and worthwhile ideas (both incremental and radical concepts)	•
	Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts	•

	Develop, implement and communicate new ideas to others effectively	●
	Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work	●
	Demonstrate originality and inventiveness in work and understand the real world limits to adopting new ideas	●
	View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistakes	●
	Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur	
<b>Critical Thinking and Problem Solving</b>	Use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation	●
	Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems	●
	Effectively analyze and evaluate evidence, arguments, claims and beliefs	●
	Analyze and evaluate major alternative points of view	●
	Synthesize and make connections between information and arguments	●
	Interpret information and draw conclusions based on the best analysis	●
	Reflect critically on learning experiences and processes	●
	Solve different kinds of non-familiar problems in both conventional and innovative ways	●
	Identify and ask significant questions that clarify various points of view and lead to better solutions	●
<b>Communication and Collaboration</b>	Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts	●
	Listen effectively to decipher meaning, including knowledge, values, attitudes and intentions	●
	Use communication for a range of purposes (e.g. to inform, instruct, motivate and persuade)	●
	Utilize multiple media and technologies, and know how to judge their effectiveness a priori as well as assess their impact	-
	Communicate effectively in diverse environments (including multi-lingual)	-
	Demonstrate ability to work effectively and respectfully with diverse teams	●
	Exercise flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal	●
	Assume shared responsibility for collaborative work, and value the individual contributions made by each team member	●
	Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts	●

### Information, Media and Technology Skills

Cluster	Indicator Statement	Addressed
<b>Information Literacy</b>	Access information efficiently (time) and effectively (sources)	●
	Evaluate information critically and competently	-
	Use information accurately and creatively for the issue or problem at hand	●
	Manage the flow of information from a wide variety of sources	-
	Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information	
<b>Media Literacy</b>	Understand both how and why media messages are constructed, and for what purposes	
	Examine how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors	
	Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media	
	Understand and utilize the most appropriate media creation tools, characteristics and conventions	

	Understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments	
<b>ICT Literacy</b>	Use technology as a tool to research, organize, evaluate and communicate information	●
	Use digital technologies (computers, PDAs, media players, GPS, etc.), communication/networking tools and social networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy	-
	Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies	

## Life and Career Skills

Cluster	Indicator Statement	Addressed
<b>Flexibility and Adaptability</b>	Adapt to varied roles, jobs responsibilities, schedules and context	●
	Work effectively in a climate of ambiguity and changing priorities	●
	Incorporate feedback effectively	●
	Deal positively with praise, setbacks and criticism	●
	Understand, negotiate and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments	●
<b>Initiative and Self-Direction</b>	Set goals with tangible and intangible success criteria	-
	Balance tactical (short-term) and strategic (long-term) goals	-
	Utilize time and manage workload efficiently	●
	Monitor, define, prioritize and complete tasks without direct oversight	-
	Go beyond basic mastery of skills and/or curriculum to explore and expand one's own learning and opportunities to gain expertise	●
	Demonstrate initiative to advance skill levels towards a professional level	
	Demonstrate commitment to learning as a lifelong process	-
	Reflect critically on past experiences in order to inform future progress	-
<b>Social and Cross-Cultural Skills</b>	Know when it is appropriate to listen and when to speak	●
	Conduct themselves in a respectable, professional manner	●
	Respect cultural differences and work effectively with people from a range of social and cultural backgrounds	-
	Respond open-mindedly to different ideas and values	●
	Leverage social and cultural differences to create new ideas and increase both innovation and quality of work	
<b>Productivity and Accountability</b>	Set and meet goals, even in the face of obstacles and competing pressure	-
	Prioritize, plan and manage work to achieve the intended result	-
	Demonstrate additional attributes associated with producing high quality products including the abilities to:	●
	<ul style="list-style-type: none"> <li>- Work positively and ethically</li> <li>- Manage time and projects effectively</li> <li>- Multi-task</li> <li>- Participate actively, as well as be reliable and punctual</li> </ul>	
	<ul style="list-style-type: none"> <li>- Present oneself professionally and with proper etiquette</li> <li>- Collaborate and cooperate effectively with teams</li> <li>- Respect and appreciate team diversity</li> <li>- Be accountable for results</li> </ul>	
<b>Leadership and Responsibility</b>	Use interpersonal and problem-solving skills to influence and guide others toward a goal	●
	Leverage strengths of others to accomplish a common goal	●
	Inspire others to reach their very best via example and selflessness	●
	Demonstrate integrity and ethical behavior in using influence and power	●
	Act responsibly with the interests of the larger community in mind	●

# Computer Science Standards Alignment

## Standards



EXPLORE

### Legend

•	The standard is clearly addressed by program activities.
-	This standard potentially could be addressed as part of FIRST® LEGO® League Explore either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

### Grades K-2

Cluster	Indicator	Indicator Statement	Addressed
Computing Systems	1A-CS-01	Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.	-
	1A-CS-02	Use appropriate terminology in identifying and describing the function of common physical components of computing systems (hardware).	-
	1A-CS-03	Describe basic hardware and software problems using accurate terminology.	-
Networks & the Internet	1A-NI-04	Explain what passwords are and why we use them, and use strong passwords to protect devices and information from unauthorized access.	-
Data & Analysis	1A-DA-05	Store, copy, search, retrieve, modify, and delete information using a computing device and define the information stored as data.	-
	1A-DA-06	Collect and present the same data in various visual formats.	-
	1A-DA-07	Identify and describe patterns in data visualizations, such as charts or graphs, to make predictions.	-
Algorithms & Programming	1A-AP-08	Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks.	-
	1A-AP-09	Model the way programs store and manipulate data by using numbers or other symbols to represent information.	-
	1A-AP-10	Develop programs with sequences and simple loops, to express ideas or address a problem.	•
	1A-AP-11	Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.	•
	1A-AP-12	Develop plans that describe a program's sequence of events, goals, and expected outcomes.	•
	1A-AP-13	Give attribution when using the ideas and creations of others while developing programs.	-
	1A-AP-14	Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops.	•
	1A-AP-15	Using correct terminology, describe steps taken and choices made during the iterative process of program development.	-
Impacts of Computing	1A-IC-16	Compare how people live and work before and after the implementation or adoption of new computing technology.	-
	1A-IC-17	Work respectfully and responsibly with others online.	-
	1A-IC-18	Keep login information private, and log off of devices appropriately.	-

### Grades 3-5

Cluster	Indicator	Indicator Statement	Addressed
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<b>Computing Systems</b>	1B-CS-01	Describe how internal and external parts of computing devices function to form a system.	-
	1B-CS-02	Model how computer hardware and software work together as a system to accomplish tasks.	-
	1B-CS-03	Determine potential solutions to solve simple hardware and software problems using common troubleshooting strategies.	-
<b>Networks &amp; the Internet</b>	1B-NI-04	Model how information is broken down into smaller pieces, transmitted as packets through multiple devices over networks and the Internet, and reassembled at the destination.	-
	1B-NI-05	Discuss real-world cybersecurity problems and how personal information can be protected.	-
<b>Data &amp; Analysis</b>	1B-DA-06	Organize and present collected data visually to highlight relationships and support a claim.	-
	1B-DA-07	Use data to highlight or propose cause-and-effect relationships, predict outcomes, or communicate an idea.	-
<b>Algorithms &amp; Programming</b>	1B-AP-08	Compare and refine multiple algorithms for the same task and determine which is the most appropriate.	-
	1B-AP-09	Create programs that use variables to store and modify data.	-
	1B-AP-10	Create programs that include sequences, events, loops, and conditionals.	-
	1B-AP-11	Decompose (break down) problems into smaller, manageable subproblems to facilitate the program development process.	-
	1B-AP-12	Modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features.	-
	1B-AP-13	Use an iterative process to plan the development of a program by including others' perspectives and considering user preferences.	-
	1B-AP-14	Observe intellectual property rights and give appropriate attribution when creating or remixing programs.	-
	1B-AP-15	Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended.	-
	1B-AP-16	Take on varying roles, with teacher guidance, when collaborating with peers during the design, implementation, and review stages of program development.	●
	1B-AP-17	Describe choices made during program development using code comments, presentations, and demonstrations.	-
<b>Impacts of Computing</b>	1B-IC-18	Discuss computing technologies that have changed the world, and express how those technologies influence, and are influenced by, cultural practices.	-
	1B-IC-19	Brainstorm ways to improve the accessibility and usability of technology products for the diverse needs and wants of users.	-
	1B-IC-20	Seek diverse perspectives for the purpose of improving computational artifacts.	-
	1B-IC-21	Use public domain or creative commons media, and refrain from copying or using material created by others without permission.	-

# ISTE Standards Alignment

## Student Standards



EXPLORE

### Legend

•	The standard is clearly addressed by program activities.
-	This standard potentially could be addressed as part of FIRST® LEGO® League Explore either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

### All Grades

Cluster	Indicator	Indicator Statement	Addressed
Empowered Learner	1	Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.	-
	1a	<i>Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.</i>	-
	1b	<i>Students build networks and customize their learning environments in ways that support the learning process.</i>	-
	1c	<i>Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.</i>	-
	1d	<i>Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.</i>	-
Digital Citizen	2	Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.	-
	2a	<i>Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.</i>	-
	2b	<i>Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.</i>	-
	2c	<i>Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.</i>	-
	2d	<i>Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.</i>	-
Knowledge Constructor	3	Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.	-
	3a	<i>Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.</i>	-
	3b	<i>Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.</i>	-
	3c	<i>Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.</i>	-
	3d	<i>Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.</i>	-
Innovative Designer	4	Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.	•
	4a	<i>Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.</i>	•
	4b	<i>Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.</i>	-
	4c	<i>Students develop, test and refine prototypes as part of a cyclical design process.</i>	-
	4d	<i>Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.</i>	•



Computational Thinker	5	Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.	●
	5a	<i>Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.</i>	-
	5b	<i>Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.</i>	-
	5c	<i>Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.</i>	●
	5d	<i>Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.</i>	●
Creative Communicator	6	Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.	●
	6a	<i>Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.</i>	●
	6b	<i>Students create original works or responsibly repurpose or remix digital resources into new creations.</i>	●
	6c	<i>Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.</i>	-
	6d	<i>Students publish or present content that customizes the message and medium for their intended audiences.</i>	●
Global Collaborator	7	Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.	●
	7a	<i>Students use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.</i>	-
	7b	<i>Students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.</i>	-
	7c	<i>Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.</i>	●
	7d	<i>Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.</i>	-

## ITEEA Standards Alignment

### Student Standards



EXPLORE

### Legend

•	The standard is clearly addressed by program activities.
-	This standard potentially could be addressed as part of FIRST® LEGO® League Explore either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

### Grades K-2

Cluster	Indicator	Indicator Statement	Addressed
The Nature of Technology	1	Students will develop an understanding of the characteristics and scope of technology.	•
	A	<i>The natural world and human-made world are different.</i>	-
	B	<i>All people use tools and techniques (technology) to help them do things.</i>	-
	2	Students will develop an understanding of the core concepts of technology.	•
	A	<i>Some systems are found in nature, and some are made by humans.</i>	-
	B	<i>Systems have parts or components that work together to accomplish a goal.</i>	-
	C	<i>Tools are simple objects that help humans complete tasks.</i>	-
	D	<i>Different materials are used in making things.</i>	•
	E	<i>People plan in order to get things done.</i>	•
	3	Students will develop an understanding of the relationships among technologies and the connections between technology and other fields of study.	-
A	<i>The study of technology uses many of the same ideas and skills as other subjects.</i>	-	
Technology and Society	4	Students will develop an understanding of the cultural, social, economic, and political effects of technology.	-
	A	<i>The use of tools and machines can be helpful or harmful.</i>	-
	5	Students will develop an understanding of the effects of technology on the environment.	-
	A	<i>Some materials can be reused and/or recycled.</i>	-
	6	Students will develop an understanding of the role of society in the development and use of technology.	-
	A	<i>Products are made to meet individual needs and wants.</i>	-
	7	Students will develop an understanding of the influence of technology on history.	-
A	<i>The way people live and work has changed throughout history because of technology.</i>	-	
Design	8	Students will develop an understanding of the attributes of design.	•
	A	<i>Everyone can design solutions to a problem.</i>	•
	B	<i>Design is a creative process.</i>	•
	9	Students will develop an understanding of engineering design.	•
	A	<i>The engineering design process includes identifying a problem, looking for ideas, developing solutions, and sharing solutions with others.</i>	•
	B	<i>Expressing ideas to others verbally and through sketches and models is an important part of the design process.</i>	•
	10	Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.	•
	A	<i>Asking questions and making observations helps a person to figure out how things work.</i>	•
	B	<i>All products and systems are subject to failure. Many products and systems, however, can be fixed.</i>	-

Abilities for a Technological World	11	Students will develop abilities to apply the design process.	●
	A	<i>Brainstorm people's needs and wants and pick some problems that can be solved through the design process.</i>	●
	B	<i>Build or construct an object using the design process.</i>	-
	C	<i>Investigate how things are made and... can be improved.</i>	●
	12	Students will develop abilities to use and maintain technological products and systems.	●
	A	<i>Discover how things work.</i>	●
	B	<i>Use hand tools correctly &amp; safely &amp; name them correctly.</i>	-
	C	<i>Recognize and use everyday symbols.</i>	-
	13	Students will develop abilities to assess the impact of products and systems.	-
	A	<i>Collect information about everyday products and systems by asking questions.</i>	-
B	<i>Determine if the human use of a product or system creates positive or negative results.</i>	-	
The Designed World	14	Students will develop an understanding of and be able to select and use medical technologies.	-
	A	<i>Vaccinations protect people from getting certain diseases.</i>	-
	B	<i>Medicine helps people who are sick to get better.</i>	-
	C	<i>There are many products designed specifically to help people take care of themselves.</i>	-
	15	Students will develop an understanding of and be able to select and use agricultural and related biotechnologies.	-
	A	<i>The use of technologies in agriculture makes it possible for food to be available year round and to conserve resources.</i>	-
	B	<i>There are many different tools necessary to control and make up the parts of an ecosystem.</i>	-
	16	Students will develop an understanding of and be able to select and use energy and power technologies.	-
	A	<i>Energy comes in many forms.</i>	-
	B	<i>Energy should not be wasted.</i>	-
	17	Students will develop an understanding of and be able to select and use information and communication technologies.	-
	A	<i>Information is data that has been organized.</i>	-
	B	<i>Technology enables people to communicate by sending and receiving information over a distance.</i>	-
	C	<i>People use symbols when they communicate by technology.</i>	-
	18	Students will develop an understanding of and be able to select and use transportation technologies.	-
	A	<i>A transportation systems has many parts that work together to help people travel.</i>	-
	B	<i>Vehicles move people or goods from one place to another in water, air or space, and on land.</i>	-
	C	<i>Transportation vehicles must be cared for to prolong use.</i>	-
	19	Students will develop an understanding of and be able to select and use manufacturing technologies.	-
	A	<i>Manufacturing systems produce products in quantity.</i>	-
B	<i>Manufactured products are designed.</i>	-	
20	Students will develop an understanding of and be able to select and use construction technologies.	-	
A	<i>People live, work, &amp; go to school in buildings, which are of different types: houses... office buildings, &amp; schools.</i>	-	
B	<i>The type of structure determines how the parts are put together.</i>	-	

## Grades 3-5

Cluster	Indicator	Indicator Statement	Addressed
The Nature of Technology	1	Students will develop an understanding of the characteristics and scope of technology.	●
	C	<i>Things that are found in nature differ from things that are human-made in how they are produced and used.</i>	-
	D	<i>Tools, materials, and skills are used to make things and carry out tasks.</i>	-
	E	<i>Creative thinking and economic and cultural influences shape technological development.</i>	-
	2	Students will develop an understanding of the core concepts of technology.	●
	F	<i>A subsystem is a system that operates as a part of another system.</i>	-
	G	<i>When parts of a system are missing, it may not work as planned.</i>	-
	H	<i>Resources are the things needed to get a job done, such as tools and machines, materials, information, energy, people, capital, and time.</i>	-
	I	<i>Tools are used to design, make, use, and assess technology.</i>	-
	J	<i>Materials have many different properties.</i>	-
	K	<i>Tools and machines extend human capabilities, such as holding, lifting, carrying, fastening, separating, and computing.</i>	●
	L	<i>Requirements are the limits to designing or making a product or system.</i>	●
	3	Students will develop an understanding of the relationships among technologies and the connections between technology and other fields of study.	-
B	<i>Technologies are often combined.</i>	-	
C	<i>Various relationships exist between technology and other fields of study.</i>	-	
Technology and Society	4	Students will develop an understanding of the cultural, social, economic, and political effects of technology.	-
	B	<i>When using technology, results can be good or bad.</i>	-
	C	<i>The use of technology can have unintended consequences.</i>	-
	5	Students will develop an understanding of the effects of technology on the environment.	-
	B	<i>Waste must be appropriately recycled or disposed of to prevent unnecessary harm to the environment.</i>	-
	C	<i>The use of technology affects the environment in good and bad ways.</i>	-
	6	Students will develop an understanding of the role of society in the development and use of technology.	-
	B	<i>Because people's needs and wants change, new technologies are developed, and old ones are improved to meet those changes.</i>	-
	C	<i>Individual, family, community, and economic concerns may expand or limit the development of technologies.</i>	-
	7	Students will develop an understanding of the influence of technology on history.	-
B	<i>People have made tools to provide food, to make clothing, and to protect themselves.</i>	-	
Design	8	Students will develop an understanding of the attributes of design.	●
	C	<i>The design process is a purposeful method of planning practical solutions to problems.</i>	●
	D	<i>Requirements for a design include such factors as the desired elements and features of a product or system or the limits that are placed on the design.</i>	●
	9	Students will develop an understanding of engineering design.	●
	C	<i>The engineering design process involves defining a problem, generating ideas, selecting a solution, testing the solution(s), [making, evaluating, and presenting].</i>	●
	D	<i>When designing an object it is important to be creative and consider all ideas.</i>	●
	E	<i>Models are used to communicate &amp; test design ideas &amp; processes.</i>	●
	10	Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.	●
	C	<i>Troubleshooting is a way of finding out why something does not work so that it can be fixed.</i>	●
	D	<i>Invention and innovation are creative ways to turn ideas into real things.</i>	●
E	<i>The process of experimentation, which is common in science, can also be used to solve technological problems.</i>	-	

Abilities for a Technological World	11	Students will develop abilities to apply the design process.	●
	D	<i>Identify and collect information about everyday problems that can be solved by technology, and generate ideas and requirements for solving a problem.</i>	-
	E	<i>The process of designing involves presenting some possible solutions in visual form and then selecting the best solution(s)...</i>	-
	F	<i>Test and evaluate the solutions for the design problem.</i>	-
	G	<i>Improve the design solutions.</i>	-
	12	Students will develop abilities to use and maintain technological products and systems.	●
	D	<i>Follow step-by-step directions to assemble a product.</i>	●
	E	<i>Select and safely use tools, products, and systems for specific tasks.</i>	-
	F	<i>Use computers to access and organize information.</i>	●
	G	<i>Use common symbols, such as numbers and words, to communicate key ideas.</i>	●
	13	Students will develop abilities to assess the impact of products and systems.	-
	C	<i>Compare, contrast and classify collected information in order to identify patterns.</i>	-
	D	<i>Investigate and assess the influence of a specific technology on the individual, family, community, and environment.</i>	-
E	<i>Examine the trade-offs of using a product or system and decide when it could be used.</i>	-	
The Designed World	14	Students will develop an understanding of and be able to select and use medical technologies.	-
	D	<i>Vaccines are designed to prevent diseases from developing and spreading; medicines are designed to relieve symptoms and stop diseases from developing.</i>	-
	E	<i>Technological advances have made it possible to create new devices, to repair or replace certain parts of the body, and to provide a means for mobility.</i>	-
	F	<i>Many tools &amp; devices have been designed to help provide clues about health and to provide a safe environment.</i>	-
	15	Students will develop an understanding of and be able to select and use agricultural and related biotechnologies.	-
	C	<i>Artificial ecosystems are human-made environments that are designed to function as a unit and are comprised of humans, plants, and animals.</i>	-
	D	<i>Most agricultural waste can be recycled.</i>	-
	E	<i>Many processes used in agriculture require different procedures, products or systems.</i>	-
	16	Students will develop an understanding of and be able to select and use energy and power technologies.	-
	C	<i>Energy comes in different forms.</i>	-
	D	<i>Tools, machines, products, and systems use energy in order to do work.</i>	-
	17	Students will develop an understanding of and be able to select and use information and communication technologies.	-
	D	<i>The processing of information through the use of technology can be used to help humans make decisions and solve problems.</i>	-
	E	<i>Information can be acquired &amp; sent through a variety of technological sources, including print &amp; electronic media.</i>	-
	F	<i>Communication technology is the transfer of messages among people and/or machines over distances through the use of technology.</i>	-
	G	<i>Letters, characters, icons, and signs are symbols that represent ideas, quantities, elements and operations.</i>	-
	18	Students will develop an understanding of and be able to select and use transportation technologies.	-
	D	<i>The use of transportation allows people and goods to be moved from place to place.</i>	-
	E	<i>A transportation system may lose efficiency/fail if a part is missing/malfunctioning or a subsystem isn't working.</i>	-
	19	Students will develop an understanding of and be able to select and use manufacturing technologies.	-
	C	<i>Processing systems convert natural materials into products.</i>	-
D	<i>Manufacturing processes include designing products, gathering resources, and using tools to separate, form, and combine materials in order to produce products.</i>	-	
E	<i>Manufacturing enterprises exist because of a consumption of goods.</i>	-	

	20	Students will develop an understanding of and be able to select and use construction technologies.	-
	<i>C</i>	<i>Modern communities are usually planned according to guidelines.</i>	-
	<i>D</i>	<i>Structures need to be maintained.</i>	-
	<i>E</i>	<i>Many systems are used in buildings.</i>	-



# Social and Emotional Learning Standards Alignment

## Student Standards

This alignment covers the CASEL Core SEL Competencies and the Ohio K-12 Social and Emotional Learning Standards. The Ohio standards were used because they provided grade level learning standards aligned to the CASEL core competencies.



EXPLORE

### Legend

•	The standard is clearly addressed by program activities.
-	This standard potentially could be addressed as part of FIRST® LEGO® League Explore either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

### Grades K-2

Cluster	Indicator	Indicator Statement	Addressed
Self-Awareness	A1	Demonstrate an awareness of personal emotions	-
	A1. 1.a	Identify basic personal emotions	-
	A1. 2.a	Recognize emotions as natural and important	-
	A1. 3.a	Identify appropriate time and place to safely process emotions, independently or with the guidance of a trusted adult	-
	A1. 4.a	Recognize that current events can impact emotions	-
	A2	Demonstrate awareness of personal interests and qualities, including strengths and challenges	•
	A2. 1.a	Identify personal interests and qualities	-
	A2. 2.a	Explore opportunities to develop skills and talents	•
	A3	Demonstrate awareness of and willingness to seek help for self or others	•
	A3. 1.a	Identify at least one trusted adult at school and in the community and know when and how to access them	-
	A3. 2.a	Seek help when faced with challenges or when frustrated with a task, skill or situation	•
	A3. 3.a	Describe situations or locations that feel safe	-
	A4	Demonstrate a sense of personal responsibility, confidence and advocacy	•
	A4. 1.a	Describe the outcomes of both following and breaking rules	-
	A4. 2.a	Demonstrate confidence in the ability to complete simple tasks and challenges independently, while expressing positive attitudes towards self	•
A4. 3.a	Identify ways to respectfully advocate for basic personal needs	-	
Self-Management	B1	Regulate emotions and behaviors by using thinking strategies that are consistent with brain development	-
	B1. 1.a	Identify personal behaviors or reactions when experiencing basic emotions	-
	B1. 2.a	Describe verbal and nonverbal ways to express emotions in different settings	-
	B1. 3.a	Identify and begin to use strategies to regulate emotions and manage behaviors	-
	B2	Set, monitor, adapt and evaluate goals to achieve success in school and life	-
	B2. 1.a	Identify goals for classroom behavior and academic success	-
	B2. 2.a	Identify how adults and peers can help with a goal	-
	B2. 3.a	Describe what action steps can be taken to reach a short-term goal	-
	B2. 4.a	Discuss obstacles that can get in the way of reaching a goal and ideas for handling those obstacles	-
	B3	Persevere through challenges and setbacks in school and life	•
	B3. 1.a	Describe a time when you kept trying in a challenging situation	-
	B3. 2.a	Explain how practice improves performance of a skill and can help in overcoming a challenge or setback	•

<b>Social Awareness</b>	C1	Recognize, identify and empathize with the feelings and perspective of others	-
	C1. 1.a	Identify facial and body cues representing feelings in others	-
	C1. 2.a	Identify words and actions that may support or hurt the feelings of others	-
	C1. 3.a	Define empathy and identify empathetic reactions in others	-
	C2	Demonstrate consideration for and contribute to the well-being of the school, community and world	●
	C2. 1.a	Identify the purpose for having school-wide expectations and classroom rules	-
	C2. 2.a	Identify characteristics of positive citizenship in the classroom and school	●
	C2. 3.a	Perform activities that contribute to classroom, school and home, with adult involvement as needed	●
	C2. 4.a	Identify and participate in activities to improve school or home	-
	C3	Demonstrate an awareness and respect for human dignity, including the similarities and differences of all people, groups and cultures	●
	C3. 1.a	Discuss how people can be the same or different	-
	C3. 2.a	Participate in cross-cultural activities and discuss differences, similarities and positive qualities across all cultures and groups	-
	C3. 3.a	Discuss the concept of, and practice, treating others the way you would want to be treated	-
	C4	Read social cues and respond constructively	●
C4. 1.a	Recognize social cues in different settings	-	
C4. 2.a	Identify norms for various family and social situations	-	
C4. 3.a	Recognize others' personal space and boundaries	●	
<b>Relationship Skills</b>	D1	Apply positive verbal and non-verbal communication and social skills to interact effectively with others and in groups	●
	D1. 1.a	Identify and engage in positive communication skills	●
	D1. 2.a	Practice giving and receiving feedback in a respectful way	●
	D1. 3.a	Develop an awareness that people communicate through social and digital media	-
	D2	Develop and maintain positive relationships	●
	D2. 1.a	Demonstrate an awareness of roles in various relationships	-
	D2. 2.a	Recognize the need for inclusiveness	●
	D2. 3.a	Recognize that people may influence each other with words or actions	-
	D3	Demonstrate the ability to prevent, manage and resolve interpersonal conflicts in constructive ways	●
	D3. 1.a	Identify common conflicts and describe possible causes	-
D3. 2.a	Recognize that there are various ways to solve conflicts and utilize these techniques to practice solving problems	●	
D3. 3.a	Apply listening and attention skills to identify the feelings and perspectives of others	●	
<b>Responsible Decision-Making</b>	E1	Develop, implement and model effective decision and critical thinking skills	●
	E1. 1.a	Identify a problem or needed decision and recognize that there may be multiple responses	●
	E1. 2.a	Identify strategies to solve a problem	●
	E2	Identify potential outcomes to help make constructive decisions	-
	E2. 1.a	Identify factors that can make it hard for a person to make the best decision in the classroom	-
	E2. 2.a	Identify reliable sources of adult help in the immediate setting	-
	E2. 3.a	Identify how personal choices will impact the outcome of a situation	-
	E3	Consider the ethical and civic impact of decisions	●
	E3. 1.a	Identify how certain actions can impact others	-
	E3. 2.a	Recognize safe practices and actions	-
	E3. 3.a	Recognize the need for group decisions that support a common goal	●
	E4	Explore and approach new situations with an open mind and curiosity while recognizing that some outcomes are not certain or comfortable	●
	E4. 1.a	Recognize that new opportunities may have positive outcomes	●
E4. 2.a	Identify physical and emotional responses to unfamiliar situations	-	
E4. 3.a	Identify examples of transitions and how they are a necessary and appropriate part of school and life	-	

## Grades 3-5

Cluster	Indicator	Indicator Statement	Addressed
Self-Awareness	A1	Demonstrate an awareness of personal emotions	-
	A1. 1.b	Identify a range of personal emotions	-
	A1. 2.b	Identify that emotions are valid, even if others feel differently	-
	A1. 3.b	Consider when it is necessary to process emotions in a safe place, independently or with the guidance of a trusted adult	-
	A1. 4.b	Describe how current events trigger emotions	-
	A2	Demonstrate awareness of personal interests and qualities, including strengths and challenges	●
	A2. 1.b	Identify personal strengths based on interests and qualities	-
	A2. 2.b	Demonstrate a skill or talent that builds on personal strengths	●
	A3	Demonstrate awareness of and willingness to seek help for self or others	●
	A3. 1.b	Describe how a trusted adult can provide academic, social or emotional support or assistance for self and others	●
	A3. 2.b	Seek help and acknowledge constructive feedback from others that addresses challenges and builds on strengths	●
	A3. 3.b	Utilize strategies that support safe practices for self and others	-
	A4	Demonstrate a sense of personal responsibility, confidence and advocacy	●
	A4. 1.b	Identify and describe how personal choices and behavior impacts self and others	-
A4. 2.b	Demonstrate confidence in the ability to complete a range of tasks and address challenges while expressing positive attitudes towards self	●	
A4. 3.b	Identify ways to respectfully advocate for academic and personal needs	●	
Self-Management	B1	Regulate emotions and behaviors by using thinking strategies that are consistent with brain development	-
	B1. 1.b	Demonstrate strategies to express a range of emotions within the expectations of the setting	-
	B1. 2.b	Describe possible outcomes associated with verbal and nonverbal expression of emotions in different settings	-
	B1. 3.b	Apply strategies to regulate emotions and manage behaviors	-
	B2	Set, monitor, adapt and evaluate goals to achieve success in school and life	-
	B2. 1.b	Identify goals for academic success and personal growth	-
	B2. 2.b	Identify school, family and community resources, with adult support, that may assist in achieving a goal	-
	B2. 3.b	Plan steps needed to reach a short-term goal	-
	B2. 4.b	Identify alternative strategies with guidance toward a specified goal	-
	B3	Persevere through challenges and setbacks in school and life	●
	B3. 1.b	Identify strategies for persevering through challenges and setbacks	●
B3. 2.b	Identify the cause of a challenge or setback and with assistance, develop a plan of action	-	
Social Awareness	C1	Recognize, identify and empathize with the feelings and perspective of others	●
	C1. 1.b	Identify verbal and nonverbal cues representing feelings in others	-
	C1. 2.b	Identify and acknowledge others' viewpoints, knowing that both sides do not have to agree but can still be respectful	●
	C1. 3.b	Demonstrate empathetic reactions in response to others' feelings and emotions	-
	C2	Demonstrate consideration for and contribute to the well-being of the school, community and world	●
	C2. 1.b	Identify reasons for making positive contributions to the school and community	-
	C2. 2.b	Demonstrate citizenship in the classroom and school community	●
	C2. 3.b	Perform activities that contribute to classroom, school, home and broader community	●
	C2. 4.b	Identify areas of improvement for school or home and develop an action plan to address these areas	-
	C3	Demonstrate an awareness and respect for human dignity, including the similarities and differences of all people, groups and cultures	●
C3. 1.b	Discuss positive and negative opinions people may have about other people or groups, even if they aren't always true	-	
C3. 2.b	Participate in cross-cultural activities and acknowledge that individual and group differences may complement each other	-	

	<i>C3. 3.b</i>	<i>Define and practice civility and respect virtually and in-person</i>	●
	C4	Read social cues and respond constructively	●
	<i>C4. 1.b</i>	<i>Identify others' reactions by tone of voice, body language and facial expressions</i>	●
	<i>C4. 2.b</i>	<i>Identify ways that norms differ among various families, cultures and social groups</i>	-
	<i>C4. 3.b</i>	<i>Recognize that individuals' needs for privacy and boundaries differ and respect those differences</i>	●
Relationship Skills	D1	Apply positive verbal and non-verbal communication and social skills to interact effectively with others and in groups	●
	<i>D1. 1.b</i>	<i>Apply active listening and effective communication skills to increase cooperation and relationships</i>	●
	<i>D1. 2.b</i>	<i>Demonstrate the ability to give and receive feedback in a respectful way</i>	●
	<i>D1. 3.b</i>	<i>Describe the positive and negative impact of communicating through social and digital media</i>	-
	D2	Develop and maintain positive relationships	●
	<i>D2. 1.b</i>	<i>Identify what creates a feeling of belonging in various relationships</i>	-
	<i>D2. 2.b</i>	<i>Demonstrate behaviors associated with inclusiveness in a variety of relationships</i>	●
	<i>D2. 3.b</i>	<i>Distinguish the helpful and harmful impact of peer pressure on self and others</i>	-
	D3	Demonstrate the ability to prevent, manage and resolve interpersonal conflicts in constructive ways	●
	<i>D3. 1.b</i>	<i>Identify and demonstrate personal behaviors to prevent conflict</i>	●
	<i>D3. 2.b</i>	<i>Apply conflict resolution skills to manage disagreements and maintain personal safety</i>	-
<i>D3. 3.b</i>	<i>Generate ideas to reach a compromise and find resolution during conflict</i>	-	
Responsible Decision-Making	E1	Develop, implement and model effective decision and critical thinking skills	●
	<i>E1. 1.b</i>	<i>Generate possible solutions or responses to a problem or needed decision recognizing that there may be more than one perspective</i>	●
	<i>E1. 2.b</i>	<i>Implement strategies to solve a problem</i>	●
	E2	Identify potential outcomes to help make constructive decisions	●
	<i>E2. 1.b</i>	<i>Identify factors that can make it hard to make the best decisions at home or at school</i>	-
	<i>E2. 2.b</i>	<i>Identify reliable sources of adult help in various settings</i>	-
	<i>E2. 3.b</i>	<i>Predict possible future outcomes of personal actions in various settings</i>	-
	E3	Consider the ethical and civic impact of decisions	●
	<i>E3. 1.b</i>	<i>Demonstrate the ability to respect the rights of self and others</i>	-
	<i>E3. 2.b</i>	<i>Demonstrate safe practices to guide actions</i>	-
	<i>E3. 3.b</i>	<i>Consider various perspectives and sources of information when participating in group decision-making</i>	●
	E4	Explore and approach new situations with an open mind and curiosity while recognizing that some outcomes are not certain or comfortable	●
	<i>E4. 1.b</i>	<i>Explore new opportunities to expand one's knowledge and experiences</i>	●
	<i>E4. 2.b</i>	<i>Develop and practice strategies to appropriately respond in unfamiliar situations</i>	-
<i>E4. 3.b</i>	<i>Practice the ability to manage transitions and adapt to changing situations and responsibilities in school and life</i>	●	