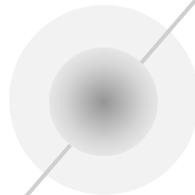
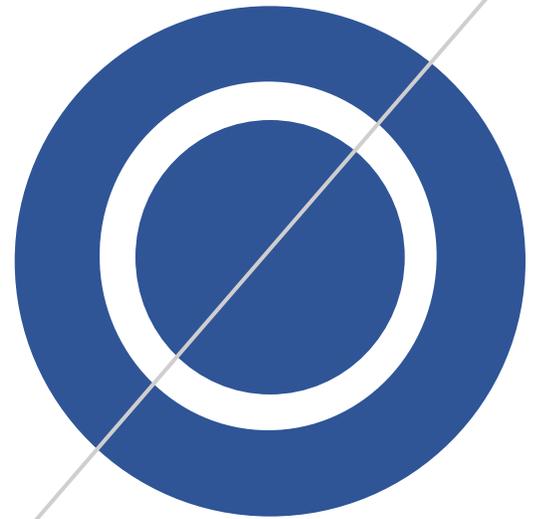


# Prioritize Prepare Practice

Essential Instructional Content and  
Focused Learning Outcomes for  
School Year 2020 –2021



Connecticut State Department of Education

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## Letter from Chief Academic Officer

Dear Colleagues,

The words of Commissioner Cardona still resonate; without question, everything we took for granted about our approach to PreK–12 education was disrupted by the pandemic. We went from practicing in an educational model that had been consistent for hundreds of years, to educating students remotely while managing the intense effects of a worldwide pandemic.

At the Connecticut State Department of Education (CSDE), our mission is to increase equity, access, opportunity and excellence in all schools, so our students have a range of options for college, career, and civic life when they graduate. We have been innovating from the inside out to support the development and delivery of high quality, high impact learning materials for students to ensure consistent access to on grade level standards daily regardless of learning environment and location.

As students and their teachers continue to engage in learning whether in person, hybrid or remote for the 2020-21 school year, they will confront learning a variety of disruptions. This will require persistence and compassion. This is why we have prioritized grade-level standards to support your work to create intentional learning opportunities that include a focus and embedded assessment practices on *current* grade-level standards; this approach promises to accelerate student learning and assist schools avoid the loss of valuable time identifying what unfinished learning is present.

This resource and the companion priority standards webpages provide educators with the right resources to make the instructional moves required to meet all learners where they are and place them on a learning pathway. A personal pathway that will meet learners where they are and support their ability to demonstrate knowledge of focused standards and essential learning.

In partnership,



Chief Academic Officer, CSDE

# Introduction

## Purpose

The 2020–21 school year presents a unique set of opportunities and challenges due to the disruption to instruction that occurred in the spring 2020 as well as the uncertainty of what lies ahead. Educators know that every school year there are students who require support in addressing unfinished learning from prior grades. And, this year the challenge exists more prominently in the 2020–21 school year. Beyond unfinished learning, the pandemic has further illuminated inequities that have always existed. CSDE believes that it is entirely possible to hold high expectations for all students, address unfinished learning in the context of grade-level work, and dial into the assets students bring with them in order to unlock the creativity and energy they bring to the joyful work of learning something new. We can do this by prioritizing content, preparing the intentional learning and practicing through multiple mediums and locations.

Since time is a scarce commodity strategic instructional choices about which content to prioritize and emphasize must be made. By identifying what is essential to teach within the major domains, teachers will know where to invest their time and effort as well as where to reduce time and intensity for topics that are less integral to the overall coherence of the standards. Prioritizing essential instructional content and learning does not mean that students will be deprived of critical knowledge, or that their educations will be any less diverse or rich. For the 2020–21 school year, prioritization of grade-level content with the incorporation of prior-grade knowledge and skills will be essential to support all students in meeting grade-level expectations.

Based on research and the progression of the disciplines, the 2020–21 Essential Instructional Content and Focused Learning Outcomes for School Year 2020 names the priorities in mathematics (K–5) and English Language Arts (ELA)/literacy (K-5), CT Social Studies Frameworks (K-5) and Next Generation Science Standards (NGSS) (K-5) that should be the focus of instruction for educators in the 2020–21 academic year. This document is intended to support educators and designers of instructional materials, and instructional leaders find the appropriate efficiencies in the curriculum that are critical for the unique challenges that have resulted from school closures and anticipated disruptions in the year ahead, keeping at the forefront principles of equitable instruction that support all students.

This guidance was developed in response to current conditions using research and guiding documents from state partners. These documents are not criteria, and they do not revise approved educational state standards. This guidance does not stand alone but is to be used in conjunction with those standards. This guidance does not attempt to repeat what standards already say, nor does it mention every opportunity the standards afford to make coherent connections within a grade or between one grade and another. Further, leveraging the focus and coherence of high-quality instructional materials aligned to educational state standards is more important than ever.

This guide is intended to complement other CSDE resources:

- [Plan for Reimagining CT Classrooms for Continuous Learning](#);
- [Addendum 12: Reimagining CT Classrooms: Planning the Instructional Time for Remote Learning in Hybrid and Full Remote Models](#); and
- [Sensible Assessments Practices for 2020–21 and Beyond](#).

In addition to this, the CSDE has developed companion webpages to search the priorities standards:

- CSDE, [Connecticut Core Priority Standards – High School](#)
- CSDE, [Connecticut Core Priority Standards – ELA 3-8](#)
- CSDE, [Connecticut Core Priority Standards – Math K-8](#)

Each webpage provides a searchable interface for the 20-21 priority content, with the text of the recommendation for each [Common Core State Standard](#). Each standard is connected to an assessment target of the [Smarter Balanced](#) summative assessment.

This document does not provide a comprehensive list of content in the grade level as defined in the Connecticut State Board of Education approved standards for ELA/literacy, mathematics, science, and social studies, but rather highlights the most critical content, so that all Connecticut students can continue to *Adapt, Advance and Achieve*. A focus on grade-level content standards will accelerate learning and advance equity of opportunities to target learning based on needs, strengths, passions and curiosities.

As emphasized by the Commissioner of Education and the State Department of Education, we need to resist the inclination to ‘water down’ instruction and assignments for EL students—and other students with specialized learning needs. These students require access to the same challenging, engaging work and cognitive demands as their peers in order to develop academic skills and grow as scholars." Note that for English learners, language and content 2020–21 Priority Instructional Content in English Language Arts/Literacy and Mathematics development are simultaneous and should be considered in context of math and literacy instruction. The intention of this guidance is to inform and influence the decisions of the following:

- Content providers and external partners;
- District curricula leaders as they design or modify current instructional materials
- District administrators in instructional planning and decision-making;
- Providers of professional learning for teachers: to design modifications to professional learning curricula for the 2020–21 school year.

## How should assessment be considered in light of this instructional guidance?

As schools reopen and respond to the rise and fall of enrollment and integrating their learners back into school, it is important to remember the following:

- We already know a lot about returning Connecticut public school students; we have a wealth of information and longitudinal data (e.g., test scores, IEP progress reports, attendance, discipline, mobility, course grades) at our disposal.
- Two-thirds of the school year 2019–20 was completed in person prior to mid-March.
- There is no single, “magic-bullet” assessment — whether screening or diagnostic or summative — that can meet the needs of all stakeholders and satisfy all purposes.
- In a wide range of research across many decades, formative assessment practices have been shown to significantly raise student achievement and student attitudes toward learning.

The CSDE [Sensible Assessment Practices](#) offers guidance to educators including general education teachers, special education teachers, interventionists, instructional specialists, and related service providers on how they can “assess” their students without necessarily having to “test” them. The assessment and instructional practices are intended to apply to all students, including students with disabilities and English learners. The unique needs and strengths of these learners must be considered in the planning of both assessment and instruction, including the provision of supports, accommodations, and modifications as required in a student’s individualized education program (IEP), Section 504 plan, or other intervention/learning plan. [Sensible Assessment Practices](#) provides an illustration (pg. 9)... provides an illustration of best assessment practices to support educator’s ability to determine the most appropriate entry point of learning. A process, when used can assist in developing a learning plan that does not focus on only the deficiencies, but highlights areas of strength and opportunity for acceleration of learning.

Uncovering and addressing unfinished learning in the context of grade-level work will require teachers to know what students know and can do throughout the school year. This document is not intended to serve as a guide for development of assessment products. However, the instructional guidance has implications for assessment in service of equitable grade-level instruction.

[Sensible Assessment Practices](#) provides an illustration of best assessment practices to support educator’s ability to determine the most appropriate entry point of learning. A process, when used can assist in developing a learning plan that does not focus on only the deficiencies, but highlights areas of strength and opportunity for acceleration of learning.

## Focused Learning Outcomes: K-5 ELA/Literacy

This ELA/Literacy instructional framework adapted from Achieve the Core’s [2020–2021 Priority Instructional Content in English Language Arts/Literacy and Mathematics](#) is presented as a starting point for the important work of focusing on standards that represent the development of early literacy skills, and the major work of ELA/Literacy instruction. Not all standards in a given grade should be emphasized equally, because some standards require greater attention based on research about what matters most for ELA/Literacy development, and the time and practice those skills and understandings take to develop. Thus, this document focuses on foundational reading skills, close reading of complex texts, and developing writing skills and strengthening reading through writing. School-based teams who focus on serving English learners (ELs) and students with an Individualized Education Program (IEP) should collaborate with their general education teams to assist in determining the most important skills and concepts to address, and if additional prerequisite content knowledge or skills for these populations should be addressed. Users of this document may find several ways to guide their thinking about how to:

- determine the most important skills and concepts to address during lessons;
- design strong instruction based on learning priorities to effectively support unfinished learning;
- collect evidence (e.g., through student work samples, teacher observations) to confirm hypotheses about how learning is developing over time for some or all students;
- identify specific learning challenges for struggling students (e.g., identifying the necessary prerequisite skills needed);
- determine how best to use [formative assessment resources](#)), including student work analysis processes for progress monitoring;
- develop grade-appropriate assignments that promote deep engagement;
- provide strong instruction; and
- support students’ writing development.

### Foundational Reading Skills

As students develop their understanding and working knowledge of print concepts, phonological awareness, phonics and word recognition, fluency, and basic conventions of the English writing system, they are at the same time, developing strong comprehension and vocabulary skills by listening to and reading stories and informational texts. Teaching the foundational skills to students enables them to become proficient readers with the capacity to comprehend a wide range of complex texts, and develop skills across the English language arts, social studies, science, and mathematics.

Due to the complexity and critical nature of foundational reading skills, details about scope and sequence that can lead to attainment of the Connecticut Core State Standards are important to consider, particularly for at-risk or struggling students. [Building the Foundation: A Suggested Progression of Sub-skills to Achieve the Reading Standards: Foundational Skills in the Common Core State Standards](#)

lists prerequisite and “stepping stone” foundational skills, defines the sub-skills (i.e., concepts or behaviors) required to master a foundational skill, and provides instructional examples. Because different students need different amounts of instruction and practice to become independent readers, it is important to use a formative assessment process to determine instructional foci, and students’ level of readiness to apply each concept in increasingly challenging texts to build accuracy, automaticity, and fluency.

### **Close Reading of Complex Texts**

Close reading of complex texts, as an outcome of reading, fosters the skills necessary for students to engage deeply with texts for analysis of texts. Ultimately, the goal is for readers to gain the meaning of a text, understanding how it works from an analysis of the text itself, including the more subtle meanings, resulting in a textual interpretation that is a bit different for every reader (i.e., as influenced by the macrocultures of society and sociocultural backgrounds of the reader). Although texts presented to students may not be hard to read, the texts may contain big ideas that are confusing. Still, teachers can do a great deal to promote and facilitate students’ close reading of grade level texts. Strategies include:

- varying the degree of complexity, meaning, presenting some texts that are easier to make sense of, and some texts that are harder due to vocabulary or grammar, or how ideas are linked across the text;
- providing instructional scaffolds and appropriate supports when texts are hard to read, that include targeted phonics instruction, advanced word study (e.g., analyzing words by the meaning and structure of their parts) and opportunities to practice fluent reading (e.g., a partial and targeted repeated oral reading, non-repetitive wide reading); and
- adjusting, and at some point, removing these scaffolds as students are more able to skillfully negotiate the features of text, overcoming barriers to comprehension.

Finally, it is important to expand the category of texts considered worthy of being read by students so that they become and stay engaged with texts.

### **Develop Writing Skills and Strengthening Reading through Writing**

As students in Grades K-5 engage in writing, we must consider how to engage them in a writing process, provide support in developing basic writing skills, and support the development of writing knowledge (e.g., writing for an audience, organizational strategies). For our youngest students, we must also recognize the importance of how the use of words and images/drawings changes depending on the task, and how children use these systems together to complement one another. Through writing instruction, students can begin to generalize what is typical of each genre of text, enabling them to be able to anticipate how information will be organized. In this manner, writing supports reading comprehension when encountering new texts.

As students’ writing progress along various continua toward a mature form, they will need opportunities to experiment with various element of writing. Working with students on two or three areas of writing

as identified through a formative assessment process, will enable students to develop and refine their writing while developing sufficient skills. In this manner, students can produce longer and increasingly sophisticated pieces of writing. Schools and districts may want to use the CSDE's [Connecticut Core Standards-aligned Grades K-5 writing prompts](#), annotated student work, and [sample scoring rubrics](#) to support students' writing development.

### **The K-5 ELA/literacy Focus Standards**

The following selected K-5 ELA/literacy focus or priority standards emphasize prerequisite skills, last beyond a single grade level, and/or are applicable to other content areas, and are deemed essential for guiding the provision of a text-centered, rich classroom experience. These standards cross the domains of reading, writing, speaking and listening, and language, becoming progressively demanding and refined at each grade level.

*All Foundational Reading Skills standards for each grade level are included in this document in an effort to support the range of learners in achieving the foundational skills essential for reading and writing. Students will progress through the foundational skills at different rates, and some standards should be given more attention than others should, either because they require more time to learn or they are especially critical. For additional guidance, consult [Building the Foundation: A Suggested Progression of Sub-skills to Achieve the Reading Standards: Foundational Skills in the Common Core State Standards](#). ().*

## **Kindergarten**

### **Reading Standards: Foundational Reading Skills (CCSS.ELA-Literacy.RF.K.)**

1. Print Concepts: Demonstrate understanding of the organization and basic features of print.
  - a. Follow words from left to right, top to bottom, and page by page.
  - b. Recognize that spoken words are represented in written language by specific sequences of letters.
  - c. Understand that words are separated by spaces in print.
  - d. Recognize and name all upper- and lowercase letters of the alphabet.
2. Phonological Awareness: Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
  - a. Recognize and produce rhyming words.
  - b. Count, pronounce, blend, and segment syllables in spoken words.
  - c. Blend and segment onsets and rimes of single-syllable spoken words.
  - d. Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words. (This does not include CVCs ending with / l /, / r /, or / x /.)
  - e. Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.
3. Phonics and Word Recognition: Know and apply grade-level phonics and word analysis skills in decoding words.

- a. Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sound or many of the most frequent sounds for each consonant.
  - b. Associate the long and short sounds with common spellings (graphemes) for the five major vowels.
  - c. Read common high-frequency words by sight (e.g., the, of, to, you, she, my, is, are, do, does).
  - d. Distinguish between similarly spelled words by identifying the sounds of the letters that differ.
4. Fluency: Read emergent-reader texts with purpose and understanding.

**Language (CCSS.ELA-Literacy.L.K.)**

4. Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on kindergarten reading and content.
  - a. Identify new meanings for familiar words and apply them accurately (e.g., knowing duck is a bird and learning the verb to duck).
  - b. Use the most frequently occurring inflections and affixes (e.g., -ed, -s, re-, un-, pre-, -ful, -less) as a clue to the meaning of an unknown word.
5. Vocabulary Acquisition and Use: With guidance and support from adults, explore word relationships and nuances in word meanings.
  - a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.
  - b. Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).
  - c. Identify real-life connections between words and their use (e.g., note places at school that are colorful).
  - d. Distinguish shades of meaning among verbs describing the same general action (e.g., walk, march, strut, prance) by acting out the meanings.
6. Vocabulary Acquisition and Use: Use words and phrases acquired through conversations, reading and being read to, and responding to texts.

**Reading Standards for Informational Text (CCSS.ELA-Literacy.RI.K.)**

1. Key Ideas and Details: With prompting and support, ask and answer questions about key details in a text.
4. Craft and Structure: With prompting and support, ask and answer questions about unknown words in a text.
9. Integration of Knowledge and Ideas: With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).
10. Range of Reading and Level of Text Complexity: Actively engage in group reading activities with purpose and understanding.

### **Reading Standards for Literature (CCSS.ELA-Literacy.RL.K.)**

1. Key Ideas and Details: With prompting and support, ask and answer questions about key details in a text.
4. Craft and Structure: Ask and answer questions about unknown words in a text.
10. Range of Reading and Level of Text Complexity: Actively engage in group reading activities with purpose and understanding.

### **Speaking and Listening (CCSS.ELA-Literacy.SL.K.)**

1. Comprehension and Collaboration: Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
  - a. Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).
  - b. Continue a conversation through multiple exchanges.

### **Writing (CCSS.ELA-Literacy.W.K.)**

8. Research to Build and Present Knowledge: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

## **Grade 1**

### **Reading Standards: Foundational Reading Skills (CCSS.ELA-Literacy.RF.1.)**

1. Print Concepts: Demonstrate understanding of the organization and basic features of print.
  - a. Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation).
2. Phonological Awareness: Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
  - a. Distinguish long from short vowel sounds in spoken single-syllable words.
  - b. Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.
  - c. Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.
  - d. Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes).
3. Phonics and Word Recognition: Know and apply grade-level phonics and word analysis skills in decoding words.
  - a. Know the spelling-sound correspondences for common consonant digraphs.
  - b. Decode regularly spelled one-syllable words.
  - c. Know final -e and common vowel team conventions for representing long vowel sounds.

- d. Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.
  - e. Decode two-syllable words following basic patterns by breaking the words into syllables.
  - f. Read words with inflectional endings.
  - g. Recognize and read grade-appropriate irregularly spelled words.
4. Fluency: Read with sufficient accuracy and fluency to support comprehension.
- a. Read grade-level text with purpose and understanding.
  - b. Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.
  - c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

### **Language (CCSS.ELA-Literacy.L.1.)**

4. Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and content, choosing flexibly from an array of strategies.
- a. Use sentence-level context as a clue to the meaning of a word or phrase.
  - b. Use frequently occurring affixes as a clue to the meaning of a word.
  - c. Identify frequently occurring root words (e.g., look) and their inflectional forms (e.g., looks, looked, looking).
5. Vocabulary Acquisition and Use: With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings.
- a. Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent.
  - b. Define words by category and by one or more key attributes (e.g., a duck is a bird that swims; a tiger is a large cat with stripes).
  - c. Identify real-life connections between words and their use (e.g., note places at home that are cozy).
  - d. Distinguish shades of meaning among verbs differing in manner (e.g., look, peek, glance, stare, glare, scowl) and adjectives differing in intensity (e.g., large, gigantic) by defining or choosing them or by acting out the meanings.
6. Vocabulary Acquisition and Use: Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., because).

### **Reading Standards for Informational Text (CCSS.ELA-Literacy.RI.1.)**

- 1. Key Ideas and Details: Ask and answer questions about key details in a text.
- 4. Craft and Structure: Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
- 9. Integration of Knowledge and Ideas: Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

10. Range of Reading and Level of Text Complexity: Actively engage in group reading activities with purpose and understanding.

### **Reading Standards for Literature (CCSS.ELA-Literacy.RL.1.)**

1. Key Ideas and Details: Ask and answer questions about key details in a text.
4. Craft and Structure: Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.
10. Range of Reading and Level of Text Complexity: With prompting and support, read prose and poetry of appropriate complexity for grade 1.

### **Speaking and Listening (CCSS.ELA-Literacy.SL.1.)**

1. Comprehension and Collaboration: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
  - a. Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
  - b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges.
  - c. Ask questions to clear up any confusion about the topics and texts under discussion.

### **Writing (CCSS.ELA-Literacy.W.1)**

8. Research to Build and Present Knowledge: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

## **Grade 2**

### **Reading Standards: Foundational Reading Skills (CCSS.ELA-Literacy.RF.2.)**

3. Phonics and Word Recognition: Know and apply grade-level phonics and word analysis skills in decoding words.
  - a. Distinguish long and short vowels when reading regularly spelled one-syllable words.
  - b. Know spelling-sound correspondences for additional common vowel teams.
  - c. Decode regularly spelled two-syllable words with long vowels.
  - d. Decode words with common prefixes and suffixes.
  - e. Identify words with inconsistent but common spelling-sound correspondences.
  - f. Recognize and read grade-appropriate irregularly spelled words.
4. Fluency: Read with sufficient accuracy and fluency to support comprehension.
  - a. Read grade-level text with purpose and understanding.
  - b. Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.

- c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

### **Language (CCSS.ELA-Literacy.L.2.)**

4. Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies.
  - a. Use sentence-level context as a clue to the meaning of a word or phrase.
  - b. Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., happy/unhappy, tell/retell).
  - c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., addition, additional).
  - d. Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., birdhouse, lighthouse, housefly; bookshelf, notebook, bookmark).
  - e. Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.
5. Vocabulary Acquisition and Use: Demonstrate understanding of word relationships and nuances in word meanings.
  - a. Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy).
  - b. Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny).
6. Vocabulary Acquisition and Use: 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).

### **Reading Standards for Informational Text (CCSS.ELA-Literacy.RI.2.)**

1. Key Ideas and Details: Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
4. Craft and Structure: Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
9. Integration of Knowledge and Ideas: Compare and contrast the most important points presented by two texts on the same topic.
10. Range of Reading and Level of Text Complexity: By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

### **Reading Standards for Literature (CCSS.ELA-Literacy.RL.2.)**

1. Key Ideas and Details: Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

4. Craft and Structure: Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.
10. Range of Reading and Level of Text Complexity: 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.

### **Speaking and Listening (CCSS.ELA-Literacy.SL.2.)**

1. Comprehension and Collaboration: Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
  - a. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
  - b. Build on others' talk in conversations by linking their comments to the remarks of others.
  - c. Ask for clarification and further explanation as needed about the topics and texts under discussion.

### **Writing (CCSS.ELA-Literacy.W.2.)**

8. Research to Build and Present Knowledge: Recall information from experiences or gather information from provided sources to answer a question.

## **Grade 3**

### **Reading Standards: Foundational Reading Skills (CCSS.ELA-Literacy.RF.3.)**

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

### **Language (CCSS.ELA-Literacy.L.3.)**

4. Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.

- a. Use sentence-level context as a clue to the meaning of a word or phrase.
  - b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat).
  - c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., company, companion).
  - d. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.
5. Vocabulary Acquisition and Use: Demonstrate understanding of word relationships and nuances in word meanings. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.
- a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps).
  - b. Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful).
  - c. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., knew, believed, suspected, heard, wondered).
6. Vocabulary Acquisition and Use: Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them).

**Reading Standards for Informational Text (CCSS.ELA-Literacy.RI.3.)**

- 1. Key Ideas and Details: Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- 4. Craft and Structure: Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
- 9. Integration of Knowledge and Ideas: Compare and contrast the most important points and key details presented in two texts on the same topic.
- 10. Range of Reading and Level of Text Complexity: By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

**Reading Standards for Literature (CCSS.ELA-Literacy.RL.3.)**

- 1. Key Ideas and Details: Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- 4. Craft and Structure: Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.
- 10. Range of Reading and Level of Text Complexity: By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2–3 text complexity band independently and proficiently.

### **Speaking and Listening (CCSS.ELA-Literacy.SL.3.)**

1. Comprehension and Collaboration: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
  - b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
  - c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
  - d. Explain their own ideas and understanding in light of the discussion.

### **Writing (CCSS.ELA-Literacy.W.3.)**

8. Research to Build and Present Knowledge: Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

## **Grade 4**

### **Reading Standards: Foundational Reading Skills (CCSS.ELA-Literacy.RF.4.)**

3. Phonics and Word Recognition: Know and apply grade-level phonics and word analysis skills in decoding words.
  - 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.
4. Fluency: Read with sufficient accuracy and fluency to support comprehension.
  - a. Read grade-level text with purpose and understanding.
  - b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.
  - c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

### **Language (CCSS.ELA-Literacy.L.4.)**

4. Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.
  - a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.

- b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph).
  - c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.
5. Vocabulary Acquisition and Use: Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- a. Explain the meaning of simple similes and metaphors (e.g., as pretty as a picture) in context.
  - b. Recognize and explain the meaning of common idioms, adages, and proverbs.
  - c. Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).
6. Vocabulary Acquisition and Use: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).

#### **Reading Standards for Informational Text (CCSS.ELA-Literacy.RI.4.)**

- 1. Key Ideas and Details: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- 4. Craft and Structure: Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
- 9. Integration of Knowledge and Ideas: Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.
- 10. Range of Reading and Level of Text Complexity: 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 Standards for Literature (CCSS.ELA-Literacy.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.
- 4. Craft and Structure: 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).
- 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.

#### **Speaking and Listening (CCSS.ELA-Literacy.SL.4.)**

1. Comprehension and Collaboration: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
  - b. Follow agreed-upon rules for discussions and carry out assigned roles.
  - c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
  - d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

#### **Writing (CCSS.ELA-Literacy.W.4.)**

8. Research to Build and Present Knowledge: 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.
9. Research to Build and Present Knowledge: Draw evidence from literary or informational texts to support analysis, reflection, and research.
  - a. Apply grade 4 Reading standards to literature (e.g., "Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character's thoughts, words, or actions].").
  - b. Apply grade 4 Reading standards to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text").

### **Grade 5**

#### **Reading Standards: Foundational Reading Skills (CCSS.ELA-Literacy.RF.5.)**

3. Phonics and Word Recognition: Know and apply grade-level phonics and word analysis skills in decoding words.
  - 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.
4. Fluency: Read with sufficient accuracy and fluency to support comprehension.
  - a. Read grade-level text with purpose and understanding.
  - b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.
  - c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

#### **Language (CCSS.ELA-Literacy.L.5.)**

4. Vocabulary Acquisition and Use: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
  - a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.
  - b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., photograph, photosynthesis).
  - c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.
5. Vocabulary Acquisition and Use: Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
  - a. Interpret figurative language, including similes and metaphors, in context.
  - b. Recognize and explain the meaning of common idioms, adages, and proverbs.
  - c. Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.
6. Vocabulary Acquisition and Use: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., however, although, nevertheless, similarly, moreover, in addition).

#### **Reading Standards for Informational Text (CCSS.ELA-Literacy.RI.5.)**

1. Key Ideas and Details: Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
4. Craft and Structure: Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
9. Integration of Knowledge and Ideas: Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.
10. Range of Reading and Level of Text Complexity: Actively engage in group reading activities with purpose and understanding.

#### **Reading Standards for Literature (CCSS.ELA-Literacy.RL.5.)**

1. Key Ideas and Details: Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
4. Craft and Structure: Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.
10. Range of Reading and Level of Text Complexity: By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4–5 text complexity band independently and proficiently.

#### **Speaking and Listening (CCSS.ELA-Literacy.SL.5.)**

1. Comprehension and Collaboration: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
  - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
  - b. Follow agreed-upon rules for discussions and carry out assigned roles.
  - c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
  - d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.

**Writing (CCSS.ELA-Literacy.W.5.)**

8. Research to Build and Present Knowledge: Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.
9. Research to Build and Present Knowledge: Draw evidence from literary or informational texts to support analysis, reflection, and research.
  - a. Apply grade 5 Reading standards to literature (e.g., "Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text [e.g., how characters interact]").
  - b. Apply grade 5 Reading standards to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point[s]").

## Focused Learning Outcomes: K-5 Mathematics

The CSDE has adapted Achieve the Core’s [2020–2021 Priority Instructional Content in ELA/Literacy and Mathematics](#) to assist in guiding the important work of addressing mathematics education for the coming school year. Providing equitable instruction requires that we hold high expectations for all students while focusing on their social emotional and academic development. As the 2020–2021 school year approaches, mathematics educators must leverage the structure and emphases of college- and career-ready standards to name content priorities and support focus on critical on-grade-level material. It will be more productive for teachers to think of learning opportunities that are most important for students in relation to the mathematics learning progressions. While attending to the grade-level standards of most importance, it will be essential to identify the pre-requisite knowledge needed for student success. Prerequisite skills or understandings that may have been missed as a result of COVID-19 could be strategically taught right before the connected unit of study or incorporated as spiral review or as part of instructional routines and procedures. Teaching these skills as connected to grade-level content deepens students’ mathematical understanding.

In addition, students will need to engage deeply with grade-level mathematics by justifying claims, sharing their thinking and responding to the thinking of others, and solving well-chosen problems that connect to their world and advance them mathematically. As a result, the Standards for Mathematical Practice remain a critical component of mathematics instruction at every level.

### *Kindergarten*

Mathematics in Kindergarten emphasizes counting and cardinality, representing and solve problems involving addition and subtraction, and understanding and using place value. The clusters and standards listed below identify the essential instructional content critical to addressing the major work for Kindergarten. This is not a comprehensive list of content in the grade level as defined in the Connecticut Core Standards, but rather highlights the major work of Kindergarten.

#### **Counting and Cardinality K.CC**

*Know number names and the count sequence.*

1. Count to 100 by ones and by tens.
2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).

*Count to tell the number of objects.*

4. Understand the relationship between numbers and quantities; connect counting to cardinality.

- a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
  - b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
  - c. Understand that each successive number name refers to a quantity that is one larger.
5. Count to answer “how many?” questions about as many as 20 things arranged in a line, rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

*Compare numbers.*

6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
7. Compare two numbers between 1 and 10 presented as written numerals.

### **Operations and Algebraic Thinking K.OA**

*Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.*

1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g.,  $5 = 2 + 3$  and  $5 = 4 + 1$ ).
4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
5. Fluently add and subtract within 5.

### **Number and Operations in Base Ten K.NBT\***

*Work with numbers 11–19 to gain foundations for place value.*

1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g.,  $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

\*It is important to note that the numbers in base ten standards, while major work of the grade should receive lighter treatment in favor of other priority instructional content.

The fluencies required in Kindergarten are identified below:

Add/subtract within 5

## Grade 1

Mathematics in grades 1 and 2 centers around representing and solve problems involving addition and subtraction, understanding and using place value, and developing concepts of measurement. The domains, clusters and standards listed below identify the essential instructional content critical to addressing the major work for grade 1. This is not a comprehensive list of content in the grade level as defined in the Connecticut Core Standards, but rather highlights the major work of the grade 1.

### Operations and Algebraic Thinking 1.OA

*Represent and solve problems involving addition and subtraction.*

1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

*Understand and apply properties of operations and the relationship between addition and subtraction.*

3. Apply properties of operations as strategies to add and subtract.3 Examples: If  $8 + 3 = 11$  is known, then  $3 + 8 = 11$  is also known. (Commutative property of addition.) To add  $2 + 6 + 4$ , the second two numbers can be added to make a ten, so  $2 + 6 + 4 = 2 + 10 = 12$ . (Associative property of addition.)
4. Understand subtraction as an unknown-addend problem. For example, subtract  $10 - 8$  by finding the number that makes 10 when added to 8.

*Add and subtract within 20.*

6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ ).

*Work with addition and subtraction equations.*

7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false?  $6 = 6$ ,  $7 = 8 - 1$ ,  $5 + 2 = 2 + 5$ ,  $4 + 1 = 5 + 2$ .
8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 + ? = 11$ ,  $5 = \square - 3$ ,  $6 + 6 = \square$ .

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

*Understand place value.*

2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
  - a. 10 can be thought of as a bundle of ten ones—called a “ten.”
  - b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
  - c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$ .

*Use place value understanding and properties of operations to add and subtract.*

4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
6. Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

**Geometry 1.G**

*Reason with shapes and their attributes.*

1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g. color, orientation, overall size); build and draw shapes to possess defining attributes.
2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.<sup>42</sup>
3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

The fluencies required in grade 1 are identified below:

Add/subtract within 10

This content builds upon content that was addressed in Kindergarten. That content is specified below so that educators can plan instruction appropriately.

- K.OA.1, K.OA.2, K.OA.3, K.OA.4, K.OA.5
- K.NBT.1

- K.MD.1, K.MD.2

By determining if the learning occurred during face-to-face instruction, remote learning, or was not addressed during the previous year, grade 1 teachers can provide necessary supports to ensure that the current grade-level content is accessed by all students.

## **Grade 2**

Mathematics in grades 1 and 2 centers around representing and solve problems involving addition and subtraction, understanding and using place value, and developing concepts of measurement. The clusters and standards listed below identify the essential instructional content critical to addressing the major work for grade 2. This is not a comprehensive list of content in the grade level as defined in the Connecticut Core Standards, but rather highlights the major work of the grade 2.

### **Operations and Algebraic Thinking 2.OA**

*Represent and solve problems involving addition and subtraction.*

1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.<sup>1</sup>

*Add and subtract within 20.*

2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

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

*Use place value understanding and properties of operations to add and subtract.*

5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
6. Add up to four two-digit numbers using strategies based on place value and properties of operations.
7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. 9. Explain why addition and subtraction strategies work, using place value and the properties of operations.

### **Measurement and Data 2.MD**

*Relate addition and subtraction to length.*

5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, . . . , and represent whole-number sums and differences within 100 on a number line diagram.

The fluencies required in grade 2 are identified below:

Single-digit sums and differences (sums from memory by end of Grade 2)

Add/subtract within 100

This content builds upon content that was addressed in grade 1. That content is specified below so that educators can plan instruction appropriately:

- 1.OA.1, 1.OA.2, 1.OA.3, 1.OA.4, 1.OA.6.b, 1.OA.7, 1.OA.8
- 1.NBT.1, 1.NBT.2, 1.NBT.3, 1.NBT.4, 1.NBT.5, 1.NBT.6
- 1.MD.1, 1.MD.2

By determining if the learning occurred during face-to-face instruction, remote learning, or was not addressed during the previous year, grade 2 teachers can provide necessary supports to ensure that the current grade-level content is accessed by all students.

## Grade 3

The mathematics in grade 3 to grade 5, progresses to representing and understanding multiplication and division and developing understanding of fractions. In grade 3, there is additional focus on solving problems involving measurement. The clusters and standards listed below identify the essential instructional content critical to addressing the major work for grade 3. This is not a comprehensive list of content in the grade level as defined in the Connecticut Core Standards, but rather highlights the major work of the grade 3.

### **Operations and Algebraic Thinking 3.OA**

*Represent and solve problems involving multiplication and division.*

1. Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .
2. Interpret whole-number quotients of whole numbers, e.g., interpret  $56 \div 8$  as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as  $56 \div 8$ .
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.1

4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = \square \div 3$ ,  $6 \times 6 = ?$ .

*Understand properties of multiplication and the relationship between multiplication and division.*

5. Apply properties of operations as strategies to multiply and divide.2 Examples: If  $6 \times 4 = 24$  is known, then  $4 \times 6 = 24$  is also known. (Commutative property of multiplication.)  $3 \times 5 \times 2$  can be found by  $3 \times 5 = 15$ , then  $15 \times 2 = 30$ , or by  $5 \times 2 = 10$ , then  $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that  $8 \times 5 = 40$  and  $8 \times 2 = 16$ , one can find  $8 \times 7$  as  $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.)
6. Understand division as an unknown-factor problem. For example, find  $32 \div 8$  by finding the number that makes 32 when multiplied by 8.

*Multiply and divide within 100.*

7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division(e.g., knowing that  $8 \times 5 = 40$ , one knows  $40 \div 5 = 8$ ) or properties of operations. By the end of grade 3, know from memory all products of two one-digit numbers.

*Solve problems involving the four operations, and identify and explain patterns in arithmetic.*

8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

### **Number and Operations—Fractions 3.NF**

*Develop understanding of fractions as numbers.*

1. Understand a fraction  $1/b$  as the quantity formed by 1 part when a whole is partitioned into  $b$  equal parts; understand a fraction  $a/b$  as the quantity formed by  $a$  parts of size  $1/b$ .
2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.
  - a. Represent a fraction  $1/b$  on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into  $b$  equal parts. Recognize that each part has size  $1/b$  and that the endpoint of the part based at 0 locates the number  $1/b$  on the number line.
  - b. Represent a fraction  $a/b$  on a number line diagram by marking off a lengths  $1/b$  from 0. Recognize that the resulting interval has size  $a/b$  and that its endpoint locates the number  $a/b$  on the number line.
3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
  - a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
  - b. Recognize and generate simple equivalent fractions, e.g.,  $1/2 = 2/4$ ,  $4/6 = 2/3$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.

- c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form  $3 = \frac{3}{1}$ ; recognize that  $\frac{6}{1} = 6$ ; locate  $\frac{4}{4}$  and 1 at the same point of a number line diagram.
- d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

### **Geometry 3.G\***

*Reason with shapes and their attributes.*

2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as  $\frac{1}{4}$  of the area of the shape.

### **Measurement and Data 3.MD\***

*Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.*

1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

*Geometric measurement: understand concepts of area and relate area to multiplication and to addition.*

5. Recognize area as an attribute of plane figures and understand concepts of area measurement.
  - a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
  - b. A plane figure which can be covered without gaps or overlaps by  $n$  unit squares is said to have an area of  $n$  square units.
6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
7. Relate area to the operations of multiplication and addition.
  - a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
  - b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

- c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths  $a$  and  $b + c$  is the sum of  $a \times b$  and  $a \times c$ . Use area models to represent the distributive property in mathematical reasoning.
- d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems.

*Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.*

- 8. Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

\*It is important to note that the measurement and data standards, while major work of the grade should receive lighter treatment in favor of other priority instructional content.

The fluencies required in grade 3 are identified below:

Single-digit products and quotients (Products from memory by end of Grade 3)  
Add/subtract within 1000

This content builds upon content that was addressed in grade 2. That content is specified below so that educators can plan instruction appropriately:

- 2.OA.3, 2.OA.4
- 2.G.1, 2.G.2, 2.G.3
- 2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4

By determining if the learning occurred during face-to-face instruction, remote learning, or was not addressed during the previous year, grade 3 teachers can provide necessary supports to ensure that the current grade-level content is accessed by all students.

## **Grade 4**

The mathematics in grade 3 to grade 5, progresses to representing and understanding multiplication and division and developing understanding of fractions. In grade 4, there is additional focus on generalizing place value understanding. The clusters and standards listed below identify the essential instructional content critical to addressing the major work for grade 4. This is not a comprehensive list of content in the grade level as defined in the Connecticut Core Standards, but rather highlights the major work of the grade 4.

### **Operations and Algebraic Thinking 4.OA**

*Use the four operations with whole numbers to solve problems.*

- 1. Interpret a multiplication equation as a comparison, e.g., interpret  $35 = 5 \times 7$  as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

2. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.<sup>1</sup>
3. Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

#### **Number and Operations in Base Ten 4.NBT**

*Generalize place value understanding for multi-digit whole numbers.*

1. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that  $700 \div 70 = 10$  by applying concepts of place value and division.
2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multidigit numbers based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.
3. Use place value understanding to round multi-digit whole numbers to any place.

*Use place value understanding and properties of operations to perform multi-digit arithmetic.*

4. Fluently add and subtract multi-digit whole numbers using the standard algorithm.
5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

#### **Number and Operations—Fractions 4.NF**

*Extend understanding of fraction equivalence and ordering.*

1. Explain why a fraction  $a/b$  is equivalent to a fraction  $(n \times a)/(n \times b)$  by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $1/2$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

*Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.*

3. Understand a fraction  $a/b$  with  $a > 1$  as a sum of fractions  $1/b$ .

- a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
  - b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples:  $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ ;  $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$ ;  $2\frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$ .
  - c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
  - d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
- a. Understand a fraction  $\frac{a}{b}$  as a multiple of  $\frac{1}{b}$ . For example, use a visual fraction model to represent  $\frac{5}{4}$  as the product  $5 \times (\frac{1}{4})$ , recording the conclusion by the equation  $\frac{5}{4} = 5 \times (\frac{1}{4})$ .
  - b. Understand a multiple of  $\frac{a}{b}$  as a multiple of  $\frac{1}{b}$ , and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express  $3 \times (\frac{2}{5})$  as  $6 \times (\frac{1}{5})$ , recognizing this product as  $\frac{6}{5}$ . (In general,  $n \times (\frac{a}{b}) = (\frac{n \times a}{b})$ .)
  - c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat  $\frac{3}{8}$  of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

*Understand decimal notation for fractions, and compare decimal fractions.*

5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express  $\frac{3}{10}$  as  $\frac{30}{100}$ , and add  $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$ .
6. Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as  $\frac{62}{100}$ ; describe a length as 0.62 meters; locate 0.62 on a number line diagram.
7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual model.

The fluencies required in grade 4 are identified below:

Add/subtract within 1,000,000

This content builds upon content that was addressed in grade 3. That content is specified below so that educators can plan instruction appropriately:

- 3.OA.1, 3.OA.2, 3.OA.3, 3.OA.4, 3.OA.5, 3.OA.6, 3.OA.7b
- 3.NF.1, 3.NF.2, 3.NF.3

- 3.G.2
- 3.NBT.2

By determining if the learning occurred during face-to-face instruction, remote learning, or was not addressed during the previous year, grade 4 teachers can provide necessary supports to ensure that the current grade-level content is accessed by all students.

## Grade 5

The mathematics in grade 3 to grade 5, progresses to representing and understanding multiplication and division and developing understanding of fractions. In grade 5, there is additional focus on generalizing place value understanding and understand concept of volume. The clusters and standards listed below identify the essential instructional content critical to addressing the major work for grade 5. This is not a comprehensive list of content in the grade level as defined in the Connecticut Core Standards, but rather highlights the major work of the grade 5.

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

*Understand the place value system.*

1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $1/10$  of what it represents in the place to its left.
2. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
3. Read, write, and compare decimals to thousandths.
  - a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g.,  $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ .
  - b. Compare two decimals to thousandths based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.
4. Use place value understanding to round decimals to any place.

*Perform operations with multi-digit whole numbers and with decimals to hundredths.*

5. Fluently multiply multi-digit whole numbers using the standard algorithm.
6. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
7. Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

### Number and Operations—Fractions 5.NF

*Use equivalent fractions as a strategy to add and subtract fractions.*

1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example,  $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$ . (In general,  $\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$ .)
2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result  $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$ , by observing that  $\frac{3}{7} < \frac{1}{2}$ .

*Apply and extend previous understandings of multiplication and division to multiply and divide fractions.*

3. Interpret a fraction as division of the numerator by the denominator ( $\frac{a}{b} = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret  $\frac{3}{4}$  as the result of dividing 3 by 4, noting that  $\frac{3}{4}$  multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size  $\frac{3}{4}$ . If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?
4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
  - a. Interpret the product  $(\frac{a}{b}) \times q$  as a parts of a partition of  $q$  into  $b$  equal parts; equivalently, as the result of a sequence of operations  $a \times q \div b$ . For example, use a visual fraction model to show  $(\frac{2}{3}) \times 4 = \frac{8}{3}$ , and create a story context for this equation. Do the same with  $(\frac{2}{3}) \times (\frac{4}{5}) = \frac{8}{15}$ . (In general,  $(\frac{a}{b}) \times (\frac{c}{d}) = \frac{ac}{bd}$ .)
  - b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
5. Interpret multiplication as scaling (resizing), by:
  - a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
  - b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence  $\frac{a}{b} = (\frac{n \times a}{n \times b})$  to the effect of multiplying  $\frac{a}{b}$  by 1.

6. Solve real-world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.
  - a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for  $(1/3) \div 4$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $(1/3) \div 4 = 1/12$  because  $(1/12) \times 4 = 1/3$ .
  - b. Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for  $4 \div (1/5)$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $4 \div (1/5) = 20$  because  $20 \times (1/5) = 4$ .
  - c. Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share  $1/2$  lb of chocolate equally? How many  $1/3$ -cup servings are in 2 cups of raisins?

#### **Measurement and Data 5.MD**

*Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.*

3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement.
  - a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.
  - b. A solid figure which can be packed without gaps or overlaps using  $n$  unit cubes is said to have a volume of  $n$  cubic units.
4. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
5. Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume.
  - a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
  - b. Apply the formulas  $V = l \times w \times h$  and  $V = b \times h$  for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems.
  - c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems.

#### **Geometry 5.G**

*Graph points on the coordinate plane to solve real-world and mathematical problems.*

1. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).
2. Represent real-world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

The fluencies required in grade 5 are identified below:

Multi-digit multiplication

This content builds upon content that was addressed in grade 4. That content is specified below so that educators can plan instruction appropriately:

- 4.OA.1, 4.OA.2
- 4.NBT.1, 4.NBT.2, 4.NBT.4, 4.NBT.5, 4.NBT.6
- 4.NF.1, 4.NF.2, 4.NF.3, 4.NF.4, 4.NF.5, 4.NF.6, 4.NF.7
- 4.MD.3

By determining if the learning occurred during face-to-face instruction, remote learning, or was not addressed during the previous year, grade 5 teachers can provide necessary supports to ensure that the current grade-level content is accessed by all students.

## Focused Learning Outcomes: K-5 Science

On November 4, 2015, the [Next Generation Science Standards \(NGSS\)](#) were adopted by the Connecticut State Board of Education setting the expectation for what all Connecticut students should know and be able to do as a result of their grade level specific science education. The NGSS envision effective science education as occurring at the intersection of three interwoven dimensions in which students learn science by doing science—applying the practices through the lens of the cross-cutting concepts to investigate phenomena that relate to the content of the disciplinary core ideas (DCI).

The NGSS are broken down by individual grades within the K – 5 grade band. The following pages indicate both the Performance Expectation (**in Bold letters**), and DCI that show the science topic students should be able to understand upon completion of the grade.

NGSS are a set of spiraling standards that build upon themselves. Science topics are covered in a particular grade, and then re-introduced with more detail and depth in subsequent grades. There are times that complete mastery of a science topic may not be accomplished at one grade, but then mastered in a subsequent grade.

The following performance expectations and core ideas align with the [NGSS Assessment Item Specifications](#) for Grade 5.

### **NGSS Grade K Performance Expectation (Bold) and Core Idea (DCI)**

**K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.**

ESS2.E: Biogeology-Plants and animals can change their environment.

**K-ESS3-1 Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.**

ESS3.A: Natural Resources-Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.

**K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.**

ESS3.C: Human Impacts on Earth Systems-Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3)

ETS1.B: Developing Possible Solutions-Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.

**K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.**

LS1.C: Organization for Matter and Energy Flow in Organisms-All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.

**K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.**

ESS2.D: Weather and Climate-Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.

**K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.**

ESS3.B: Natural Hazards-Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.

ETS1.A: Defining and Delimiting Engineering Problems-Asking questions, making observations, and gathering information are helpful in thinking about problems.

**K-PS3-1 Make observations to determine the effect of sunlight on Earth's surface.**

PS3.B: Conservation of Energy and Energy Transfer-Sunlight warms Earth’s surface.

**K-PS3-2 Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on an area.**

PS3.B: Conservation of Energy and Energy Transfer-Sunlight warms Earth’s surface.

**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**

PS2.A: Forces and Motion-Pushes and pulls can have different strengths and directions. Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.

PS2.B: Types of Interactions-When objects touch or collide; they push on one another and can change motion.

PS3.C: Relationship Between Energy and Forces-A bigger push or pull makes things speed up or slow down more quickly.

**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.**

PS2.A: Forces and Motion-Pushes and pulls can have different strengths and directions. Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.

ETS1.A: Defining and Delimiting Engineering Problems-A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.

### ***NGSS Grade 1 Performance Expectation (Bold) and Core Idea (DCI)***

**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.**

LS1.A: Structure and Function-All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

LS1.D: Information Processing-Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs.

**1-LS1-2 Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.**

LS1.B: Growth and Development of Organisms-Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive.

**1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.**

LS3.A: Inheritance of Traits-Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents.

LS3.B: Variation of Traits-Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.

**1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.**

ESS1.A: The Universe and Its Stars-Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted.

**1-ESS1-2 Make observations at different times of year to relate the amount of daylight to the time of year.**

ESS1.B: Earth and the Solar System-Seasonal patterns of sunrise and sunset can be observed, described, and predicted

**1-PS4-1 Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.**

PS4.A: Wave Properties-Sound can make matter vibrate, and vibrating matter can make sound.

**1-PS4-2 Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.**

PS4.B: Electromagnetic Radiation-Objects can be seen if light is available to illuminate them or if they give off their own light.

**1-PS4-3 Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.**

PS4.B: Electromagnetic Radiation-Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam.

**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.**

PS4.C: Information Technologies and Instrumentation-People also use a variety of devices to communicate (send and receive information) over long distances.

***NGSS Grade 2 Performance Expectation (Bold) and Core Idea (DCI)***

**2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.**

LS2.A: Interdependent Relationships in Ecosystems-Plants depend on water and light to grow.

**2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.**

LS2.A: Interdependent Relationships in Ecosystems-Plants depend on animals for pollination or to move their seeds around.

ETS1.B: Developing Possible Solutions-Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.

**2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.**

LS4.D: Biodiversity and Humans-There are many different kinds of living things in any area, and they exist in different places on land and in water.

**2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.**

ESS1.C: The History of Planet Earth-Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe.

**2-ESS2-1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.**

ESS2.A: Earth Materials and Systems-Wind and water can change the shape of the land.

ETS1.C: Optimizing the Design Solution-Because there is always more than one possible solution to a problem, it is useful to compare and test designs.

**2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.**

ESS2.B: Plate Tectonics and Large-Scale System Interactions-Maps show where things are located. One can map the shapes and kinds of land and water in any area.

**2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.**

ESS2.C: The Roles of Water in Earth's Surface Processes-Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form.

**2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.**

PS1.A: Structure and Properties of Matter-Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties.

**2-PS1-2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.**

PS1.A: Structure and Properties of Matter-Different properties are suited to different purposes.

**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.**

PS1.A: Structure and Properties of Matter-Different properties are suited to different purposes. A great variety of objects can be built up from a small set of pieces.

**2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.**

PS1.B: Chemical Reactions-Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not.

***NGSS Grade 3 Performance Expectation (Bold) and Core Idea (DCI)***

**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.**

PS2.A: Forces and Motion - Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion.

PS2.B: Types of Interactions - Objects in contact exert forces on each other.

**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.**

PS2.A Forces and Motion - The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it.

**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.**

PS2.B: Types of Interactions - Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, on their orientation relative to each other

**3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.**

PS2.B: Types of Interactions - Electric and Magnetic forces between a pair of objects do not require the objects to be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart, and, for forces between two magnets, on their orientation relative to each other.

**3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.**

LS1.B: Growth and Development of Organisms - Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles.

**3-LS2-1 Construct an argument that some animals form groups that help members survive.**

LS2.D: Social Interactions and Group Behavior - Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size.

**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.**

LS3.A: Inheritance of Traits - Many characteristics of organisms are inherited from their parents.

LS3.B: Variation of Traits - Different organisms vary in how they look and function because they have different inherited information.

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

LS3.A: Inheritance of Traits - Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment.

LS3.B: Variation of Traits - The environment also affects the traits that an organism develops.

**3-LS4-1 Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.**

LS4.A: Evidence of Common Ancestry and Diversity - Some kinds of plants and animals that once lived on Earth are no longer found anywhere. - Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments.

**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.**

LS4.B: Natural Selection - Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing.

**3-LS4-3 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.**

LS4.C: Adaptation - For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all.

**3-LS4-4 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.**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience - When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die.

LS4.D: Biodiversity and Humans - Populations live in a variety of habitats and change in those habitats affects the organisms living there.

**3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.**

ESS2.D: Weather and Climate - Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next.

**3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.**

ESS2.D: Weather and Climate - Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years.

**3-ESS3-1 Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.**

ESS3.B: Natural Hazards - A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts.

***NGSS Grade 4 Performance Expectation (Bold) and Core Idea (DCI)***

**4-PS3-1 Use evidence to construct an explanation relating the speed of an object to the energy of that object.**

PS3.A: Definitions of Energy - The faster a given object is moving, the more energy it possesses.

**4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.**

PS3.A: Definitions of Energy - Energy can be moved from place to place by moving objects — or through sound, light, or electric currents.

PS3.B: Conservation of Energy and Energy Transfer - Energy is present whenever there are moving objects, sound, light, or heat. When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air; as a result, the air gets heated and sound is produced. - Light also transfers energy from place to place. - Energy can also be transferred from place to place by electric currents, which can then be used locally to produce motion, sound, heat, or light. The currents may have been produced to begin with by transforming the energy of motion into electrical energy.

**4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.**

PS3.A: Definitions of Energy - Energy can be moved from place to place by moving objects or through sound, light, or electric currents.

PS3.B: Conservation of Energy and Energy Transfer - Energy is present whenever there are moving objects, sound, light, or heat. When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air; as a result, the air gets heated and sound is produced.

PS3.C: Relationship Between Energy and Forces - When objects collide, the contact forces transfer energy so as to change the objects' motions.

**4-PS3-4 Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.**

PS3.B: Conservation of Energy and Energy Transfer - Energy can also be transferred from place to place by electric currents, which can then be used locally to produce motion, sound, heat, or light. The

currents may have been produced to begin with by transforming the energy of motion into electrical energy.

PS3.D: Energy in Chemical Processes and Everyday Life - The expression “produce energy” typically refers to the conversion of stored energy into a desired form for practical use.

ETS1.A: Defining Engineering Problems - Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account.

**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.**

PS4.A: Wave Properties ▪ Waves, which are regular patterns of motion, can be made in water by disturbing the surface. When waves move across the surface of deep water, the water goes up and down in place; there is no net motion in the direction of the wave except when the water meets a beach. ▪ Waves of the same type can differ in amplitude (height of the wave) and wavelength (spacing between wave peaks).

**4-PS4-2 Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.**

PS4.B: Electromagnetic Radiation - An object can be seen when light reflected from its surface enters the eyes

**4-PS4-3 Generate and compare multiple solutions that use patterns to transfer information.**

PS4.C: Information Technologies and Instrumentation - Digitized information can be transmitted over long distances without significant degradation. High-tech devices, such as computers or cell phones, can receive and decode information—convert it from digitized form to voice—and vice versa.

ETS1.C: Optimizing the Design Solution - Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints.

**4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.**

LS1.A: Structure and Function - Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.

**4-LS1-2 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.**

LS1.D: Information Processing - Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal’s brain. Animals are able to use their perceptions and memories to guide their actions.

**4-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.**

ESS1.C: The History of Planet Earth - Local, regional, and global patterns of rock formations reveal changes over time due to Earth forces, such as earthquakes. The presence and location of certain fossil types indicate the order in which rock layers were formed.

**4-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.**

ESS2.A: Earth Materials and Systems - Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms, and gravity break rocks, soils, and sediments into smaller particles and move them around.

**4-ESS2-2 Analyze and interpret data from maps to describe patterns of Earth's features.**

ESS2.B: Plate Tectonics and Large-Scale System Interactions - The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes appear in patterns. Most earthquakes and volcanoes occur in bands that are often along the boundaries between continents and oceans. Major mountain chains form inside continents or near their edges. Maps can help locate the different land and water features areas of Earth.

**4-ESS3-1 Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.**

ESS3.A: Natural Resources - Energy and fuels that humans use are derived from natural sources, and their use affects the environment in multiple ways. Some resources are renewable over time, and others are not.

**4-ESS3-2 Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.**

ESS3.B: Natural Hazards - A variety of hazards result from natural processes (e.g., earthquakes, tsunamis, volcanic eruptions). Humans cannot eliminate the hazards but can take steps to reduce their impacts.

ETS1.B: Designing Solutions to Engineering Problems - Testing a solution involves investigating how well it performs under a range of likely condition.

***NGSS Grade 5 Performance Expectation (Bold) and Core Idea (DCI)***

**5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.**

PS1.A: Structure and Properties of Matter - Matter of any type can be subdivided into particles that are too small to see, but even then, the matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations, including the inflation and shape of a balloon and the effects of air on larger particles or objects.

**5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.**

PS1.A: Structure and Properties of Matter - The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish.

PS1.B: Chemical Reactions - No matter what reaction or change in properties occurs, the total weight of the substances does not change.

**5-PS1-3 Make observations and measurements to identify materials based on their properties.**

PS1.A: Structure and Properties of Matter - Measurements of a variety of properties can be used to identify materials.

**5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.**

PS1.B: Chemical Reactions - When two or more different substances are mixed, a new substance with different properties may be formed.

**5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down.**

PS2.B: Types of Interactions - The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center

**5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.**

PS3.D: Energy in Chemical Processes and Everyday Life - The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter.

LS1.C: Organization for Matter and Energy Flow in Organisms - Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion.

**5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.**

LS1.C: Organization for Matter and Energy Flow in Organisms - Plants acquire their material for growth chiefly from air and water.

**5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.**

LS2.A: Interdependent Relationships in Ecosystems - The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plant parts and animals) and therefore operate as "decomposers." Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem.

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems - Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases and water from the environment and release waste matter (gas, liquid, or solid) back into the environment.

**5-ESS1-1 Support an argument that the apparent brightness of the sun and stars is due to their relative distances from Earth.**

ESS1.A: The Universe and Its Stars - The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth.

**5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.**

ESS1.B: Earth and the Solar System - The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year.

**5-ESS2-1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.**

ESS2.A: Earth Materials and Systems - Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth's surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather.

**5-ESS2-2 Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.**

ESS2.C: The Roles of Water in Earth's Surface Processes - Nearly all of Earth's available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere.

**5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.**

ESS3.C: Human Impacts on Earth Systems - Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments.

## **Focused Learning Outcomes: K-5 Social Studies**

In February 2015, the Board approved the [Connecticut Elementary and Secondary Social Studies Frameworks](#) to assist district curriculum writers in writing or revising the social studies curricula. Inquiry is at the heart of social studies. The inquiry process is absolutely critical for effective student

understanding of history, geography, civics, and economics, and is emphasized throughout the frameworks document. Inquiry should guide the teaching of social studies at all levels.

Inquiry instruction is based on both teachers and students asking (and answering) compelling questions; social studies instruction should consist of more than a teacher solely telling students “what they need to know.” Student investigation of subject matter is the most critical component of inquiry. Teachers must carefully guide students through the inquiry process, but true inquiry allows students to construct their own questions and, with the guidance and support of skilled teachers, conduct inquiry on their own. Inquiry eliminates the old “skills vs. content” dilemma; to successfully engage in an inquiry activity, students and teachers will have to use both.

Many of the inquiry skills necessary for social studies can be developed and reinforced through the lens of English/language arts (e.g., developing questions, evaluating sources, using evidence, developing an argument, communicating conclusions). Thus, many school districts teach social studies using an interdisciplinary approach. This is entirely appropriate as social studies naturally allows students to master key reading, writing, analysis, speaking, and listening skills. Asking students to analyze various sources to answer an essential question helps students to sharpen their skills of analyzing primary sources and empowers them to “take a stand” and answer compelling questions. The following statements are drawn from the frameworks document and the expectations of what students should know and be able to do by the end of the grade.

### ***Kindergarten: Me and My Community***

1. Students will analyze why being part of a community is important and identify their communities (e.g., home, school, their neighborhood).
2. Students will explain the need for rules and consequences rules in their communities.
3. Students will analyze various ways that different communities create rules; electing a leader or leaders of a community is one way to do that.
4. Students will begin to utilize geography and mapping skills (e.g., creating a map of a classroom, a school, or a local community).
5. Students will engage in activities that begin the development of the critical skills of reading, writing, listening, and speaking.
6. Students will explore the concept of “history” through comparing similarities and differences between family life today and the past.

### ***Grade 1: Society and Ourselves***

1. Students will explore the relationship between themselves, their family, their school, and their larger community to better understand culture and its importance in shaping their lives.
2. Students will identify major figures in their town/city (e.g., mayor, town council, police chief, etc.) and the role that each play in the community.
3. Students will explain how people and events from the past have affected their community.
4. Students will begin the process of analyzing “primary sources” to learn about the past (e.g., written documents, photographs, art, etc.).

5. Students will expand their understanding of geography and explore the impact of geography of on the development of their own town or city (e.g., rivers, mountains, weather).
6. Students will expand their understand of civic rights and responsibilities.
7. Students will explore the differences between “wants” and “needs” and which is more important to individuals, families, and communities.

### ***Grade 2: Making a Difference***

1. Students will explore the lives and contributions of various individuals and groups of people that have made a difference in their local community, state, country, or world.
2. Students will explore in detail the life of one individual who has “made a difference” (this is often done by age-appropriate biographies).
3. Students will explain how they can make a difference in society as a whole.
4. Students will analyze an issue in their school or community that needs change and how they can enact change.
5. Students will identify resources that can be used to study individuals are groups of people who lived in the past.
6. Students will analyze ways in which their school and local community are diverse.
7. Students will explain why people have different ideas about what is best for their school, community, state, and country.

### ***Grade 3: Connecticut and Local History***

1. Students will explain significant events in the history of their community and how their local community has contributed to Connecticut’s story.
2. Student will analyze how many people live in their local community, whether their local community is getting larger or smaller, where adults in their local community work, etc.
3. Students will explain the significance of Connecticut to America’s history.
4. Students will analyze ways that their local community and Connecticut have stayed the same and/or changed over time.
5. Students will explain ways indigenous peoples have affected the history and culture of Connecticut.
6. Students will analyze ways that geography has impacted the development of their local community and Connecticut.
7. Student will explain various symbols, slogans, and landmarks that represent their local community and how they help explain the identity of their community.

### ***Grade 4: United States Geography***

1. Students will identify the major regions of the United States and the characteristics of each region.
2. Students will explain the impacts of the geography, environment, and climate on how people live.
3. Students will analyze why people move from one place to another.
4. Students will analyze ways that people adapt to the location in which they live.
5. Students will explain ways that regions are shaped by their historical events.

6. Students will utilize various maps to explore the history, politics, and economies of regions of the United States.

### ***Grade 5: Early United States History***

1. Students will analyze important events and individuals in the history of North America, starting with first indigenous peoples and ending with the Revolutionary War.
2. Students will explore the contributions of Connecticut to the development of colonial America.
3. Students will identify ways that groups from Europe, Latin America, and Africa arrived in North America.
4. Students will analyze the impact of indigenous peoples on historical developments during this period.
5. Students will analyze the cultural diversity that existed in colonial America.

**Planning Tool** \*Adapted from RIDE Planning Tool Spring 2020

**What is the purpose of this tool?** The purpose of this planning tool is to help teams of educators identify the priority content in each unit, determine the learning targets on prerequisite content, and develop strategies to address noted gaps, so that instruction aligns with grade-level standards. Completion of this tool is not required, however can provide a framework to support the collaborative conversation in determining learning.

**Who should complete this tool?** Teachers and leaders who teach and support the same content could work in vertical teams to ensure that there is attention given to the progression of the standards.

**What materials will assist in completing this planning tool?** Curriculum materials, including but not limited to scope and sequences, pacing guides, and lesson-level planning guidance as well evidence (data points or artifacts) that can be accessed to assist in determining learning targets.

Step 1: Understanding the Content		
List the focus standards for the unit of instruction	List the prerequisite standards (skills and concepts)	How were the prerequisites taught? (e.g., in-person, remotely, or not addressed)
Step 2: Evidence Gathering and Analysis of Student Level of Understanding		
List the evidence available to assess understanding of the prerequisite knowledge or learning targets through formative assessment process	List evidence to be used to identify level of understanding and learning targets	Based upon the evidence, list prerequisite knowledge necessary to be addressed to achieve grade level standards and learning targets
Step 3: Moving to grade-level instruction		
List those responsible for addressing the prerequisites (e.g., teacher, interventionist, para, etc.)	List resources to that will be used to address the prerequisites	
Step 4: Unit Development		
List the lessons of the unit	Describe any instructional strategies that will be utilized for the lesson.	List students to receive the targeted/personal support (e.g., whole class, specific students)

## Glossary

**Combine:** Give less time and attention to individual lessons by merging a group of lessons in the same domain.

**Emphasize/Prioritize:** Elevate the importance of one or more standards, concepts, strategies, or problem types above others. Emphasizing is a matter of giving stronger weight to specified things in the cluster or standard, not a matter of limiting entirely to the specified things.

**Essential Learning:** Learning standards that are of highest priority at each grade and content. Intended to provide a framework for strategically drawing on prior grade-level content that has been identified as essential topics.

**Evidence of learning:** Qualitative and Quantitative data that can use used to focus classroom or individual instruction.

**Incorporate:** Draw in prior grade-level skills and understandings to support students in engaging successfully with grade-level content. Base decisions related to this additional support on analyses of prior grade level scope and sequence and/or factors related to the district, school or classroom-level context.

**Integrate:** Merge content from the same grade level with other content that has been explicitly specified.

**Learning Targets:** Statements of the knowledge and skills students need to demonstrate mastery of a standard. Learning targets are derived directly from the approved state and national educational standards and identify what students should know and be able to do by the end of a grade or course. .

**Limit:** Cut back on the number of brief, repetitious practice problems that would normally be assigned to students for these topic(s)

**Unfinished Learning:** Prerequisite knowledge or skills that students need for future work that they do not have yet. Unfinished learning is a term intended to show the potential for growth and learning instead of focusing on a gap in learning or knowledge.

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