Enclosure 5c
March 9, 2021

RHODE ISLAND

Revision of Standards

March 9, 2021

RIDE Rhode Island Department of Education

RIDE Mission and Vision

RIDE Mission

The mission of the Rhode Island Department of Education (RIDE) is threefold:

1. To lead and support local education agencies (LEAs), schools, and communities through a **unified, strategic direction for education in the state.**

2. To use policy, advocacy, and governance structures to create an environment that advances opportunities for all students.

3. To maintain collaboration and efficiency in the department that enables innovation, agility, and continuous learning.

RIDE Vision

RIDE creates conditions for every Rhode Island student to think critically and collaboratively, and act as a creative, self-motivated, culturally and globally competent learner. Rhode Island students are prepared to lead fulfilling and productive lives, succeed in academic and employment settings, and contribute meaningfully to society.

RIDE Priorities

Guiding its mission and vision are the following priorities:

- **Equity**
- **Excellence in Learning**
- **Engaged Communities**
- **World Class Talent**
- **Governance Structures**

In prioritizing "Excellence in Learning," in particular, RIDE is committed to providing support and resources that allow every LEA to adopt and implement high-quality curricular materials.

View commitments aligned to each priority here.

Legislation- Standards and Curriculum

RIDE's 2021-2025 strategic plan, in part, responds to legislation passed by Rhode Island lawmakers in 2019 requiring the Commissioner of Elementary and Secondary Education and the Rhode Island Department of Education (RIDE) to:

- Develop statewide academic standards and curriculum frameworks for mathematics, English language arts (ELA), and science;
- Identify at least five examples of high-quality curriculum and materials for these core subjects; and
- Support school systems in the selection and implementation of curriculum materials.
- Implement an assessment system aligned to skills, competencies and knowledge of the standards

Moreover, legislation requires 100 percent of LEAs statewide to adopt high-quality curriculum materials in K-12 schools that are aligned with academic standards, with curriculum frameworks, and with statewide standardized tests where applicable. This must be completed by June 2023 for ELA and math and by June 2025 for science.

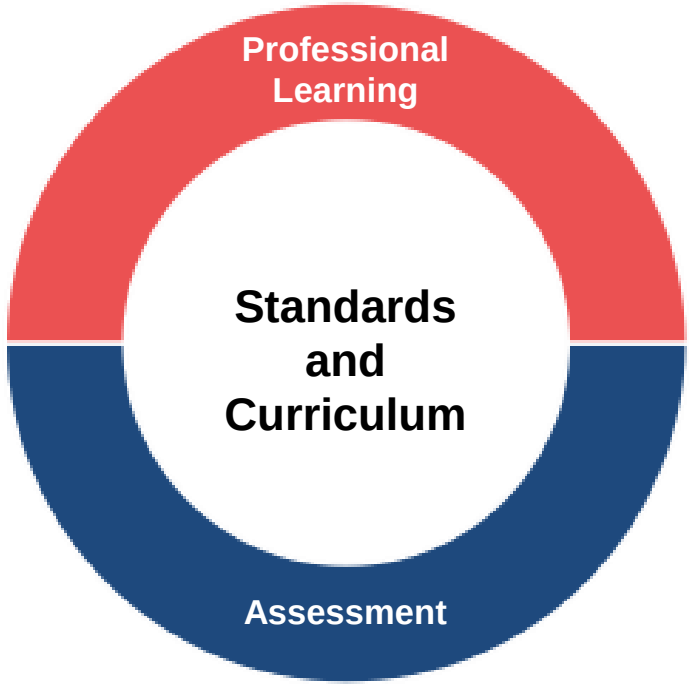
Academic Strategy for SY2021-2022

Students and educators are experiencing the most challenging academic year in recent memory. This pandemic-focused year follows decades of academic challenges for many students. And, yet, our students and educators remain as capable as any in the world.

At RIDE, we are committed to supporting our teachers and students with a **coherent academic system** centered in equitable high expectations for all.

To achieve coherence and greater equity, RIDE's academic strategy focuses on:

1. Strengthening RI's academic core (standards, curriculum, assessment, professional learning);
2. Strengthening supports for teachers and leaders;
3. Improving intervention practices in classrooms across RI; and
4. Preparing students for college and career success.

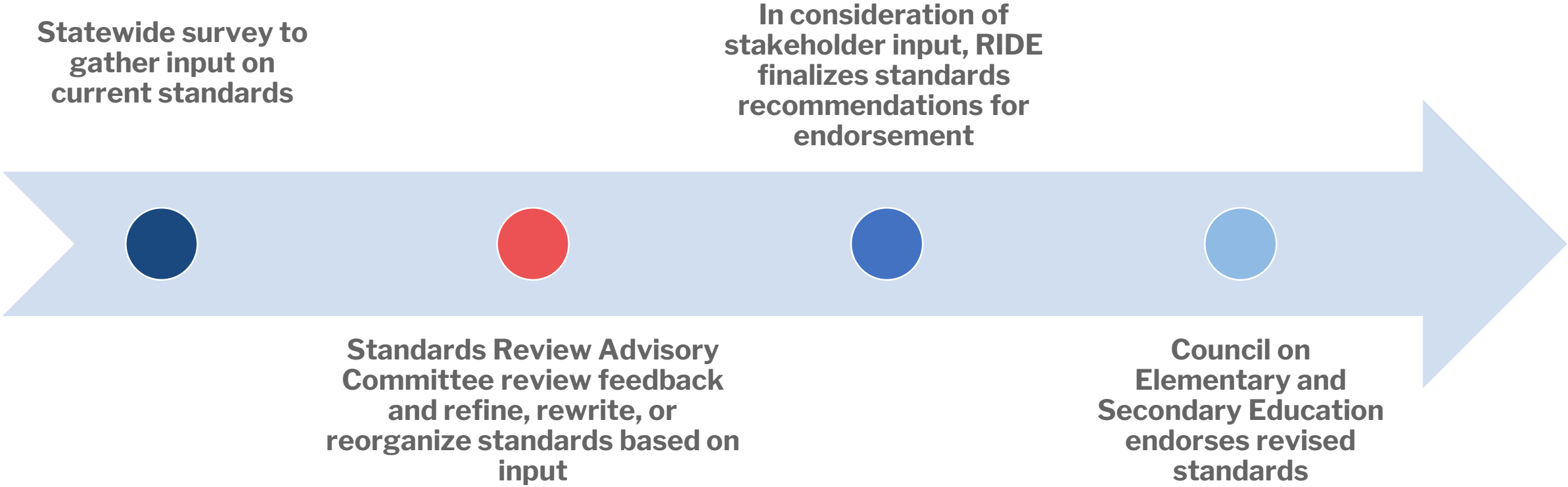


Academic Standards

RHODE ISLAND

Academic Standards

RIDE is responsible for instituting a process to develop statewide academic standards for the core subjects of mathematics, ELA, science and technology, history and social studies, world languages, and the arts. It must also put into place a process to review and update the standards every four years thereafter.



Academic Standards

To date, RIDE has:

- ✓ Completed a 2019 initial review process of standards in all required subjects
- ✓ Developed a standards revision process that includes stakeholder engagement
- ✓ Issued statewide surveys to receive public feedback on current ELA, social studies, and mathematics academic standards
- ✓ Propose revisions in ELA and mathematics to Council

This year, RIDE will:

- ☐ Host stakeholder sessions to receive input on revised social studies standards
- ☐ Introduce new social studies standards for review
- ☐ Align high school mathematics standards with high school course expectations in Algebra I, Geometry, Algebra II
- ☐ Integrated all content standards into the RI Content Frameworks.

Survey Design- Input on Standards

Global Statements

- Considered global statements regarding the standards, which were designed in accordance with parameters set forth by the 2019 legislation

Alignment

- Directly solicited if respondents would recommend adopting the differences documented in Massachusetts Curriculum Frameworks

Individual Standards

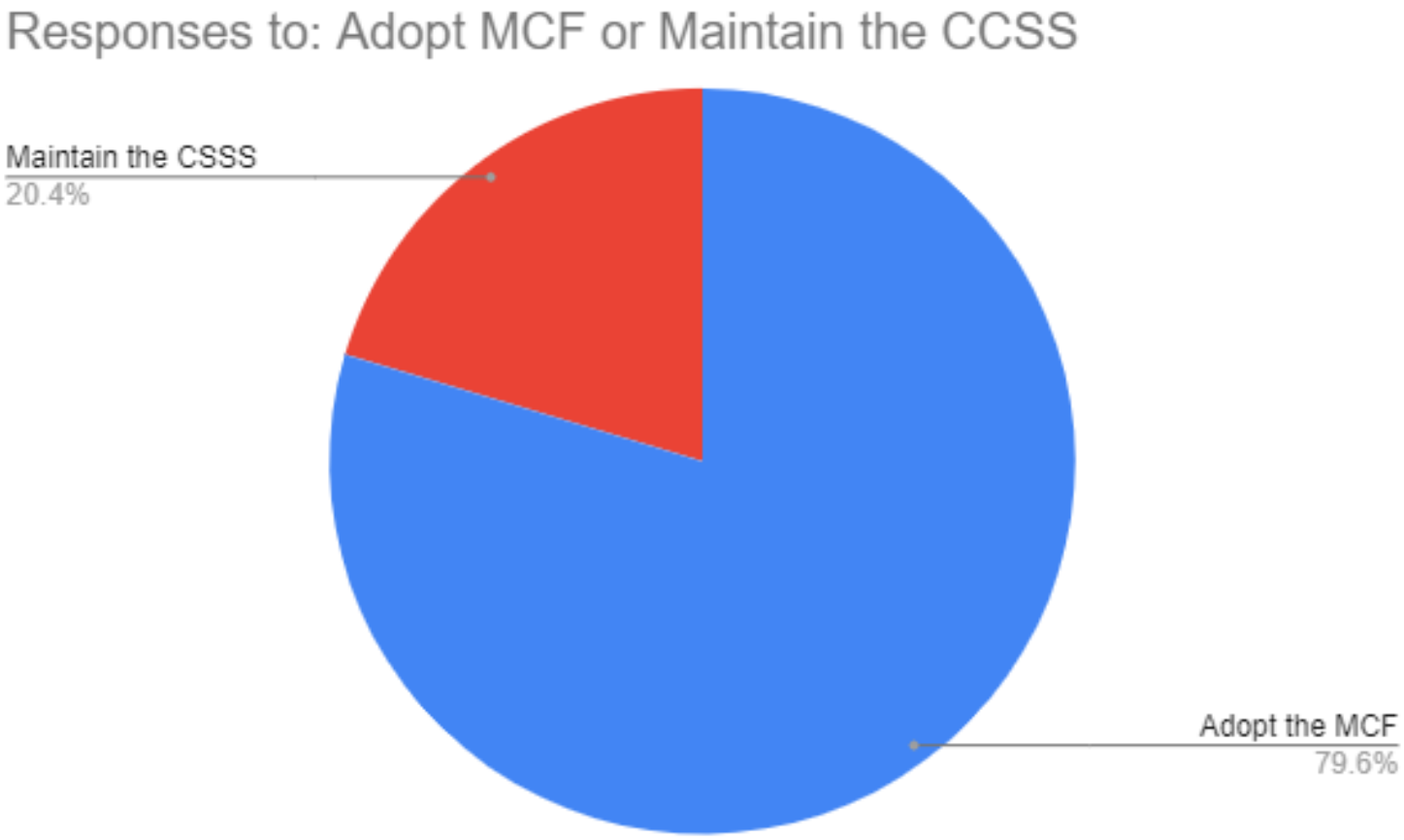
- Opportunity for respondents to provide feedback on each individual standard

Survey

Who responded?

- 55% • Classroom Educators
- 30% • Building and District Educators
- 9% • Community Engagement
- 6% • Mathematics/Reading Specialists

Standards Survey



Three other themes emerged for consideration from committee discussion:

- Cultural and Gender References
- Student Readiness
- Illustrative Examples

Committee Information

Participants

- Teachers of ELA/Literacy and Mathematics
- K-2, 3-5, 6-8 and HS

Discussion Topics

- RI Legislation
- Creation and Communication of the Standards Survey and the Emerging Themes
- RIDE's Recommendation

What they Considered

- How could the themes be addressed by RIDE?
- How could the themes be addressed by LEAs?
- Communication & instructional implications for RIDE and LEAs

Committee Accomplishments

ELA/Literacy and Mathematics Committees

- Supported survey responses to transition to language modification of CCSS
- Analyzed and suggested strategies to address 3 comment themes
- Suggested strategies for communicating standards changes to the field

Multiple Factors Considered by RIDE

Legislation asserts the Rhode Island comprehensive assessment system will remain in effect for a period no less than 10 years.	A tightly aligned system of standards, curriculum and assessment will provide clarity for all stakeholders.	The CCSS map shows strong alignment yet some differences with the MCF. The focus, coherence and rigor of the MCF mirror those in the CCSS.	Anecdotal data indicate some Rhode Island educators have regularly referred to the MCF since RICAS became the state assessment.	Survey responses indicate support for making modifications to the standards.	RIDE is engaged in work to support equitable implementation of the standards through curriculum frameworks, blueprints, HQCM resources, and guidance.

Recommendation

RIDE recommends endorsing new standards in English Language Arts and Mathematics.

The Rhode Island Core Standards

Next Steps

- Creation of robust and supportive Curriculum Frameworks
- A focus on professional learning supporting the implementation of High-Quality Instructional Materials
- Creation and dissemination of the Multilingual Learner Blueprint and a proposed Differently Abled Blueprint
- Definition of and tools to support Culturally Responsive and Sustaining Education
- Expansion of readiness and intervention initiatives
- Continued conversations with higher education

Appendix

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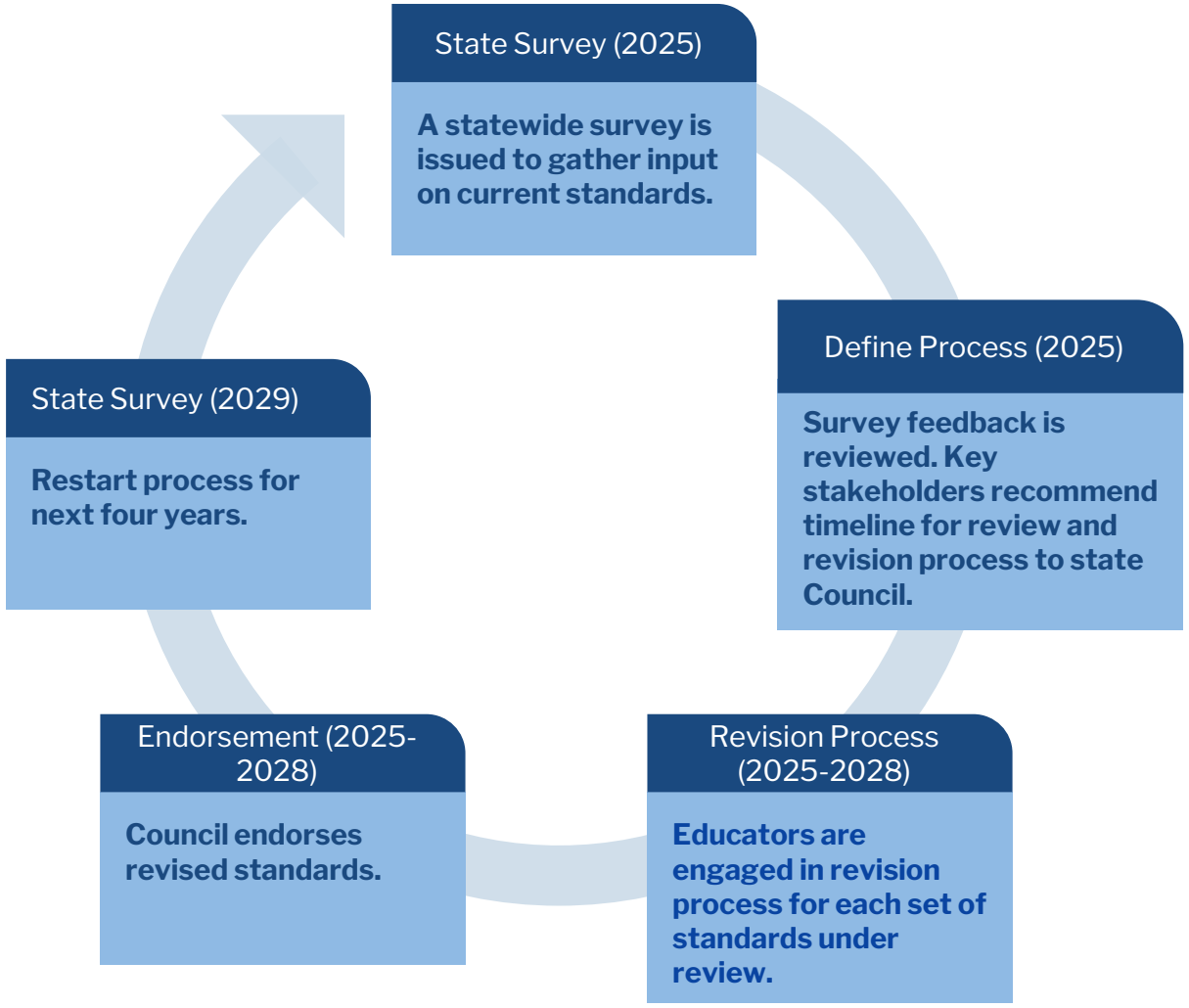
Standards Revision Process Principles

RIDE follows these principles to ensure an open and consultative process for standards revision every four years:

- ✓ **Driven by professional Rhode Island educators**
- ✓ **Consistency across all content areas**
- ✓ **Focus on the substance of standards**
- ✓ **Improve what exists today rather than start from scratch**
- ✓ **Alignment with state assessments and curriculum**
- ✓ **Public input on every standard**

Standards Review Four-Year Cycle



Massachusetts Curriculum Frameworks- Deeper Dive

Highlights of Crosswalk between Massachusetts Curriculum Frameworks and Common Core State Standards

English Language Arts & Mathematics

- Clarity of language
- Clarity of examples
- Additional, expanded, and/or relocated standards

Examples of Changes CCSS to MCF

Mathematics

Some ***footnotes*** from the CCSS have been directly incorporated into descriptive standard text in the MCF.

CCSS: 3.NF.A (Cluster Heading) Develop understanding of fractions as numbers.

MCF: 3.NF.A (Cluster Heading) Develop understanding of fractions as numbers for fractions with denominators 2, 3, 4, 6, and 8.

Content standards added to the MCF represent a change of about 3% from the CCSS.

CCSS: 6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.

MCF: 6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.

(Added by Massachusetts) Read and interpret circle graphs.

Examples of Changes CCSS to MCF

ELA/Literacy

Additional language has been added to the CCSS to clarify meaning or add detail to the standard within the MCF.

CCSS: RL.6.4 ...analyze the impact of a specific word choice on meaning and tone.

MCF: RL.6.4...analyze the impact of specific word choices, including those that create repeated sounds and rhythms in poetry, on meaning, tone (i.e., author's attitude toward subject or audience), or mood (i.e., emotional atmosphere).

MCF added one set of standards for Speaking and Listening within the Content Areas

CCSS: SL.6.1-6 No standard present

MCF: SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *discipline-specific topics, texts, and issues*, building on others' ideas and expressing their own clearly.

RHODE ISLAND CORE STANDARDS FOR ENGLISH LANGUAGE ARTS/LITERACY

March 2021

Rhode Island Department of Education, 2021
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Standards for English Language Arts & Literacy in History/Social Studies, Science, Mathematics, and Technical Subjects
K through Grade 5

ANCHOR STANDARDS

Reading

Writing

Speaking and Listening

Language

STANDARDS BY GRADE LEVEL

Kindergarten

Grade 1

Grade 2

Grade 3

Grade 4

Grade 5

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College and Career Readiness Anchor Standards for Reading

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what a text states explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from a text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of a text relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.[4]
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend complex literary and informational texts.[5]

Note on range and content of student reading

To build a foundation for college and career readiness, students must read widely and deeply from among a broad range of high-quality, increasingly challenging literary and informational texts. Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structures and elements.

By reading texts in history/social studies, science, mathematics, and other disciplines, students build a foundation of knowledge in these fields that will also give them the background to be better readers in all content areas. Students can gain this foundation only when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades. Students also acquire the habits of reading independently and closely, which are essential to their future success.

[4] Please see "Research to Build and Present Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

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College and Career Readiness Anchor Standards for Writing

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop experiences or events using effective literary techniques, well-chosen details, and well-structured sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. When conducting research, gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, interpretation, reflection, and research.

Note on range and content of student writing

To build a foundation for college and career readiness, students need to learn to use writing as a way of offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying real and imagined experiences and events. They learn to appreciate that a key purpose of writing is to communicate clearly to an external, sometimes unfamiliar audience, and they begin to adapt the form and content of their writing to accomplish a particular task and purpose. They develop the capacity to build knowledge on a subject through research and to respond analytically to literary and informational sources. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and extended time frames throughout the year.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

[5] Measuring text complexity involves a qualitative evaluation of the text, a quantitative evaluation of the text, and matching reader to text and task. See Appendix A of the Common Core State Standards

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College and Career Readiness Anchor Standards for Speaking and Listening

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that:
   - Listeners can follow the line of reasoning.
   - The organization, development, vocabulary, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To build a foundation for college and career readiness, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner. Being productive members of these conversations requires that students contribute accurate, relevant information; respond to and develop what others have said; make comparisons and contrasts; and analyze and synthesize a multitude of ideas in various domains.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio.

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College and Career Readiness Anchor Standards for Language

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge.

Note on range and content of student language use

To build a foundation for college and career readiness, students must gain control over many conventions of standard English grammar, usage, and mechanics as well as learn other ways to use language to convey meaning effectively. They must also be able to determine or clarify the meaning of grade-appropriate words encountered through listening, reading, and media use; come to appreciate that words have nonliteral meanings, shadings of meaning, and relationships to other words; and expand their vocabulary in the course of studying content. The inclusion of Language Standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.

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Kindergarten Reading Standards

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Kindergarten Reading Standards for Literature [RL]

Key Ideas and Details

1. With prompting and support, ask and answer questions about key details in a text.
2. With prompting and support, retell familiar stories, including key details.

   For example, after hearing their teacher read and show the illustrations in Gerald McDermott's picture book version of a traditional African tale,* Anansi the Spider*, students retell the folktale about the clever spider Anansi and draw pictures to illustrate characters and their interactions at important points in the story. (RL.K.2, RL.K.3, W.K.3)
3. With prompting and support, identify characters, settings, and major events in a story.

Craft and Structure

4. Ask and answer questions about unknown words in a text. (See kindergarten Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Recognize common types of texts and characteristics of their structure (e.g., story elements in books; rhyme, rhythm, and repetition in poems).

   For example, students read with their teacher two texts about foods that are made, eaten, and enjoyed all around the world: pancakes. The two texts are Tomie DePaola's book* Pancakes for Breakfast *and Christina Rossetti's poem "Mix a Pancake." After discussing the two texts, students explain how they knew from the structure of each work that the first text was a story and the second a poem. (RL.K.5, SL.K.1)
6. With prompting and support, explain that reading the cover or title page is how to find out who created a book; name the author and illustrator of a book and define the role of each in telling the story.

Integration of Knowledge and Ideas

7. With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).
8. (Not applicable.)
9. With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.

Range of Reading and Level of Text Complexity

10. Actively engage in group reading activities with purpose and understanding.

Kindergarten Reading Standards for Informational Text [RI]

Key Ideas and Details

1. With prompting and support, ask and answer questions about key details in a text.
2. With prompting and support, identify the main topic and retell key details of a text.
3. With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.

Craft and Structure

4. With prompting and support, ask and answer questions about unknown words in a text. (See kindergarten Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Identify the front cover, back cover, and title page of a book.

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6. Name the author and illustrator of a text and define the role of each in presenting the ideas or information in the text.

Integration of Knowledge and Ideas

7. With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).
   For example, students study the life cycles of plants and animals. Read-alouds from books such as* One Bean *by Anne Rockwell*, From Seed to Plant *by Gail Gibbons, and* A Tree is a Plant *by Clyde Robert Bulla introduce students to core science concepts and vocabulary through illustrations and words. Students draw, dictate, and write observations in science journals. (RI.K.2, RI.K.4, RI.K.7, SL.K.5, L.K.6)
8. With prompting and support, identify the reasons an author gives to support points in a text.
9. With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, procedures).

Range of Reading and Level of Text Complexity

10. Actively engage in group reading activities with purpose and understanding.

Kindergarten Reading Standards for Foundational Skills [RF]

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. A research- and evidence-based scope and sequence for phonological and phonics development and the complete range of foundational skills are not ends in and of themselves. They are necessary and important components of an effective, comprehensive reading curriculum designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: as students become skilled readers, they will need much less practice with these concepts. Struggling readers may need more or different kinds of practice. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

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

Print Concepts

1. Demonstrate understanding of the organization and basic features of print.
   a. Follow words from left to right, top to bottom, and page by page.
   b. Recognize that spoken words are represented in written language by specific sequences of letters.
   c. Understand that words are separated by spaces in print.
   d. Recognize and name all upper- and lowercase letters of the alphabet.

Phonological Awareness

2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
   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.[6] (This does not include CVCs ending with /l/, /r/, or /x/.)

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Phonics and Word Recognition

3. Know and apply grade-level phonics and word analysis skills in decoding words.
    a. Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sound or many of the most frequent sounds for each consonant.
    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.

Fluency

4. Read early-emergent-reader texts with purpose and understanding.

Kindergarten Writing Standards [W]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collections of annotated student writing samples in Appendix C of the *Common Core State Standards*.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, lists and notes, descriptive letters, personal reflections—should have a place in the classroom as well. To develop flexibility and nuance in their own writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Use a combination of drawing, dictating, and writing to compose opinion pieces that tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., *My favorite book is...*).
2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts that name and supply some information about a topic.
   How do you play football? A student explains it all in this illustrated how-to book created during a unit on informational writing. See "How to Play Football," a kindergarten writing sample, Writing Standards in Action. (W.K.2, L.K.1, L.K.2)

[6] Words, syllables, or phonemes written in /slashes/ refer to their pronunciation or phonology. Thus, /CVC/ is a word with three phonemes regardless of the number of letters in the spelling of the word.

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3. Use a combination of drawing, dictating, and writing to narrate a single event or experience, or several loosely linked events or experiences; sequence the narrative appropriately and provide a reaction to what it describes.
    a. For poems, use rhyming words to create structure. (See kindergarten Reading Foundational Skills Standard 2a.)

A kindergartner tells the story, in pictures and words, of everything that happened on a night at an aunt's house. See "Auntie and Me," a kindergarten personal narrative writing sample, Writing Standards in Action. (W.K.2, W.K.3, W.K.5, L.K.1, L.K.2, L.K.5, L.K.6)

Production and Distribution of Writing

4. (Begins in grade 1.)
5. With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.
    a. (Begins in grade 3.)
    b. Demonstrate the ability to use vocabulary appropriate for kindergarten (as described in kindergarten Language Standards 4–6).
6. With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including collaboration with peers.

Research to Build and Present Knowledge

7. Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).
8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
9. (Begins in grade 4.)

Range of Writing

10. Write or dictate writing routinely for a range of tasks, purposes, and audiences.

Kindergarten Speaking and Listening Standards [SL]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Comprehension and Collaboration

1. Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
    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.
2. Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

Presentation of Knowledge and Ideas

4. Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.
5. Add drawings or other visual displays to descriptions as desired to provide additional detail.
6. Speak audibly and express thoughts, feelings, and ideas clearly.

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For example, pairs of students make audio recordings of poems in which each child speaks alternate lines or verses. They listen to the recordings and decide whether both voices are clear, sufficiently loud, and easy to understand.

Kindergarten Language Standards [L]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. For example, though sentence fragments may receive the most attention in grade 4, more nuanced discussions of the topic should develop throughout the later grades as students continue to analyze speakers' and authors' sentence structure, vary syntax for effect in their own speaking and writing, and more.*

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned previously.
   Sentence Structure and Meaning
   - **a.** Demonstrate the ability to produce and expand complete sentences using frequently occurring nouns, pronouns, adjectives, verbs, question words, and prepositions; name and use in context numbers 0–100 (see kindergarten mathematics standards for Counting and Cardinality).
   - **b.** Form questions that seek additional information, rather than a simple *yes/no* answer.

   Word Usage
   - **c.** Form regular plural nouns orally by adding /*s*/ or /*es*/.

   For example, students make an illustrated list of plural nouns that end just in "s"—cats, boats, car—and those that need "es"—classes, bushes, boxes. (W.K.10, L.K.1)
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   - **a.** Print upper- and lowercase letters.
   - **b.** Capitalize the first word in a sentence and the pronoun I.
   - **c.** Recognize and name end punctuation.
   - **d.** Write a letter or letters for most consonant and short-vowel sounds (phonemes).
   - **e.** Spell simple words phonetically, drawing on knowledge of sound-letter relationships.
   - **f.** Write numbers 0–20 (see kindergarten mathematics standards for Counting and Cardinality).

Knowledge of Language

3. (Begins in grade 2.)

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on kindergarten reading and content.
   - **a.** Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* is a bird and learning the verb *to duck*).
5. 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.

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6. Use words and phrases acquired through conversations, activities in the kindergarten curriculum, reading and being read to, and responding to texts.

For example, students use targeted academic vocabulary for mathematics—count, add, more, counting on, number, put together, number sentence, equal to, equal sign—to ask or answer questions about addition. Later, in a lesson introducing subtraction, the teacher reads the picture book Ten Little Monkeys Jumping on the Bed, by Annie Kubler, to engage students in the process of making sense of subtraction as taking away: "Eight little monkeys jumping on the bed, one fell offand then ***there were…." Based on story prompts, students are guided to represent subtraction situations with actions, fingers, drawings, and numbers.***

Connections to the Standards for Mathematical Practice

6. Attend to precision
See the Rhode Island Mathematics Standards.

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Grade 1 Reading Standards

Grade 1 Reading Standards for Literature [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Ask and answer questions about key details in a text.
2. Retell stories, including key details, and demonstrate understanding of their central message or lesson.
3. Describe characters, settings, and major events in a story, using key details.

Craft and Structure

4. Identify words and phrases in stories or poems that suggest feelings or appeal to the senses. (See grade 1 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Identify characteristics of common types of stories, including folktales and fairy tales.

   For example, in a study of folktales as a genre, students listen to and read along with the teacher the traditional poem, "The Fox's Foray," noting the repetition, rhythm, and rhyme. After performing a choral reading of another version of the poem, "The Fox Went Out One Chilly Night," they read more traditional tales featuring foxes and write opinion pieces about the character of the fox in the tales they have read. (RL.1.5, RL.1.9, W.1.1, L.1.6)
6. Identify who is telling the story at various points in a text.

Integration of Knowledge and Ideas

7. Use illustrations and details in a story to describe its characters, setting, or events.
8. (Not applicable. For expectations regarding central messages or lessons in stories, see RL.2.)
9. Compare and contrast the adventures and experiences of characters in stories.

   For example, students read or listen to audiobooks of several picture books by one author/illustrator, such as Beatrix Potter, Dr. Seuss, William Steig, Eric Carle, Ezra Jack Keats, Jerry Pinkney, or Mo Willems, and make a list of the similarities they notice in the books. (RL.1.9, W.1.10)

Range of Reading and Level of Text Complexity

10. With prompting and support, read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 1. (See Appendix A & Appendix A New Research.)

Grade 1 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Ask and answer questions about key details in a text.
2. Identify the main topic and retell key details of a text.
3. Describe the connection between two individuals, events, ideas, or pieces of information in a text.

   Students read and listen to the teacher read biographies of individuals who were courageous in the pursuit of justice for a variety of reasons throughout United States history. Among the books read are* Elizabeth Leads the Way *(about Elizabeth Cady Stanton) by Margot Theis Raven,* Side by Side: the Story of Dolores Huerta and Cesar Chavez *by Monica Brown,* Jackie Robinson *by Wil Mara, and* Ruby Bridges *by Robert Coles. After reading these true stories, students write their own biography of a person who worked for justice. (RI.1.3, W.1.2, W.1.3)

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Craft and Structure

4. Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. (See grade 1 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.
6. Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

Integration of Knowledge and Ideas

7. Use the illustrations and details in a text to describe its key ideas.
8. Identify the reasons an author gives to support points in a text.
9. Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

Range of Reading and Level of Text Complexity

10. With prompting and support, read and comprehend informational texts exhibiting complexity appropriate for at least grade 1. (See Appendix A & Appendix A New Research.)

Grade 1 Reading Standards for Foundational Skills [RF]

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. A research- and evidence-based scope and sequence for phonological and phonics development and the complete range of foundational skills are not ends in and of themselves. They are necessary and important components of an effective, comprehensive reading curriculum designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: as students become skilled readers, they will need much less practice with these concepts. Struggling readers may need more or different kinds of practice. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

Print Concepts

1. 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).

Phonological Awareness

2. 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).

Phonics and Word Recognition

3. 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.

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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.

Fluency

4. 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.

Grade 1 Writing Standards [W]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collections of annotated student writing samples in Appendix C of the *Common Core State Standards*.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, lists and notes, descriptive letters, personal reflections—should have a place in the classroom as well. To develop flexibility and nuance in their writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Write opinion pieces that introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.
"Legos are great toys," writes a first grader, "Keep reading and find out why." With detailed drawings and expressive language to support an opinion, a student makes the case for what one can build with these blocks and a little imagination. See "Legos," an opinion/argument essay (W.1.1, W.1.5, L.1.1, L.1.2, L.1.6). Another student writes a restaurant review, stating an opinion about a favorite place to eat out, including recommended dishes. See "Panara Bread," a sample first grade opinion/argument essay (W.1.1, W.1.5, W.1.8, L.1.1, L.1.2, L.1.5) ***Writing Standards in Action***
In math, instead of writing opinions, students write or draw solutions to math word problems and present arguments to explain their thinking.
Connections to the Standards for Mathematical Practice
2. *Reason abstractly and quantitatively.*
3. *Construct viable arguments and respond to the reasoning of others.*
See Rhode Island Mathematics Standards.
2. Write informative/explanatory texts that name a topic, supply some facts about the topic, and provide some sense of closure.

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A student introduces a distinct topic, explains facts about it, provides an emphatic closure, and maintains a formal tone in "Weather in the Polar Region," an informational essay, Writing Standards in Action. (W.1.2, W.1.5, W.1.8, L.1.1, L.1.2)

3. Write narratives in prose or poem form that recount two or more appropriately sequenced events or experiences, include some details about what happened or was experienced, use temporal words to signal order where appropriate, and provide some sense of closure.
    a. For poems, use rhyming words and words that repeat long or short vowel sounds to create structure (see grade 1 Reading Foundational Skills Standard 2a).

Production and Distribution of Writing

4. Produce writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)
5. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.
    a. (Begins in grade 3.)
    b. Demonstrate the ability to choose and use appropriate vocabulary (as described in Language Standards 4–6 up to and including grade 1).
6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

Research to Build and Present Knowledge

7. Participate in shared research and writing projects (e.g., explore a number of how-to books on a given topic and use them to write a sequence of instructions).
8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

    For example, in science, students explore sources of light and how light is important. They investigate how shadows are made and look at reflections using mirrors to redirect a light beam. They write and perform skits to explain what they have learned about the interaction of light and materials. (W.1.2, W.1.8, Science Standards)
9. (Begins in grade 4.)

Range of Writing

10. Write routinely for a range of tasks, purposes, and audiences.

Grade 1 Speaking and Listening Standards [SL]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Comprehension and Collaboration

1. 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.

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For example, students explore the theme, "A true friend helps us when we are in trouble" in poems, pictures, and stories and discuss the examples in small groups, where they practice listening and building on one another's ideas. (RL.1.2, SL.1.1)

Connections to the Standards for Mathematical Practice

2. *Reason abstractly and quantitatively.*

3. *Construct viable arguments and respond to the reasoning of others.*

See the Rhode Island Mathematics Standards.

2. Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
3. Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

Presentation of Knowledge and Ideas

4. Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly and using appropriate vocabulary. (See grade 1 Language Standards 4–6 for specific expectations regarding vocabulary.)
5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
6. Produce complete sentences when appropriate to task and situation. (See grade 1 Language Standard 1 for specific expectations.)

Grade 1 Language Standards [L]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades*. *For example, though sentence fragments may receive the most attention in grade 4, more nuanced discussions of the topic should develop throughout the later grades as students continue to analyze speakers' and authors' sentence structure, vary syntax for effect in their own speaking and writing, and more.*

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades.

   Sentence Structure and Meaning

   a. Produce and expand simple and compound sentences.
   b. Demonstrate understanding that a question is a type of sentence.
   c. Use singular and plural nouns with matching verbs in sentences.
   d. Use verbs in sentences to convey a sense of past, present, and future.

   Word Usage

   e. Use common, proper, and possessive nouns.
   f. Use personal, possessive, and indefinite pronouns.
   g. Use frequently occurring prepositions, adjectives, adverbs, conjunctions, and articles.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   a. Print legibly all upper- and lowercase letters.
   b. Use end punctuation for sentences.
   c. Capitalize the names of months and people.
   d. Use commas in dates and to separate individual words in a series.
   e. Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words.
   f. Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.

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g. Write numerals up to 120 (see grade 1 mathematics standards for Numbers and Operations in Base Ten); understand that numbers are also written as words; write words for numbers from one to ten.

Knowledge of Language

3. (Begins in grade 2.)

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 1 reading and content*, choosing flexibly from an array of strategies.
- **a.** Use sentence-level context as a clue to the meaning of a word or phrase.
- **b.** Use frequently occurring affixes as a clue to the meaning of a word.
- **c.** Identify frequently occurring root words (e.g., *look*) and their inflectional forms (e.g., *looks*, *looked*, *looking*).

5. 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. Use words and phrases acquired through conversations, activities in the grade 1 curriculum, reading and being read to, and responding to texts, including using frequently occurring conjunctions (e.g., *because*) to signal simple relationships. (See grade 1 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grade 1 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

For example, building on their knowledge of literary terms from kindergarten, students explain to their families that a fairy tale is a kind of story with special characters. When they go to the public library, they select books that are fairy tales, folktales, realistic stories, or informational books and show their families how they can tell who is the author or illustrator of a book. (RL.1.5, SL.1.4, L.1.6)

Connections to the Standards for Mathematical Practice

6. Attend to precision.

See Rhode Island Mathematics Standards.

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Grade 2 Reading Standards

Grade 2 Reading Standards for Literature [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Ask and answer such questions as *who, what, where, when, why,* and *how* to demonstrate understanding of key details in a text.
2. Retell stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.
3. Describe how characters in a story respond to major events and challenges.

Craft and Structure

4. Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song. (See grade 2 Language Standards 4–6 on applying knowledge of vocabulary to reading.)

   For example, students learn the traditional nursery rhyme "As I was going to St. Ives" and point out how its repetitions of sounds affect the meaning and help them find the answer to the mathematical puzzle posed by the speaker in the poem. (RL.2.1, RL.2.4)
5. Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.
6. Explain what dialogue is and how it can reveal characters' thoughts and perspectives.

Integration of Knowledge and Ideas

7. Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.
8. (Not applicable. For expectations regarding central messages, lessons, or morals in stories, see RL.2.)
9. Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 2. (See Appendix A & Appendix A New Research.)

Grade 2 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Ask and answer such questions as *who, what, where, when, why,* and *how* to demonstrate understanding of key details in a text.
2. Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
3. Describe the connection between a series of historical events, scientific ideas or concepts, mathematical ideas or concepts, or steps in technical procedures in a text.

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For example, as they are learning to subtract numbers within 1,000 in math, students read* Shark Swimathon *by Stuart Murphy and use mathematical reasoning to keep track of how many laps the shark swim team members swim each in order to predict whether or not the sharks will make their goal.

Craft and Structure

4. Determine the meaning of words and phrases in a text relevant to a *grade 2 topic or subject area*. (See grade 2 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
6. Identify the main purpose of a text, including what the author wants to answer, explain, or describe.

Integration of Knowledge and Ideas

7. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.

   For example, in a social studies unit on understanding the information in different types of maps and how to use a world atlas, students compare the physical geography of North America and Africa. They interpret maps and read how geography influenced the life of a Kenyan woman who used her knowledge to restore fertility to the land. Among the books they read at different levels of complexity are* Wangari's Trees of Peace: A True Story from Africa *by Jeanette Winter,* Seeds of Change: Wangari's Gift to the World *by Jen Cullerton Johnson, and* Planting the Trees of Kenya, the Story of Wangari Maathai *by Claire Nivola. (RI.2.1, RI.2.7, SL.2.1)
8. Describe how reasons support specific points the author makes in a text.
9. Compare and contrast the most important points presented by two texts on the same topic.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 2. (See Appendix A & Appendix A New Research.)

Grade 2 Reading Standards for Foundational Skills [RF]

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. A research- and evidence-based scope and sequence for phonological and phonics development and the complete range of foundational skills are not ends in and of themselves. They are necessary and important components of an effective, comprehensive reading curriculum designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: as students become skilled readers, they will need much less practice with these concepts. Struggling readers may need more or different kinds of practice. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

Note: RF.1 and RF.2, on print concepts and phonological awareness, apply only to kindergarten, and grade 1.

Phonics and Word Recognition

3. 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.

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e. Identify words with inconsistent but common spelling-sound correspondences.
f. Recognize and read grade-appropriate irregularly spelled words.

Fluency

4. 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.

Grade 2 Writing Standards [W]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collections of annotated student writing samples in Appendix C of the *Common Core State Standards*.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, lists and notes, descriptive letters, personal reflections—should have a place in the classroom as well. To develop flexibility and nuance in their own writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Write opinion pieces that introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., *because, and, also*) to connect opinion and reasons, and provide a concluding statement or section.
In math, instead of writing opinions, students write or draw solutions to math word problems and present arguments to explain their thinking.
Connections to the Standards for Mathematical Practice
2. *Reason abstractly and quantitatively.*
3. *Construct viable arguments and respond to the reasoning of others.*
See Rhode Island Mathematics Standards.
For example, students keep a math journal in which they record proposed solutions to word problems in addition and subtraction. They use drawings, written equations, and written sentences to argue why 8 is the correct answer to a problem such as "If there are 15 cupcakes in the table and 7 are eaten, how many remain?"
2. Write informative/explanatory texts that introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

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Second graders research grey wolves and write and illustrate informational reports. See two different reports from this project, "All about the Grey Wolf: the Pack Family" and "All about the Grey Wolf: Howl in the Night." Writing Standards in Action (W.2.2, W.2.7, W.2.8, L.2.1, L.2.2, L.2.3)

3. Write narratives in prose or poem form that recount a well-elaborated event or experience, or a set of events or experiences; include details and dialogue to show actions, thoughts, and feelings; use temporal words to signal order where appropriate; and provide a sense of closure.
    a. For poems, use words and phrases that form patterns of sounds (e.g., regular beats, alliteration, end rhymes, repeated sounds in words or lines) to create structure. (See grade 2 Reading Literature Standard 4.)

In "Goodbye to Winter Clothes," a second grader captures the turning point from New England's winter to spring.
"Good bye to winter clothes
Peace out winter
Adios to slipping on ice
Hey beautiful flowers
Hola to bright birds
Hey to shiny grass"
This narrative in the form of a poem is from Writing Standards in Action. (W.2.3, W.2.10, L.2.1, L.2.2, L.2.5)

Production and Distribution of Writing

2. Produce writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)

For example, students learn about the job of a reporter and news reporting in print and online journalism. They learn to read, analyze, and evaluate models of narrative news reporting and write their own news stories using what they have learned from the models. (W.2.3, W.2.4)

3. With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.
    a. (Begins in grade 3.)
    b. Demonstrate the ability to choose and use appropriate vocabulary (as described in Language Standards 4–6 up to and including grade 2).
4. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

Research to Build and Present Knowledge

5. Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

For example, students read biographies of people who have made a difference in the world. They conduct research and write new or updated biographies of subjects of their choosing. (RI.2.2, RI.2.3, W.2.2, W.2.7)

6. Recall information from experiences or gather information from provided sources to answer a question.
7. (Begins in grade 4.)

Range of Writing

8. Write routinely for a range of tasks, purposes, and audiences.

Grade 2 Speaking and Listening Standards [SL]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

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Comprehension and Collaboration

1. 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.

    For example, students working in a group studying community helpers make a list of people they ***know and could interview. Building on one another's knowledge, they decide whom they wish to invite to class to discuss the work they do.***

    Connections to the Standards for Mathematical Practice

    2. *Reason abstractly and quantitatively.*

    3. *Construct viable arguments and respond to the reasoning of others.*

    See Rhode Island Mathematics Standards.
2. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

    For example, groups of students ask and answer questions about mathematical reasoning as they solve word problems in which they must add and subtract within 1,000. In their conversations, they use general academic and domain-specific vocabulary such as place value, digit, value, operation, add, subtract, addition, subtraction, sum, difference, compose, decompose, increase, decrease, composition, and decomposition. They complete an assessment in which, as head Zookeepers, they are responsible for ordering animals' food. They address Standards for Mathematical Practice 3 through 8 as well as math content standards as they solve problems like the one below:

    Penguins: The 80 penguins eat a total of 504 pounds of fish each week.
    Week 1: Currently there are 282 pounds of fish in the freezer. How many pounds of new fish should you order to feed the penguins for week one?
    Week 1 Order:_____pounds of fish
    Week 2: After week one, there are 216 pounds of fish left in the freezer. The 80 penguins eat a total of 504 pounds of fish each week. How many pounds of new fish should you order to feed the penguins for week two?
    Week 2 Order:_____pounds of fish

Presentation of Knowledge and Ideas

4. Tell a story, recount an experience, or explain how to solve a mathematical problem with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences and using appropriate vocabulary. (See grade 2 Language Standards 4–6 for specific expectations regarding vocabulary.)

    Connections to the Standards for Mathematical Practice

    2. Reason abstractly and quantitatively.

    3. Construct viable arguments and respond to the reasoning of others.

    6. Attend to precision.

    See Rhode Island Mathematics Standards.
5. Create audio recordings of stories or poems; add drawings or other visual displays to stories or descriptions of experiences when appropriate to clarify ideas, thoughts, and feelings.
6. Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 2 Language Standards 1 and 3 for specific expectations.)

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Grade 2 Language Standards [L]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. For example, though sentence fragments may receive the most attention in grade 4, more nuanced discussions of the topic should develop throughout the later grades as students continue to analyze speakers' and authors' sentence structure, vary syntax for effect in their own speaking and writing, and more.*

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades.
   Sentence Structure and Meaning
   - **a.** Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences and choose among sentence types depending on the meaning to be conveyed.
   - **b.** Use adjectives and adverbs in sentences and choose between them depending on what is to be modified.

   Word Usage
   - **c.** Use collective nouns and frequently occurring irregular plural nouns.
   - **d.** Use reflexive pronouns.
   - **e.** Form and use the past tense of frequently occurring irregular verbs.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   - **a.** Print upper- and lowercase letters legibly and fluently.
   - **b.** Capitalize holidays, product names, and geographic names.
   - **c.** Use commas in greetings and closings of letters.
   - **d.** Use an apostrophe to form contractions and frequently occurring possessives.
   - **e.** Generalize learned spelling patterns when writing words (e.g., *cage → badge; boy → boil*).
   - **f.** Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.
   - **g.** Demonstrate understanding that context determines whether the writer uses a numeral or a written number (e.g., numerals in 1 + 3 = 4, but written words in "When I was one, I was just begun, / When I was two, I was still quite new" from A. A. Milne's poem "Now We Are Six").

Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
   - **a.** Compare formal and informal uses of English.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *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.

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f. Recognize and use appropriately abbreviations related to grade-level content or commonly used in everyday life (e.g., *a.m., p.m.*)

g. Recognize and use appropriately symbols related to grade-level content or commonly used in everyday life (e.g., *$, ¢*).

5. 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. Use words and phrases acquired through conversations, activities in the grade 2 curriculum, reading and being read to, and responding to texts, including using adjectives and adverbs to describe.
(See grade 2 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grade 2 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

For example, in art class, students learn about line, shape, and color as they create two-dimensional prints representing a cityscape. They learn that certain concepts, such as pattern and repetition, can have similar, yet somewhat different meanings when applied to art, math, and literature. They also learn that some terms, such as "warm and cool colors" belong just to the domain of visual arts. When they display their work, students describe their knowledge and personal experiences about their work on the unit. (W.2.2, SL.2.4, L.2.6, Arts Standards)

Connections to the Standards for Mathematical Practice

6. Attend to precision.

See Rhode Island Mathematics Standards.

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Grade 3 Reading Standards

Grade 3 Reading Standards for Literature [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Retell stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in a text.

   For example, students read versions of classic fables attributed to Aesop, discussing how the stories can be told differently, yet have the same moral. Then they read a collection of modern fables, told mostly in dialogue, by Arnold Lobel. Students practice reading the fables aloud in pairs to develop fluency and expression, and then write a script from a fable to perform. By the end of the unit, students can explain what fables are, why they have endured over thousands of years, and how they reflect human experience. (RL.3.2, RL.3.9, RF.3.4, W.3.10, L.3.6)
3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from figurative language. (See grade 3 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Identify common structural elements of fiction (e.g., problem, solution); describe how each successive part of a text builds on earlier sections.
6. Distinguish their own point of view from that of a text's narrator or those of its characters.

Integration of Knowledge and Ideas

7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).
8. (Not applicable. For expectations regarding central messages, lessons, or morals in stories, see RL.2.)
9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 3. (See Appendix A & Appendix A New Research.)

Grade 3 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
2. Determine the main idea of a text; recount the key details and explain how they support the main idea.
3. Describe the relationship between a series of historical events, scientific ideas or concepts, mathematical ideas or concepts, or steps in technical procedures in a text, using language that pertains

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to time, sequence, and cause/effect.

Craft and Structure

1. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 3 topic or subject area*. (See grade 3 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
2. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
   For example, students study the characteristics and text features of informational text. Then they develop a research question about a topic of interest, conduct research to locate information, and write a report that uses the text features they have studied—such as a table of contents, headings and subheadings, informative illustrations, an index, and a glossary. (RI.3.5, W.3.2, W.3.7)
3. Distinguish their own point of view from that of the author of a text.

Integration of Knowledge and Ideas

4. Use information gained from illustrations (e.g., maps, photographs) and the words, numbers, and symbols in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
   Connections to the Standards for Mathematical Practice
   2. Reason abstractly and quantitatively.
   6. Attend to precision.
   See Rhode Island Mathematics Standards.
5. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).
6. Compare and contrast the most important points and key details presented in two texts on the same topic.

Range of Reading and Level of Text Complexity

7. Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 3. (See Appendix A & Appendix A New Research.)

Grade 3 Reading Standards for Foundational Skills [RF]

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. A research- and evidence-based scope and sequence for phonological and phonics development and the complete range of foundational skills are not ends in and of themselves. They are necessary and important components of an effective, comprehensive reading curriculum designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: as students become skilled readers, they will need much less practice with these concepts. Struggling readers may need more or different kinds of practice. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

Note: RF.1 and RF.2, on print concepts and phonological awareness, apply only to kindergarten, and grade 1.

Phonics and Word Recognition

3. 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 multisyllable words.

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d. Read grade-appropriate irregularly spelled words.

Fluency

4. 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.

Grade 3 Writing Standards [W]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collections of annotated student writing samples in Appendix C of the *Common Core State Standards*.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, lists and notes, descriptive letters, personal reflections—should have a place in the classroom as well. To develop flexibility and nuance in their own writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Write opinion pieces on topics or texts, supporting an opinion with reasons.
- **a.** Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
- **b.** Provide reasons that support the opinion.
- **c.** Use linking words and phrases (e.g., *because, therefore, since, for example*) to connect opinion and reasons.
- **d.** Provide a concluding statement or section.

For example, as they study the colonial period, students read and view print and digital resources on the colonists' conflicting views about separating from Britain. Sources include* Liberty! How the Revolutionary War Began *by Lucille Recht Penner, the PBS website History of US based on Joy Hakim's book series, and* Colonial Voices: Hear Them Speak*, a collection of primary sources by Kay Winter. Students choose a character from the period and write a letter from the character's point of view, giving an opinion and supporting either the revolutionary or the loyalist cause with reasons. (RI.3.6, RI.3.9, W.3.1).

In math, instead of writing opinions, students write or draw solutions to math word problems and present arguments to explain their thinking.

Connections to the Standards for Mathematical Practice
***2.** Reason abstractly and quantitatively.*

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3. *Construct viable arguments and respond to the reasoning of others.*
See Rhode Island Mathematics Standards.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
    a. Introduce a topic and group-related information together; include illustrations when useful to aiding comprehension.
    b. Develop the topic with facts, definitions, and details.
    c. Use linking words and phrases (e.g., *also, another, and, more, but*) to connect ideas within categories of information.
    d. Provide a concluding statement or section.

In "Visions of Helen Keller," a solid example of biographical writing, a third grader presents details that reveal the significance of Keller's accomplishments as well as admiration and empathy for her life. See this example of informational writing at Writing Standards in Action. (W.3.2, W.3.4, W.3.7, W.3.8, RI.3.2, RI.3.3, L.3.2, L.3.3)

3. Write narratives in prose or poem form to develop experiences or events using effective literary techniques, descriptive details, and clear sequences.
    a. Establish a situation and introduce a speaker, narrator, and/or characters; organize an appropriate narrative sequence.
    b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences or events or show responses to situations.
    c. Use figurative language to suggest images. (See grade 3 Reading Literature Standard 4.)
    d. Use temporal words and phrases to signal order where appropriate.
    e. Provide a sense of closure.
    f. For poems, use words and phrases that form patterns of sound (e.g., rhyme, repetition of sounds within words or within lines) to create meaning or effect.

With sentences of various types, precise word choice, and appropriate figures of speech, a student paints a clear picture of the narrator's spirited response to the problem posed by a pet Guinea pig's escape from its cage. See "Runaway Rachel," from Writing Standards in Action. (W.3.3, W.3.4, L.3.1, L.3.2, L.3.3)

Production and Distribution of Writing

4. Produce writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. Develop and strengthen writing as needed by planning, revising, and editing.
    a. Demonstrate command of standard English conventions (as described in Language Standards 1–3 up to and including grade 3).
    b. Demonstrate the ability to choose and use appropriate vocabulary (as described in Language Standards 4–6 up to and including grade 3).

Connections to the Standards for Mathematical Practice
6. *Attend to precision.*
See Rhode Island Mathematics Standards.

6. Use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short research projects that build knowledge about a topic.
8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
9. (Begins in grade 4.)

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time

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frames (a single sitting or a day or two) for a range ofdiscipline-specific tasks, purposes, and audiences.

Grade 3 Speaking and Listening Standards [SL]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.
   a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. (See grade 3 Reading Literature Standard 1 and Reading Informational Text Standard 1 for specific expectations regarding use of textual evidence.)
   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.

   Connections to the Standards for Mathematical Practice
   2. *Reason abstractly and quantitatively.*
   3. *Construct viable arguments and respond to the reasoning of others.*
   See Rhode Island Mathematics Standards.

2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
   Connections to the Standards for Mathematical Practice
   2. Reason abstractly and quantitatively.
   3. Construct viable arguments and respond to the reasoning of others.
   6. Attend to precision.
   See Rhode Island Mathematics Standards.
3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

Presentation of Knowledge and Ideas

4. Report on a topic, text, or solution to a mathematical problem, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace and using appropriate vocabulary. (See grade 3 Language Standards 4–6 for specific expectations regarding vocabulary.)

   For example, in a science and literacy unit, students study weather and weather-related hazards. The unit focuses on developing general academic and science-specific vocabulary using books such as Inside Weather by Mary Kay Carson, Weather Words and What They Mean by Gail Gibbons, and Extreme Weather by Michael Mogil and Barbara Levine. Students generate questions, conduct research, and analyze weather data from their own observations. They write up their findings and present them in oral reports. (W.3.7, SL.3.4, L.3.6)

   Connections to the Standards for Mathematical Practice
   2. Reason abstractly and quantitatively
   3. Construct viable arguments and respond to the reasoning of others

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6. Attend to precision
See Rhode Island Mathematics Standards.

5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.
6. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 3 Language Standards 1 and 3 for specific expectations.)

Grade 3 Language Standards [L]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades*. *For example, though sentence fragments may receive the most attention in grade 4, more nuanced discussions of the topic should develop throughout the later grades as students continue to analyze speakers' and authors' sentence structure, vary syntax for effect in their own speaking and writing, and more.*

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 3 Writing Standard 5 and Speaking and Listening Standard 6 on strengthening writing and presentations by applying knowledge of conventions.)
   Sentence Structure and Meaning
   - **a.** Produce, expand, and rearrange complete simple, compound, and complex sentences.
   - **b.** Ensure subject-verb and pronoun-antecedent agreement.[7]
   - **c.** Use verbs in the present, past, and future tenses and choose among them depending on the overall meaning of the sentence.
   - **d.** Use coordinating and subordinating conjunctions and choose between them depending on the overall meaning of the sentence.
   - **e.** Form and use comparative and superlative adjectives and adverbs and choose between them depending on what is to be modified and the overall meaning of the sentence.

   Word Usage
   - **f.** Use abstract nouns.
   - **g.** Form and use regular and irregular plural nouns and the past tense of regular and irregular verbs.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   - **a.** Write legibly and fluently by hand, using either printing or cursive handwriting.
   - **b.** Capitalize appropriate words in titles.
   - **c.** Use commas in addresses.
   - **d.** Use commas and quotation marks in dialogue.
   - **e.** Form and use possessives.
   - **f.** Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting, smiled, cries, happiness*).
   - **g.** Demonstrate understanding that numerals used at the beginning of a sentence are written as words and capitalized (e.g., "Three pandas could be seen eating leaves high in the bamboo grove.").
   - **h.** Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.
   - **i.** Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

[7]These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated

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Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
    a. Choose words and phrases for effect.[8]
    b. Recognize and observe differences between the conventions of spoken and written English.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words 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.
    e. Recognize and use appropriately abbreviations related to grade-level content or common in everyday life (e.g., *N, S, E, W* on a map).
    f. Recognize and use appropriately symbols related to grade-level content or common in everyday life (e.g., <, >).
5. Demonstrate understanding of word relationships and nuances in word meanings.
    a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., *take steps*).
    b. Identify real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*).
    c. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., *knew, believed, suspected, heard, wondered*).
6. Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases,[8] including those that signal spatial and temporal relationships. (See grade 3 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grade 3 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

For example, as third graders are introduced to fractions in math, they learn to apply general academic vocabulary (e.g., half, part, equal). They also learn domain-specific words and phrases (e.g., numerator, denominator, number line). They use both kinds of vocabulary to explain the reasoning behind their solutions to word problems.

Connections to the Standards for Mathematical Practice
6. Attend to precision.
See Rhode Island Mathematics Standards.

[31] These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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Grade 4 Reading Standards

Grade 4 Reading Standards for Literature [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Refer to details and examples in a text when explaining what the text states explicitly and when drawing inferences from the text.
   For example, students read Natalie Babbitt's novel* Tuck Everlasting *and select paragraphs and sentences in the novel in which the reader is given hints about the mysterious qualities of the spring water that has given eternal life to the members of the Tuck family. They pay particular attention to how Babbitt's use of metaphors and images gives richness to the text. (RL.4.1, RL.4.2, RL.4.4, L.4.5)
2. Determine a theme of a story, drama, or poem from details in the text; summarize a text.
3. Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., *Herculean*); explain how figurative language (e.g., simile, metaphor) enriches a text. (See grade 4 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Explain major differences among prose, poetry, and drama and refer to the structural elements of each (e.g., paragraphs and chapters for prose; stanza and verse for poetry; scene, stage directions, cast of characters for drama) when writing or speaking about a text.
6. Compare and contrast the points of view from which different stories are narrated, including the difference between first- and third-person narrations.

Integration of Knowledge and Ideas

7. Make connections between a written story or drama and its visual or oral presentation, identifying where the presentation reflects specific descriptions and directions in the written text.
8. (Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 4. (See Appendix A & Appendix A New Research.)

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Grade 4 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Refer to details and examples in a text when explaining what the text states explicitly and when drawing inferences from the text.
2. Determine the main idea of a text and explain how it is supported by key details; summarize a text.

   For example, students read parts of* I, Columbus, a retelling of entries from Columbus's journal of 1492-93 *by Peter and Connie Roop. In pairs, they summarize important facts about Columbus's voyage, arrival, search for gold, failure to understand the treasures on the islands, and return to Spain. They use what they have learned to write reports, which they display in the library. (RI.4.2, W.4.2, W.4.4)
3. Explain events, procedures, ideas, or concepts in a historical, scientific, mathematical, or technical text, including what happened and why, based on specific information in the text.

Craft and Structure

4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*. (See grade 4 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
6. Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

Integration of Knowledge and Ideas

7. Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on webpages) and explain how the information contributes to an understanding of the text in which it appears.

   Connections to the Standards for Mathematical Practice

   2. Reason abstractly and quantitatively.

   6. Attend to precision.

   See Rhode Island Mathematics Standards.

   For example, as they are learning about fractions in math, students view an episode of the PBS math series Cyberchase. Characters in the episode must use their knowledge of equivalent fractions to sort through crystals to find the one that contains the most orange. After students view the video, they explain what the characters did to solve the problem, and how the visual models in the animation clarified what equivalent fractions are.
8. Explain how an author uses reasons and evidence to support particular points in a text.
9. Integrate information from two texts on the same topic in order to write or speak knowledgeably about the subject.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 4. (See Appendix A & Appendix A New Research.)

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Grade 4 Reading Standards for Foundational Skills [RF]

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. A research- and evidence-based scope and sequence for phonological and phonics development and the complete range of foundational skills are not ends in and of themselves. They are necessary and important components of an effective, comprehensive reading curriculum designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: as students become skilled readers, they will need much less practice with these concepts. Struggling readers may need more or different kinds of practice. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

Note: RF.1 and RF.2, on print concepts and phonological awareness, apply only to kindergarten, and grade 1.

Phonics and Word Recognition

3. 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.

Fluency

4. 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.

Grade 4 Writing Standards [W]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collections of annotated student writing samples in Appendix C of the *Common Core State Standards*.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, lists and notes, descriptive letters, personal reflections—should have a place in the classroom as well. To develop flexibility and nuance in their own writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

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1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
    a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped in paragraphs and sections to support the writer's purpose.
    b. Provide reasons that are supported by facts and details.
    c. Link opinion and reasons using words and phrases (e.g., *for instance, in order to, in addition*).
    d. Provide a concluding statement or section related to the opinion presented.

Is outdoor recess a necessity for elementary school students? A writer provides a clear opinion with reasons as well as acknowledgment of counterarguments. Writing Standards in Action. (W.4.1, W.4.4, L.4.1, L.4.2, L.4.3)

In math, instead of writing opinions, students write or draw solutions to math word problems and present arguments to explain their thinking.
Connections to the Standards for Mathematical Practice
***2.** Reason abstractly and quantitatively.*
***3.** Construct viable arguments and respond to the reasoning of others.*
See Rhode Island Mathematics Standards.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
    a. Introduce a topic clearly and group related information in paragraphs and sections; include text features (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.
    b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
    c. Link ideas within categories of information using words and phrases (e.g., *another, for example, also, because*).
    d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
    e. Provide a concluding statement or section related to the information or explanation presented.

A student writes a first-person newspaper article reflecting on the challenges of living with Asperger's syndrome. See "Living with Asperger's," Writing Standards in Action. (W.4.2, W.4.3, W.4.5, L.4.2, L.4.3)

3. Write narratives in prose or poem form to develop experiences or events using effective literary techniques, descriptive details, and clear sequences.
    a. Orient the reader by establishing a situation and introducing a speaker, narrator, and/or characters; organize an appropriate narrative sequence.
    b. Use dialogue and description to develop experiences or events or show responses to situations.
    c. Use a variety of transitional words and phrases to manage sequence.
    d. Use concrete words and phrases, figurative language such as similes and metaphors, and sensory details to convey experiences or events precisely.
    e. Provide a sense of closure appropriate to the narrated experiences or events.
    f. For poems, use patterns of sound (e.g., rhyme, rhythm, alliteration, consonance) and visual patterns (e.g., line length, grouped lines as stanzas or verses) to create works that are distinctly different in form from prose narratives. (See grade 4 Reading Literature Standard 5.)

A writer creates a vivid picture of a bowling match in "The Comeback," a personal narrative that includes just enough information on the sport for a reader unfamiliar with the terms. Writing Standards in Action. (W.4.3, W.4.2, W.4.4, W.4.5, L.4.2, L.4.3)

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. Develop and strengthen writing as needed by planning, revising, and editing.
    a. Demonstrate command of standard English conventions (as described in Language Standards 1–3 up to and including grade 4).

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b. Demonstrate the ability to use general academic and domain-specific vocabulary appropriately (as described in Language Standards 4–6 up to and including grade 4).

Connections to the Standards for Mathematical Practice

6. *Attend to precision.*

See Rhode Island Mathematics Standards.

6. Use technology, including current web-based communication platforms, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

Research to Build and Present Knowledge

7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.

8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

9. Draw evidence from literary or informational texts to support written analysis, reflection, and research, applying one or more grade 4 standards for Reading Literature or Reading Informational Text as needed.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Grade 4 Speaking and Listening Standards [SL]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 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. (See grade 4 Reading Literature Standard 1 and Reading Informational Text Standard 1 for specific expectations regarding the use of textual evidence.)
- **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.

For example, in literature discussion groups, individual students take on the roles of leader, scribe, and reporter as they discuss questions about theme they have generated in preparation for a report to the class. (RL.4.2, SL.4.1)

Connections to the Standards for Mathematical Practice

2. *Reason abstractly and quantitatively.*

3. *Construct viable arguments and respond to the reasoning of others.*

See Rhode Island Mathematics Standards.

2. Paraphrase portions of a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

Connections to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

3. Construct viable arguments and respond to the reasoning of others.

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6. Attend to precision.
See Rhode Island Mathematics Standards

3. Identify the reasons and evidence a speaker provides to support particular points.

Presentation of Knowledge and Ideas

4. Report on a topic, text, procedure, or solution to a mathematical problem, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace and use appropriate vocabulary. (See grade 4 Language Standards 4–6 for specific expectations regarding vocabulary.)
   Connections to the Standards for Mathematical Practice
   2. Reason abstractly and quantitatively.
   3. Construct viable arguments and respond to the reasoning of others.
   6. Attend to precision.
   See Rhode Island Mathematics Standards.
5. Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.
6. Differentiate between contexts that call for formal English (e.g., presenting research findings) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See grade 4 Language Standards 1 and 3 for specific expectations.)

Grade 4 Language Standards [L]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades*. *For example, though sentence fragments may receive the most attention in grade 4, more nuanced discussions of the topic should develop throughout the later grades as students continue to analyze speakers' and authors' sentence structure, vary syntax for effect in their own speaking and writing, and more.*

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 4 Writing Standard 5 and Speaking and Listening Standard 6 on strengthening writing and presentations by applying knowledge of conventions.)
   Sentence Structure and Meaning
   a. Produce complete sentences, using knowledge of subject and predicate to recognize and correct inappropriate sentence fragments and run-on sentences.[9]
   b. Correctly use frequently confused words (e.g., *their/there*).
   c. Use helping verbs, also known as auxiliaries (e.g., *can, may, might, should*), to convey various conditions of possibility, likelihood, obligation, or permission, choosing among helping verbs depending on the overall meaning of the sentence.
   d. Use relative pronouns and relative adverbs to add more information about a noun or verb used in a sentence.
   e. Form and use prepositional phrases in sentences to add more information about qualities such as location, time, agency, and direction.
   Word Usage
   f. Form and use progressive verb tenses.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   a. Write legibly and fluently by hand, using either printing or cursive handwriting; write their given

[37] These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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name signature in cursive.
- **b.** Use correct capitalization.
- **c.** Use commas and quotation marks to mark direct speech and quotations from a text.
- **d.** Use a comma before a coordinating conjunction in a compound sentence.
- **e.** Spell grade-appropriate words correctly, consulting references as needed.

Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **a.** Choose words and phrases to convey ideas precisely.[10]
- **b.** Choose punctuation for effect.
- **c.** Differentiate between contexts that call for formal English (e.g., presenting research findings) and situations where informal discourse is appropriate (e.g., small-group discussion).

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning 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.
- **d.** Recognize and use appropriately abbreviations related to grade-level content or common in everyday life (e.g., *hr., min., sec.*).
- **e.** Recognize and use appropriately symbols related to grade-level content or common in everyday life (e.g., *&, #, **).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- **a.** Explain the meaning of simple similes and metaphors (e.g., *as pretty as a picture*) in context.
- **b.** Recognize and explain the meaning of common idioms, adages, and proverbs.
- **c.** Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).

For example, students collect common idioms, proverbs, and figurative phrases in English from their reading and from interviewing their family members. They research the terms and create an illustrated dictionary that explains the meaning of sentences such as:
It's raining cats and dogs.
This only happens once in a blue moon.
My dad is a couch potato.
My sister was cool as a cucumber when she gave her report.
Not all that glitters is gold.
Neither a borrower nor a lender be. (W.4.7, L.4.5)

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., *quizzed, whined, stammered*) and that are basic to a particular topic (e.g., *wildlife, conservation,* and *endangered* when discussing animal preservation). (See grade 4 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grade 4 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)
Connections to the Standards for Mathematical Practice
6. Attend to precision.

[10]These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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See Rhode Island Mathematics Standards.

Grade 5 Reading Standards

Grade 5 Reading Standards for Literature [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Quote or paraphrase a text accurately when explaining what the text states explicitly and when drawing inferences from the text. (See grade 5 Writing Standard 8 for more on paraphrasing.)
2. Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize a text.

   For example, students explore the theme "Heroism demands courage and taking risks" in traditional tales such as* The Merry Adventures of Robin Hood *by Howard Pyle and modern novels such as Bud, Not Buddy by Christopher Paul Curtis.
3. Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text; identify and explain the effects of figurative language such as metaphors and similes. (See grade 5 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.
6. Describe how a narrator's or speaker's point of view influences how events are described in a story, myth, poem, or drama.

Integration of Knowledge and Ideas

7. Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel; multimedia presentation of fiction, folktale, myth, poem).
8. (Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Compare and contrast stories in the same genre (e.g., mysteries or adventure stories) on their approaches to similar themes and topics.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 5. (See Appendix A & Appendix A New Research.)

Grade 5 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Quote or paraphrase a text accurately when explaining what the text states explicitly and when drawing inferences from the text. (See grade 5 Writing Standard 8 for more on paraphrasing.)

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2. Determine one or more main ideas of a text and explain how they are supported by key details; summarize a text.
3. Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, mathematical, or technical text based on specific information in the text.

For example, in a social studies unit, students examine the expedition of Lewis and Clark. They analyze primary and secondary sources to determine the historical importance of the journey of the Corps of Discovery, and to build understanding that there can be multiple perspectives on historical events. (RI.5.3, RI.5.6, RI.5.7)

Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 5 topic or subject area*. (See grade 5 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Describe how an author uses one or more structures (e.g., chronology, comparison, cause/effect, problem/solution) of events, to present information in a text.
6. Analyze multiple accounts of the same event or topic, noting important similarities and differences among the points of view they represent.

Integration of Knowledge and Ideas

7. Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
   Connections to the Standards for Mathematical Practice
   2. Reason abstractly and quantitatively.
   6. Attend to precision.
   See Rhode Island Mathematics Standards.
8. Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).
9. Integrate information from several texts on the same topic in order to write or speak knowledgeably about the subject.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 5. (See Appendix A & Appendix A New Research.)

Grade 5 Reading Standards for Foundational Skills [RF]

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. A research- and evidence-based scope and sequence for phonological and phonics development and the complete range of foundational skills are not ends in and of themselves. They are necessary and important components of an effective, comprehensive reading curriculum designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: as students become skilled readers, they will need much less practice with these concepts. Struggling readers may need more or different kinds of practice. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

Note: RF.1 and RF.2, on print concepts and phonological awareness, apply only to kindergarten, and grade 1.

Phonics and Word Recognition

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3. 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.

Fluency

4. 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.

Grade 5 Writing Standards [W]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collections of annotated student writing samples in Appendix C of the *Common Core State Standards*.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, lists and notes, descriptive letters, personal reflections—should have a place in the classroom as well. To develop flexibility and nuance in their writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
    a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped in paragraphs and sections to support the writer's purpose.
    b. Provide logically ordered reasons that are supported by facts and details.
    c. Link opinion and reasons using words, phrases, and clauses (e.g., *consequently, specifically*).
    d. Provide a concluding statement or section related to the opinion presented.

Should a dog be allowed to run free or always be on a leash in a public park? A fifth grader considers the rewards and hazards of free-ranging dogs in "Be Careful When You Let Your Dog Off Leash," skillfully using details and personal anecdotes to support an argument. Writing Standards in Action. (W.5.1, W.5.3, W.5.4, L.5.1, L.5.2, L.5.5, L.5.6)

In math, instead of writing opinions, students write or draw solutions to math word problems and present arguments to explain their thinking.

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Connections to the Standards for Mathematical Practice
2. *Reason abstractly and quantitatively.*
3. *Construct viable arguments and respond to the reasoning of others.*
See Rhode Island Mathematics Standards.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- **a.** Introduce a topic clearly, provide a general observation and focus, and group related information logically in paragraphs and sections; include text features (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.
- **b.** Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
- **c.** Link ideas within and across categories of information using words, phrases, and clauses (e.g., *in contrast, especially*).
- **d.** Use precise language and domain-specific vocabulary to inform about or explain the topic.
- **e.** Provide a concluding statement or section related to the information or explanation presented.

Writing Standards in Action features two fifth grade research reports designed to inform and explain. "Hot Air Balloons" explores a topic that touches upon both history and science and incorporates multiple sources (RI.5.9, W.5.2, W.5.7, W.5.8, W.5.9, L.5.2, L.5.3). "Pointe Shoes" draws upon multiple print and digital sources as well as personal experience to explain the technical aspects of how a ballet dancer's pointe shoes are made, used, and maintained (W.5.2, W.5.4, W.5.7, W.5.8, RI.5.4, RI.5.9, L.5.2, L.5.4, L.5.5, L.5.6).

3. Write narratives in prose or poem form to develop experiences or events using effective literary techniques, descriptive details, and clear sequences.
- **a.** Orient the reader by establishing a situation and introducing a speaker, narrator, and/or characters; organize an appropriate narrative sequence.
- **b.** Use narrative techniques such as dialogue, description, and pacing to develop experiences or events or show responses to situations.
- **c.** Use a variety of transitional words, phrases, and clauses to manage sequence.
- **d.** Use concrete words and phrases and sensory details to convey experiences or events precisely.
- **e.** Provide a sense of closure appropriate to the narrated experiences or events.
- **f.** For prose narratives, draw on characteristics of traditional or modern genres (e.g., tall tales, myths, mysteries, fantasies, historical fiction) from diverse cultures as models for writing. (See grade 5 Reading Literature Standard 9.)
- **g.** For poems, draw on characteristics of traditional poetic forms (e.g., ballads, couplets) or modern free verse from diverse cultures as models for writing.

The variety of forms narrative can take is shown in two examples from Writing Standards in Action. "King Da-Ka" is a fifth grader's highly personal narrative about the anticipation of waiting for a wild roller coaster ride (W.5.3, W.5.4, W.5.5, L.5.1, L.5.2, L.5.3), while "The Rose" is a poem that shows the writer's strong awareness of the conventions of descriptive verse in its depiction of the delicacy, beauty, and serenity of a blooming rose (W.5.3, W.5.4, W.5.10, L.5.2, L.5.5).

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)

5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- **a.** Demonstrate command of standard English conventions (as described in Language Standards 1–3 up to and including grade 5).
- **b.** Demonstrate the ability to use general academic and domain-specific vocabulary appropriately (as described in Language Standards 4–6 up to and including grade 5).

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Connections to the Standards for Mathematical Practice
6. *Attend to precision.*
See Rhode Island Mathematics Standards.

6. Use technology, including current web-based communication platforms, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

Research to Build and Present Knowledge

7. Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
8. Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.
9. Draw evidence from literary or informational texts to support written analysis, reflection, and research, applying one or more grade 5 standards for Reading Literature or Reading Informational Text as needed.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Grade 5 Speaking and Listening Standards [SL]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 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. (See grade 5 Reading Literature Standard 1 and Reading Informational Text Standard 1 for specific expectations regarding the use of textual evidence.)
    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.

    Connections to the Standards for Mathematical Practice
    2. *Reason abstractly and quantitatively.*
    3. *Construct viable arguments and respond to the reasoning of others.*
    See Rhode Island Mathematics Standards.
2. Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
    Connections to the Standards for Mathematical Practice
    2. Reason abstractly and quantitatively.
    3. Construct viable arguments and respond to the reasoning of others
    6. Attend to precision.
    See Rhode Island Mathematics Standards.
3. Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

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For example, students listen to a podcast by a researcher about the decline in the bat population in the United States and compare the researcher's information to a map produced by the U.S. Geological Services of bat populations in the U.S. over a ten-year period. They summarize the information from both sources and explain whether the two sources agree or disagree and how each used supporting evidence. (RI.5.8, RI.5.9, SL.5.2, SL.5.3)

Presentation of Knowledge and Skills

4. Report on a topic, text, procedure, or solution to a mathematical problem, or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace and use appropriate vocabulary. (See grade 5 Language Standards 4–6 for specific expectations regarding vocabulary.)
   Connections to the Standards for Mathematical Practice
   2. Reason abstractly and quantitatively.
   3. Construct viable arguments and respond to the reasoning of others.
   6. Attend to precision.
   See Rhode Island Mathematics Standards.
5. Include multimedia components and visual displays in presentations when appropriate to enhance the development of main ideas or themes.
6. Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation. (See grade 5 Language Standards 1 and 3 for specific expectations.)

Grade 5 Language Standards [L]

The following standards offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. For example, though sentence fragments may receive the most attention in grade 4, more nuanced discussions of the topic should develop throughout the later grades as students continue to analyze speakers' and authors' sentence structure, vary syntax for effect in their own speaking and writing, and more.*

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 5 Writing Standard 5 and Speaking and Listening Standard 6 on strengthening writing and presentations by applying knowledge of conventions.)
   Sentence Structure and Meaning
   - **a.** Use verb tense to convey various times, sequences, states, and conditions, choosing among verb tenses depending on the overall meaning of the sentence.
   - **b.** Recognize and correct inappropriate shifts in verb tense.[11]
   - **c.** Use active and passive verbs, choosing between them depending on the overall meaning of the sentence.

   Word Usage
   - **d.** Form and use perfect verb tenses.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   - **a.** Write legibly and fluently by hand, using either print or cursive handwriting; write their given and family name signature in cursive.
   - **b.** Use punctuation to separate items in a series.[11]
   - **c.** Use a comma to separate an introductory element from the rest of the sentence.
   - **d.** Use a comma to set off the words yes and no (e.g., *Yes, thank you*), to set off a tag question

[11] These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking

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from the rest of the sentence (e.g., It's true, isn't it?), and to indicate direct address (e.g., *Is that you, Steve?*).

e. Use underlining, quotation marks, or italics to indicate titles of works.

f. Spell grade-appropriate words correctly, consulting references as needed.

Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

a. Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.[12]

b. Compare and contrast the varieties of English (e.g., dialects, registers) used in stories, dramas, or poems.

For example, students read Ernest Lawrence Thayer's poem "Casey at the Bat" and point out lines in the poem that use the informal slang of baseball and lines that use standard English. They discuss what Thayer's use of language reveals about the characters in the poem, how the language and rhythm build suspense, and how the final stanza shows the crowd's emotion as the game comes to its climax. (RL.5.5, SL.5.1, L.5.3)

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 5 reading and content*, choosing flexibly from a range of strategies.

a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.

b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *photograph, photosynthesis*).

c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases

d. Recognize and use appropriately abbreviations related to grade-level content or common in everyday life, including abbreviations derived from words or phrases in other languages (*e.g., lb., oz., etc.*).

e. Recognize and use appropriately symbols related to grade-level content or common in everyday life, including symbols with multiple meanings (e.g., parentheses in mathematics and in writing, ° to measure angles and temperature).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

a. Interpret figurative language, including similes and metaphors, in context.

b. Recognize and explain the meaning of common idioms, adages, and proverbs.

c. Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

6. Acquire and use accurately grade-appropriate 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*). (See grade 5 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grade 5 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

Connections to the Standards for Mathematical Practice

6. Attend to precision.

See Rhode Island Mathematics Standards.

[45] These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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Standards for English Language Arts
Grades 6 through 12

ANCHOR STANDARDS

Reading

Writing

Speaking and Listening

Language

STANDARDS BY GRADE LEVEL

Grade 6

Grade 7

Grade 8

Grades 9–10

Grades 11–12

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College and Career Readiness Anchor Standards for Reading

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what a text states explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from a text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of a text relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.[13]
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance
9. Analyze how two or more texts address similar themes or topics in the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend complex literary and informational texts.[14]

Note on range and content of student reading

To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Such works offer profound insights into the human condition and serve as models for students' own thinking and writing. Along with high-quality contemporary works, these texts should be chosen from among seminal historical documents, the classics of American literature, and the timeless dramas of Shakespeare. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references, and images. Through reading texts whose intent is to persuade or change the reader, students gain experience in understanding the elements of rhetoric, the ability to evaluate intricate arguments, and the capacity to surmount the challenges posed by complex texts.

[13] Please see "Research to Build Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

[14] Measuring text complexity involves (1) a qualitative evaluation of the text, (2) a quantitative evaluation of the text, and (3) matching reader to text and task. See . Appendix A of the Common Core State Standards

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College and Career Readiness Anchor Standards for Writing

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop experiences or events using effective literary techniques, well-chosen details, and well-structured sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. When conducting research, gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, interpretation, reflection, and research.

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college and career ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within argument and explanation within narrative—to produce complex and nuanced writing. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

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College and Career Readiness Anchor Standards for Speaking and Listening

The grades 6-12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that:
   - Listeners can follow the line of reasoning.
   - The organization, development, vocabulary, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To become college and career ready, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner—built around important content in various domains. They must be able to contribute appropriately to these conversations, to make comparisons and contrasts, and to analyze and synthesize a multitude of ideas in accordance with the standards of evidence appropriate to a particular discipline. Whatever their intended major or profession, high school graduates will depend heavily on their ability to listen attentively to others so that they are able to build on others' meritorious ideas while expressing their own clearly and persuasively.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to change.

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College and Career Readiness Anchor Standards for Language

The grades 6-12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Convention of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge.

Note on range and content of student language use

To be college and career ready, students must have firm control over the conventions of standard English. At the same time, they must come to appreciate that language is as much a matter of craft as one of rules and be able to choose words, syntax, and punctuation to express themselves and achieve particular functions and rhetorical effects. They must also have extensive vocabularies, built through reading and study, enabling them to comprehend complex texts and engage in purposeful writing about and conversations around content. They need to become skilled in determining or clarifying the meaning of words and phrases they encounter, choosing flexibly from an array of strategies to aid them. They must learn to see an individual word as part of a network of other words—words, for example, that have similar denotations but different connotations. The inclusion of Language Standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.

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Grade 6 Reading Standards

Grade 6 Reading Standards for Literature [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Cite textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 6 Writing Standard 8 for more on quoting and paraphrasing.)
2. Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of a text distinct from personal opinions or judgments.
3. Describe how the plot of a particular story, poem, or drama unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.

   For example, students read* Black Ships Before Troy*, Rosemary Sutcliff's retelling of Homer's* Iliad*. As they read, they keep journals in which they keep track of the plot and relationships among characters and their motivations, and they make illustrations of scenes in the epic. They discuss the characteristics of a hero in classical Greek literature and write essays about a character of their choice, arguing whether or not the character is a hero. (RL.6.1, RL.6.3, W.6.1)

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices, including those that create repeated sounds and rhythms in poetry, on meaning, tone (i.e., author's attitude toward subject or audience), or mood (i.e., emotional atmosphere). (See grade 6 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.
6. Explain how an author develops the point of view of the narrator or speaker in a text.

Integration of Knowledge and Ideas

7. Compare and contrast the experience of reading a story, drama, or poem to that of listening to or viewing the same text.
8. (Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Compare and contrast texts in different forms or genres (e.g., stories and poems, historical novels and fantasy stories) in terms of their approaches to similar themes and topics.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 6. (See Appendix A & Appendix A New Research.)

Grade 6 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Cite textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 6 Writing Standard 8 for more on quoting

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and paraphrasing.)

2. Determine a text's central idea(s) and how particular details help convey the idea(s); provide a summary of a text distinct from personal opinions or judgments.
3. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; explain how word choice affects meaning and tone. (See grade 6 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Analyze how a particular sentence, paragraph, chapter, section, or text feature (e.g., heading) fits into the overall structure of a text and contributes to the development of the ideas.
6. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.

Integration of Knowledge and Ideas

7. Integrate information presented in different media or formats (e.g., in charts, graphs, photographs, videos, maps) as well as in words to develop a coherent understanding of a topic or issue.
8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
9. Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 6. (See Appendix A & Appendix A New Research.)

Grade 6 Writing Standards [W]

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C of the Common Core State Standards.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a

literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, personal reflections in prose or poem form, scripts of dramas or interviews—should have a place in the classroom as well. To develop flexibility and nuance in their own writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors

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who have written successfully across genres.

1. Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims with clear reasons and relevant evidence.
    a. Introduce claim(s) and organize the reasons and evidence clearly in paragraphs and sections.
    b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.
    c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.
    d. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing).
    e. Provide a concluding statement or section that follows from the argument presented.

Persuasive letters offer two sixth grade writers the opportunity to express their opinions in thoughtful arguments posted on Writing Standards in Action. "Dear Mr. Sandler" makes a plea to the producer to stop showing actors enjoying smoking in films for teenagers because doing so sets a bad example (W.6.1, W.6.4, W.6.9, L.6.1, L.6.3, RI.6.1, RI.6.7, and SL.6.2). In "Dear Mr. Spinelli," another student writes to author Jerry Spinelli about the theme of triumphing over racism and homelessness in the book* Maniac Magee *(W.6.1, W.6.2, W.6.4, W.6.9, RL.6.1, RL.6.2, L.6.2, L.6.3, L.6.5). This letter was written as part of the "Letters about Literature" project of the Massachusetts Center for the Book and the Library of Congress.

2. Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
    a. Introduce a topic; organize ideas, concepts, and information in paragraphs and sections, using strategies such as definition, classification, comparison/contrast, and cause/effect; include text features (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
    b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
    c. Use appropriate transitions to clarify the relationships among ideas and concepts.
    d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
    e. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing).
    f. Provide a concluding statement or section that follows from the information or explanation presented.

After reading both historical fiction and nonfiction sources about the Salem witch trials, a student blends informational and narrative writing to present an individual character's actions and to explain the larger meaning of beliefs about guilt and innocence in seventeenth-century Salem. See the Writing Standards in Action example, "The Salem Witch Trials." (W.6.2, W.6.3, W.6.4, W.6.8, W.6.9, RI.6.1, L.6.1, L.6.2, L.6.3, L.6.5, L.6.6)

3. Write narratives to develop experiences or events using effective literary techniques, relevant descriptive details, and well-structured sequences.
    a. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an appropriate narrative sequence.
    b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
    c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another
    d. Use precise words and phrases, relevant descriptive details, figurative and sensory language, and techniques such as personification (e.g., "the fog crept in") to convey experiences or events.
    e. Provide a conclusion that follows from the narrated experiences or events.

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Two compositions on Writing Standards in Action show the versatility of narrative. In the poem "Sailing," a student describes the exhilaration and peace of being at sea on a sailboat, using sensory images to convey the magic of this personal experience. (W.6.3, W.6.4, W.6.10, L.6.3, L.6.5). "Feelings of Fall" is a prose narrative organized around a conflict that takes place between a girl and her grandfather over raking leaves in chilly November. It shows how a science lesson on the seasons gives the girl not only an awareness of nature, but also an awareness of her own feelings. (W.6.3, L.6.1, L.6.2, L.6.3)

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
    a. Demonstrate command of standard English conventions (as described in Language Standards 1–3 up to and including grade 6).
    b. Demonstrate the ability to select accurate vocabulary (as described in Language Standards 4–6 up to and including grade 6).
6. Use technology, including current web-based communication platforms, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
8. When conducting research, gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
9. Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grade 6 standards for Reading Literature or Reading Informational Text as needed.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range ofdiscipline-specific tasks, purposes, and audiences.

Grade 6 Speaking and Listening Standards [SL]

The following standards for grades 6–12 offer a focus for instruction in each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
    a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. (See grade 6 Reading Literature Standard 1 and Reading Informational Text Standard 1 for specific expectations regarding the use of textual evidence.)

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b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

2. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
3. Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.

Presentation of Knowledge and Ideas

4. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate vocabulary, eye contact, volume, and pronunciation. (See grade 6 Language Standards 4–6 for specific expectations regarding vocabulary.)
5. Include multimedia components and visual displays in presentations to clarify information.
6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language Standards 1 and 3 for specific expectations.)

Grade 6 Language Standards [L]

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. For example, though conventions of pronoun usage may receive the most attention in grade 7, more nuanced discussions of pronouns should develop throughout the upper grades as students continue to analyze speakers' and authors' choices of words, work toward precision in speaking and writing, and more.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 6 Writing Standard 5 and Speaking and Listening Standard 6 on strengthening writing and presentations by applying knowledge of conventions.)
   Sentence Structure, Variety, and Meaning
   a. Use simple, compound, complex, and compound-complex sentences to communicate ideas clearly and to add variety to writing.
   b. Explain the function of phrases and clauses in general, how phrases and clauses differ, and how their use conveys a particular meaning in a specific written or spoken sentence.
   c. Place or rearrange phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.[15]
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.[15]
   b. Spell correctly, recognizing that some words have commonly accepted variations (e.g., donut/doughnut).

[55] These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

- **a.** Maintain appropriate consistency in style and tone while varying sentence patterns for meaning and audience interest.[16]
- **b.** Recognize variations from standard or formal English in writing and speaking, determine their appropriateness for the intended purpose and audience, and make changes as necessary.[16]

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 6 reading and content*, choosing flexibly from a range of strategies.

- **a.** Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

For example, students consider the number of meanings the word "light" can have and write sentences to demonstrate how context and placement determines what words mean. Some of their sentences:
Her dress was light purple.
I'm going to light the candles.
The play was a light comedy.
The children can stay outside as long as it's light; when it gets dark, they have to come into the house.
The blanket was light as a feather.

- **b.** Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *audience, auditory, audible*).
- **c.** Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
- **d.** Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

- **a.** Interpret figures of speech (e.g., personification) in context.
- **b.** Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.
- **c.** Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *stingy, scrimping, economical, unwasteful, thrifty*).

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grade 6 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grade 6 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

[16] These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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Grade 7 Reading Standards

Grade 7 Reading Standards for Literature [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Cite several pieces of textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 7 Writing Standard 8 for more on quoting and paraphrasing.)
2. Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of a text.
3. Analyze how particular elements of a story, poem, or drama interact (e.g., how setting shapes the characters or plot).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning, tone, or mood, including the impact of repeated use of particular images. (See grade 7 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Analyze how aspects of a literary work's structure contribute to its meaning or style (e.g., the effect of repetition in an epic, flashback in a novel, soliloquy in a drama).
6. Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.

Integration of Knowledge and Ideas

7. Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version.

   For example, students analyze how an author uses words and phrases to create a mood of fear in a print text and compare that to the way a film director creates a similar mood with settings and images, sounds, lighting, and camera angles.
8. (Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.

   For example, students read Mark Twain's* The Adventures of Tom Sawyer *and selections from Twain's autobiography. They explore the conflicts and tensions in the novel, including the honesty, lies, and oaths by various characters and their consequences, and historical conflicts, such as the prejudices of mid-nineteenth-century America. Students write an essay on one of the conflicts and deliver an oral report, using evidence to support their arguments and conclusions. (RL.7.1, RL.7.9, RI.7.1, W.7.1, SL.7.4)

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 7. (See Appendix A & Appendix A New Research.)

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Grade 7 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Cite several pieces of textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 7 Writing Standard 8 for more on quoting and paraphrasing.)
2. Determine a text's central idea(s) and analyze its/their development over the course of the text; provide an objective summary of a text.
3. Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone. (See grade 7 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
   For example, students read David Macaulay's* Cathedral: The Story of its Construction *and analyze how he uses words and images to depict the complex process of architectural design and the sequence of construction in the medieval period. In order to develop a thesis about the characteristics of Macaulay's style as a writer/illustrator, they examine a collection of his books and write an essay about his style as a writer of literary nonfiction. (RI.7.1, RI.7.4, W.7.2, W.7.9)
5. Analyze the structure an author uses to organize a text, including how the major sections and text features (e.g., headings) contribute to the whole and to the development of the ideas.
6. Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.

Integration of Knowledge and Ideas

7. Compare and contrast a written text to an audio, video, or multimedia version, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).
8. Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.
9. Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 7. (See Appendix A & Appendix A New Research.)

Grade 7 Writing Standards [W]

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C of the Common Core State Standards.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an

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argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, personal reflections in prose or poem form, scripts of dramas or interviews—should have a place in the classroom as well. To develop flexibility and nuance in their own writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims with clear reasons and relevant evidence.
    - **a.** Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically in paragraphs and sections.
    - **b.** Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
    - **c.** Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.
    - **d.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing).
    - **e.** Provide a concluding statement or section that follows from and supports the argument presented.

    In "Animal Rights: Give them a Voice," on Writing Standards in Action, a seventh-grade student makes the claim for the rights of animals, giving vivid examples of the conditions under which, they are raised for food and experimentation. Acknowledgment and rebuttal of the opposing claim as well as discussion of a practical compromise alternative demonstrate the writer's understanding of the complexity of the issue. (W.7.1, W.7.4, W.7.9, RI.7.1, L.7.2, L.7.3, L.7.5)
2. Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
    - **a.** Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information in paragraphs and sections, using strategies such as definition, classification, comparison/contrast, and cause/effect; include text features (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
    - **b.** Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
    - **c.** Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
    - **d.** Use precise language and domain-specific vocabulary to inform about or explain the topic.
    - **e.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing).
    - **f.** Provide a concluding statement or section that follows from and supports the information or explanation presented.

    The theme "Fear can turn human beings into monsters" is explored in a literary analysis essay on Writing Standards in Action that examines Rod Serling's teleplay, "The Monsters Are Due on Maple Street," from the early television series, The Twilight Zone. (RL.7.1, RL.7.2, W.7.2, W.7.4, L.7.3, SL.7.2)
3. Write narratives to develop experiences or events using effective literary techniques, relevant descriptive details, and well-structured sequences.
    - **a.** Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an appropriate narrative sequence.

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b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.

c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.

d. Use precise words and phrases, relevant descriptive details, and figurative and sensory language to establish a mood that evokes an emotion, to capture action, and to convey experiences or events.

e. Provide a conclusion that follows from and reflects on the narrated experiences or events.

The narrative mode is used with imagination and skill in two seventh grade examples on Writing Standards in Action. In the first example, "The Great Escape: from the Amazing Adventures of Bunny Foo Foo," the point of view is that of a pet rabbit, just on the edge of finding freedom from its cage, and the story is told with a playful tone as a first person narrative. "The Tale of a Leaf," the second example, is a poem that uses vivid sensory and figurative language and symbolism to impart a sense of joy and wonder to the autumn flight of a falling leaf. Both examples are aligned to Standards W.7.3, W.7.10, W.7.4, L.7.1, L.7.2, and L.7.5.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)

For example, students studying the genre of mystery stories write narratives in which they introduce a variety of characters with distinctive traits, create plausible yet mysterious events, use vivid descriptions to create mood, use foreshadowing clues that point to the solution of the mystery, and resolve the mystery with an explanation by one of the characters. (RL.7.10, W.7.3, W.7.4)

5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.

a. Demonstrate command of standard English conventions (as described in Language Standards 1–3 up to and including grade 7).

b. Demonstrate the ability to select accurate vocabulary appropriate for audience and purpose (as described in Language Standards 4–6 up to and including grade 7).

6. Use technology, including current web-based communication platforms, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

8. When conducting research, gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

9. Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grade 7 Standards for Reading Literature or Reading Informational Text as needed.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range ofdiscipline-specific tasks, purposes, and audiences.

Grade 7 Speaking and Listening Standards [SL]

The following standards for grades 6–12 offer a focus for instruction in each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected*

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to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.

Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 7 topics, texts, and issues*, building on others' ideas and clearly expressing their own.
    a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. (See grade 7 Reading Literature Standard 1 and Reading Informational Text Standard 1 for specific expectations regarding the use of textual evidence.)
    b. Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
    c. Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
    d. Acknowledge new information expressed by others and, when warranted, modify their own views.
2. Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.
3. Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.

Presentation of Knowledge and Ideas

4. Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate vocabulary, eye contact, volume, and pronunciation. (See grade 7 Language Standards 4–6 for specific expectations regarding vocabulary.)
5. Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.
6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 7 Language Standards 1 and 3 for specific expectations.)

Grade 7 Language Standards [L]

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. *For example, though conventions of pronoun usage may receive the most attention in grade 7, more nuanced discussions of pronouns should develop throughout the upper grades as students continue to analyze speakers' and authors' choices of words, work toward precision in speaking and writing, and more.*

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 7 Writing Standard 5 and Speaking and Listening Standard 6 on strengthening writing and presentations by applying knowledge of conventions.)
   Sentence Structure, Variety, and Meaning
    a. Use phrases and clauses to communicate ideas precisely, with attention to skillful use of verb tenses to add clarity.

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b. Recognize and correct vague pronouns (those that have unclear or ambiguous antecedents).[17]
c. Recognize and correct inappropriate shifts in pronoun number and person in sentences with multiple clauses and phrases.
d. Recognize that changing the placement of a phrase or clause can add variety, emphasize particular relationships among ideas, or alter the meaning of a sentence or paragraph.[17]

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
a. Use a comma to separate coordinate adjectives (e.g., *a fascinating, enjoyable movie*).
b. Spell correctly, recognizing that some words have commonly accepted variations (e.g., donut/doughnut).

Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
a. Maintain appropriate consistency in style and tone while varying sentence patterns for meaning and audience interest.
b. Recognize variations from standard or formal English in writing and speaking, determine their appropriateness for the intended purpose and audience, and make changes as necessary.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 7 reading and content*, choosing flexibly from a range of strategies.
a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *belligerent, bellicose, rebel*).
c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
a. Interpret figures of speech (e.g., literary, biblical, mythological allusions) in context.
b. Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words.
c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *refined, respectful, polite, diplomatic, condescending*).

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grade 7 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grade 7 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

[17] These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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Grade 8 Reading Standards

Grade 8 Reading Standards for Literature [RL]

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Key Ideas and Details

1. Cite the textual evidence that most strongly supports analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 8 Writing Standard 8 for more on quoting and paraphrasing.)
2. Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of a text.
3. Analyze how particular lines of dialogue or incidents in a story, poem, or drama propel the action, reveal aspects of a character, or provoke a decision.

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning, tone, or mood, including the impact of allusion and irony. (See grade 8 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Compare and contrast the structures of two or more texts, analyzing how structure contributes to meaning and style in each text.
6. Analyze how differences in point of view between characters and audience (e.g., created through the use of dramatic irony) create such effects as suspense or humor.

Integration of Knowledge and Ideas

7. Analyze the extent to which an audio, filmed, or staged production of a story, drama, or poem stays faithful to or departs from the original text or script, evaluating the choices made by the director or performer(s).
8. (Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 8. (See Appendix A & Appendix A New Research.)

Grade 8 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Cite the textual evidence that most strongly supports an analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 8 Writing Standard 8 for more on quoting and paraphrasing.)
2. Determine a text's central idea(s) and analyze its/their development over the course of the text, including relationships to supporting ideas; provide an objective summary of a text.
3. Analyze how a text makes connections among and distinctions between individuals, ideas, or events

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(e.g., through comparisons, analogies, or categories).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts. (See grade 8 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Analyze in detail the structural elements of a text, including the role of specific sentences, paragraphs, and text features in developing and refining a key concept.
6. Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.

Integration of Knowledge and Ideas

7. Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
9. Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 8. (See Appendix A & Appendix A New Research.)

Grade 8 Writing Standards [W]

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.* The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C of the Common Core State Standards.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, personal reflections in prose or poem form, scripts of dramas or interviews—should have a place in the classroom as well. To develop flexibility and nuance in their own writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims with clear reasons and relevant evidence.
    a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims,

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and organize the reasons and evidence logically in paragraphs and sections.

- **b.** Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
- **c.** Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
- **d.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing).
- **e.** Provide a concluding statement or section that follows from and supports the argument presented.

A literary analysis of Jim Hall's poem, "Maybe Dats Youwr Pwoblem Too," begins not with a usual thesis statement but with a personal anecdote of a situation that amused others but embarrassed the author. This lead engages the reader to continue reading an analysis of Hall's humorous/serious poem about the dilemma of being Spiderman, a man who can't escape his identity. Writing Standards in Action (W.8.1, W.8.3, W.8.9, RL.8.1, RL.8.2, RL.8.4, L.8.5)

2. Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

- **a.** Introduce a topic clearly, previewing what is to follow; use paragraphs and sections to organize ideas, concepts, and information into broader categories; include text features (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
- **b.** Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
- **c.** Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
- **d.** Use precise language and domain-specific vocabulary to inform about or explain the topic.
- **e.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing).
- **f.** Provide a concluding statement or section that follows from and supports the information or explanation presented.

A student shows deep personal engagement with Cynthia Lord's book* Rules *in a letter to the author describing how reading the book deepened her understanding of her autistic brother. The letter maintains a tone of friendliness and appreciation. Writing Standards in Action (W.8.2, W.8.4, W.8.9, RL.8.1, L.8.1, L.8.2, L.8.3, L.8.5)

3. Write narratives to develop experiences or events using effective literary techniques, relevant descriptive details, and well-structured sequences.

- **a.** Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an appropriate narrative sequence.
- **b.** Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters.
- **c.** Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events.
- **d.** Use precise words and phrases and relevant descriptive details to convey a tone (the writer's attitude toward the subject: e.g., humorous, serious, or ironic) and to convey experiences or events.
- **e.** Provide a conclusion that follows from and reflects on the narrated experiences or events.

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Suspense builds in "Lab Rat," an eighth grade science fiction story on Writing Standards in Action. Developed in a manner appropriate to a chapter of a longer work, the conclusion focuses on the plight of the narrator and invites the reader to continue reading further to find out what happens next (W.8.3, W.8.4, L.8.1, L.8.3, L.8.6). A different sort of narrative unfolds in the poem, "Before on Stone." In this work, the writer adapts the form of Stephen Chbosky's poem, "Once on Yellow Paper with Green Lines," from his coming-of-age novel, The Perks of Being a Wallflower, to create a new poem that traces the evolution of writing through time (W.8.3, W.8.10, RL.8.4, L.8.3, L.8.5, L.9–10.1).

Production and Distribution of Writing

1. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
2. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.
    a. Demonstrate command of standard English conventions (as described in Language Standards 1–3 up to and including grade 8).
    b. Demonstrate the ability to select accurate vocabulary appropriate for audience and purpose (as described in Language Standards 4–6 up to and including grade 8).
3. Use technology, including current web-based communication platforms, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.

Research to Build and Present Knowledge

4. Conduct short as well as more sustained research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
5. When conducting research, gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
6. Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grade 8 standards for Reading Literature or Reading Informational Text as needed.

Range of Writing

7. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Grade 8 Speaking and Listening Standards [SL]

The following standards for grades 6–12 offer a focus for instruction in each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 8 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
    a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on

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ideas under discussion. (See grade 8 Reading Literature Standard 1 and Reading Informational Text Standard 1 for specific expectations regarding the use of textual evidence.)

b. Follow rules for collegial discussions and decision making, track progress toward specific goals and deadlines, and define individual roles as needed.

c. Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.

d. Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

2. Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.

3. Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.

Presentation of Knowledge and Ideas

4. Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate vocabulary, eye contact, volume, and pronunciation. (See grade 8 Language Standards 4–6 for specific expectations regarding vocabulary.)

5. Integrate multimedia components and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 8 Language Standards 1 and 3 for specific expectations.)

Grade 8 Language Standards [L]

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. *For example, though conventions of pronoun usage may receive the most attention in grade 7, more nuanced discussions of pronouns should develop throughout the upper grades as students continue to analyze speakers' and authors' choices of words, work toward precision in speaking and writing, and more.*

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 8 Writing Standard 5 and Speaking and Listening Standard 6 on strengthening writing and presentations by applying knowledge of conventions.)

Sentence Structure, Variety, and Meaning

a. Coordinate phrases and clauses in simple, compound, complex, and compound-complex sentences, with emphasis on agreement of pronouns and their antecedents.

b. Form and use verbs in the active and passive voices and the indicative, imperative, interrogative, conditional, and subjunctive moods to communicate a particular meaning.[18]

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

a. Use punctuation (comma, ellipsis, dash) to indicate a pause or break.

b. Use an ellipsis to indicate an omission.

[18] These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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c. Spell correctly, recognizing that some words have commonly accepted variations (e.g., donut/doughnut).

Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

a. Maintain appropriate consistency in style and tone while varying sentence patterns for meaning and audience interest.

b. Recognize variations from standard or formal English in writing and speaking, determine their appropriateness for the intended purpose and audience, and make changes as necessary.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on *grade 8 reading and content*, choosing flexibly from a range of strategies.

a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *precede, recede, secede*).

c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.

d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

a. Interpret figures of speech (e.g. verbal irony, puns) in context.

b. Use the relationship between particular words to better understand each of the words.

c. Distinguish among the connotations (associations) of words with similar denotations. (definitions) (e.g., *bullheaded, willful, firm, persistent, resolute*).

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grade 8 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grade 8 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

For example, after finding out that emoji was designated the 2015 "word of the year" by the Oxford Online Dictionary, students decide that for a class project they will compile their own online etymological dictionary of words and phrases that are commonly used in English. Their diverse list of words and phrases to research includes blue jeans, jazz, hip-hop, numero uno, pizza, Algebra, lacrosse, Olympics, movie star, time flies, and bon appetit. (W.8.7, L.8.6)

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Grades 9–10 Reading Standards

Grades 9–10 Reading Standards for Literature [RL]

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text.
2. Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of a text.
3. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.

Craft and Structure

4. Determine the figurative or connotative meaning(s) of words and phrases as they are used in a text; analyze the impact of words with multiple meanings, as well as symbols or metaphors that extend throughout a text and shape its meaning. (See grades 9–10 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Analyze how an author's choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.
6. Analyze a case in which a character's point of view and actions signal acceptance or rejection of cultural norms or intellectual ideas of a period or place, drawing on a wide reading of world literature.

Integration of Knowledge and Ideas

7. Analyze a critical response to a work or body of literature (e.g., author documentary, book review); provide a summary of the argument presented and evaluate the strength of the evidence supporting it.
8. (Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare).

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

For example, Students respond to, analyze, and compare a variety of poems that exemplify the range of poetry's dramatic power, such as Robert Browning's "My Last Duchess," Elizabeth Bishop's "Fish," Robert Frost's "Out, Out…" (along with Macbeth's soliloquy in Act V of* Macbeth*), and Amy Lowell's "Patterns." They then use these poems as models as they write poems of their own that reflect a dramatic moment or event. (RL.9–10.10, W.9–10.3)

Grades 9–10 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text.

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2. Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of a text.
3. Analyze how an author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the presence or absence of connections between them.

Craft and Structure

4. Determine the meaning(s) of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative or contradictory impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper; how an author's word choice varies from one part of a text to another). (See grades 9–10 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
   For example, students at Levels 1–2 in English language proficiency study the American Civil Rights movement in their ESL class. The unit offers students contextualized, extended practice with discourse, sentence, and word/phrase dimensions of academic language targeted in the unit. Students develop academic language they can use to discuss and explain causes and effects of key events in the Civil Rights Movement, and argue about their significance. (RI.9–10.4, L.9–10.6)
5. Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
6. Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Integration of Knowledge and Ideas

7. Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized or deemphasized in each account.
8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements or incomplete truths and fallacious reasoning.
9. Analyze seminal documents of historical and literary significance (e.g., Washington's Farewell Address, Lincoln's Second Inaugural and Gettysburg Addresses, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

Grades 9–10 Writing Standards [W]

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, personal reflections in prose or poem form, scripts of dramas or interviews—should have a place in the classroom as well. To develop flexibility and nuance in their writing, students need to engage with a wide range of complex model

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texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
    - **a.** Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence.
    - **b.** Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns.
    - **c.** Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
    - **d.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
    - **e.** Provide a concluding statement or section that follows from and supports the argument presented.

    For example, students research contemporary issues in education, such as whether public schools prepare students for citizenship or whether a college education is worth its costs. Students gather, evaluate, and synthesize information from a variety of sources and write a position paper on their topic that they present to the class. (W.9–10.1, W.9–10.7, W.9–10.8, W.9–10.9, SL.9–10.4)
2. Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
    - **a.** Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include text features (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
    - **b.** Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
    - **c.** Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
    - **d.** Use precise language and domain-specific vocabulary to manage the complexity of the topic.
    - **e.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
    - **f.** Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
3. Write narratives to develop experiences or events using effective literary techniques, well-chosen details, and well-structured sequences.
    - **a.** Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create an appropriate progression of experiences or events.
    - **b.** Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
    - **c.** Use a variety of techniques to sequence events so that they build on one another to create a coherent whole.
    - **d.** Use precise words and phrases, telling details, and figurative and sensory language to describe settings and characters and establish mood and tone.

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e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

In the personal essay, "Thunder," on Writing Standards in Action, the writer blends narrative and informational techniques to relate a profound personal experience that occurs during an orchestra rehearsal. Information about the performance venue, the weather conditions, the orchestra, and the music coalesces into a brief, fast-paced narrative account of the writer's responses to the music, to the story it evokes, and to her place in the performance. (W.9–10.2, W.9–10.3, W.9–10.4, W.9–10.5, L.9–10.1, L.9–10.2, L.9–10.5, L.9–10.6)

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
    a. Demonstrate command of standard English conventions (as described in Language Standards 1–3 up to and including grades 9–10).
    b. Demonstrate the ability to select accurate vocabulary appropriate for audience, purpose, and style (as described in Language Standards 4–6 up to and including grades 9–10).
6. Use technology, including current web-based communication platforms, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
8. When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grades 9–10 Standards for Reading Literature or Reading Informational Text as needed.

For example, students read Matthew Arnold's poem "Dover Beach." In order to understand the nineteenth-century controversy over the implications of evolutionary theory, they read letters, essays, and excerpts from news articles from the period. They use what they have learned to inform their understanding of the poem and to write an interpretive essay. (RL.9–10.1, RL.9–10.2, RL.9–10.9, W.9–10.9)

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Grades 9–10 Speaking and Listening Standards [SL]

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

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Comprehension and Collaboration

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades *9–10 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.
    a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (See grades 9–10 Reading Literature Standard 1 and Reading Informational Text Standard 1 for specific expectations regarding the use of textual evidence.)
    b. Work with peers to set rules for collegial discussions and decision making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.
    c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.
    d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

    For example, in preparation for a student council meeting, students plan an agenda for discussion, including how much time they will devote to each issue before the council and how much time each speaker will have to present a case or argument. They build into their agenda time for making decisions and taking votes. (SL.9–10.1)
2. Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally), evaluating the credibility and accuracy of each source.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience, and task. (See grades 9–10 Language Standards 4–6 for specific expectations regarding vocabulary.)
5. Make strategic use of digital media (e.g., audio, visual, interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grades 9–10 Language Standards 1 and 3 for specific expectations.)

Grades 9–10 Language Standards [L]

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grades 9–10 Writing Standard 5 and Speaking and Listening Standard 6 on strengthening writing and presentations by applying knowledge of conventions.)

    Sentence Structure, Variety, and Meaning
    a. Manipulate and rearrange clauses and phrases in sentences, paying attention to agreements of pronouns and their antecedents, logical use of verb tenses, and variety in sentence patterns.

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b. Use various types of phrases (noun, verb, adjectival, participial, prepositional) and clauses (independent, dependent, noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations.

c. Use parallel structure as a technique for creating coherence in sentences, paragraphs, and larger pieces of writing.[19]

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

a. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.

b. Use a colon to introduce a list or quotation.

c. Spell correctly, recognizing that some words have commonly accepted variations (e.g., catalog/catalogue).

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

a. Write and edit work so that it conforms to the guidelines in a style manual (e.g., *MLA Handbook*, Turabian's *Manual for Writers*) appropriate for the discipline and writing type.

b. Revise and edit work to decrease redundancy (ineffective repetition of ideas or details).[19]

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 9–10 reading and content*, choosing flexibly from a range of strategies.

a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., *analyze, analysis, analytical; advocate, advocacy*).

c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology.

d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

a. Interpret figures of speech (e.g., euphemism, oxymoron) in context and analyze their role in the text.

b. Analyze nuances in the meaning of words with similar denotations.

For example, a tenth grade English teacher introduces the concept of image patterns during a study of Shakespeare's* Richard II*. As the class reads the play, students pay close attention to certain passages and record in their journals recurring words or images they notice. As a class, they discuss and analyze several speeches from the play in which the image of the sun and its associated ideas of brightness, height, and power are used to describe Richard as a king ruling by divine right. After the discussion of the sun image pattern, students work in groups using their journals and a concordance to Shakespeare or an online Shakespeare search engine to discover other image clusters (earth/land/garden; blood/murder/war) and discuss their connections to ideas in the play. Students write finished essays that trace and interpret one image pattern, connecting it to important themes in the play. (RL.9–10.2, RL.9–10.4, W.9–10.9, L.9–10.5)

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grades 9–10 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grades 9–10 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

[19]These skills are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

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Grades 11–12 Reading Standards

Grades 11–12 Reading Standards for Literature [RL]

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of a text.
3. Analyze the impact of the author's choices regarding how to develop and relate elements of a story, poem, or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).

Craft and Structure

4. Determine the figurative or connotative meaning(s) of words and phrases as they are used in a text; analyze the impact of specific words or rhetorical patterns (e.g., how the language evokes a sense of time and place, how shifts in rhetorical patterns signal new perspectives). (See grades 11–12 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution, the choice to introduce a new tone or point of view) contribute to its overall structure and meaning as well as its aesthetic impact.
6. Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, understatement, notable omission).

Integration of Knowledge and Ideas

7. Analyze one or more critical responses to a work or body of literature, including how the critical lens (e.g., formal, historical, feminist, sociological, psychological) influences the interpretation.
8. (Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Demonstrate knowledge of eighteenth, nineteenth and early-twentieth century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.

   For example, students read* The Scarlet Letter *by Nathaniel Hawthorne. In order to deepen their understanding of the early colonial period and of Puritan beliefs, they read poems by Anne Bradstreet, transcripts of witch trials in Salem, "Sinners in the Hands of an Angry God," by Jonathan Edwards (a sermon written during the Great Awakening), and excerpts from several colonial-era diaries (Judge Sewall, William Byrd III, Mary Rowlandson). Then students write an essay in which they relate what they have learned from these other texts to events, characters, and themes in* The Scarlet Letter*. (RL.11–12.9, RI.11–12.2, W.11–12.2)

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

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Grades 11–12 Reading Standards for Informational Text [RI]

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of a text.
3. Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

Craft and Structure

4. Determine the meaning(s) of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines or revises the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10). (See grades 11–12 Language Standards 4–6 on applying knowledge of vocabulary to reading.)
5. Analyze and evaluate the effectiveness of the structure an author uses in an exposition or argument, including whether the structure makes points clear, coherent, convincing, and engaging.

   For example, in a unit on rhetorical analysis, students learn to recognize and understand the tools of argument and persuasion so that they may become informed and contributing citizens in a democracy. They are introduced to the terms ethos, logos, pathos, occasion, audience, and speaker, and use these rhetorical concepts to deconstruct an advertisement for a product, ballot question, or political candidate. After completing this exercise, they apply their knowledge to analyses of Coretta Scott King's "The Death Penalty is a Step Back," the speeches of Brutus and Marc Antony in Shakespeare's* Julius Caesar*, and the 1852 oration "What to the Slave is the Fourth of July" by Frederick Douglass. (RI.11–12.5, RI.11–12.6, SL.11–12.3)
6. Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text.

Integration of Knowledge and Ideas

7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., charts, graphs, photographs, videos, maps) as well as in words in order to address a question or solve a problem.
8. Delineate and evaluate the reasoning in seminal historical texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., *The Federalist*, presidential addresses).
9. Analyze pre-twentieth-century documents of historical and literary significance (e.g., the Magna Carta, the Declaration of Independence, the Declaration of the Rights of Man, the Preamble to the Constitution, the Bill of Rights) for their themes, purposes, and rhetorical features.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

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Grades 11–12 Writing Standards [W]

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Text Types and Purposes

Note: The intent of Writing Standards 1–3 is to ensure flexibility, not rigidity, in student writing. Many effective pieces of writing blend elements of more than one text type in service of a single purpose: for example, an argument may rely on anecdotal evidence, a short story may function to explain some phenomenon, or a literary analysis may use explication to develop an argument. In addition, each of the three types of writing is itself a broad category encompassing a variety of texts: for example, narrative poems, short stories, and memoirs represent three distinct forms of narrative writing. Finally, although the bulk of writing assigned in school should address the purposes described below, other forms of writing—for example, personal reflections in prose or poem form, scripts of dramas or interviews—should have a place in the classroom as well. To develop flexibility and nuance in their own writing, students need to engage with a wide range of complex model texts (see Reading Literature Standard 10 and Reading Informational Text Standard 10) and study authors who have written successfully across genres.

1. Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
    - **a.** Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.
    - **b.** Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.
    - **c.** Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
    - **d.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
    - **e.** Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
    - **a.** Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include text features (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
    - **b.** Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
    - **c.** Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
    - **d.** Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.
    - **e.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
    - **f.** Provide a concluding statement or section that follows from and supports the information or

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explanation presented (e.g., articulating implications or the significance of the topic).

3. Write narratives to develop experiences or events using effective literary techniques, well-chosen details, and well-structured sequences.
    a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create an appropriate progression of experiences or events.
    b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
    c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, resolution).
    d. Use precise words and phrases, telling details, and figurative and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.
    e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

A personal view of nature is the subject of the poem, "The Hidden Places," on Writing Standards in Action. The poem's fluid style and coherent organization make the progression of ideas easy to follow. Vivid details, effective figurative language, and skillful manipulation of syntax contribute to the poem's development and tone. In the final stanza, parallel structures indicate a significant shift from reflection on concrete experiences to presentation of an abstract personal view of the natural world. (W.11–12.3, W.11–12.4, W.11–12.10, L.9–10.1, L.11–12.3, L.11–12.5)

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
    a. Demonstrate command of standard English conventions (as described in Language Standards 1–3 up to and including grades 11–12).
    b. Demonstrate the ability to select accurate vocabulary appropriate for audience, purpose, and style (as described in Language Standards 4–6 up to and including grades 11–12).
6. Use technology, including current web-based communication platforms, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
8. When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9. Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grades 11–12 standards for Reading Literature or Reading Informational Text as needed.

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For example, students read and discuss "The Fall of the House of Usher" by Edgar Allen Poe, as an example of observer narration; "The Prisoner" by Bernard Malamud, as an example of a single character point of view; and "The Boarding House" by James Joyce, as an example of multiple character point of view. Students summarize their conclusions about how the authors' choices regarding narrative point of view affected their responses as readers. They write analytical papers that they later give as oral presentations to the class. (RL.11–12.3, RL.11–12.5, W.11–12.9, SL.11–12.4)

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Grades 11–12 Speaking and Listening Standards [SL]

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Comprehension and Collaboration

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 11–12 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.

- **a.** Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (See grades 11–12 Reading Literature Standard 1 and Reading Informational Text Standard 1 for specific expectations regarding the use of textual evidence.)
- **b.** Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
- **c.** Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.
- **d.** Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

2. Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.

3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. (See grades 11–12 Language Standards 4–6 for specific expectations regarding vocabulary.)

5. Make strategic use of digital media (e.g., audio, visual, interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

6. Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language Standards 1 and 3 for specific expectations.)

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Grades 11–12 Language [L]

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grades 11–12 Writing Standard 5 and Speaking and Listening Standard 6 on strengthening writing and presentations by applying knowledge of conventions.)
   Word Usage
   - **a.** Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.
   - **b.** Resolve issues of complex or contested usage, consulting references (e.g., *Merriam-Webster's Dictionary of English Usage*, *Garner's Modern American Usage*) as needed.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   - **a.** Observe hyphenation conventions.
   - **b.** Spell correctly, recognizing that some words have commonly accepted variations (e.g., catalog/catalogue).

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
   - **a.** Vary syntax for effect, consulting references (e.g., Tufte's *Artful Sentences*) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.
   - **b.** Revise and edit to make work more concise and cohesive.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 11–12 reading and content*, choosing flexibly from a range of strategies.
   - **a.** Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
   - **b.** Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., *conceive, conception, conceivable*).
   - **c.** Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.
   - **d.** Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
   - **a.** Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text.
   - **b.** Analyze nuances in the meaning of words with similar denotations.
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grades 11–12 Reading Literature Standard 4 and Reading Informational Text Standard 4 on applying knowledge of vocabulary to reading; see grades 11–12 Writing Standard 5 and Speaking and Listening Standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

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Standards for Literacy in the Content Areas
Grades 6 through 12

ANCHOR STANDARDS

Reading

Writing

Speaking and Listening

STANDARDS BY GRADE LEVEL

Grades 6–8

Grades 9–10

Grades 11–12

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College and Career Readiness Anchor Standards for Reading

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade span. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what a text states explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from a text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of a text relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.[21]
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Note on range and content of student reading

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

Range of Reading and Level of Text Complexity

1. Independently and proficiently read and comprehend complex literary and informational texts.[22]

[21] Please see "Research to Build Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources

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College and Career Readiness Anchor Standards for Writing

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop experiences or events using effective literary techniques, well-chosen details, and well-structured sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. When conducting research, gather relevant information from n credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, interpretation, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college and career ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline and the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.

[22] Measuring text complexity involves (1) a qualitative evaluation of the text, (2) a quantitative evaluation of the text, and (3) matching reader to text and task. See Appendix A of the Common Core State Standards .

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College and Career Readiness Anchor Standards for Speaking and Listening

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that:
   - Listeners can follow the line of reasoning.
   - The organization, development, vocabulary, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To become college and career ready, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner—built around important content in various domains. They must be able to contribute appropriately to these conversations, to make comparisons and contrasts, and to analyze and synthesize a multitude of ideas in accordance with the standards of evidence appropriate to a particular discipline. Whatever their intended major or profession, high school graduates will depend heavily on their ability to listen attentively to others so that they are able to build on others' meritorious ideas while expressing their own clearly and persuasively.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology is changing quickly, creating a new urgency for students to be adaptable in response to change.

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Grades 6–8 Reading Standards

Grades 6–8 Reading Standards for Literacy in the Content Areas: History/Social Studies [RCA-H]

The standards below begin at grade 6; standards for K–5 reading in history/social studies, science, mathematics,[23] and career and technical subjects are integrated into the K–5 Reading Standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Key Ideas and Details

1. Cite specific textual evidence to support analysis of primary and secondary sources, quoting or paraphrasing as appropriate. (See grades 6–8 Writing Standard 8 for more on paraphrasing.)
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.
3. Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
5. Describe how a text presents information (e.g., sequentially, comparatively, causally), including how written texts incorporate features such as headings.
6. Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Integration of Knowledge and Ideas

7. Integrate visual information (e.g., charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
8. Distinguish among fact, opinion, and reasoned judgment in a text.
9. Analyze the relationship between a primary and secondary source on the same topic.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend history/social studies texts exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

[23] These standards do not set expectations for reading in mathematics at grades 6–12.

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Grades 6–8 Reading Standards for Literacy in the Content Areas: Science and Career and Technical Subjects [RCA-ST]

Note: These standards do not apply to mathematics. The standards do not set expectations for reading in mathematics at grades 6–12.

Key Ideas and Details

1. Cite specific textual evidence to support analysis of science and technical texts, quoting or paraphrasing as appropriate. (See grades 6–8 Writing Standard 8 for more on quoting and paraphrasing.)
2. Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
3. Follow precisely a multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks.

Craft and Structure

4. Determine the meaning of general academic vocabulary as well as symbols, notation, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.
5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.
6. Analyze an author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.

Integration of Knowledge and Ideas

7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend science/technical texts exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

Grades 6–8 Writing Standards for Literacy in the Content Areas [WCA]

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

Text Types and Purposes

1. Write arguments focused on *discipline-specific content.*
   a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from

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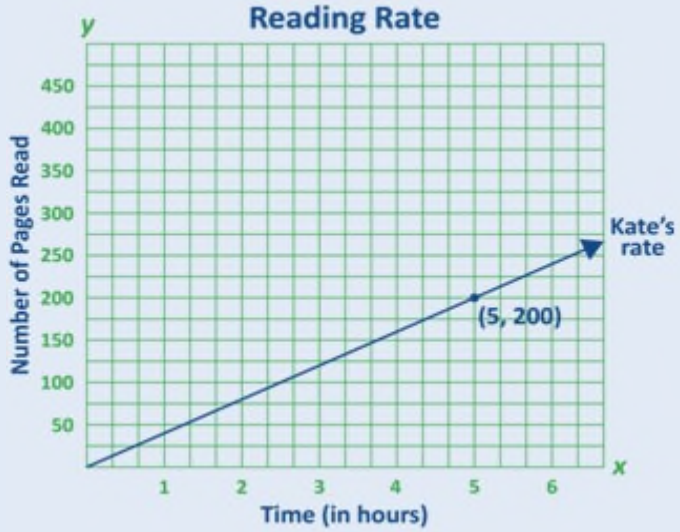
alternate or opposing claims/critiques, and organize the reasons and evidence logically in paragraphs and sections.

b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources.

c. Use words, phrases, and clauses with precision to create cohesion and clarify the relationships among claim(s), counterclaims/critiques, reasons, and evidence.

d. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing).

e. Provide a concluding statement or section that follows from and supports the argument presented.



Grade 8 math students, read, write, and reason to solve this problem:
Kate is reading a 500-page book. The graph represents the relationship between the number of hours Kate has spent reading and the number of pages she has read.

a. At what rate, in pages per hour, is Kate reading? Show or explain how you got your answer.
b. What is the total amount of time, in hours, it will take Kate to read the entire 500-page book? Show or explain how you got your answer.

Edward is reading the same 500-page book. The equation y=50x represents the relationship between y, the number of pages he has read, and x, the number of hours he has spent reading.

c. On the grid, graph the equation that represents the number of hours that Edward has spent reading and the number of pages he has read. Label the line "Edward's rate."

Edward thinks he will finish reading the book in less time than Kate. Is he correct?
Show or explain how you got your answer.

Connections to the Standards for Mathematical Practice

2. *Reason abstractly and quantitatively.*

3. *Construct viable arguments and respond to the reasoning of others.*

See Rhode Island Mathematics Standards.

2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

a. Introduce a topic clearly, previewing what is to follow; use paragraphs and sections to organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include text features (e.g., headings), graphics (e.g., charts, tables), and multimedia when

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useful to aiding comprehension.

b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.

c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas, concepts, or procedures.

d. Use precise language and domain-specific vocabulary to inform about or explain the topic.

e. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing).

f. Provide a concluding statement or section that follows from and supports the information or explanation presented.

In a Writing Standards in Action sample of informational/explanatory text, a seventh grader uses research on archaeological discoveries in Egypt's Valley of the Kings as the basis for creating an imagined first-hand account in a fictional archaeologist's journal. Through a number of sometimes extended entries, the writer sustains a believable tone and sense of wonder. (W.7.3,WCA.6-8.2, WCA.6-8.8, L.7.1, L.7.2, L.7.3)

3. (See note; not applicable as a separate requirement.)[24]

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Two writers' responses (1 and 2) to the Dalai Lama's essay, "Many Faiths, One Truth," published in the* New York Times*, are text-based essays that use a formal tone and careful organization appropriate to the Letters to the Editor section of a major newspaper. (WCA.6–8.1, WCA.6–8.4, WCA.6–8.9, RCA.8.1, RCA.6–8.6, RCA.6–8.8, L.8.2, L.8.3) See the Writing Standards in Action Project for more.

5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.

Connections to the Standards for Mathematical Practice
6. *Attend to precision.*
See the Rhode Island *Mathematics Standards.*

6. Use technology, including current web-based communication platforms, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

If you could go back to ancient Greece, would you rather live in Athens or in Sparta? In a paired set of arguments posted on Writing Standards in Action, two students make separate cases for the superiority of Athens and Sparta respectively, supporting their arguments with what they have read about the city states in social studies classes. (WCA.6–8.1, WCA.6–8.7, L.6.3, L.6.6)

8. When conducting research, gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

[24] Students' narrative skills continue to grow in these grades. The standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science, mathematics, and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations, analyses, or technical work so that others can replicate them and (possibly) reach the same results. In addition, career/vocational courses may involve more specific forms of narrative composition: scripts and storyboards in filmmaking, timelines and interview write-ups in journalism, instructions for a tool's assembly or safe use in carpentry, and more.

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For example, in a science unit, students explore ecosystem dynamics as seen through a study of invasive species. They research how invasive species are introduced, the impacts they have on local food webs, and how ecosystems react to invasives. The unit involves reading and research, vocabulary development, models, data analysis and writing. (RCA-ST.6–8.4, WCA.6–8.8, WCA.6–8.9)

9. Draw evidence from informational texts to support analysis, interpretation, reflection, and research. (See grades 6–8 Reading Standard 1 for more on the use of textual evidence.)

Range of Writing

10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Grades 6–8 Speaking and Listening Standards for Literacy in the Content Areas [SLCA]

The standards below begin at grade 6; standards for K–5 speaking and listening are integrated into the K–5 Speaking and Listening Standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Comprehension and Collaboration

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *discipline-specific topics, texts, and issues*, building on others' ideas and expressing their own clearly.
    a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. (See grades 6–8 Reading Standard 1 for more on the use of textual evidence.)
    b. Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
    c. Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
    d. Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

    Connections to the Standards for Mathematical Practice
    2. *Reason abstractly and quantitatively.*
    3. *Construct viable arguments and respond to the reasoning of others.*
    See Rhode Island Mathematics Standards.
2. Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.

    Connections to the Standards for Mathematical Practice
    2. Reason abstractly and quantitatively.
    3. Construct viable arguments and respond to the reasoning of others.
    6. Attend to precision.
    See Rhode Island Mathematics Standards.
3. Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.

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For example, after an author of science books on endangered animal species visits their class to talk about her research and writing, students write reports on what she said, summarizing important points and arranging them in a logical order. (WCA.6–8.2, SLCA.6–8.3)

Presentation of Knowledge and Ideas

4. Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate vocabulary, eye contact, volume, and pronunciation.

   For example, students in a music class experience and analyze various "theme and variations" in musical compositions. They use their understanding of variation of a musical theme to analyze how American composer Charles Ives manipulated and varied a familiar musical tune, "America." The unit culminates with a summative performance in which collaborative groups compose and perform original short themes and three variations on them and explain their work. (RCA-ST.6–8.4, RCA-ST.6–8.5, SLCA.6–8.4)

   Connections to the Standards for Mathematical Practice

   2. Reason abstractly and quantitatively.
   3. Construct viable arguments and respond to the reasoning of others.
   6. Attend to precision.
   See Rhode Island Mathematics Standards.
5. Integrate multimedia components and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

   For example, as they study proportional relationships in math, students learn to use data to construct linear graphs and to explain in words the meanings of these visual displays. To demonstrate what they have learned, students research the income potential of various summer job opportunities, present the visual data, and make arguments for a particular job choice justified by valid mathematical reasoning and an explanation of how the experience the job offers supports their interests and career goals. (WCA.6–8.1, SLCA.6–8.5)
6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

Grades 9–10 Reading Standards

Grades 9–10 Reading Standards for Literacy in the Content Areas: History/Social Studies [RCA-H]

Key Ideas and Details

1. Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of a text.
3. Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.
5. Analyze how a text uses structure to emphasize key points or advance an explanation or analysis.

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6. Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

Integration of Knowledge and Ideas

7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.
8. Assess the extent to which the reasoning and evidence in a text support the author's claims.

   For example, students compose an essay for their humanities class on deTocqueville's observations of life in America in the 1830s, and argue whether or not his claims about America are still relevant in the twenty-first century. They support their argument with examples drawn from economic, political, and social aspects of modern life. (RCA-H.9–10.1, RCA-H.9–10.8, WCA.9–10.1).
9. Compare and contrast treatments of the same topic in several primary and secondary sources.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend history/social studies texts exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

Grades 9–10 Reading Standards for Literacy in the Content Areas: Science and Career and Technical Subjects [RCA-ST]

Key Ideas and Details

1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
2. Determine the central ideas or conclusions of a text; trace a text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of a text.
3. Follow precisely a complex multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

   For example, students in a carpentry class learn the procedure for framing a shed. Their reading includes an illustrated manual for relevant technical terms, such as framing square, sill, joist, beam, column, header, as well as manuals on power tool safety and building codes. Their final project consists of a scale model mockup of the built structure and a written multi-step procedure plan for building it. (RCA-ST.9–10.3, RCA-ST.9–10.4, WCA.9–10.2, WCA.9–10.3)

Craft and Structure

4. Determine the meaning of general academic vocabulary as well as symbols, notation, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 9–10 texts and topics*.
5. Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., *force, friction, reaction force, energy*).
6. Analyze an author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

Integration of Knowledge and Ideas

7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
8. Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.

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9. Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend science/technical texts exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

For example, students in a culinary arts class read about food safety, sanitation, and the uses of chemicals in institutional and restaurant food service kitchens. They read technical manuals on hazard analysis and safety data sheets to develop guidelines for procedures to support safety in food handling. (RCA-ST.9–10.10, WCA.9–10.2, WCA.9–10.3, WCA.9–10.10)

Grades 9–10 Writing Standards for Literacy in the Content Areas [WCA]

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

Text Types and Purposes

1. Write arguments focused on *discipline-specific content.*
    - **a.** Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims/critiques, and create an organization that establishes clear relationships among the claim(s), counterclaims/critiques, reasons, and evidence.
    - **b.** Develop claim(s) and counterclaims/critiques fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims/critiques in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns.
    - **c.** Use words, phrases, and clauses with precision to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims/critiques.
    - **d.** Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
    - **e.** Provide a concluding statement or section that follows from or supports the argument presented.

    Connections to the Standards for Mathematical Practice
    2. *Reason abstractly and quantitatively.*
    3. *Construct viable arguments and respond to the reasoning of others.*
    See Rhode Island Mathematics Standards.
2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
    - **a.** Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include text features (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
    - **b.** Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete

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details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.

c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas, concepts, or procedures.

d. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers.

e. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.

f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

3. (See note; not applicable as a separate requirement.)[25]

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. ***Connections to the Standards for Mathematical Practice***
6. *Attend to precision.*
See Rhode Island Mathematics Standards.

6. Use technology, including current web-based communication platforms, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

8. When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

9. Draw evidence from informational texts to support analysis, interpretation, reflection, and research. (See grades 9–10 Reading Standard 1 for more on the use of textual evidence.)

Range of Writing

10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

[25] Students' narrative skills continue to grow in these grades. The standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science, mathematics, and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations, analyses, or technical work that others can replicate them and (possibly) reach the same results. In addition, career/vocational courses may involve more specific forms of narrative composition: scripts and storyboards in filmmaking, timelines and interview write-ups in journalism, instructions for a tool's assembly or safe use in carpentry, and more.

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Grades 9–10 Speaking and Listening Standards for Literacy in the Content Areas [SLCA]

The standards below begin at grade 6; standards for K–5 speaking and listening are integrated into the K–5 Speaking and Listening Standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Comprehension and Collaboration

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *discipline-specific topics*, *texts*, *and issues*, building on others' ideas and expressing their own clearly and persuasively.
    a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (See grades 9–10 Reading Standard 1 for more on the use of textual evidence.)
    b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.
    c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.
    d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

    Connections to the Standards for Mathematical Practice
    2. *Reason abstractly and quantitatively.*
    3. *Construct viable arguments and respond to the reasoning of others.*
    See Rhode Island Mathematics Standards.
2. Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

For example, students encounter the following word problem:
A math teacher gives her student his score on the last test. She provides him with an expression that has a value equal to the number of points he scored on the test.
$9 + 8\,[4 + 2(3 - 5)^2] - 3 \cdot 4$
Gerard estimates that he scored 90 points on the test. The expression below represents the actual number of points he scored on the test. What is the difference between Gerard's estimate and the actual number of points he scored on the test? Explain how you got your answer. (SLCA. 9-10.1, SCLA.9-10.2)

Connections to the Standards for Mathematical Practice
2. Reason abstractly and quantitatively.
3. Construct viable arguments and respond to the reasoning of others.
6. Attend to precision.
See Rhode Island Mathematics Standards.

3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any Fallacious reasoning or exaggerated or distorted evidence.

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Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience, and task.

For example, students in a high school geometry class develop their understanding of congruence, transformation, and visual design in order to answer the essential question, "How can a shape change yet remain the same?" They learn how context determines the meaning of a word as they learn the precise mathematical meanings of the words transformation, translation, reflection, and rotation. Students create an original fabric design that uses transformations of shapes; in addition to producing the design itself, students write a report to explain why their design is based on transformation and congruence and give instructions on how to reproduce the design. Their culminating project is an oral and visual presentation of the project. (WCA.9–10.1, WCA.9–10.2, SLCA.9–10.4)

Connections to the Standards for Mathematical Practice
2. Reason abstractly and quantitatively.
3. Construct viable arguments and respond to the reasoning of others.
6. Attend to precision.
See Rhode Island Mathematics Standards.

5. Make strategic use of digital media (e.g., audio, visual, interactive elements) in presentations to enhance understanding of findings, claims, reasoning, and evidence and to add interest.
6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

For example, students modify their report on a science project, originally designed to be presented to parents and a panel of adult experts, for presentation to a class of third graders. (WCA.9–10.2, SLCA.9–10.6)

Grades 11–12 Reading Standards

Grades 11–12 Reading Standards for Literacy in the Content Areas: History/Social Studies [RCA-H]

Key Ideas and Details

1. Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where a text leaves matters uncertain.

Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).
5. Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.

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6. Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.

Integration of Knowledge and Ideas

7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
8. Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.
9. Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.

For example, as part of a unit on making a presentation about immigration to this country in the twentieth and twenty-first centuries, students generate questions to ask neighbors, family members, or local experts about the topic. They also develop discussion questions about immigrants from a particular country, such as Brazil, Guatemala, Haiti, Somalia, Syria, India, or Ireland, to guide their reading of chapters from books, articles, and digital media on the topic. To add visual interest to their presentation, they find historic photographs on websites such as the Library of Congress. Finally they integrate the information into a media presentation that focuses on immigrants' reasons for coming to the United States, the social and economic conditions they faced upon arrival, and how the immigrant group has fared economically and socially in the U.S. in the twenty-first century. (RCA-H.11–12.7, RCA-H.11–12.9, WCA.11–12.4, SLCA.11–12.4, SLCA.11–12.5)

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend history/social studies texts exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

Grades 11–12 Reading Standards for Literacy in the Content Areas: Science and Career and Technical Subjects [RCA-ST]

Key Ideas and Details

1. Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

For example, in an interdisciplinary science unit on ocean systems, students read and view resources from the National Oceanic and Atmospheric Administration (NOAA) and the Public Broadcasting System (PBS). Following an introduction to the Gulf of Maine, students explore the 1) physical/chemical features of the Gulf of Maine and how they affect marine species, 2) the Gulf of Maine marine ecosystem and the interconnectedness of its components, and 3) human impacts on the ocean system. Students grapple with real-world problems currently facing New England's marine resources, such as cod overfishing, habitat reduction due to invasive fishing methods, and reductions in key species due to bycatch, and make a presentation to a community group on sustainable seafood in New England. (RCA-ST.11–12.1, WCA.11–12.1, SLCA.11–12.4)

2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
3. Follow precisely a complex multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Craft and Structure

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4. Determine the meaning of general academic vocabulary as well as symbols, notation, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11–12 texts and topics*.
5. Analyze how a text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.
6. Analyze an author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.

Integration of Knowledge and Ideas

7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.
9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

Range of Reading and Level of Text Complexity

10. Independently and proficiently read and comprehend science/technical texts exhibiting complexity appropriate for the grade/course. (See Appendix A & Appendix A New Research.)

Grades 11–12 Writing Standards for Literacy in the Content Areas [WCA]

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

Text Types and Purposes

1. Write arguments focused on *discipline-specific content*.
    a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims/critiques, reasons, and evidence.
    b. Develop claim(s) and counterclaims/critiques fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims/critiques in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.
    c. Use words, phrases, and clauses with precision as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims/critiques.
    d. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
    e. Provide a concluding statement or section that follows from or supports the argument presented.

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Connections to the Standards for Mathematical Practice
2. *Reason abstractly and quantitatively.*
3. *Construct viable arguments and respond to the reasoning of others.*
See Rhode Island Mathematics Standards.

2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
    a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include text features (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
    b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
    c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas, concepts, or procedures.
    d. Use precise language, domain-specific vocabulary and techniques to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
    e. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.
    f. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).
3. (See note; not applicable as a separate requirement.)[26]

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

    Connections to the Standards for Mathematical Practice
    6. *Attend to precision.*
    See Rhode Island Mathematics Standards.
6. Use technology, including current Web-based communication platforms, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

[26] Students' narrative skills continue to grow in these grades. The standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science, mathematics, and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations, analyses, or technical work that others can replicate them and (possibly) reach the same results. In addition, career/vocational courses may involve more specific forms of narrative composition: scripts and storyboards in filmmaking, timelines and interview write-ups in journalism, instructions for a tool's assembly or safe use in carpentry, and more.

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For example, in a fourth-year mathematics unit on financial literacy, students build on their learning from Algebra I and Algebra II. They take on the role of a financial planner to make recommendations for three hypothetical clients, each of whom has different financial goals. Students keep math journals throughout the project to record their understanding of inverse functions and their reasoning about the exponential growth of investments. Their final reports are scored on the accuracy and completeness of their graphical representations, the accuracy of the algebraic evidence they present, the strength of their reasoning, the precision of their language and their overall verbal and mathematical communications skills. (WCA.11–12.1, WCA.11–12.7)

8. When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9. Draw evidence from informational texts to support analysis, interpretation, reflection, and research. (See grades 11–12 Reading Standard 1 for more on the use of textual evidence.)

Range of Writing

10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Grades 11–12 Speaking and Listening Standards for Literacy in the Content Areas [SLCA]

The standards below begin at grade 6; standards for K–5 speaking and listening are integrated into the K–5 Speaking and Listening Standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Comprehension and Collaboration

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *discipline-specific topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.
   a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (See grades 11–12 Reading Standard 1 for more on the use of textual evidence.)
   b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
   c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.
   d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions and critiques when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

Connections to the Standards for Mathematical Practice

2. *Reason abstractly and quantitatively.*

3. *Construct viable arguments and respond to the reasoning of others.*

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See Rhode Island Mathematics Standards.

2. Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
   Connections to the Standards for Mathematical Practice
   2. Reason abstractly and quantitatively.
   3. Construct viable arguments and respond to the reasoning of others.
   6. Attend to precision.
   See Rhode Island Mathematics Standards.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.
   For example, as students in a civics class watch a televised debate among candidates for political office, they use a professional evaluation form, such as the guidelines developed by the National Issues Forum, to evaluate the effectiveness of candidates' responses to questions.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.
   Connections to the Standards for Mathematical Practice
   2. Reason abstractly and quantitatively.
   3. Construct viable arguments and respond to the reasoning of others.
   6. Attend to precision.
   See Rhode Island Mathematics Standards.
5. Make strategic use of digital media (e.g., audio, visual, and interactive elements) in presentations to enhance understanding of findings, claims, reasoning, and evidence and to add interest.
   For example, students studying digital video production create a script for a short documentary video, a storyboard with pictorial indications of camera angles, and a digital project file for the production that includes footage, audio, titles, and credits. They present their video to an audience and answer questions about the content of the view and the process of their work. (RCA-ST.11–12.4, WCA.11–12.4, SLCA.11–12.5)
6. Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.

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Common Core State Standards / Rhode Island Core Standards Comparison Tables

K-12 English Language Arts

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Common Core State Standards / Rhode Island Core Standards Comparison

Grades K-12 English Language Arts/Literacy

Kindergarten Standards

Kindergarten Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. With prompting and support, ask and answer questions about key details in a text.	No change
2. With prompting and support, retell familiar stories, including key details.	No change
3. With prompting and support, identify characters, settings, and major events in a story.	No change
4. Ask and answer questions about unknown words in a text.	Ask and answer questions about unknown words in a text. (See kindergarten Language standards 4–6 on applying knowledge of vocabulary to reading.)
5. Recognize common types of texts (e.g., storybooks, poems).	Recognize common types of texts and characteristics of their structure (e.g., story elements in books; rhyme, rhythm, and repetition in poems).
6. With prompting and support, name the author and illustrator of a story and define the role of each in telling the story.	With prompting and support, explain that reading the cover or title page is how to find out who created a book; name the author and illustrator of a book and define the role of each in telling the story.

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7. With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).	No change
8. (Not applicable to literature)	(Not applicable ~~to literature~~)
9. With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.	No change
10. Actively engage in group reading activities with purpose and understanding.	No change

Kindergarten Reading Standards for Informational Texts	
Common Core State Standard	**Rhode Island Core Standards**
1. With prompting and support, ask and answer questions about key details in a text.	No change
2. With prompting and support, identify the main topic and retell key details of a text.	No change
3. With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.	No change
4. With prompting and support, ask and answer questions about unknown words in a text.	No change
5. Identify the front cover, back cover, and title page of a book.	No change
6. Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.	No change
7. With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).	No change

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8. With prompting and support, identify the reasons an author gives to support points in a text.	No change
9. With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).	No change
10. Actively engage in group reading activities with purpose and understanding.	No change

Kindergarten Reading Standards: Foundational Skills	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate understanding of the organization and basic features of print. a. Follow words from left to right, top to bottom, and page by page. 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.	No change
2. 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) and in three-phoneme (consonant-vowel-consonant, or CVC) words. (This does not include CVCs ending with /l/, /r/, or /x/.)	No change
3. Know and apply grade-level phonics and word analysis skills in decoding words.	No change

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a. Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sound or many of the most frequent sounds of 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. Read emergent-reader texts with purpose and understanding.	Read early-emergent-reader texts with purpose and understanding.

Kindergarten Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., *My favorite book is . . .*).	No change
2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.	No change
3. Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.	No change
4. (Begins in grade 3)	(Begins in grade 1)
5. With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.	With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed. a. (Begins in grade 3)

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	b. Demonstrate the ability to use vocabulary appropriate for kindergarten (as described in kindergarten Language standards 4–6).
6. With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.	No change
7. Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).	No change
8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.	No change
9. (Begins in grade 4)	No change
10. (Begins in grade 3)	Write or dictate writing routinely for a range of tasks, purposes, and audiences.

Kindergarten Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. 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.	No change
2. Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.	No change
3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood.	No change

4. Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.	No change
5. Add drawings or other visual displays to descriptions as desired to provide additional detail.	No change
6. Speak audibly and express thoughts, feelings, and ideas clearly.	No change

Kindergarten Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Print many upper- and lowercase letters. b. Use frequently occurring nouns and verbs. c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., *dog*, *dogs*; *wish*, *wishes*). d. Understand and use question words (interrogatives) (e.g., *who*, *what*, *where*, *when*, *why*, *how*). e. Use the most frequently occurring prepositions (e.g., *to*, *from*, *in*, *out*, *on*, *off*, *for*, *of*, *by*, *with*). f. Produce and expand complete sentences in shared language activities.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned previously. *Sentence Structure and Meaning* a. Demonstrate the ability to produce and expand complete sentences using frequently occurring nouns, pronouns, adjectives, verbs, question words, and prepositions; name and use in context numbers 0–100 (see kindergarten mathematics standards for Counting and Cardinality). b. Form questions that seek additional information, rather than a simple *yes/no* answer. *Word Usage* a. Form regular plural nouns orally by adding */s/* or */es/*.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Capitalize the first word in a sentence and the pronoun *I*. b. Recognize and name end punctuation. c. Write a letter or letters for most consonant and short-vowel sounds (phonemes).	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Print upper- and lowercase letters. b. Capitalize the first word in a sentence and the pronoun *I*. c. Recognize and name end punctuation.

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d. Spell simple words phonetically, drawing on knowledge of sound-letter relationships.	d. Write a letter or letters for most consonant and short-vowel sounds (phonemes). e. Spell simple words phonetically, drawing on knowledge of sound-letter relationships. f. Write numbers 0–20 (see kindergarten mathematics standards for Counting and Cardinality).
3. (Begins in grade 2)	No change
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *kindergarten reading and content*. a. Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* is a bird and learning the verb *to duck*). b. Use the most frequently occurring inflections and affixes (e.g., *-ed*, *-s*, *re-*, *un-*, *pre-*, *-ful*, *-less*) as a clue to the meaning of an unknown word.	5. 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. [Deleted at K level]
5. 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.	No change
6. 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.	No change

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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.	

First Grade Standards

Grade 1 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Ask and answer questions about key details in a text.	No change
2. Retell stories, including key details, and demonstrate understanding of their central message or lesson.	No change
3. Describe characters, settings, and major events in a story, using key details.	No change
4. Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.	Identify words and phrases in stories or poems that suggest feelings or appeal to the senses. (See grade 1 Language standards 4–6 on applying knowledge of vocabulary to reading.)
5. Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of text types.	Identify characteristics of common types of stories, including folktales and fairy tales.
6. Identify who is telling the story at various points in a text.	No change
7. Use illustrations and details in a story to describe its characters, setting, or events.	No change
8. (Not applicable to literature)	(Not applicable. For expectations regarding central messages or lessons in stories, see RL.2.)

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9. Compare and contrast the adventures and experiences of characters in stories.	No change
10. With prompting and support, read prose and poetry of appropriate complexity for grade 1	With prompting and support, read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 1.

Grade 1 Reading Standards for Informational Texts	
Common Core State Standard	**Rhode Island Core Standards**
1. Ask and answer questions about key details in a text.	No change
2. Identify the main topic and retell key details of a text.	No change
3. Describe the connection between two individuals, events, ideas, or pieces of information in a text.	No change
4. Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.	No change
5. Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.	No change
6. Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.	No change
7. Use the illustrations and details in a text to describe its key ideas.	No change
8. Identify the reasons an author gives to support points in a text.	No change
9. Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).	No change
10. With prompting and support, read informational texts appropriately complex for grade 1.	With prompting and support, read and comprehend informational texts exhibiting complexity appropriate for at least grade 1.

Grade 1 Reading Standards: Foundational Skills	
Common Core State Standard	**Rhode Island Core Standards**
1. 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).	No change
2. 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).	No change
3. 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.	No change

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4. Read with sufficient accuracy and fluency to support comprehension. a. Read on-level texts with purpose and understanding. b. Read on-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.	Read with sufficient accuracy and fluency to support comprehension. a. Read grade-level texts 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.

Grade 1 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.	No change
2. Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.	No change
3. Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.	Write narratives in prose or poem form that recount two or more appropriately sequenced events or experiences, include some details about what happened or was experienced, use temporal words to signal ~~event~~ order where appropriate, and provide some sense of closure. a. For poems, use rhyming words and words that repeat long or short vowel sounds to create structure (see grade 1 Reading Foundational standard 2a).
4. (Begins in grade 3)	Produce writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.	With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.

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	a. (Begins in grade 3) b. Demonstrate the ability to choose and use appropriate vocabulary (as described in Language standards 4–6 up to and including grade 1).
6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.	No change
7. Participate in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions).	No change
8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.	No change
9. (Begins in grade 4)	No change
10. (Begins in grade 3)	Write routinely for a range of tasks, purposes, and audiences.

Grade 1 Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. 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.	No change
2. Ask and answer questions about key details in a text read aloud or information presented orally or through other media	No change

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3. Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.	No change
4. Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly,	No change
5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	No change
6. Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3.)	No change

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Grade 1 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Print all upper- and lowercase letters. a. Use common, proper, and possessive nouns. b. Use singular and plural nouns with matching verbs in basic sentences (e.g., *He hops*; *We hop*). c. Use personal, possessive, and indefinite pronouns (e.g., *I*, *me*, *my*; *they*, *them*, *their*; *anyone*, *everything*). d. Use verbs to convey a sense of past, present, and future (e.g., *Yesterday I walked home*; *Today I walk home*; *Tomorrow I will walk home*). e. Use frequently occurring adjectives. f. Use frequently occurring conjunctions (e.g., *and*, *but*, *or*, *so*, *because*). g. Use determiners (e.g., articles, demonstratives). h. Use frequently occurring prepositions (e.g., *during*, *beyond*, *toward*). i. Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. *Sentence Structure and Meaning* a. Produce and expand simple and compound sentences. b. Demonstrate understanding that a question is a type of sentence. c. Use singular and plural nouns with matching verbs in sentences. d. Use verbs in sentences to convey a sense of past, present, and future. *Word Usage* e. Use common, proper, and possessive nouns. f. Use personal, possessive, and indefinite pronouns. g. Use frequently occurring prepositions, adjectives, adverbs, conjunctions, and articles.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Capitalize dates and names of people. b. Use end punctuation for sentences. c. Use commas in dates and to separate single words in a series. d. Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words. e. Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Print legibly all upper- and lowercase letters. b. Use end punctuation for sentences. c. Capitalize the names of months and people. d. Use commas in dates and separate individual words in a series. e. Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words. f. Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.

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	g. Write numerals up to 120 (see grade 1 mathematics standards for Numbers and Operations in Base 10); understand that numbers are also written as words; write words for numbers from one to ten.
3. (Begins in grade 2)	No change
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 1 reading and content*, choosing flexibly from an array of strategies. a. Use sentence-level context as a clue to the meaning of a word or phrase. b. Use frequently occurring affixes as a clue to the meaning of a word. c. Identify frequently occurring root words (e.g., *look*) and their inflectional forms (e.g., *looks*, *looked*, *looking*).	No change
5. 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.	No change
6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., *because*).	Use words and phrases acquired through conversations, activities in the grade 1 curriculum, reading and being read to, and responding to texts, including using frequently occurring conjunctions (e.g., *because*) to signal simple relationships. (See grade 1 Reading Literature standard 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grade 1 Writing standard 5 and

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	Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

Second Grade Standards

Grade 2 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details in a text.	No change
2. Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.	Retell stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.
3. Describe how characters in a story respond to major events and challenges.	No change
4. Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.	Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song. (See grade 2 Language standards 4–6 on applying knowledge of vocabulary to reading.)
5. Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.	No change
6. Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.	Explain what dialogue is and how it can reveal characters' thoughts and perspectives.
7. Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.	No change
8. (Not applicable to literature)	(Not applicable. For expectations regarding central messages, lessons, or morals in stories, see RL.2.)

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9. Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.	No change
10. By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 2.

Grade 2 Reading Standards for Informational Texts	
Common Core State Standard	**Rhode Island Core Standards**
1. Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details in a text.	No change
2. Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.	No change
3. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.	Describe the connection between a series of historical events, scientific ideas or concepts, mathematical ideas or concepts, or steps in technical procedures in a text.
4. Determine the meaning of words and phrases in a text relevant to a *grade 2 topic or subject area*.	No change
5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.	No change
6. Identify the main purpose of a text, including what the author wants to answer, explain, or describe.	No change
7. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.	No change
8. Describe how reasons support specific points the author makes in a text.	No change
9. Compare and contrast the most important points presented by two texts on the same topic.	No change

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10. By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 2.

Grade 2 Reading Standards: Foundational Skills	
Common Core State Standard	**Rhode Island Core Standards**
1. (No standard at this grade level.)	(No standard at this grade level.)
2. (No standard at this grade level.)	(No standard at this grade level.)
3. 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.	No change
4. Read with sufficient accuracy and fluency to support comprehension. a. Read on-level texts with purpose and understanding. b. Read on-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.	Read with sufficient accuracy and fluency to support comprehension. a. Read grade-level texts 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.

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Grade 2 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., *because*, *and*, *also*) to connect opinion and reasons, and provide a concluding statement or section.	No change
2. Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.	No change
3. Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.	Write narratives in prose or poem form that recount a well-elaborated event or experience, or a set of events or experiences; include details and dialogue to show actions, thoughts, and feelings; use temporal words to signal ~~event~~ order where appropriate; and provide a sense of closure. For poems, use words and phrases that form patterns of sounds (e.g., regular beats, alliteration, end rhymes, repeated sounds in words or lines) to create structure. (See grade 2 Reading Literature standard 4.)
4. (Begins in grade 3)	Produce writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.	With guidance and support from adults and peers, Focus on a topic and strengthen writing as needed by revising and editing. a. (Begins in grade 3) b. Demonstrate the ability to choose and use appropriate vocabulary (as described in Language standards 4–6 up to and including grade 2).
6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.	No change

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7. Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).	No change
8. Recall information from experiences or gather information from provided sources to answer a question.	No change
9. (Begins in grade 4)	No change
10. (Begins in grade 3)	Write routinely for a range of tasks, purposes, and audiences.

Grade 2 Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. 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.	No change
2. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.	No change
3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.	No change
4. Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.	No change
5. Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.	No change

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6. Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 2 Language standards 1 and 3.)	No change

Grade 2 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Use collective nouns (e.g., *group*). b. Form and use frequently occurring irregular plural nouns (e.g., *feet*, *children*, *teeth*, *mice*, *fish*). c. Use reflexive pronouns (e.g., *myself*, *ourselves*). d. Form and use the past tense of frequently occurring irregular verbs (e.g., *sat*, *hid*, *told*). e. Use adjectives and adverbs, and choose between them depending on what is to be modified. f. Produce, expand, and rearrange complete simple and compound sentences (e.g., *The boy watched the movie*; *The little boy watched the movie*; *The action movie was watched by the little boy*).	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. *Sentence Structure and Meaning* a. Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences and choose among sentence types depending on the meaning to be conveyed. b. Use adjectives and adverbs in sentences and choose between them depending on what is to be modified. *Word Usage* c. Use collective nouns and frequently occurring irregular plural nouns. d. Use reflexive pronouns. e. Form and use the past tense of frequently occurring irregular verbs.

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2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Capitalize holidays, product names, and geographic names. b. Use commas in greetings and closings of letters. c. Use an apostrophe to form contractions and frequently occurring possessives. d. Generalize learned spelling patterns when writing words (e.g., *cage* → *badge*; *boy* → *boil*). e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Print upper- and lowercase letters legibly and fluently. b. Capitalize holidays, product names, and geographic names. c. Use commas in greetings and closings of letters. d. Use an apostrophe to form contractions and frequently occurring possessives. e. Generalize learned spelling patterns when writing words (e.g., *cage* → *badge*; *boy* → *boil*). f. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings. g. Demonstrate understanding that context determines whether the writer uses a numeral or a written number (e.g., numerals in 1 + 3 = 4, but written words in "When I was one, I was just begun, / When I was two, I was still quite new" from A. A. Milne's poem "Now We Are Six")
3. Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Compare formal and informal uses of English.	No change
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 2 reading and content*, choosing flexibly from an array of strategies. a. Use sentence-level context as a clue to the meaning of a word or phrase. b. Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., *happy*/*unhappy*, *tell*/*retell*). c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *addition*, *additional*).	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*).

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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.	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. f. Recognize and use appropriately abbreviations related to grade-level content or commonly used in everyday life (e.g., *a.m., p.m.*) g. Recognize and use appropriately symbols related to grade-level content or commonly used in everyday life (e.g., *$, ¢*).
5. 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*).	No change
6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., *When other kids are happy that makes me happy*).	Use words and phrases acquired through conversations, activities in the grade 2 curriculum, reading and being read to, and responding to texts, including using adjectives and adverbs to describe. (See grade 2 Reading Literature standard 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grade 2 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

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Third Grade Standards

Grade 3 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	No change
2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.	Retell stories, including fables, folktales, and myths from diverse cultures, determine the central message, lesson, or moral and explain how it is conveyed through key details in a text.
3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.	No change
4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.	Determine the meaning of words and phrases as they are used in a text, distinguishing literal from figurative language. (See grade 3 Language standards 4–6 on applying knowledge of vocabulary to reading.)
5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as *chapter*, *scene*, and *stanza*; describe how each successive part builds on earlier sections.	Identify common structural elements of fiction (e.g., problem, solution); describe how each successive part of a text builds on earlier sections.
6. Distinguish their own point of view from that of the narrator or those of the characters.	No change
7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).	No change
8. (Not applicable to literature)	(Not applicable. For expectations regarding central messages, lessons, or morals in stories, see RL.2.)

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9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).	No change
10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2–3 text complexity band independently and proficiently	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 3.

Grade 3 Reading Standards for Informational Texts	
Common Core State Standard	**Rhode Island Core Standards**
1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.	No change
2. Determine the main idea of a text; recount the key details and explain how they support the main idea.	No change
3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.	Describe the relationship between a series of historical events, scientific ideas or concepts, mathematical ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 3 topic or subject area*.	No change
5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.	No change
6. Distinguish their own point of view from that of the author of a text.	No change
7. Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).	Use information gained from illustrations (e.g., maps, photographs) and the words, numbers, and symbols in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

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8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).	No change
9. Compare and contrast the most important points and key details presented in two texts on the same topic.	No change
10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.	Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 3.

Grade 3 Reading Standards: Foundational Skills	
Common Core State Standard	**Rhode Island Core Standards**
1. (No standard at this grade level.)	(No standard at this grade level.)
2. (No standard at this grade level.)	(No standard at this grade level.)
3. 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.	No change
4. Read with sufficient accuracy and fluency to support comprehension. a. Read on-level texts with purpose and understanding. b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.	Read with sufficient accuracy and fluency to support comprehension. a. Read grade-level texts with purpose and understanding.

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

Grade 3 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write opinion pieces on topics or texts, supporting a point of view with reasons. a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons. b. Provide reasons that support the opinion. c. Use linking words and phrases (e.g., *because*, *therefore*, *since*, *for example*) to connect opinion and reasons. d. Provide a concluding statement or section.	Write opinion pieces on topics or texts, supporting an opinion with reasons. a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons. b. Provide reasons that support the opinion. c. Use linking words and phrases (e.g., *because*, *therefore*, *since*, *for example*) to connect opinion and reasons. d. Provide a concluding statement or section.
2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly. a. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension. b. Develop the topic with facts, definitions, and details. c. Use linking words and phrases (e.g., *also*, *another*, *and*, *more*, *but*) to connect ideas within categories of information. d. Provide a concluding statement or section.	No change
3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	Write narratives in prose or poem form to develop ~~real or imagined~~ experiences or events using effective literary techniques, descriptive details, and clear ~~event~~ sequences.

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a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally. b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations. c. Use temporal words and phrases to signal event order. d. Provide a sense of closure.	a. Establish a situation and introduce a speaker, narrator, and/or characters; organize an appropriate narrative sequence. b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences or events or show responses to situations. c. Use figurative language to suggest images. (See grade 3 Reading Literature standard 4.) d. Use temporal words and phrases to signal ~~event~~ order where appropriate. e. Provide a sense of closure. f. For poems, use words and phrases that form patterns of sound (e.g., rhyme, repetition of sounds within words or within lines) to create meaning or effect.
4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	~~With guidance and support from adults~~ Produce writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 3 on page 29.)	~~With guidance and support from peers and adults~~ Develop and strengthen writing as needed by planning, revising, and editing. a. Demonstrate command of standard English conventions (as described in Language standards 1–3 up to and including grade 3). b. Demonstrate the ability to choose and use appropriate vocabulary (as described in Language standards 4–6 up to and including grade 3).
6. With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.	No change
7. Conduct short research projects that build knowledge about a topic.	No change

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8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.	No change
(Begins in grade 4)	No change
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

Grade 3 Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others. d. Explain their own ideas and understanding in light of the discussion.	No change
2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally	No change

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3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.	No change
4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.	No change
5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.	No change
6. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 3 Language standards 1 and 3.)	No change

Grade 3 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences. b. Form and use regular and irregular plural nouns. c. Use abstract nouns (e.g., *childhood*). d. Form and use regular and irregular verbs. e. Form and use the simple (e.g., *I walked*; *I walk*; *I will walk*) verb tenses. f. Ensure subject-verb and pronoun-antecedent agreement.* g. Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified. h. Use coordinating and subordinating conjunctions. i. Produce simple, compound, and complex sentences.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 3 Writing standard 5 and Speaking and Listening standard 6 on strengthening writing and presentations by applying knowledge of conventions.) *Sentence Structure and Meaning* a. Produce, expand, and rearrange complete simple, compound, and complex sentences. b. Ensure subject-verb and pronoun-antecedent agreement. c. Use verbs in the present, past, and future tenses and choose among them depending on the overall meaning of the sentence.

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	d. Use coordinating and subordinating conjunctions and choose between them depending on the overall meaning of the sentence. e. Form and use comparative and superlative adjectives and adverbs and choose between them depending on what is to be modified and the overall meaning of the sentence. *Word Usage* f. Use abstract nouns. g. Form and use regular and irregular plural nouns and the past tense of regular and irregular verbs.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Capitalize appropriate words in titles. b. Use commas in addresses. c. Use commas and quotation marks in dialogue. d. Form and use possessives. e. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting*, *smiled*, *cries*, *happiness*). f. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words. g. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Write legibly and fluently by hand, using either printing or cursive handwriting. b. Capitalize appropriate words in titles. c. Use commas in addresses. d. Use commas and quotation marks in dialogue. e. Form and use possessives. f. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting*, *smiled*, *cries*, *happiness*). g. Demonstrate understanding that numerals used at the beginning of a sentence are written as words and capitalized (e.g., “Three pandas could be seen eating leaves high in the bamboo grove”). h. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words. i. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

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3. Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Choose words and phrases for effect.* b. Recognize and observe differences between the conventions of spoken and written standard English.	No change
4. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on *grade 3 reading and content*, choosing flexibly from a range of strategies. a. Use sentence-level context as a clue to the meaning of a word or phrase. b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., *agreeable/disagreeable*, *comfortable/uncomfortable*, *care/careless*, *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.	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. e. Recognize and use appropriately abbreviations related to grade-level content or common in everyday life (e.g., *N, S, E, W* on a map). f. Recognize and use appropriately symbols related to grade-level content or common in everyday life (e.g., <, >).
5. Demonstrate understanding of word relationships and nuances in word meanings. a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., *take steps*). b. Identify real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*).	No change

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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. 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*).	Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships. (See grade 3 Reading Literature standard 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grade 3 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

Fourth Grade Standards

Grade 4 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	No change
2. Determine a theme of a story, drama, or poem from details in the text; summarize the text.	No change
3. Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).	No change
4. Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., *Herculean*).	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*); explain how figurative language (e.g., simile, metaphor) enriches a text. (See grade 4 Language standards 4–6 on applying knowledge of vocabulary to reading.)

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5. Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.	Explain major differences among prose, poetry, and drama and refer to the structural elements of each (e.g., paragraphs and chapters for prose; stanza and verse for poetry; scene, stage directions, cast of characters for drama) when writing or speaking about a text.
6. Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.	No change
7. Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.	Make connections between a written story or drama and its visual or oral presentation ~~of the text~~, identifying where the presentation reflects specific descriptions and directions in the written text.
8. (Not applicable to literature)	(Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.	No change
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.	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 4.

Grade 4 Reading Standards for Informational Text	
Common Core State Standard	**Rhode Island Core Standards**
1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	No change
2. Determine the main idea of a text and explain how it is supported by key details; summarize the text.	No change

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3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.	Explain events, procedures, ideas, or concepts in a historical, scientific, mathematical, or technical text, including what happened and why, based on specific information in the text.
4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.	No change
5. Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.	No change
6. Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.	No change
7. Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.	No change
8. Explain how an author uses reasons and evidence to support particular points in a text.	No change
9. Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.	No change
10. By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.	Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 4.

Grade 4 Reading Standards: Foundational Skills	
Common Core State Standard	**Rhode Island Core Standards**
1. (No standard at this grade level.)	(No standard at this grade level.)
2. (No standard at this grade level.)	(No standard at this grade level.)

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3. 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.	No change
4. Read with sufficient accuracy and fluency to support comprehension. a. Read on-level texts with purpose and understanding. b. Read on-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.	Read with sufficient accuracy and fluency to support comprehension. a. Read grade-level texts 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.

Grade 4 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information. a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose. b. Provide reasons that are supported by facts and details. c. Link opinion and reasons using words and phrases (e.g., *for instance*, *in order to, in addition*). d. Provide a concluding statement or section related to the opinion presented.	Write opinion pieces on topics or texts, supporting a point of view with reasons and information. a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped in paragraphs and sections to support the writer's purpose. b. Provide reasons that are supported by facts and details. c. Link opinion and reasons using words and phrases (e.g., *for instance*, *in order to, in addition*). d. Provide a concluding statement or section related to the opinion presented.

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2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly. a. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. c. Link ideas within categories of information using words and phrases (e.g., *another*, *for example*, *also*, *because*). d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Provide a concluding statement or section related to the information or explanation presented.	Write informative/explanatory texts to examine a topic and convey ideas and information clearly. a. Introduce a topic clearly and group related information in paragraphs and sections; include text features (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. c. Link ideas within categories of information using words and phrases (e.g., *another*, *for example*, *also*, *because*). d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Provide a concluding statement or section related to the information or explanation presented.
3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally. b. Use dialogue and description to develop experiences and events or show the responses of characters to situations. c. Use a variety of transitional words and phrases to manage the sequence of events. d. Use concrete words and phrases and sensory details to convey experiences and events precisely. e. Provide a conclusion that follows from the narrated experiences or events.	Write narratives in prose or poem form to develop ~~real or imagined~~ experiences or events using effective literary techniques, descriptive details, and clear ~~event~~ sequences. a. Orient the reader by establishing a situation and introducing a speaker, narrator, and/or characters; organize an appropriate narrative sequence. b. Use dialogue and description to develop experiences or events or show ~~the~~ responses ~~of characters~~ to situations. c. Use a variety of transitional words and phrases to manage ~~the~~ sequence ~~of events~~. d. Use concrete words and phrases, figurative language such as similes and metaphors, and sensory details to convey experiences or events precisely. e. Provide a sense of closure appropriate to the narrated experiences or events.

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	f. For poems, use patterns of sound (e.g., rhyme, rhythm, alliteration, consonance) and visual patterns (e.g., line length, grouped lines as stanzas or verses) to create works that are distinctly different in form from prose narratives. (See grade 4 Reading Literature standard 5.)
4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	No change
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 4 on page 29.)	~~With guidance and support from peers and adults~~ Develop and strengthen writing as needed by planning, revising, and editing. a. Demonstrate command of standard English conventions (as described in Language standards 1–3 up to and including grade 4). b. Demonstrate the ability to use general academic and domain-specific vocabulary appropriately (as described in Language standards 4–6 up to and including grade 4).
6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.	~~With some guidance and support from adults~~ Use technology, including current Web-based communication platforms, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting
7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.	No change
8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.	No change
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.	Draw evidence from literary or informational texts to support written analysis, reflection, and research, applying one or more

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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 standard*s to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text").	grade 4 standards for Reading Literature or Reading Informational Text as needed.
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

Grade 4 Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. b. Follow agreed-upon rules for discussions and carry out assigned roles. c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others. d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.	No change
2. Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally	No change
3. Identify the reasons and evidence a speaker provides to support particular points.	No change

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4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.	No change
5. Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.	No change
6. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See grade 4 Language standard 1.)	No change

Grade 4 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Use relative pronouns (*who*, *whose*, *whom*, *which*, *that*) and relative adverbs (*where*, *when*, *why*). b. Form and use the progressive (e.g., *I was walking*; *I am walking*; *I will be walking*) verb tenses. c. Use modal auxiliaries (e.g., *can*, *may*, *must*) to convey various conditions. d. Order adjectives within sentences according to conventional patterns (e.g., *a small red bag* rather than *a red small bag*). e. Form and use prepositional phrases. f. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.* g. Correctly use frequently confused words (e.g., *to*, *too*, *two*; *there*, *their*).*	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 4 Writing standard 5 and Speaking and Listening standard 6 on strengthening writing and presentations by applying knowledge of conventions.) *Sentence Structure and Meaning* a. Produce complete sentences, using knowledge of subject and predicate to recognize and correct inappropriate sentence fragments and run-on sentences. b. Correctly use frequently confused words (e.g., *their/there*). c. Use helping verbs, also known as auxiliaries (e.g., *can, may, might, should*), to convey various conditions of

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	possibility, likelihood, obligation, or permission, choosing among helping verbs depending on the overall meaning of the sentence. d. Use relative pronouns and relative adverbs to add more information about a noun or verb used in a sentence. e. Form and use prepositional phrases in sentences to add more information about qualities such as location, time, agency, and direction. *Word Usage* f. Form and use progressive verb tenses.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use correct capitalization. b. Use commas and quotation marks to mark direct speech and quotations from a text. c. Use a comma before a coordinating conjunction in a compound sentence. d. Spell grade-appropriate words correctly, consulting references as needed.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Write legibly and fluently by hand, using either printing or cursive handwriting; write their given name signature in cursive. b. Use correct capitalization. c. Use commas and quotation marks to mark direct speech and quotations from a text. d. Use a comma before a coordinating conjunction in a compound sentence. e. Spell grade-appropriate words correctly, consulting references as needed.
3. Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Choose words and phrases to convey ideas precisely.* b. Choose punctuation for effect.* c. Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).	No change

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4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 4 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *telegraph*, *photograph*, *autograph*). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.	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. d. Recognize and use appropriately abbreviations related to grade-level content or common in everyday life (e.g., *hr., min., sec.*). e. Recognize and use appropriately symbols related to grade-level content or common in everyday life (e.g., *&, #, **).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Explain the meaning of simple similes and metaphors (e.g., *as pretty as a picture*) in context. b. Recognize and explain the meaning of common idioms, adages, and proverbs. c. Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).	No change
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., *quizzed*, *whined*, *stammered*)	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

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and that are basic to a particular topic (e.g., *wildlife*, *conservation*, and *endangered* when discussing animal preservation).	particular topic (e.g., *wildlife, conservation,* and *endangered* when discussing animal preservation). (See grade 4 Reading Literature standard 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grade 4 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

Fifth Grade Standards

Grade 5 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.	Quote or paraphrase a text accurately when explaining what the text states explicitly and when drawing inferences from the text. (See grade 5 Writing standard 8 for more on paraphrasing.)
2. Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.	No change
3. Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).	No change
4. Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.	Determine the meaning of words and phrases as they are used in a text; identify and explain the effects of figurative language such as metaphors and similes. (See grade 5 Language standards 4–6 on applying knowledge of vocabulary to reading.)

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5. Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.	No change
6. Describe how a narrator's or speaker's point of view influences how events are described.	Describe how a narrator's or speaker's point of view influences how events are described in a story, myth, poem, or drama.
7. Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).	No change
8. (Not applicable to literature)	(Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Compare and contrast stories in the same genre (e.g., mysteries and adventure stories) on their approaches to similar themes and topics.	No change
10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4–5 text complexity band independently and proficiently.	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 5.

Grade 5 Reading Standards for Informational Text	
Common Core State Standard	**Rhode Island Core Standards**
1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.	No change
2. Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.	Determine one or more main ideas of a text and explain how they are supported by key details; summarize a text.
3. Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.	Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in historical, scientific, mathematical, or technical texts based on specific information in the text.

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 5 topic or subject area*.	No change
5. Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.	Describe how an author uses one or more structures (e.g., chronology, comparison, cause/effect, problem/solution) to present information in a text.
6. Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.	No change
7. Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.	No change
8. Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).	No change
9. Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.	No change
10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4–5 text complexity band independently and proficiently.	Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts, exhibiting complexity appropriate for at least grade 5.

Grade 5 Reading Standards: Foundational Skills	
Common Core State Standard	**Rhode Island Core Standards**
1. (No standard at this grade level.)	(No standard at this grade level.)
2. (No standard at this grade level.)	(No standard at this grade level.)
3. Know and apply grade-level phonics and word analysis skills in decoding words.	No change

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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. Read with sufficient accuracy and fluency to support comprehension. a. Read on-level texts with purpose and understanding. b. Read on-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.	Read with sufficient accuracy and fluency to support comprehension. a. Read grade-level texts 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.

Grade 5 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information. a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose. b. Provide logically ordered reasons that are supported by facts and details. c. Link opinion and reasons using words, phrases, and clauses (e.g., *consequently*, *specifically*). d. Provide a concluding statement or section related to the opinion presented.	Write opinion pieces on topics or texts, supporting a point of view with reasons and information. a. a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped in paragraphs and sections to support the writer's purpose. b. Provide logically ordered reasons that are supported by facts and details. c. Link opinion and reasons using words, phrases, and clauses (e.g., *consequently*, *specifically*). d. Provide a concluding statement or section related to the opinion presented.
2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

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a. Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., *in contrast*, *especially*). d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Provide a concluding statement or section related to the information or explanation presented.	a. Introduce a topic clearly, provide a general observation and focus, and group related information logically in paragraphs and sections; include text features (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. *b.* Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., *in contrast*, *especially*). d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Provide a concluding statement or section related to the information or explanation presented.
3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. a. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally. b. Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations. c. Use a variety of transitional words, phrases, and clauses to manage the sequence of events. d. Use concrete words and phrases and sensory details to convey experiences and events precisely. e. Provide a conclusion that follows from the narrated experiences or events.	Write narratives in prose or poem form to develop ~~real or imagined~~ experiences or events using effective literary techniques, descriptive details, and clear ~~event~~ sequences. a. Orient the reader by establishing a situation and introducing a speaker, narrator, and/or characters; organize an appropriate narrative sequence. b. Use narrative techniques such as dialogue, description, and pacing to develop experiences or events or show ~~the~~ responses ~~of characters~~ to situations. c. Use a variety of transitional words, phrases, and clauses to manage ~~the~~ sequence ~~of events~~. d. Use concrete words and phrases and sensory details to convey experiences or events precisely. e. Provide a sense of closure appropriate to the narrated experiences or events. f. For prose narratives, draw on characteristics of traditional or modern genres (e.g., tall tales, myths,

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	mysteries, fantasies, historical fiction) from diverse cultures as models for writing. (See grade 5 Reading Literature standard 9.) g. For poems, draw on characteristics of traditional poetic forms (e.g., ballads, couplets) or modern free verse from diverse cultures as models for writing.
4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	No change
5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 5 on page 29.)	~~With guidance and support from peers and adults~~ Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. a. Demonstrate command of standard English conventions (as described in Language standards 1–3 up to and including grade 5). b. Demonstrate the ability to use general academic and domain-specific vocabulary appropriately (as described in Language standards 4–6 up to and including grade 5).
6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.	~~With some guidance and support from adults~~ Use technology, including current Web-based communication platforms, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.
7. Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.	No change
8. Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.	No change

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9. Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 5 Reading standards* to literature (e.g., "Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text [e.g., how characters interact]"). b. Apply *grade 5 Reading standards* to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point[s]").	Draw evidence from literary or informational texts to support written analysis, reflection, and research, applying one or more grade 5 standards for Reading Literature or Reading Informational Text as needed.
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

Grade 5 Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. b. Follow agreed-upon rules for discussions and carry out assigned roles. c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.	No change
2. Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally	No change
3. Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.	No change

4. Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.	No change
5. Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.	No change
6. Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation. (See grade 5 Language standards 1 and 3.)	No change

Grade 5 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences. b. Form and use the perfect (e.g., *I had walked*; *I have walked*; *I will have walked*) verb tenses. c. Use verb tense to convey various times, sequences, states, and conditions. d. Recognize and correct inappropriate shifts in verb tense.* e. Use correlative conjunctions (e.g., either/or, neither/nor).	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 5 Writing standard 5 and Speaking and Listening standard 6 on strengthening writing and presentations by applying knowledge of conventions.) *Sentence Structure and Meaning* a. Use verb tense to convey various times, sequences, states, and conditions, choosing among verb tenses depending on the overall meaning of the sentence. b. Recognize and correct inappropriate shifts in verb tense. c. Use active and passive verbs, choosing between them depending on the overall meaning of the sentence. *Word Usage* d. Form and use perfect verb tenses.

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2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use punctuation to separate items in a series.* b. Use a comma to separate an introductory element from the rest of the sentence. c. Use a comma to set off the words *yes* and *no* (e.g., *Yes, thank you*), to set off a tag question from the rest of the sentence (e.g., *It's true, isn't it?*), and to indicate direct address (e.g., *Is that you, Steve?*). d. Use underlining, quotation marks, or italics to indicate titles of works. e. Spell grade-appropriate words correctly, consulting references as needed.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Write legibly and fluently by hand, using either print or cursive handwriting; write their given and family name signature in cursive. b. Use punctuation to separate items in a series c. Use a comma to separate an introductory element from the rest of the sentence. d. Use a comma to set off the words *yes* and *no* (e.g., *Yes, thank you*), to set off a tag question from the rest of the sentence (e.g., *It's true, isn't it?*), and to indicate direct address (e.g., *Is that you, Steve?*). e. Use underlining, quotation marks, or italics to indicate titles of works. f. Spell grade-appropriate words correctly, consulting references as needed.
3. Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Expand, combine, and reduce sentences for meaning, reader/listener interest, and style. b. Compare and contrast the varieties of English (e.g., dialects, registers) used in stories, dramas, or poems.	No change
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 5 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *photograph*, *photosynthesis*). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.	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*).

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	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. d. Recognize and use appropriately abbreviations related to grade-level content or common in everyday life, including abbreviations derived from words or phrases in other languages (e.g., *lb., oz., etc.*). e. Recognize and use appropriately symbols related to grade-level content or common in everyday life, including symbols with multiple meanings (e.g., parentheses in mathematics and in writing, ° to measure angles and temperature).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figurative language, including similes and metaphors, in context. b. Recognize and explain the meaning of common idioms, adages, and proverbs. c. Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.	No change
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., *however*, *although*, *nevertheless*, *similarly*, *moreover*, *in addition*).	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*). (See grade 5 Reading Literature standard 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grade 5 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

Sixth Grade Standards

Grade 6 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Cite textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 6 Writing standard 8 for more on quoting and paraphrasing.)
2. Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.	No change
3. Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.	Describe how the plot of a particular story, poem, or drama unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.
4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices, including those that create repeated sounds and rhythms in poetry, on meaning, tone (i.e., author's attitude toward subject or audience), or mood (i.e., emotional atmosphere). (See grade 6 Language standards 4–6 on applying knowledge of vocabulary to reading.)
5. Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.	No change
6. Explain how an author develops the point of view of the narrator or speaker in a text.	No change

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7. Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to what they perceive when they listen or watch.	Compare and contrast the experience of reading a story, drama, or poem to that of listening to or viewing the same text.
8. (Not applicable to literature)	(Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.	No change
10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 6.

Grade 6 Reading Standards for Informational Text	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	No change
2. Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.	Determine a text's central idea(s) and how particular details help convey the idea(s); provide a summary of the text distinct from personal opinions or judgments.
3. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).	No change
4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; explain how word choice affects meaning and tone. (See grade 6 Language standards 4–6 on applying knowledge of vocabulary to reading.)

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5. Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.	Analyze how a particular sentence, paragraph, chapter, section, or text feature (e.g., heading) fits into the overall structure of a text and contributes to the development of the ideas.
6. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.	No change
7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.	Integrate information presented in different media or formats (e.g., in charts, graphs, photographs, videos, or maps) as well as in words to develop a coherent understanding of a topic or issue.
8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.	No change
9. Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).	No change
10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 6.

Grade 6 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments to support claims with clear reasons and relevant evidence. a. Introduce claim(s) and organize the reasons and evidence clearly. b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons. d. Establish and maintain a formal style.	Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims with clear reasons and relevant evidence. a. Introduce claim(s) and organize the reasons and evidence clearly in paragraphs and sections. b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.

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e. Provide a concluding statement or section that follows from the argument presented.	c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons. d. Establish and maintain a ~~formal~~ style appropriate to audience and purpose (e.g., formal for academic writing). e. Provide a concluding statement or section that follows from the argument presented.
2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from the information or explanation.	Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic; organize ideas, concepts, and information in paragraphs and sections, using strategies such as definition, classification, comparison/contrast, and cause/effect; include text features (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing). f. Provide a concluding statement or section that follows from the information or explanation presented.

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3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. a. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events. e. Provide a conclusion that follows from the narrated experiences or events.	Write narratives to develop ~~real or imagined~~ experiences or events using effective literary techniques, relevant descriptive details, and well-structured ~~event~~ sequences. a. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an appropriate narrative sequence. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, figurative and sensory language, and techniques such as personification (e.g., "the fog crept in") to convey experiences or events. e. Provide a conclusion that follows from the narrated experiences or events.
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	No change
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 6 on page 53.)	~~With some guidance and support from peers and adults~~ Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. a. Demonstrate command of standard English conventions (as described in Language standards 1–3 up to and including grade 6). b. Demonstrate the ability to select accurate vocabulary (as described in Language standards 4–6 up to and including grade 6).

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6. Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.	Use technology, including current Web-based communication platforms, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.
7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.	Conduct short as well as more sustained research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
8. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.	When conducting research, gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 6 Reading standards* to literature (e.g., "Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics"). b. Apply *grade 6 Reading standards* to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").	Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grade 6 standards for Reading Literature or Reading Informational Text as needed.
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

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Grade 6 Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed. c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion. d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.	No change
2. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.	No change
3. Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.	No change
4. Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.	No change
5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	No change
6. Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3.)	No change

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Grade 6 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Ensure that pronouns are in the proper case (subjective, objective, possessive). b. Use intensive pronouns (e.g., *myself*, *ourselves*). c. Recognize and correct inappropriate shifts in pronoun number and person.* d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).* e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 6 Writing standard 5 and Speaking and Listening standard 6 on strengthening writing and presentations by applying knowledge of conventions.) *Sentence Structure, Variety, and Meaning* a. Use simple, compound, complex, and compound-complex sentences to communicate ideas clearly and to add variety to writing. b. Explain the function of phrases and clauses in general, how phrases and clauses differ, and how their use conveys a particular meaning in a specific written or spoken sentence. c. Place or rearrange phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. b. Spell correctly.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. b. Spell correctly, recognizing that some words have commonly accepted variations (e.g., donut/doughnut).
3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.	Use knowledge of language and its conventions when writing, speaking, reading, or listening.

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a. Vary sentence patterns for meaning, reader/listener interest, and style.* b. Maintain consistency in style and tone.	a. Maintain appropriate consistency in style and tone while varying sentence patterns for meaning and audience interest. b. Recognize variations from standard or formal English in writing and speaking, determine their appropriateness for the intended purpose and audience, and make changes as necessary.
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 6 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *audience*, *auditory*, *audible*). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).	No change
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., personification) in context. b. Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *stingy*, *scrimping*, *economical*, *unwasteful*, *thrifty*).	No change

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6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grade 6 Reading Literature standard 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grade 6 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

Seventh Grade Standards

Grade 7 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Cite several pieces of textual evidence to support analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 7 Writing standard 8 for more on quoting and paraphrasing.)
2. Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.	No change
3. Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).	Describe how particular elements of a story, poem, or drama interact (e.g., how setting shapes the characters or plot).
4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning, tone, or mood, including the impact of repeated use of particular images. (See grade 7 Language standards 4–6 on applying knowledge of vocabulary to reading.)

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5. Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.	Analyze how aspects of a literary work's structure contribute to its meaning or style (e.g., the effect of repetition in an epic, a flashback in a novel, or a soliloquy in a drama).
6. Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.	No change
7. Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).	Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version ~~analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film)~~.
8. (Not applicable to literature)	(Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.	No change
10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 7.

Grade 7 Reading Standards for Informational Text	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	No change
2. Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.	Determine a text's central idea(s) and analyze its/their development over the course of the text; provide an objective summary of a text.
3. Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).	No change

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4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.	No change
5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.	Analyze the structure an author uses to organize a text, including how the major sections and text features (e.g., headings) contribute to the whole and to the development of the ideas.
6. Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.	Remains the Same
7. Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).	Compare and contrast a written text to an audio, video, or multimedia version ~~of the text~~, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).
8. Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.	No change
9. Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.	No change
10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 7.

Grade 7 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments to support claims with clear reasons and relevant evidence.	Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims with clear reasons and relevant evidence.

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a. Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented.	a. Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically in paragraphs and sections. b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence. d. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing). e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from and supports the information or explanation presented.	Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information in paragraphs and sections, using strategies such as definition, classification, comparison/contrast, and cause/effect; include text features (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic.

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	e. Establish and maintain a style appropriate to the audience and purpose (e.g., formal for academic writing). f. Provide a concluding statement or section that follows from and supports the information or explanation presented.
3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events.	Write narratives to develop ~~real or imagined~~ experiences or events using effective literary techniques, relevant descriptive details, and well-structured ~~event~~ sequences. a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an appropriate narrative sequence. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and figurative and sensory language to establish a mood that evokes an emotion, to capture action, and to convey experiences or events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events.
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	No change
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have	~~With some guidance and support from peers and adults~~ Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

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been addressed. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 7 on page 53.)	a. Demonstrate command of standard English conventions (as described in Language standards 1–3 up to and including grade 7). b. Demonstrate the ability to select accurate vocabulary (as described in Language standards 4–6 up to and including grade 7).
6. Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.	Use technology, including current Web-based communication platforms, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.
7. Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.	Conduct short as well as more sustained research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	When conducting research, gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 7 Reading standards* to literature (e.g., "Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history"). b. Apply *grade 7 Reading standards* to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims").	Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grade 7 standards for Reading Literature or Reading Informational Text as needed.

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10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

Grade 7 Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed. c. Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed. d. Acknowledge new information expressed by others and, when warranted, modify their own views.	No change
2. Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.	No change
3. Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.	No change
4. Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and	No change

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	examples; use appropriate eye contact, adequate volume, and clear pronunciation.	
5.	Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.	No change
6.	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 7 Language standards 1 and 3 for specific expectations.)	No change

Grade 7 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Explain the function of phrases and clauses in general and their function in specific sentences. b. Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas. c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.*	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 7 Writing standard 5 and Speaking and Listening standard 6 on strengthening writing and presentations by applying knowledge of conventions.) *Sentence Structure, Variety, and Meaning* a. Use phrases and clauses to communicate ideas precisely, with attention to skillful use of verb tenses to add clarity. b. Recognize and correct vague pronouns (those that have unclear or ambiguous antecedents). c. Recognize and correct inappropriate shifts in pronoun number and person in sentences with multiple clauses and phrases. d. Recognize that changing the placement of a phrase or clause can add variety, emphasize particular relationships among ideas, or alter the meaning of a sentence or paragraph.

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2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore an old[,] green shirt*). b. Spell correctly.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore an old[,] green shirt*). b. Spell correctly, recognizing that some words have commonly accepted variations (e.g., donut/doughnut).
3. Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.*	Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Maintain appropriate consistency in style and tone while varying sentence patterns for meaning and audience interest. b. Recognize variations from standard or formal English in writing and speaking, determine their appropriateness for the intended purpose and audience, and make changes as necessary.
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 7 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *belligerent*, *bellicose*, *rebel*). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).	No change

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5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context. b. Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *refined*, *respectful*, *polite*, *diplomatic*, *condescending*).	No change
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grade 7 Reading Literature standard 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grade 7 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

Eighth Grade Standards

Grade 8 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.	Cite the textual evidence that most strongly supports ~~an~~ analysis of what a text states explicitly as well as inferences drawn from the text, quoting or paraphrasing as appropriate. (See grade 8 Writing standard 8 for more on quoting and paraphrasing.)

2. Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.	No change
3. Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.	Analyze how particular lines of dialogue or incidents in a story, poem, or drama propel the action, reveal aspects of a character, or provoke a decision.
4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning, tone, or mood, including the use of allusion and irony. (See grade 8 Language standards 4–6 on applying knowledge of vocabulary to reading.)
5. Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.	Compare and contrast the structures of two or more texts, analyzing how structure contributes to meaning and style in each text.
6. Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.	Analyze how differences in ~~the~~ point~~s~~ of view between characters and ~~the~~ audience ~~or reader~~ (e.g., created through the use of dramatic irony) create such effects as suspense or humor.
7. Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.	Analyze the extent to which an audio, filmed, or staged production of a story, drama, or poem stays faithful to or departs from the original, evaluating the choices made by the director or performer(s).
8. (Not applicable to literature)	(Not applicable. For expectations regarding themes in literary texts, see RL.2.)
9. Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.	No change
10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6–8 text complexity band independently and proficiently.	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and

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	perspectives and exhibiting complexity appropriate for at least grade 8.

Grade 8 Reading Standards for Informational Text	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.	No change
2. Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.	Determine a text's central idea(s) and analyze its/their development over the course of the text, including relationships to supporting ideas; provide an objective summary of a text.
3. Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).	No change
4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.	No change
5. Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.	Analyze in detail the structural elements of a text, including the role of specific sentences, paragraphs, and text features in developing and refining a key concept.
6. Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.	No change
7. Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.	No change

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8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.	No change
9. Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.	No change
10. By the end of the year, read and comprehend literary nonfiction at the high end of the grades 6–8 text complexity band independently and proficiently.	Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for at least grade 8.

Grade 8 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments to support claims with clear reasons and relevant evidence. a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented.	Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims with clear reasons and relevant evidence. a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically in paragraphs and sections. b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. d. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing). e. Provide a concluding statement or section that follows from and supports the argument presented.

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2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from and supports the information or explanation presented.	Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. a. Introduce a topic clearly, previewing what is to follow; use paragraphs and sections to organize ideas, concepts, and information into broader categories; include text features (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing). f. Provide a concluding statement or section that follows from and supports the information or explanation presented.

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3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events. d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events.	Write narratives to develop ~~real or imagined~~ experiences or events using effective literary techniques, relevant descriptive details, and well-structured ~~event~~ sequences. a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an appropriate narrative sequence. b. Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events. d. Use precise words and phrases and relevant descriptive details to convey a tone (the writer's attitude toward the subject: e.g., humorous, serious, or ironic) and to convey experiences or events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events.
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)	No change
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 8 on page 53.)	~~With some guidance and support from peers and adults~~ Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. a. Demonstrate command of standard English conventions (as described in Language standards 1–3 up to and including grade 8).

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	b. Demonstrate the ability to select accurate vocabulary (as described in Language standards 4–6 up to and including grade 8).
6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.	Use technology, including current Web-based communication platforms, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.
7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	Conduct short as well as more sustained research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	When conducting research, gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grade 8 Reading standards* to literature (e.g., "Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new"). b. Apply *grade 8 Reading standards* to literary nonfiction (e.g., "Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced").	Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grade 8 standards for Reading Literature or Reading Informational Text as needed.
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

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Grade 8 Speaking and Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed. c. Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas. d. Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.	No change
2. Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.	No change
3. Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.	No change
4. Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.	No change
5. Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.	No change

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6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 8 Language standards 1 and 3 for specific expectations.)	No change

Grade 8 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Explain the function of verbals (gerunds, participles, infinitives) in general and their function in particular sentences. b. Form and use verbs in the active and passive voice. c. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood. d. Recognize and correct inappropriate shifts in verb voice and mood.*	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grade 8 Writing standard 5 and Speaking and Listening standard 6 on strengthening writing and presentations by applying knowledge of conventions.) *Sentence Structure, Variety, and Meaning* a. Coordinate phrases and clauses in simple, compound, complex, and compound-complex sentences, with emphasis on agreement of pronouns and their antecedents. b. Form and use verbs in the active and passive voices and the indicative, imperative, interrogative, conditional, and subjunctive moods to communicate a particular meaning.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use punctuation (comma, ellipsis, dash) to indicate a pause or break. b. Use an ellipsis to indicate an omission. c. Spell correctly.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use punctuation (comma, ellipsis, dash) to indicate a pause or break. b. Use an ellipsis to indicate an omission. c. Spell correctly, recognizing that some words have commonly accepted variations (e.g., donut/doughnut).

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3. Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).	Use knowledge of language and its conventions when writing, speaking, reading, or listening. a. Maintain appropriate consistency in style and tone while varying sentence patterns for meaning and audience interest. b. Recognize variations from standard or formal English in writing and speaking, determine their appropriateness for the intended purpose and audience, and make changes as necessary.
4. Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on *grade 8 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *precede*, *recede*, *secede*). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).	No change
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g. verbal irony, puns) in context. b. Use the relationship between particular words to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *bullheaded*, *willful*, *firm*, *persistent*, *resolute*).	No change

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6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grade 8 Reading Literature standard 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grade 8 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary.)

6th-8th Grade Standards for Literacy in History/Social Studies, Science, and Technical Subjects

Grades 6-8 Reading Standards for Literacy in the Content Areas: History/Social Studies	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite specific textual evidence to support analysis of primary and secondary sources.	Cite specific textual evidence to support analysis of primary and secondary sources, quoting or paraphrasing as appropriate. (See grades 6–8 Writing standard 8 for more on quoting and paraphrasing.)
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.	No change
3. Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).	No change

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4. Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.	Determine the meaning of general academic and domain-specific words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
5. Describe how a text presents information (e.g., sequentially, comparatively, causally).	No change
6. Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).	No change
7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.	No change
8. Distinguish among fact, opinion, and reasoned judgment in a text.	No change
9. Analyze the relationship between a primary and secondary source on the same topic.	No change
10. By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently.	Independently and proficiently read and comprehend history/social studies texts exhibiting complexity appropriate for the grade/course.

Grades 6-8 Reading Standards for Literacy in the Content Areas: Science and Career and Technical Subjects	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite specific textual evidence to support analysis of science and technical texts.	Cite specific textual evidence to support analysis of science and technical texts, quoting or paraphrasing as appropriate. (See grades 6–8 Writing standard 8 for more on quoting and paraphrasing.)
2. Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.	No change
3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.	No change

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4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.	Determine the meaning of general academic vocabulary as well as symbols, notation, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.
5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.	No change
6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.	No change
7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).	No change
8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.	No change
9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	No change
10. By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently.	Independently and proficiently read and comprehend science/technical texts exhibiting complexity appropriate for the grade/course.

Grades 6-8 Writing Standards for Literacy in the Content Areas ~~History/Social Studies, Science, and Technical Subjects~~	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments focused on *discipline-specific content*. a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.	Write arguments focused on *discipline-specific content*. a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or

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b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented.	opposing claims/critiques, and organize the reasons and evidence logically in paragraphs and sections. b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources. c. Use words, phrases, and clauses with precision to create cohesion and clarify the relationships among claim(s), counterclaims/critiques, reasons, and evidence. d. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing). e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style and objective tone. f. Provide a concluding statement or section that follows from and supports information or explanation presented.	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. a. Introduce a topic clearly, previewing what is to follow; use paragraphs and sections to organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include text features (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas, concepts, or procedures. d. Use precise language and domain-specific vocabulary to inform about or explain the topic.

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	e. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing). f. Provide a concluding statement or section that follows from and supports the information or explanation presented.
3. (See note; not applicable as a separate requirement)	No change
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	No change
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.	~~With some guidance and support from peers and adults~~ Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.
6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.	Use technology, including current Web-based communication platforms, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.
7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	Conduct short as well as more sustained research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	When conducting research, gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from informational texts to support analysis, reflection, and research.	Draw evidence from informational texts to support analysis, interpretation, reflection, and research. (See grades 6–8 Reading standard 1 for more on the use of textual evidence.)

10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

Grades 6-8 Speaking and Listening Standards in the Content Areas	
Common Core State Standard	**Rhode Island Core Standards**
1. (No standard at this grade level.)	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *discipline-specific topics, texts, and issues*, building on others' ideas and expressing their own clearly. a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. (Grades 6-8 Reading standard 1 for more on the use of textual evidence.) b. Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed. c. Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas. d. Acknowledge new information expressed by others, and, when warranted, qualify or justify their own view in light of the evidence presented.
2. (No standard at this grade level.)	Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.

3. (No standard at this grade level.)	Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.
4. (No standard at this grade level.)	Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate vocabulary, eye contact, volume, and pronunciation.
5. (No standard at this grade level.)	Integrate multimedia components and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
6. (No standard at this grade level.)	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

Ninth to Tenth Grade Standards

Grades 9-10 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	No change
2. Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	No change

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3. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.	No change
4. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.	Determine the figurative and connotative meaning(s) of words and phrases as they are used in ~~the~~ a text~~;~~ analyze the impact of words with multiple meanings, as well as symbols or metaphors that extend throughout a text and shape its meaning. (See grades 9-10 Language standards 4-6 on applying knowledge of vocabulary to reading).
5. Analyze how an author's choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.	No change
6. Analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature.	Analyze a case in which a character's point of view and actions signal acceptance or rejection of cultural norms or intellectual ideas of a period or place, drawing on a wide reading of world literature.
7. Analyze the representation of a subject or a key scene in two different artistic mediums, including what is emphasized or absent in each treatment (e.g., Auden's "Musée des beaux Arts" and Breughel's *Landscape with the Fall of Icarus*).	Analyze a critical response to a work or body of literature (e.g., author documentary, book review); provide a summary of the argument presented and evaluate the strength of the evidence supporting it.
8. (Not applicable to literature)	(Not applicable to literature)
9. Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare).	No change
10. By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9-10 text complexity band independently and proficiently.	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for the grade/course.

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Grades 9-10 Reading Standards for Informational Texts	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	No change
2. Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	No change
3. Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.	Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and ~~the connections that are drawn~~ the presence or absence of connections between them.
4. Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).	Determine the meaning(s) of words and phrases as they are used in the text, including figurative, connotative, and technical meanings; analyze the cumulative or contradictory impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper, how an author's word choice varies from one part of a text to another). (See grades 9-10 Language standards 4-6 on applying knowledge of vocabulary to reading).
5. Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).	No change
6. Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.	No change
7. Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.	Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized or deemphasized in each account.

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8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.	Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements or incomplete truths and fallacious reasoning.
9. Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts.	Analyze seminal ~~U.S.~~ documents of historical and literary significance (e.g., Washington's Farewell Address, Lincoln's Second Inaugural and the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts.
10. By the end of grade 9, read and comprehend literary nonfiction in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9-10 text complexity band independently and proficiently.	Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for the grade/course.

Grades 9-10 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments to support claims in an analysis of substantive topics of texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.	Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims in an analysis of substantive topics of texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise claim(s), distinguish the claims from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns.

d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.	c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content. a. Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language and domain-specific vocabulary to manage the complexity of the topic. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. a. Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include text features (e.g., headings), graphics (e.g., figured, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language and domain-specific vocabulary to manage the complexity of the topic. e. Establish and maintain a ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation

	presented (e.g., articulating implications or the significance of the topic).
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences. a. Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole. d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.	Write narratives to develop ~~real or imagined~~ experiences or events using effective literary techniques, well-chosen details, and well-structured event sequences. a. Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create an appropriate progression of experiences or events. b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole. d. Use precise words and phrases, telling details, and figurative and sensory language to describe settings and characters and to establish mood and tone. e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3.)	No change
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 9-10.)	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. a. Demonstrate command of standard English conventions (as described in Language standards 1–3 up to and including grades 9-10).

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	b. Demonstrate the ability to select accurate vocabulary (as described in Language standards 4–6 up to and including grades 9-10).
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibility and dynamically.	Use technology, including current Web-based communication platforms, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibility and dynamically.
7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	No change
8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grades 9-10 Reading standards* to literature (e.g., "Analyze how an author draws on and transforms source material in a specific work [e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare]"). b. Apply *grades 9-10 Reading standards* to literary nonfiction (e.g. "Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning").	Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grades 9-10 standards for Reading Literature or Reading Informational Text as needed.

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	No change

Grades 9-10 Speaking & Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 9-10 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternative views), clear goals and deadlines, and individual roles as needed. c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions. d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 9-10 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (See grades 9-10 Reading Literature standard 1 and Reading Informational Text standard 1 for specific expectations regarding the use of textual evidence.) b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternative views), clear goals and deadlines, and individual roles as needed. c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.

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	d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.
2. Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.	No change
3. Evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.	No change
4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.	Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience, and task. (See grades 9-10 Language standards 4-6 for specific expectations regarding vocabulary.)
5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.	Make strategic use of digital media (e.g., ~~textual, graphical~~, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
6. Adapt speech to a variety of context and tasks, demonstrating command of formal English when indicated or appropriate. (See grades 9-10 Language standards 1 and 3 for specific expectations.)	No change

Grades 9-10 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Use parallel structure. b. Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See grades 9-10 Writing standard 5 and Speaking and Listening standard 6 on strengthening writing and presentations by applying knowledge of conventions.) Sentence Structure, Variety, and Meaning a. Manipulate and rearrange clauses and phrases in sentences, paying attention to agreements of pronouns and their antecedents, logical use of verb tenses, and variety in sentence patterns. b. Use various types of phrases (noun, verb, adjective, participial, prepositional) and clauses (independent, dependent, noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations. c. Use parallel structure as a technique for creating coherence in sentences, paragraphs, and larger pieces of writing.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses. b. Use a colon to introduce a list or quotation. c. Spell correctly.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses. b. Use a colon to introduce a list or quotation. c. Spell correctly, recognizing that some words have commonly accepted variations (e.g., catalog, catalogue).

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3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. a. Write and edit work so that it conforms to the guidelines in a style manual (e.g., *MLA Handbook*, Turabian's *Manual for Writers*) appropriate for the discipline and writing type.	Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. a. Write and edit work so that it conforms to the guidelines in a style manual (e.g., *MLA Handbook*, Turabian's *Manual for Writers*) appropriate for the discipline and writing type. b. Revise and edit work to decrease redundancy (ineffective repetition of ideas or details).
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 9-10 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical; advocate, advocacy). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology. d. Verify the preliminary determination of the meaning of a word or phrase (e.g. by checking the inferred meaning in context or in a dictionary).	No change
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., euphemism, oxymoron) in context and analyze their role in the text.	No change

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b. Analyze nuances in the meaning of words with similar denotations.	
6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grades 9-10 Reading Literature standards 4 and Reading Informational Text standard 4 on applying knowledge of vocabulary to reading; see grades 9-10 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary).

Eleventh to Twelfth Grade Standards

Grades 11-12 Reading Standards for Literature	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.	No change
2. Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.	No change
3. Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).	Analyze the impact of the author's choices regarding how to develop and relate elements of a story, poem, or drama (e.g.,

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	where a story is set, how the action is ordered, how the characters are introduced and developed).
4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors).	Determine the figurative and connotative meaning(s) of words and phrases as they are used in ~~the~~ a text~~,~~; analyze the impact of specific words or rhetorical patterns (e.g., how the language evokes a sense of time and place, how shifts in rhetorical patterns signal new perspectives). (See grades 11-12 Language standards 4-6 on applying knowledge of vocabulary to reading).
5. Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.	Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution, the choice to introduce a new tone or point of view) contribute to its overall structure and meaning as well as its aesthetic impact.
6. Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).	Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement, notable omission).
7. Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist).	Analyze one or more critical response to a work or body of literature, including how the critical lens (e.g., formal, historical, feminist, sociological, psychological) influences the interpretation.
8. (Not applicable to literature)	(Not applicable to literature)
9. Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.	No change
10. By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.	Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and

By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11-CCR text complexity band independently and proficiently.	perspectives and exhibiting complexity appropriate for the grade/course.

Grades 11-12 Reading Standards for Informational Texts	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.	No change
2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.	No change
3. Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.	No change
4. Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).	Determine the meaning(s) of words and phrases as they are used in the text, including figurative, connotative, and technical meanings; analyze how an author uses and refines or revises the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10). (See grades 11-12 Language standards 4-6 on applying knowledge of vocabulary to reading).
5. Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing and engaging.	Analyze and evaluate the effectiveness of the structure an author uses in an exposition or argument, including whether the structure makes points clear, coherent, convincing and engaging.

6. Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and context contribute to the power, persuasiveness, or beauty of the text.	No change
7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.	Integrate and evaluate multiple sources of information presented in different media or formats (e.g., in charts, graphs, photographs, videos, or maps) as well as in words in order to address a question or solve a problem.
8. Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premise, purposes, and arguments in works of public advocacy (e.g., *The Federalist*, presidential addresses).	Delineate and evaluate the reasoning in seminal ~~U.S.~~ historical texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premise, purposes, and arguments in works of public advocacy (e.g., *The Federalist*, presidential addresses).
9. Analyze seventeenth-, eighteenth-, nineteenth- and early-twentieth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, The Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.	Analyze pre-20th century foundational U.S. documents of historical and literary significance (e.g., the Magna Carta, The Declaration of Independence, the Declaration of the Rights of Man, The Preamble to the Constitution, the Bill of Rights) for their themes, purposes, and rhetorical features.
10. By the end of grade 11, read and comprehend literary nonfiction in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11-CCR text complexity band independently and proficiently.	Independently and proficiently read and comprehend literary nonfiction representing a variety of genres, cultures, and perspectives and exhibiting complexity appropriate for the grade/course.

Grades 11-12 Writing Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments to support claims in an analysis of substantive topics of texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.	Write arguments (e.g., essays, letters to the editor, advocacy speeches) to support claims in an analysis of substantive topics of texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.	Write informative/explanatory texts (e.g., essays, oral reports, biographical feature articles) to examine and convey complex ideas, concepts, and information clearly and

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a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; including formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	accurately through the effective selection, organization, and analysis of content. a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; including ~~formatting~~ text features (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic. e. Establish and maintain a ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.	Write narratives to develop ~~real or imagined~~ experiences or events using effective literary techniques, well-chosen details, and well-structured ~~event~~ sequences.

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a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution). d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.	a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create an appropriate progression of experiences or events. b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events and/or characters. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution). d. Use precise words and phrases, telling details and figurative and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3.)	No change
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 11-12.)	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. a. Demonstrate command of standard English conventions (as described in Language standards 1–3 up to and including grades 11-12).

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	b. Demonstrate the ability to select accurate vocabulary (as described in Language standards 4–6 up to and including grades 11-12).
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	Use technology, including current Web-based communication platforms, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	No change
8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strength and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strength and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research. a. Apply *grades 11-12 Reading standards* to literature (e.g., "Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics"). b. Apply *grades 11-12 Reading standards* to literary nonfiction (e.g. "Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., the U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., *The Federalist*, presidential addresses]").	Draw evidence from literary or informational texts to support written analysis, interpretation, reflection, and research, applying one or more grades 9-10 standards for Reading Literature or Reading Informational Text as needed.

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10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	No change

Grades 11-12 Speaking & Listening Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 11-12 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed. c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.. d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grades 11-12 topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (See grades 11-12 Reading Literature standard 1 and Reading Informational Text standard 1 for specific expectations regarding the use of textual evidence.) b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed. c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.

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	d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.
2. Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.	No change
3. Evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.	No change
4. Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.	Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. (See grades 11-12 Language standards 4-6 for specific expectations regarding vocabulary.)
5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.	Make strategic use of digital media (e.g., ~~textual, graphical~~, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
6. Adapt speech to a variety of context and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11-12 Language standards 1 and 3 for specific expectations.)	No change

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Grades 11-12 Language Standards	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested. b. Resolve issues of complex or contested usage, consulting references (e.g., *Merriam-Webster's Dictionary of English Usage, Garner's Modern American Usage*) as needed.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; retain and further develop language skills learned in previous grades. (See Writing standard 5 and Speaking and Listening standard 6 on strengthening writing and presentations by applying knowledge of conventions.) Word Usage a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested. b. Resolve issues of complex or contested usage, consulting references (e.g., *Merriam-Webster's Dictionary of English Usage, Garner's Modern American Usage*) as needed.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Observe hyphenation conventions. b. Spell correctly.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Observe hyphenation conventions. b. Spell correctly, recognizing that some words have commonly accepted variations (e.g., catalog/catalogue).
3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.	Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. a. Vary syntax for effect, consulting references (e.g., Tufte's *Artful Sentence*) for guidance as needed;

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a. Vary syntax for effect, consulting references (e.g., Tufte's *Artful Sentence*) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.	apply an understanding of syntax to the study of complex texts when reading. b. Revise and edit work to make work more concise and cohesive.
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 11-12 reading and content*, choosing flexibly from a range of strategies. a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. d. Verify the preliminary determination of the meaning of a word or phrase (e.g. by checking the inferred meaning in context or in a dictionary).	No change
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. a. Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text. b. Analyze nuances in the meaning of words with similar denotations.	No change
6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; independently research words and gather vocabulary knowledge. (See grades 11-12 Reading Literature standards 4 and Reading Informational Text standard 4 on applying

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knowledge when considering a word or phrase important to comprehension or expression.	knowledge of vocabulary to reading; see grades 11-12 Writing standard 5 and Speaking and Listening standard 4 on strengthening writing and presentations by applying knowledge of vocabulary).

9th-12th Grade Standards for Literacy in History/Social Studies, Science, and Technical Subjects

Grades 9-10 Reading Standards for Literacy in the Content Areas: History/Social Studies	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.	No change
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.	No change
3. Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.	No change
4. Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.	Determine the meaning of general academic and domain-specific words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.

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5. Analyze how a text uses structure to emphasize key points or advance an explanation or analysis.	No change
6. Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.	No change
7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.	No change
8. Assess the extent to which the reasoning and evidence in a text support the author's claims.	No change
9. Compare and contrast treatments of the same topic in several primary and secondary sources.	No change
10. By the end of grade 10, read and comprehend history/social studies texts in the grades 9-10 text complexity band independently and proficiently.	Independently and proficiently read and comprehend history/social studies texts exhibiting complexity appropriate for the grade/course.

Grades 9-10 Reading Standards for Literacy in the Content Areas: Science and Career and Technical Subjects	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite specific textual evidence to support analysis of science and technical texts, attending to precise details of explanations or descriptions.	No change
2. Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.	No change
3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.	No change
4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 9–10 texts and topics*.	Determine the meaning of general academic vocabulary as well as symbols, notation, key terms, and other domain-specific

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	words and phrases as they are used in a specific scientific or technical context relevant to *grades 9–10 texts and topics*.
5. Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., *force, friction, reaction force, energy*).	No change
6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	No change
7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.	No change
8. Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.	No change
9. Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.	No change
10. By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently.	Independently and proficiently read and comprehend science/technical texts exhibiting complexity appropriate for the grade/course.

Grades 9-10 Writing Standards for Literacy in the Content Areas ~~History/Social Studies, Science & Technical Subjects~~	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments focused on *discipline-specific content*. a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and	Write arguments focused on *discipline-specific content*. a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.

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counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented.	b. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented.
2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. a. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. a. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include ~~formatting~~ text features (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas, ~~and~~ concepts, or procedures. d. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers.

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f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	e. Establish and maintain a ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g, formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
3. (See note; not applicable as a separate requirement)	No change
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	No change
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	No change
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	Use technology, including the ~~Internet~~ current Web-based communication platforms, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	No change
8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research questions; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research questions; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
9. Draw evidence from informational texts to support analysis, reflection, and research.	Draw evidence from informational texts to support analysis, interpretation, reflection, and research. (See grades 9-10 Reading standard 1 for more on the use of textual evidence.)

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10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

Grades 9-10 Speaking and Listening Standards in the Content Areas	
Common Core State Standard	**Rhode Island Core Standards**
1. (No standard at this grade level.)	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *discipline-specific topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively. a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (Grades 9-10 Reading standard 1 for more on the use of textual evidence.) b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed. c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions. d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

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2. (No standard at this grade level.)	Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
3. (No standard at this grade level.)	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.
4. (No standard at this grade level.)	Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience, and task.
5. (No standard at this grade level.)	Make strategic use of digital media (e.g., audio, visual, and interactive elements) in presentations to enhance understanding of findings, claims, reasoning, and evidence and to add interest.
6. (No standard at this grade level.)	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

Grades 11-12 Reading Standards for Literacy in the Content Areas: History/Social Studies	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.	No change
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.	No change
3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matter uncertain.	No change

4. Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).	Determine the meaning of general academic and domain-specific words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).
5. Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.	No change
6. Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.	No change
7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.	No change
8. Evaluate the author's premises, claims, and evidence by corroborating or challenging them with other information.	No change
9. Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.	No change
10. By the end of grade 12, read and comprehend history/social studies texts in the grades 11–CCR text complexity band independently and proficiently.	Independently and proficiently read and comprehend history/social studies texts exhibiting complexity appropriate for the grade/course.

Grades 11-12 Reading Standards for Literacy in the Content Areas: Science and Career and Technical Subjects	
Common Core State Standard	**Rhode Island Core Standards**
1. Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.	No change
2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.	No change

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3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.	No change
4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11–12 texts and topics*.	Determine the meaning of general academic vocabulary as well as symbols, notation, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11–12 texts and topics*.
5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.	No change
6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.	No change
7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.	No change
8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.	No change
9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.	No change
10. By the end of grade 12, read and comprehend science/technical texts in the grades 11–CCR text complexity band independently and proficiently.	Independently and proficiently read and comprehend science/technical texts exhibiting complexity appropriate for the grade/course.

Grades 11-12 Writing Standards for Literacy in the Content Areas ~~History/Social Studies, Science & Technical Subjects~~	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments focused on *discipline-specific content*.	Write arguments focused on *discipline-specific content*.

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a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented.	a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented. f. ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g., formal for academic writing)
2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include ~~formatting~~ text features (e.g., headings), graphics (e.g.,

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information and examples appropriate to the audience's knowledge of the topic. c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language and domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas ~~and~~ concepts, or procedures. d. Use precise language and domain-specific vocabulary and techniques ~~such as metaphor, simile, and analogy~~ to manage the complexity of the topic; convey a knowledgeable stance in a style that ~~responds to~~ reflects the discipline and context as well as to the expertise of likely readers. e. Establish and maintain a ~~formal style and objective tone~~ ~~formal style and objective tone~~ style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
3. (See note; not applicable as a separate requirement)	No change
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	No change
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	No change

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6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	Use technology, including the ~~Internet~~ current Web-based communication platforms, to produce~~,~~ and publish writing and present the relationships between information and ideas clearly and efficiently.
7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	No change
8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of a specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	When conducting research, gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of a specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9. Draw evidence from informational texts to support analysis, reflection, and research.	Draw evidence from informational texts to support analysis, interpretation, reflection, and research. (See grades 11-12 Reading standard 1 for more on the use of textual evidence.)
10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	No change

Grades 11-12 Speaking and Listening Standards in the Content Areas	
Common Core State Standard	**Rhode Island Core Standards**
1. (No standard at this grade level.)	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *discipline-specific topics, texts, and issues*, building on others' ideas and expressing their own clearly and persuasively.

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	a. Come to discussion prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. (Grades 11-12 Reading standard 1 for more on the use of textual evidence.) b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed. c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives. d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions and critiques when possible; and determine what additional information or research is required to deepen the investigation or complete the task.
2. (No standard at this grade level.)	Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
3. (No standard at this grade level.)	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.

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4. (No standard at this grade level.)	Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, vocabulary, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. .
5. (No standard at this grade level.)	Make strategic use of digital media (e.g., audio, visual, and interactive elements) in presentations to enhance understanding of findings, claims, reasoning, and evidence and to add interest.
6. (No standard at this grade level.)	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

K-12 College and Career Readiness Anchor Standards

College and Career Readiness Anchor Standard for Reading	
Common Core State Standard	**Rhode Island Core Standards**
1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	No change
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	No change

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3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	No change
4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.	No change
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.	Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of a text ~~(e.g., a section, chapter, scene, or stanza)~~ relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.	No change
7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.*	No change
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.	No change
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.	No change
10. Read and comprehend complex literary and informational texts independently and proficiently.	Independently and proficiently read and comprehend complex literary and informational texts.

College and Career Readiness Standards for Writing	
Common Core State Standard	**Rhode Island Core Standards**
1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.	No change
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.	No change

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3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.	Write narratives to develop ~~real or imagined~~ experiences or events using effective literary techniques, well-chosen details, and well-structured ~~event~~ sequences.
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	No change
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.	No change
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.	Use technology ~~including the Internet~~ to produce and publish writing and to interact and collaborate with others.
7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.	No change
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.	When conducting research, gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.	Draw evidence from literary or informational texts to support analysis, interpretation, reflection, and research.
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	No change

College and Career Readiness Anchor Standards for Speaking and Listening	
Common Core State Standard	**Rhode Island Core Standards**

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1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.	No change
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.	No change
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.	No change
4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.	Present information, findings, and supporting evidence such that: • Listeners can follow the line of reasoning. • The organization, development, vocabulary, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.	No change
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.	No change

College and Career Readiness Anchor Standards for Language	
Common Core State Standard	**Rhode Island Core Standards**
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	No change
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	No change
3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.	No change

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4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.	No change
5. Demonstrate understanding of figurative language, word relationships and nuances in word meanings.	No change
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.	Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge ~~when encountering an unknown term important to comprehension or expression~~.

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RHODE ISLAND CORE STANDARDS FOR MATHEMATICS

March 2021

Rhode Island Department of Education, 2021
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The Standards for Mathematical Practice

The Standards for Mathematical Practice describe expertise that mathematics educators at all levels should seek to develop in their students. The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years. These practices rest on two sets of important "processes and proficiencies" that have longstanding importance in mathematics education—the National Council of Teachers of Mathematics (NCTM) process standards and the strands of mathematical proficiency specified in the National Research Council's Report "Adding It Up."

Designers of curricula, assessments, and professional development should endeavor to connect the mathematical practices to mathematical content in instruction.

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand others' approaches to solving complex problems and identify correspondences among different approaches.

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of the quantities and their relationships in problem situations. Students bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically, and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meanings of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to

compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in communicating their own reasoning verbally and/or in writing. In problem solving they state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, expressing numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school, they have learned to examine claims and make explicit use of definitions.

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well-remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square, and use that to realize that its value cannot be more than 5 for any real numbers x and y.

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Kindergarten

Introduction

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

1. Students use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set; counting out a given number of objects; comparing sets or numerals; and modeling simple joining and separating situations with sets of objects, or eventually with equations such as 5 + 2 = 7 and 7 – 2 = 5. (Kindergarten students should see addition and subtraction equations, and student writing of equations in kindergarten is encouraged, but it is not required.) Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.
2. Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic two-dimensional shapes, such as squares, triangles, circles, rectangles, and hexagons, presented in a variety of ways (e.g., with different sizes and orientations), as well as three-dimensional shapes such as cubes, cones, cylinders, and spheres. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Kindergarten Overview

Counting and Cardinality

- **A.** Know number names and the counting sequence.
- **B.** Count to tell the number of objects.
- **C.** Compare numbers.

Operations and Algebraic Thinking

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

Number and Operations in Base Ten

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

Measurement and Data

- **A.** Describe and compare measurable attributes.
- **B.** Classify objects and count the number of objects in each category.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Geometry

- **A.** Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
- **B.** Analyze, compare, create, and compose shapes.

Kindergarten Content Standards

Counting and Cardinality K.CC

A. 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 one).
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).

B. 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. Recognize the one more pattern of counting using objects.
5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

C. 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 for groups with up to 10 objects, 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

A. 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,[3] 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, including zero.

Number and Operations in Base Ten K.NBT

A. 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.

[3] Drawings need not show details, but should show the mathematics in the problem.

Measurement and Data K.MD

A. Describe and compare measurable attributes.

1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
2. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

B. Classify objects and count the number of objects in each category.

3. Classify objects into given categories; count the numbers of objects in each category (up to and including 10) and sort the categories by count.

Geometry K.G

A. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.
2. Correctly name shapes regardless of their orientation or overall size.
3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

B. Analyze, compare, create, and compose shapes.

4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).
5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
6. Compose simple shapes to form larger shapes.
   For example, "Can you join these two triangles with full sides touching to make a rectangle?"

Grade 1

Introduction

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

1. Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model add-to, take-from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
2. Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop an understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.
3. Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.[4]
4. Students compose and decompose plane or solid figures (e.g., put two triangles together to make a quadrilateral) and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

[4] Students should apply the principle of transitivity of measurement to make indirect comparisons, but they need not use this technical term.

Grade 1 Overview

Operations and Algebraic Thinking

- **A.** Represent and solve problems involving addition and subtraction.
- **B.** Understand and apply properties of operations and the relationship between addition and subtraction.
- **C.** Add and subtract within 20.
- **D.** Work with addition and subtraction equations.

Number and Operations in Base Ten

- **A.** Extend the counting sequence.
- **B.** Understand place value.
- **C.** Use place value understanding and properties of operations to add and subtract.

Measurement and Data

- **A.** Measure lengths indirectly and by iterating length units.
- **B.** Tell and write time.
- **C.** Represent and interpret data.
- **D.** Work with money.

Geometry

- **A.** Reason with shapes and their attributes.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 1 Content Standards

Operations and Algebraic Thinking 1.OA

A. 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 (number sentences) with a symbol for the unknown number to represent the problem.[5]
2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

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

3. Apply properties of operations to add. [6]

   For example, when adding numbers order does not matter. 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). When adding zero to a number, the result is the same number (Identity property of zero for 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.

C. Add and subtract within 20.

5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use mental strategies such as counting on; making 10 (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a 10 (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).

D. Work with addition and subtraction equations.

7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.

   For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.
8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

   For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.

Number and Operations in Base Ten 1.NBT

A. Extend the counting sequence.

1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

B. 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.

[5] See Glossary, Table 1.

[6] Students need not use formal terms for these properties.

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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 <.

C. 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. Identify arithmetic patterns of 10 more and 10 less than using strategies based on place value.
6. Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Measurement and Data 1.MD

A. Measure lengths indirectly and by iterating length units.

1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

B. Tell and write time.

3. Tell and write time in hours and half-hours using analog and digital clocks.

C. Represent and interpret data.

4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

D. Work with money.

5. Identify the values of all U.S. coins and know their comparative values (e.g., a dime is of greater value than a nickel). Find equivalent values (e.g., a nickel is equivalent to five pennies). Use appropriate notation (e.g., 69¢). Use the values of coins in the solutions of problems (up to 100¢).

Geometry 1.G

A. 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 that 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.[7]
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.

[7] Students do not need to learn formal names such as "right rectangular prism."

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Grade 2

Introduction

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

1. Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1,000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).
2. Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1,000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.
3. Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.
4. Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Grade 2 Overview

Operations and Algebraic Thinking

- **A.** Represent and solve problems involving addition and subtraction.
- **B.** Add and subtract within 20.
- **C.** Work with equal groups of objects to gain foundations for multiplication.

Number and Operations in Base Ten

- **A.** Understand place value.
- **B.** Use place value understanding and properties of operations to add and subtract.

Measurement and Data

- **A.** Measure lengths indirectly and by iterating length units.
- **B.** Relate addition and subtraction to length.
- **C.** Work with time and money.
- **D.** Represent and interpret data.

Geometry

- **A.** Reason with shapes and their attributes.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 2 Content Standards

Operations and Algebraic Thinking 2.OA

A. 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.[8]

B. Add and subtract within 20.

2. Fluently add and subtract within 20 using mental strategies.[9] By end of grade 2, know from memory all sums of two single-digit numbers and related differences.

   For example, the sum 6 + 5 = 11 has related differences of 11 – 5 = 6 and 11 – 6 =5.

C. Work with equal groups of objects to gain foundations for multiplication.

3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
4. Use addition to find the total number of objects arranged in rectangular arrays with up to five rows and up to five columns; write an equation to express the total as a sum of equal addends.

Number and Operations in Base Ten 2.NBT

A. Understand place value.

1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
   a. 100 can be thought of as a bundle of ten tens—called a "hundred."
   b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
2. Count within 1,000; skip-count by 5s, 10s, and 100s. Identify patterns in skip counting starting at any number.
3. Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.
4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

B. 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 1,000, 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.[10]

[8] See Glossary, Table 1.
[9] Strategies such as counting on; making tens; decomposing a number; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.
[10] Explanations may be supported by drawings or objects.

Measurement and Data 2.MD

A. Measure and estimate lengths in standard units.

1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
3. Estimate lengths using units of inches, feet, centimeters, and meters.
4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

B. 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.

C. Work with time and money.

7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
    a. Know the relationships of time, including seconds in a minute, minutes in an hour, hours in a day, days in a week; days in a month and a year and approximate number of weeks in a month and weeks in a year.
8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies (up to $10), using $ and ¢ symbols appropriately and whole dollar amounts.

    For example, if you have 2 dimes and 3 pennies, how many cents do you have? If you have $3 and 4 quarters, how many dollars or cents do you have? (Students are not expected to use decimal notation.)

D. Represent and interpret data.

9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Organize and record the data on a line plot (dot plot) where the horizontal scale is marked off in whole-number units.
10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems,[11] using information presented in a bar graph.

Geometry 2.G

A. Reason with shapes and their attributes.

1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[12] Identify triangles, squares, rectangles, rhombuses, trapezoids, pentagons, hexagons, and cubes.
2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *half of*, *a third of*, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

[11] See Glossary, Table 1.

[12] Sizes are compared directly or visually, not compared by measuring.

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Grade 3

Introduction

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

1. Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.
2. Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, $\frac{1}{2}$ of the paint in a small bucket could be less paint than $\frac{1}{3}$ of the paint in a larger bucket, but $\frac{1}{3}$ of a ribbon is longer than $\frac{1}{5}$ of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.
3. Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps; a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.
4. Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Grade 3 Overview

Operations and Algebraic Thinking

- **A.** Represent and solve problems involving multiplication and division.
- **B.** Understand properties of multiplication and the relationship between multiplication and division.
- **C.** Multiply and divide within 100.
- **D.** Solve problems involving the four operations, and identify and explain patterns in arithmetic.

Number and Operations in Base Ten

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

Number and Operations—Fractions

A. Develop understanding of fractions as numbers.

Measurement and Data

- **A.** Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
- **B.** Represent and interpret data.
- **C.** Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
- **D.** Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

Geometry

A. Reason with shapes and their attributes.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 3 Content Standards

Operations and Algebraic Thinking 3.OA

A. Represent and solve problems involving multiplication and division.

1. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in five groups of seven objects each.
   For example, describe a context in which a total number of objects can be expressed as 5 × 7.
2. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.
   For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.[13]
4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers.
   For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = □ ÷ 3, 6 × 6 = ?.

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

5. Apply properties of operations to multiply.[14]
   For example, when multiplying numbers order does not matter. If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known (Commutative property of multiplication); The product 3 × 5 × 2 can be found by 3 × 5 = 15 then 15 × 2 = 30, or by 5 × 2 = 10 then 3 × 10 = 30 (Associative property of multiplication); When multiplying two numbers either number can be decomposed and multiplied; one can find 8 x 7 by knowing that 7 = 5 + 2 and that 8 × 5 = 40 and 8 × 2 = 16, resulting in 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56 (Distributive property); When a number is multiplied by 1 the result is the same number (Identity property of 1 for multiplication).
6. Understand division as an unknown-factor problem.
   For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.

C. Multiply and divide within 100.

7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of grade 3, know from memory all products of two single-digit numbers and related division facts.
   For example, the product 4 x 7 = 28 has related division facts 28 ÷ 7 = 4 and 28 ÷ 4 = 7.

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

8. Solve two-step word problems using the four operations for problems posed with whole numbers and having whole number answers. 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.[15]
9. Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations.
   For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.

[13] See Glossary, Table 2.
[14] Students need not use formal terms for these properties. Students are not expected to use distributive notation.
[15] Students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

Number and Operations in Base Ten 3.NBT

A. Use place value understanding and properties of operations to perform multi-digit arithmetic. [16]

1. Use place value understanding to round whole numbers to the nearest 10 or 100.
2. Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.

Number and Operations—Fractions 3.NF

A. Develop understanding of fractions as numbers for fractions with denominators 2, 3, 4, 6, and 8.

1. Understand a fraction $1/b$ as the quantity formed by 1 part when a whole (a single unit) 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 unit 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 fraction $1/b$ is located $1/b$ of a whole unit from 0 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.

   For example, express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.

   d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

Measurement and Data 3.MD

A. 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 metric units of grams (g), kilograms (kg), and liters (*l*).[17] Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same metric units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.[18]

[16] A range of algorithms may be used.
[17] Excludes compound units such as cm^3 and finding the geometric volume of a container.
[18] Excludes multiplicative comparison problems (problems involving notions of "times as much"; see Glossary, Table 2).

B. Represent and interpret data.

3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.

   For example, draw a bar graph in which each square in the bar graph might represent five pets.

4. Generate measurement data by measuring lengths of objects using rulers marked with halves and fourths of an inch. Record and show the data by making a line plot (dot plot), where the horizontal scale is marked off in appropriate units—whole numbers, halves, or fourths. *(See Glossary for example.)*

C. 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 of one 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 non-standard 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.

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

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

Geometry 3.G

A. Reason with shapes and their attributes.

1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Compare and classify shapes by their sides and angles (right angle/non-right angle). Recognize rhombuses, rectangles, squares, and trapezoids as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

   For example, partition a shape into four parts with equal areas and describe the area of each part as ¼ of the area of the shape.

Grade 4

Introduction

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

1. Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate or mentally calculate products. They develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate and mentally calculate quotients, and interpret remainders based upon the context.
2. Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g., $^{15}/_{9} = {}^{5}/_{3}$), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.
3. Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Grade 4 Overview

Operations and Algebraic Thinking

- **A.** Use the four operations with whole numbers to solve problems.
- **B.** Gain familiarity with factors and multiples.
- **C.** Generate and analyze patterns.

Number and Operations in Base Ten

- **A.** Generalize place value understanding for multi-digit whole numbers less than or equal to 1,000,000.
- **B.** Use place value understanding and properties of operations to perform multi-digit arithmetic on whole numbers less than or equal to 1,000,000.

Number and Operations—Fractions

- **A.** Extend understanding of fraction equivalence and ordering for fractions ordering for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.
- **B.** Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.
- **C.** Understand decimal notation for fractions, and compare decimal fractions.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Measurement and Data

- **A.** Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- **B.** Represent and interpret data.
- **C.** Geometric measurement: Understand concepts of angle and measure angles.

Geometry

- **A.** Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Grade 4 Content Standards

Operations and Algebraic Thinking 4.OA

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

1. Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
2. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.[19]
3. Solve multi-step 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.
    a. Know multiplication facts and related division facts through 12 x 12.

B. Gain familiarity with factors and multiples.

4. Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

C. Generate and analyze patterns.

5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

    For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

Number and Operations in Base Ten 4.NBT

A. Generalize place value understanding for multi-digit whole numbers less than or equal to 1,000,000.

1. Recognize that in a multi-digit whole number, a digit in any place represents 10 times as much as it represents in the place to its right.

    For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.
2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
3. Use place value understanding to round multi-digit whole numbers to any place.

B. Use place value understanding and properties of operations to perform multi-digit arithmetic on whole numbers less than or equal to 1,000,000.

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.

[19] See Glossary, Table 2.

Number and Operations—Fractions 4.NF

A. Extend understanding of fraction equivalence and ordering for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.

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 numbers and sizes of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions, including fractions greater than 1.
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.

B. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.

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. (The whole can be a set of objects.)
   - ***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 drawings or visual fraction models. *Examples:* $^{3}/_{8} = {}^{1}/_{8} + {}^{1}/_{8} + {}^{1}/_{8}$; $^{3}/_{8} = {}^{1}/_{8} + {}^{2}/_{8}$; $2\ {}^{1}/_{8} = 1 + 1 + {}^{1}/_{8} = {}^{8}/_{8} + {}^{8}/_{8} + {}^{1}/_{8}$.
   - **c.** Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
   - **d.** Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using drawings or visual fraction models and equations to represent the problem.
4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
   - **a.** Understand a fraction $^{a}/_{b}$ as a multiple of $^{1}/_{b}$.

   For example, use a visual fraction model to represent $^{5}/_{4}$ as the product $5 \times ({}^{1}/_{4})$, recording the conclusion by the equation $^{5}/_{4} = 5 \times ({}^{1}/_{4})$.
   - **b.** Understand a multiple of $^{a}/_{b}$ as a multiple of $^{1}/_{b}$, and use this understanding to multiply a fraction by a whole number.

   For example, use a visual fraction model to express $3 \times ({}^{2}/_{5})$ as $6 \times ({}^{1}/_{5})$, recognizing this product as $^{6}/_{5}$. (In general, $n \times ({}^{a}/_{b}) = {}^{(n \times a)}/_{b}$.)
   - **c.** Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.

   For example, if each person at a party will eat $^{3}/_{8}$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

C. 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.[20]

   For example, express $^{3}/_{10}$ as $^{30}/_{100}$, and add $^{3}/_{10} + {}^{4}/_{100} = {}^{34}/_{100}$.
6. Use decimal notation to represent fractions with denominators 10 or 100.

   For example, rewrite 0.62 as $^{62}/_{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.

[20] Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.

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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.

Measurement and Data 4.MD

A. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

1. Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.
   For example, know that 1 ft. is 12 times as long as 1 in. Express the length of a 4 ft. snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), …
2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
3. Apply the area and perimeter formulas for rectangles in real-world and mathematical problems.
   For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor. (Note: When finding areas of rectangular regions answers will be in square units. For example, the area of a 1 cm x 1 cm rectangular region will be 1 square centimeter (1 cm^2, students are not expected to use this notation.) When finding the perimeter of a rectangular region answers will be in linear units. For example, the perimeter of the region is: 1cm + 1cm + 1cm +1cm = 4 cm or 2(1cm) + 2(1cm) = 4 cm).

B. Represent and interpret data.

4. Make a line plot (dot plot) representation to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots (dot plots).
   For example, from a line plot (dot plot) find and interpret the difference in length between the longest and shortest specimens in an insect collection.

C. Geometric measurement: Understand concepts of angle and measure angles.

5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
   a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles.
   b. An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.
6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
7. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Geometry 4.G

A. Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Grade 5

Introduction

In grade 5, instructional time should focus on four critical areas: (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3) developing understanding of measurement systems and determining volumes to solve problems; and (4) solving problems using the coordinate plane

1. Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing unit fractions by whole numbers and whole numbers by unit fractions.)
2. Students develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. They finalize fluency with multi-digit multiplication, and division. They apply their understandings of models for decimals, decimal notation, and properties of operations to add and subtract decimals to hundredths. They develop fluency in these computations and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of decimals to hundredths efficiently and accurately.
3. Students convert among different-sized measurement units within a given measurement system allowing for efficient and accurate problem solving with multi-step real-world problems as they progress in their understanding of scientific concepts and calculations. Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real-world and mathematical problems.
4. Students learn to interpret the components of a rectangular coordinate system as lines and understand the precision of location that these lines require. Students learn to apply their knowledge of number and length to the order and distance relationships of a coordinate grid and to coordinate this across two dimensions. Students solve mathematical and real world problems using coordinates.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Grade 5 Overview

Operations and Algebraic Thinking

- **A.** Write and interpret numerical expressions.
- **B.** Analyze patterns and relationships.

Number and Operations in Base Ten

- **A.** Understand the place value system.
- **B.** Perform operations with multi-digit whole numbers and with decimals to hundredths.

Number and Operations—Fractions

- **A.** Use equivalent fractions as a strategy to add and subtract fractions.
- **B.** Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Measurement and Data

- **A.** Convert like measurement units within a given measurement system.
- **B.** Represent and interpret data.
- **C.** Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Geometry

- **A.** Graph points on the coordinate plane to solve real-world and mathematical problems.
- **B.** Classify two-dimensional figures into categories based on their properties.

Grade 5 Content Standards

Operations and Algebraic Thinking 5.OA

A. Write and interpret numerical expressions.

1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols, e.g.,(6 x 30) + (6 x ½).
2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

   For example, express the calculation "Add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.

B. Analyze patterns and relationships.

3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

   For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

Number and Operations in Base Ten 5.NBT

A. Understand the place value system.

1. Recognize that in a multi-digit number, including decimals, a digit in any place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ 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., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (\frac{1}{10}) + 9 \times (\frac{1}{100}) + 2 \times (\frac{1}{1000})$.
   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.

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

5. Fluently multiply multi-digit whole numbers. (Include two-digit x four-digit numbers and, three-digit x three-digit 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 and between multiplication and division; relate the strategy to a written method and explain the reasoning used.

Number and Operations—Fractions 5.NF

A. 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 (the whole can be a set of objects), 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 $\frac{3}{7} < \frac{1}{2}$.

B. 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 ¾ as the result of dividing 3 by 4, noting that ¾ multiplied by 4 equals 3, and that when three wholes are shared equally among four people each person has a share of size ¾. If nine 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 and/or area 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.

For example, without multiplying tell which number is greater: 225 or ¾ x 225; $\frac{11}{50}$ or $\frac{3}{2} \times \frac{11}{50}$?

   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 $\frac{a}{b} = (n \times a)/(n \times b)$ 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.[21]

   a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.

For example, create a story context for $(\frac{1}{3}) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(\frac{1}{3}) \div 4 = \frac{1}{12}$ because $(\frac{1}{12}) \times 4 = \frac{1}{3}$.

   b. Interpret division of a whole number by a unit fraction, and compute such quotients.

For example, create a story context for $4 \div (\frac{1}{5})$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (\frac{1}{5}) = 20$ because $20 \times (\frac{1}{5}) = 4$.

[21] Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade.

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 three people share ½ lb. of chocolate equally? How many $^1/_3$-cup servings are in two cups of raisins?

Measurement and Data 5.MD

A. Convert like measurement units within a given measurement system.

1. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real-world problems.

B. Represent and interpret data.

2. Make a line plot (dot plot) to display a data set of measurements in fractions of a unit. Use operations on fractions for this grade to solve problems involving information presented in line plot (dot plot).

For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

C. 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 non-standard 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 edge 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 formula $V = l \times w \times h$ and $V = B \times h$ (where B stands for the area of the base) 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

A. 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 zero 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.

B. Classify two-dimensional figures into categories based on their properties.

3. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

4. Classify two-dimensional figures in a hierarchy based on properties.

For example, all rectangles are parallelograms because they are all quadrilaterals with two pairs of opposite sides parallel.

Grade 6

Introduction

In grade 6, instructional time should focus on five critical areas: (1) connecting ratio and rate to whole number multiplication and division, and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; (4) developing understanding of statistical thinking; and (5) reasoning about geometric shapes and their measurements.

1. Students use reasoning about multiplication and division to solve ratio and rate problems about quantities. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students connect their understanding of multiplication and division with ratios and rates. Thus students expand the scope of problems for which they can use multiplication and division to solve problems, and they connect ratios and fractions. Students solve a wide variety of problems involving ratios and rates.
2. Students use the meaning of fractions, the meanings of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for dividing fractions make sense. Students use these operations to solve problems. Students extend their previous understandings of number and the ordering of numbers to the full system of rational numbers, which includes negative rational numbers, and in particular negative integers. They reason about the order and absolute value of rational numbers and about the location of points in all four quadrants of the coordinate plane.
3. Students understand the use of variables in mathematical expressions. They write expressions and equations that correspond to given situations, evaluate expressions, and use expressions and formulas to solve problems. Students understand that expressions in different forms can be equivalent, and they use the properties of operations to rewrite expressions in equivalent forms. Students know that the solutions of an equation are the values of the variables that make the equation true. Students use properties of operations and the idea of maintaining the equality of both sides of an equation to solve simple one-step equations. Students construct and analyze tables, such as tables of quantities that are in equivalent ratios, and they use equations (such as $3x = y$) to describe relationships between quantities.
4. Building on and reinforcing their understanding of number, students begin to develop their ability to think statistically. Students recognize that a data distribution may not have a definite center and that different ways to measure center yield different values. The median measures center in the sense that it is roughly the middle value. The mean measures center in the sense that it is the value that each data point would take on if the total of the data values were redistributed equally, and also in the sense that it is a balance point. Students recognize that a measure of variability (interquartile range) can also be useful for summarizing data because two very different sets of data can have the same mean and median yet be distinguished by their variability. Students learn to describe and summarize numerical data sets, identifying clusters, peaks, gaps, and symmetry, considering the context in which the data were collected.
5. Students in grade 6 also build on their work with area in elementary school by reasoning about relationships among shapes to determine area, surface area, and volume. They find areas of right

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

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Grade 6 Overview

Ratios and Proportional Relationships

A. Understand ratio and rate concepts and use ratio reasoning to solve problems.

The Number System

A. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
B. Compute fluently with multi-digit numbers and find common factors and multiples.
C. Apply and extend previous understandings of numbers to the system of rational numbers.

Expressions and Equations

A. Apply and extend previous understandings of arithmetic to algebraic expressions.
B. Reason about and solve one-variable equations and inequalities.
C. Represent and analyze quantitative relationships between dependent and independent variables.

Geometry

A. Solve real-world and mathematical problems involving area, surface area, and volume.

Statistics and Probability

A. Develop understanding of statistical variability.
B. Summarize and describe distributions.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 6 Content Standards

Ratios and Proportional Relationships 6.RP

A. Understand ratio and rate concepts and use ratio and rate reasoning to solve problems.

1. Understand the concept of a ratio including the distinctions between part:part and part:whole and the value of a ratio; part/part and part/whole. Use ratio language to describe a ratio relationship between two quantities.

   For example, The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every two wings there was one beak; For every vote candidate A received, candidate C received nearly three votes, meaning that candidate C received three out of every four votes or ¾ of all votes.

2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship, *including the use of units*.

   For example, This recipe has a ratio of three cups of flour to four cups of sugar, so there is ¾ cup of flour for each cup of sugar; We paid $75 for 15 hamburgers, which is a rate of five dollars per hamburger.[22]

3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
   a. Make tables of equivalent ratios relating quantities with whole-number measurements. Find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
   b. Solve unit rate problems, including those involving unit pricing, and constant speed.

   For example, if it took seven hours to mow four lawns, then, at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?

   c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $^{30}/_{100}$ times the quantity); solve problems involving finding the whole, given a part and the percent.
   d. Use ratio reasoning to convert measurement units within and between measurement systems; manipulate and transform units appropriately when multiplying or dividing quantities.

   For example, Malik is making a recipe, but he cannot find his measuring cups! He has, however, found a tablespoon. His cookbook says that 1 cup = 16 tablespoons. Explain how he could use the tablespoon to measure out the following ingredients: two cups of flour, ½ cup sunflower seed, and 1¼ cup of oatmeal.[23]

   e. Solve problems that relate the mass of an object to its volume.

The Number System 6.NS

A. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.

   For example, create a story context for $(^2/_3) \div (^3/_4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(^2/_3) \div (^3/_4) = {}^8/_9$ because $^3/_4$ of $^8/_9$ is $^2/_3$. In general, $(^a/_b) \div (^c/_d) = {}^{ad}/_{bc}$. How much chocolate will each person get if three people share $^1/_2$ lb. of chocolate equally? How many $^3/_4$-cup servings are in $^2/_3$ of a cup of yogurt? How wide is a rectangular strip of land with length $^3/_4$ mile and area $^1/_2$ square mile?

B. Compute fluently with multi-digit numbers and find common factors and multiples.

2. Fluently divide multi-digit numbers using the standard algorithm.
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

[22] Expectations for unit rates in this grade are limited to non-complex fractions.
[23] Example is from the Illustrative Mathematics Project: https://www.illustrativemathematics.org/content-standards/tasks/2174

4. Use prime factorization to find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two relatively prime numbers.

For example, express 36 + 8 as 4(9 + 2).

C. Apply and extend previous understandings of numbers to the system of rational numbers.

5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, and positive/negative electric charge). Use positive and negative numbers (whole numbers, fractions, and decimals) to represent quantities in real-world contexts, explaining the meaning of zero in each situation.
6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.
    a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that zero is its own opposite.
    b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
    c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
7. Understand ordering and absolute value of rational numbers.
    a. Interpret statements of inequality as statements about the relative positions of two numbers on a number line diagram.

For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.

    b. Write, interpret, and explain statements of order for rational numbers in real-world contexts.

For example, write –3°C > –7°C to express the fact that –3°C is warmer than –7°C.

    c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.

For example, for an account balance of –30 dollars, write \|–30\| = 30 to describe the size of the debt in dollars.

    d. Distinguish comparisons of absolute value from statements about order.

For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.

8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.

Expressions and Equations 6.EE

A. Apply and extend previous understandings of arithmetic to algebraic expressions.

1. Write and evaluate numerical expressions involving whole-number exponents.
2. Write, read, and evaluate expressions in which letters stand for numbers.
    a. Write expressions that record operations with numbers and with letters standing for numbers.

For example, express the calculation "Subtract y from 5" as 5 – y.

    b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, and coefficient); view one or more parts of an expression as a single entity.

For example, describe the expression 2(8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.

c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = ½$.

3. Apply the properties of operations to generate equivalent expressions.

For example, apply the distributive property to the expression 3(2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6(4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.

4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).

For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.

B. Reason about and solve one-variable equations and inequalities.

5. Understand solving an equation or inequality as a process of answering a question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.

6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q, and x are all nonnegative rational numbers.

8. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

C. Represent and analyze quantitative relationships between dependent and independent variables.

9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.

For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.

Geometry 6.G

A. Solve real-world and mathematical problems involving area, surface area, and volume.

1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface areas of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

Statistics and Probability 6.SP

A. Develop understanding of statistical variability.

1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.

   For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.
2. Understand that a set of data collected to answer a statistical question has a distribution, which can be described by its center (median, mean, and/or mode), spread (range, interquartile range), and overall shape.
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

B. Summarize and describe distributions.

4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
   a. Read and interpret circle graphs.
5. Summarize numerical data sets in relation to their context, such as by:
   a. Reporting the number of observations.
   b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
   c. Giving quantitative measures of center (median, and/or mean) and variability (range and/or interquartile range), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.
   d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

Grade 7

Introduction

In grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

1. Students extend their understanding of ratios and rates and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios, rates, and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about scale drawings by relating corresponding lengths between the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships.
2. Students develop a unified understanding of number, recognizing fractions, decimals (that have a finite or a repeating decimal representation), and percents as different representations of rational numbers. Students extend addition, subtraction, multiplication, and division to all rational numbers, maintaining the properties of operations and the relationships between addition and subtraction, and multiplication and division. By applying these properties, and by viewing negative numbers in terms of everyday contexts (e.g., amounts owed or temperatures below zero), students explain and interpret the rules for adding, subtracting, multiplying, and dividing with negative numbers. They use the arithmetic of rational numbers as they formulate expressions and equations in one variable and use these equations to solve problems.
3. Students continue their work with area from grade 6, solving problems involving the area and circumference of a circle and surface area of three-dimensional objects. In preparation for work on congruence and similarity in grade 8 they reason about relationships among two-dimensional figures using scale drawings and informal geometric constructions, and they gain familiarity with the relationships between angles formed by intersecting lines. Students work with three-dimensional figures, relating them to two-dimensional figures by examining cross-sections. They solve real-world and mathematical problems involving area, surface area, and volume of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.
4. Students build on their previous work with single data distributions to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Grade 7 Overview

Ratios and Proportional Relationships

A. Analyze proportional relationships and use them to solve real-world and mathematical problems.

The Number System

A. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Expressions and Equations

A. Use properties of operations to generate equivalent expressions.

B. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Geometry

A. Draw, construct and describe geometrical figures and describe the relationships between them.

B. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

Statistics and Probability

A. Use random sampling to draw inferences about a population.

B. Draw informal comparative inferences about two populations.

C. Investigate chance processes and develop, use, and evaluate probability models.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 7 Content Standards

Ratios and Proportional Relationships 7.RP

A. Analyze proportional relationships and use them to solve real-world and mathematical problems.

1. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units.

   For example, if a person walks ½ mile in each ¼ hour, compute the unit rate as the complex fraction ½/¼ miles per hour, equivalently 2 miles per hour.

2. Recognize and represent proportional relationships between quantities.
   a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table, or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
   b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
   c. Represent proportional relationships by equations.

   For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn.

   d. Explain what a point (*x, y*) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, *r*) where *r* is the unit rate.
3. Use proportional relationships to solve multi-step ratio, rate, and percent problems.

   For example: simple interest, tax, price increases and discounts, gratuities and commissions, fees, percent increase and decrease, percent error.

The Number System 7.NS

A. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

1. Apply and extend previous understandings of addition and subtraction to add and subtract integers and other rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.
   a. Describe situations in which opposite quantities combine to make zero.

   For example, A hydrogen atom has zero charge because its two constituents are oppositely charged; If you open a new bank account with a deposit of $30 and then withdraw $30, you are left with a $0 balance.

   b. Understand $p + q$ as the number located a distance $|q|$ from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
   c. Understand subtraction of rational numbers as adding the additive inverse, $p – q = p + (–q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
   d. Apply properties of operations as strategies to add and subtract rational numbers.
2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide integers and other rational numbers.
   a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.

b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.

c. Apply properties of operations as strategies to multiply and divide rational numbers.

d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

3. Solve real-world and mathematical problems involving the four operations with integers and other rational numbers.[24]

Expressions and Equations 7.EE

A. Use properties of operations to generate equivalent expressions.

1. Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients.

For example, 4x + 2 = 2(2x +1) and -3(x – 5/3) = -3x + 5.

2. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.

For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05." A shirt at a clothing store is on sale for 20% off the regular price, "p". The discount can be expressed as 0.2p. The new price for the shirt can be expressed as p – 0.2p or 0.8p.

B. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

3. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.

For example, if a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9¾ inches long in the center of a door that is 27½ inches wide, you will need to place the bar about 9 inches from each edge; This estimate can be used as a check on the exact computation.

4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

a. Solve word problems leading to equations of the form $px + q = r$ and $p(x \div q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.

For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.

For example, as a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.

c. Extend analysis of patterns to include analyzing, extending, and determining an expression for simple arithmetic and geometric sequences (e.g., compounding, increasing area), using tables, graphs, words, and expressions.

[24] Computations with rational numbers extend the rules for manipulating fractions to complex fractions.

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Geometry 7.G

A. Draw, construct, and describe geometrical figures and describe the relationships between them.

1. Solve problems involving scale drawings of geometric figures, such as computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
2. Draw (freehand, with ruler and protractor, and with technology) two-dimensional geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.
3. Describe the shape of the two-dimensional face of the figure that results from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

B. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

4. Circles and measurement:
    a. Know that a circle is a two-dimensional shape created by connecting all of the points equidistant from a fixed point called the center of the circle.
    b. Understand and describe the relationships among the radius, diameter, and circumference of a circle.
    c. Understand and describe the relationship among the radius, diameter, and area of a circle.
    d. Know the formulas for the area and circumference of a circle and use them to solve problems.
    e. Give an informal derivation of the relationship between the circumference and area of a circle.
5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write simple equations and use them to solve for an unknown angle in a figure.
6. Solve real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Statistics and Probability 7.SP

A. Use random sampling to draw inferences about a population.

1. Understand that statistics can be used to gain information about a population by examining a sample of the population; Generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.
2. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.

    For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.

B. Draw informal comparative inferences about two populations.

3. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.

    For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team and both distributions have similar variability (mean absolute deviation) of about 5 cm. The difference between the mean heights of the two teams (10 cm) is about twice the variability (5 cm) on either team. On a dot plot, the separation between the two distributions of heights is noticeable.

4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.

    For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.

C. Investigate chance processes and develop, use, and evaluate probability models.

5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around ½ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.
6. Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.

   For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.
7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
   a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.

   For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.
   b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.

   For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?
8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.
   a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
   b. Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.
   c. Design and use a simulation to generate frequencies for compound events.

   For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least four donors to find one with type A blood?

Grade 8

Introduction

In grade 8, instructional time should focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; and (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

1. Students use linear equations and systems of linear equations to represent, analyze, and solve a variety of problems. Students recognize equations for proportions ($y/x = m$ or $y = mx$) as special linear equations ($y = mx + b$), understanding that the constant of proportionality (m) is the slope, and the graphs are lines through the origin. They understand that the slope (m) of a line is a constant rate of change, so that if the input or x-coordinate changes by an amount A, the output or y-coordinate changes by the amount $m \times A$. Students also use a linear equation to describe the association between two quantities in bivariate data (such as arm span vs. height for students in a classroom). At this grade, fitting the model and assessing its fit to the data are done informally. Interpreting the model in the context of the data requires students to express a relationship between the two quantities in question and to interpret components of the relationship (such as slope and y-intercept) in terms of the situation.

   Students strategically choose and efficiently implement procedures to solve linear equations in one variable, understanding that when they use the properties of equality and the concept of logical equivalence, they maintain the solutions of the original equation. Students solve systems of two linear equations in two variables and relate the systems to pairs of lines in the plane; these intersect, are parallel, or are the same line. Students use linear equations, systems of linear equations, linear functions, and their understanding of slope of a line to analyze situations and solve problems.

2. Students grasp the concept of a function as a rule that assigns to each input exactly one output. They understand that functions describe situations where one quantity determines another. They can translate among representations and partial representations of functions (noting that tabular and graphical representations may be partial representations), and they describe how aspects of the function are reflected in the different representations.
3. Students use ideas about distance and angles, how they behave under translations, rotations, reflections, and dilations, and ideas about congruence and similarity to describe and analyze two-dimensional figures and to solve problems. Students show that the sum of the angles in a triangle is the angle formed by a straight line, and that various configurations of lines give rise to similar triangles because of the angles created when a transversal cuts parallel lines. Students understand the statement of the Pythagorean Theorem and its converse, and can explain why the Pythagorean Theorem holds, for example, by decomposing a square in two different ways. They apply the Pythagorean Theorem to find distances between points on the coordinate plane, to find lengths, and to analyze polygons. Students complete their work on volume by solving problems involving cones, cylinders, and spheres.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Grade 8 Overview

The Number System

A. Know that there are numbers that are not rational, and approximate them by rational numbers.

Expressions and Equations

A. Work with radicals and integer exponents.
B. Understand the connections between proportional relationships, lines, and linear equations.
C. Analyze and solve linear equations and pairs of simultaneous linear equations.

Functions

A. Define, evaluate, and compare functions.
B. Use functions to model relationships between quantities.

Geometry

A. Understand congruence and similarity using physical models, transparencies, or geometry software.
B. Understand and apply the Pythagorean Theorem.
C. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

Statistics and Probability

A. Investigate patterns of association in bivariate data.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 8 Content Standards

The Number System 8.NS

A. Know that there are numbers that are not rational, and approximate them by rational numbers.

1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion. For rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2).

   For example, by truncating the decimal expansion of $\sqrt{2}$ show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

Expressions and Equations 8.EE

A. Work with radicals and integer exponents.

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions.

   For example, $3^2 \times 3^{-5} = 3^{-3} = \frac{1}{3^3} = \frac{1}{27}$.
2. Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
3. Use numbers expressed in the form of a single digit multiplied by an integer power of 10 to estimate very large or very small quantities, and express how many times as much one is than the other.

   For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9, and determine that the world population is more than 20 times larger.
4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

B. Understand the connections between proportional relationships, lines, and linear equations.

5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

   For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
6. Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane. Derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b.

C. Analyze and solve linear equations and pairs of simultaneous linear equations.

7. Solve linear equations in one variable.
   a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
   b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
8. Analyze and solve pairs of simultaneous linear equations.
   a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
   b. Solve systems of two linear equations in two variables algebraically (using substitution and elimination strategies), and estimate solutions by graphing the equations. Solve simple cases by inspection.

   For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6.

c. Solve real-world and mathematical problems leading to two linear equations in two variables.

For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.

Functions 8.F

A. Define, evaluate, and compare functions.

1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.[25]
2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).

   For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.
3. Interpret the equation $y = mx + b$ as defining a linear function whose graph is a straight line; give examples of functions that are not linear.

   For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1, 1), (2, 4) and (3, 9), which are not on a straight line.

B. Use functions to model relationships between quantities.

4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (*x, y*) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

Geometry 8.G

A. Understand congruence and similarity using physical models, transparencies, or geometry software.

1. Verify experimentally the properties of rotations, reflections, and translations:
   - **a.** Lines are transformed to lines, and line segments to line segments of the same length.
   - **b.** Angles are transformed to angles of the same measure.
   - **c.** Parallel lines are transformed to parallel lines.
2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations. Given two congruent figures, describe a sequence that exhibits the congruence between them.
3. Describe the effects of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations. Given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.

   For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.

B. Understand and apply the Pythagorean Theorem.

6. **a.** Understand the relationship among the sides of a right triangle.
   b. Analyze and justify the Pythagorean Theorem and its converse using pictures, diagrams, narratives, or models.
7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
8. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

[25] Function notation is not required in grade 8.

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C. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

9. Know the formulas for the volumes of cones, cylinders, and spheres, and use them to solve real-world and mathematical problems.

Statistics and Probability 8.SP

A. Investigate patterns of association in bivariate data.

1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line and informally assess the model fit by judging the closeness of the data points to the line.

3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.

For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.

4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.

For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?

Mathematics Standards for High School

The high school standards specify the mathematics that all students should study in order to be college and career ready. Additional mathematics that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics is indicated by (+), as in this example:

> (+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers).

All standards without a (+) symbol should be in the common mathematics curriculum for all college and career ready students. Standards with a (+) symbol may also appear in courses intended for all students.

The high school standards are listed in conceptual categories:

- Number and Quantity
- Algebra
- Functions
- Modeling
- Geometry
- Statistics and Probability.

Conceptual categories portray a coherent view of high school mathematics; a student's work with functions, for example, crosses a number of traditional course boundaries, potentially up through and including calculus.

Modeling is best interpreted not as a collection of isolated topics but in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (★). The star symbol sometimes appears on the heading for a group of standards; in that case, it should be understood to apply to all standards in that group.

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Conceptual Category: Number and Quantity [N]

Introduction

Numbers and Number Systems

During the years from kindergarten to eighth grade, students must repeatedly extend their conception of number. At first, "number" means "counting number": 1, 2, 3…. Soon after that, 0 is used to represent "none" and the whole numbers are formed by the counting numbers together with zero. The next extension is fractions. At first, fractions are barely numbers and tied strongly to pictorial representations. Yet by the time students understand division of fractions, they have a strong concept of fractions as numbers and have connected them, via their decimal representations, with the Base Ten system used to represent the whole numbers. During middle school, fractions are augmented by negative fractions to form the rational numbers. In grade 8, students extend this system once more, augmenting the rational numbers with the irrational numbers to form the real numbers. In high school, students will be exposed to yet another extension of number, when the real numbers are augmented by the imaginary numbers to form the complex numbers.)

With each extension of number, the meanings of addition, subtraction, multiplication, and division are extended. In each new number system—integers, rational numbers, real numbers, and complex numbers—the four operations stay the same in two important ways: They have the Commutative, Associative, and Distributive properties and their new meanings are consistent with their previous meanings.

Extending the properties of whole-number exponents leads to new and productive notation. For example, properties of whole-number exponents suggest that $(5^{1/3})^3$ should be $5^{(1/3)3} = 5^1 = 5$ and that $5^{1/3}$ should be the cube root of 5.

Calculators, spreadsheets, and computer algebra systems can provide ways for students to become better acquainted with these new number systems and their notation. They can be used to generate data for numerical experiments, to help understand the workings of matrix, vector, and complex number algebra, and to experiment with non-integer exponents.

Quantities

In real-world problems, the answers are usually not numbers but quantities: numbers with units, which involve measurement. In their work in measurement up through grade 8, students primarily measure commonly used attributes such as length, area, and volume. In high school, students encounter a wider variety of units in modeling, e.g., acceleration, currency conversions, derived quantities such as person-hours and heating degree-days, social science rates such as per-capita income, and rates in everyday life such as points scored per game or batting averages. They also encounter novel situations in which they themselves must conceive the attributes of interest. For example, to find a good measure of overall highway safety, they might propose measures such as fatalities per year, fatalities per year per driver, or fatalities per vehicle-mile traveled. Such a conceptual process is sometimes called quantification. Quantification is important for science, as when surface area suddenly "stands out" as an important variable in evaporation. Quantification is also important for companies, which must conceptualize relevant attributes and create or choose suitable measures for them.

Conceptual Category: Number and Quantity Overview [N]

The Real Number System

- **A.** Extend the properties of exponents to rational exponents.
- **B.** Use properties of rational and irrational numbers.

Quantities

- **A.** Reason quantitatively and use units to solve problems.

The Complex Number System

- **A.** Perform arithmetic operations with complex numbers.
- **B.** Represent complex numbers and their operations on the complex plane.
- **C.** Use complex numbers in polynomial identities and equations.

Vector and Matrix Quantities

- **A.** Represent and model with vector quantities.
- **B.** Perform operations on vectors.
- **C.** Perform operations on matrices and use matrices in applications.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Conceptual Category: Number and Quantity Content Standards [N]

The Real Number System N-RN

A. Extend the properties of exponents to rational exponents.

1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.
   For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})3 = 5^{(1/3)3}$ to hold, so $(5^{1/3})^3$ must equal 5.
2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.

B. Use properties of rational and irrational numbers.

3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

Quantities N-Q

A. Reason quantitatively and use units to solve problems.

1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.★
2. Define appropriate quantities for the purpose of descriptive modeling.★
3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.★
   a. Describe the effects of approximate error in measurement and rounding on measurements and on computed values from measurements. Identify significant figures in recorded measures and computed values based on the context given and the precision of the tools used to measure.★

The Complex Number System N-CN

A. Perform arithmetic operations with complex numbers.

1. Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.
2. Use the relation $i^2 = -1$ and the Commutative, Associative, and Distributive properties to add, subtract, and multiply complex numbers.
3. (+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.

B. Represent complex numbers and their operations on the complex plane.

4. (+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.
5. (+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation.
   For example, $(-1+\sqrt{3}i)^3=8$ because $(-1+\sqrt{3}i)$ has modulus 2 and argument 120°.
6. (+) Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.

C. Use complex numbers in polynomial identities and equations.

7. Solve quadratic equations with real coefficients that have complex solutions.
8. (+) Extend polynomial identities to the complex numbers.
   For example, rewrite $x^2 + 4$ as $(x + 2i)(x – 2i)$.
9. (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.

Vector and Matrix Quantities N-VM

A. Represent and model with vector quantities.

1. (+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., $\boldsymbol{v}$, $|\boldsymbol{v}|$, $||\boldsymbol{v}||$, v).
2. (+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.
3. (+) Solve problems involving velocity and other quantities that can be represented by vectors.

B. Perform operations on vectors.

4. (+) Add and subtract vectors.
   - **a.** (+) Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that (+) the magnitude of a sum of two vectors is typically not the sum of the magnitudes.
   - **b.** (+) Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.
   - **c.** (+) Understand vector subtraction $\boldsymbol{v} - \boldsymbol{w}$ as $\boldsymbol{v} + (-\boldsymbol{w})$, where $-\boldsymbol{w}$ is the additive inverse of $\boldsymbol{w}$, with the same magnitude as $\boldsymbol{w}$ and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise.
5. (+) Multiply a vector by a scalar.
   - **a.** (+) Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$.
   - **b.** (+) Compute the magnitude of a scalar multiple $c\boldsymbol{v}$ using $||c\boldsymbol{v}|| = |c|\boldsymbol{v}$. Compute the direction of $c\boldsymbol{v}$ knowing that when $|c|\boldsymbol{v} \neq 0$, the direction of $c\boldsymbol{v}$ is either along $\boldsymbol{v}$ (for $c > 0$) or against $\boldsymbol{v}$ (for $c < 0$).

C. Perform operations on matrices and use matrices in applications.

6. (+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.
7. (+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.
8. (+) Add, subtract, and multiply matrices of appropriate dimensions.
9. (+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a Commutative operation, but still satisfies the Associative and Distributive properties.
10. (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.
11. (+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.
12. (+) Work with 2×2 matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.

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Conceptual Category: Algebra [A]

Introduction

Expressions

An expression is a record of a computation with numbers, symbols that represent numbers, arithmetic operations, exponentiation, and, at more advanced levels, the operation of evaluating a function. Conventions about the use of parentheses and the Order of Operations assure that each expression is unambiguous. Creating an expression that describes a computation involving a general quantity requires the ability to express the computation in general terms, abstracting from specific instances.

Reading an expression with comprehension involves analysis of its underlying structure. This may suggest a different but equivalent way of writing the expression that exhibits some different aspect of its meaning. For example, $p + 0.05p$ can be interpreted as the addition of a 5% tax to a price p. Rewriting $p + 0.05p$ as $1.05p$ shows that adding a tax is the same as multiplying the price by a constant factor.

Algebraic manipulations are governed by the properties of operations and exponents and the conventions of algebraic notation. At times, an expression is the result of applying operations to simpler expressions. For example, $p + 0.05p$ is the sum of the simpler expressions p and $0.05p$. Viewing an expression as the result of operation on simpler expressions can sometimes clarify its underlying structure. A spreadsheet or a computer algebra system (CAS) can be used to experiment with algebraic expressions, perform complicated algebraic manipulations, and understand how algebraic manipulations behave.

Equations and Inequalities

An equation is a statement of equality between two expressions, often viewed as a question asking for which values of the variables the expressions on either side are in fact equal. These values are the solutions to the equation. An identity, in contrast, is true for all values of the variables; identities are often developed by rewriting an expression in an equivalent form.

The solutions of an equation in one variable form a set of numbers; the solutions of an equation in two variables form a set of ordered pairs of numbers, which can be plotted in the coordinate plane. Two or more equations and/or inequalities form a system. A solution for such a system must satisfy every equation and inequality in the system.

An equation can often be solved by successively deducing from it one or more simpler equations. For example, one can add the same constant to both sides without changing the solutions, but squaring both sides might lead to extraneous solutions. Strategic competence in solving includes looking ahead for productive manipulations and anticipating the nature and number of solutions.

Some equations have no solutions in a given number system, but have a solution in a larger system. For example, the solution of $x + 1 = 0$ is an integer, not a whole number; the solution of $2x + 1 = 0$ is a rational number, not an integer; the solutions of $x^2 - 2 = 0$ are real numbers, not rational numbers; and the solutions of $x^2 + 2 = 0$ are complex numbers, not real numbers.

The same solution techniques used to solve equations can be used to rearrange formulas. For example, the formula for the area of a trapezoid, $A = (^{(b1+b2)}/_{2})h$, can be solved for h using the same deductive process. Inequalities can be solved by reasoning about the properties of inequality. Many, but not all, of the properties of equality continue to hold for inequalities and can be useful in solving them.

Connections to Functions and Modeling

Expressions can define functions, and equivalent expressions define the same function. Asking when two functions have the same value for the same input leads to an equation; graphing the two functions allows for finding approximate solutions of the equation. Converting a verbal description to an equation, inequality, or system of these is an essential skill in modeling.

Conceptual Category: Algebra Overview [A]

Seeing Structure in Expressions

- **A.** Interpret the structure of expressions (linear, quadratic, exponential, polynomial, rational).
- **B.** Write expressions in equivalent forms to solve problems.

Arithmetic with Polynomials and Rational Expressions

- **A.** Perform arithmetic operations on polynomials.
- **B.** Understand the relationship between zeros and factors of polynomials.
- **C.** Use polynomial identities to solve problems.
- **D.** Rewrite rational expressions.

Creating Equations

- **A.** Create equations that describe numbers or relationships.

Reasoning with Equations and Inequalities

- **A.** Understand solving equations as a process of reasoning and explain the reasoning.
- **B.** Solve equations and inequalities in one variable.
- **C.** Solve systems of equations.
- **D.** Represent and solve equations and inequalities graphically.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

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Conceptual Category: Algebra Content Standards [A]

Seeing Structure in Expressions A-SSE

A. Interpret the structure of linear, quadratic, exponential, polynomial, and rational expressions.

1. Interpret expressions that represent a quantity in terms of its context.★
   - **a.** Interpret parts of an expression, such as terms, factors, and coefficients.
   - ***b.*** Interpret complicated expressions by viewing one or more of their parts as a single entity.

   For example, interpret $P(1 + r)^n$ as the product of P and a factor not depending on P.
2. Use the structure of an expression to identify ways to rewrite it.

   For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.

B. Write expressions in equivalent forms to solve problems.

3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
   - **a.** Factor a quadratic expression to reveal the zeros of the function it defines.
   - **b.** Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.
   - **c.** Use the properties of exponents to transform expressions for exponential functions.

   For example, the expression 1.15^t can be rewritten as $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.
4. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems.★

   For example, calculate mortgage payments.

Arithmetic with Polynomials and Rational Expressions A-APR

A. Perform arithmetic operations on polynomials.

1. Understand that polynomials form a system analogous to the integers, namely, they are closed under certain operations.
   - **a.** Perform operations on polynomial expressions (addition, subtraction, multiplication, division) and compare the system of polynomials to the system of integers when performing operations.
   - **b.** Factor and/or expand polynomial expressions, identify and combine like terms, and apply the Distributive property.

B. Understand the relationship between zeros and factors of polynomials.

2. Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.
3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.

C. Use polynomial identities to solve problems.

4. Prove polynomial identities and use them to describe numerical relationships.

   For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.
5. (+) Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.

D. Rewrite rational expressions.

6. Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.
7. (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.

Creating Equations A-CED

A. Create equations that describe numbers or relationships.

1. Create equations and inequalities in one variable and use them to solve problems. (Include equations arising from linear and quadratic functions, and simple root and rational functions and exponential functions.)★
2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.★
3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.★

   For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.
4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.★

   For example, rearrange Ohm's law $V = IR$ to highlight resistance, R.

Reasoning with Equations and Inequalities A-REI

A. Understand solving equations as a process of reasoning and explain the reasoning.

1. Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify or refute a solution method.
2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

B. Solve equations and inequalities in one variable.

3. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
   a. Solve linear equations and inequalities in one variable involving absolute value.
4. Solve quadratic equations in one variable.
   a. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x – p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.
   b. Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula, and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b.

C. Solve systems of equations.

5. Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.
6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
7. Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.

   For example, find the points of intersection between the line $y = –3x$ and the circle $x^2 + y^2 = 3$.
8. (+) Represent a system of linear equations as a single matrix equation in a vector variable.
9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3×3 or greater).

D. Represent and solve equations and inequalities graphically.

10. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line). Show that any point on the graph of an equation in two variables is a solution to the equation.
11. Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.★

12. Graph the solutions of a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set of a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Conceptual Category: Functions [F]

Introduction

Functions describe situations where one quantity determines another. For example, the return on $10,000 invested at an annualized percentage rate of 4.25% is a function of the length of time the money is invested. Because we continually make theories about dependencies between quantities in nature and society, functions are important tools in the construction of mathematical models.

In school mathematics, functions usually have numerical inputs and outputs and are often defined by an algebraic expression. For example, the time in hours it takes for a car to drive 100 miles is a function of the car's speed in miles per hour, v; the rule $T(v) = {}^{100}/_{v}$ expresses this relationship algebraically and defines a function whose name is T.

The set of inputs to a function is called its domain. We often infer the domain to be all inputs for which the expression defining a function has a value, or for which the function makes sense in a given context.

A function can be described in various ways, such as; by a graph (e.g., the trace of a seismograph); by a verbal rule, as in, "I'll give you a state, you give me the capital city"; by an algebraic expression like $f(x) = a + bx$; or by a recursive rule. The graph of a function is often a useful way of visualizing the relationship of the function models, and manipulating a mathematical expression for a function can throw light on the function's properties.

Functions presented as expressions can model many important phenomena. Two important families of functions characterized by laws of growth are linear functions, which grow at a constant rate, and exponential functions, which grow at a constant percent rate. Linear functions with a constant term of zero describe proportional relationships.

A graphing utility or a computer algebra system can be used to experiment with properties of these functions and their graphs and to build computational models of functions, including recursively defined functions.

Connections to Expressions, Equations, Modeling, and Coordinates

Determining an output value for a particular input involves evaluating an expression; finding inputs that yield a given output involves solving an equation. Questions about when two functions have the same value for the same input lead to equations, whose solutions can be visualized from the intersection of their graphs. Because functions describe relationships between quantities, they are frequently used in modeling. Sometimes functions are defined by a recursive process, which can be displayed effectively using a spreadsheet or other technology.

Conceptual Category: Functions Overview [F]

Interpreting Functions

- **A.** Understand the concept of a function and use function notation.
- **B.** Interpret functions that arise in applications in terms of the context (linear, quadratic, exponential, rational, polynomial, square root, cube root, trigonometric, logarithmic).
- **C.** Analyze functions using different representations.

Building Functions

- **A.** Build a function that models a relationship between two quantities.
- **B.** Build new functions from existing functions.

Linear, Quadratic, and Exponential Models

- **A.** Construct and compare linear, quadratic, and exponential models and solve problems.
- **B.** Interpret expressions for functions in terms of the situation they model.

Trigonometric Functions

- **A.** Extend the domain of trigonometric functions using the unit circle.
- **B.** Model periodic phenomena with trigonometric functions.
- **C.** Prove and apply trigonometric identities.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Conceptual Category: Functions Content Standards [F]

Interpreting Functions F-IF

A. Understand the concept of a function and use function notation.

1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$.
2. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.

   For example, given a function representing a car loan, determine the balance of the loan at different points in time.
3. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.

   For example, the Fibonacci sequence is defined recursively by f(0) = f(1) = 1, f(n + 1) = f(n) + f(n − 1) for n ≥ 1.

B. Interpret functions that arise in applications in terms of the context (linear, quadratic, exponential, rational, polynomial, square root, cube root, trigonometric, logarithmic).

4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.★
5. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.★

   For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.
6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.★

C. Analyze functions using different representations.

7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.★
   a. Graph linear and quadratic functions and show intercepts, maxima, and minima.★
   b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.★
   c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.★
   d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.★
   e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.★
8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
   a. Use the process of factoring and/or completing the square in quadratic and polynomial functions, where appropriate, to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
   b. Use the properties of exponents to interpret expressions for exponential functions. Apply to financial situations such as identifying appreciation and depreciation rate for the value of a house or car some time after its initial purchase. $V_n = P(1+r)^n$

   For example, identify percent rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, and $y = (1.2)^{t/10}$, and classify them as representing exponential growth or decay.
9. Translate among different representations of functions (algebraically, graphically, numerically in tables, or by verbal descriptions). Compare properties of two functions each represented in a different way.

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For example, given a graph of one polynomial function (including quadratic functions) and an algebraic expression for another, say which has the larger/smaller relative maximum and/or minimum.

10. Given algebraic, numeric and/or graphical representations of functions, recognize the function as polynomial, rational, logarithmic, exponential, or trigonometric.

Building Functions F-BF

A. Build a function that models a relationship between two quantities.

1. Write a function (linear, quadratic, exponential, simple rational, radical, logarithmic, and trigonometric) that describes a relationship between two quantities.★

- **a.** Determine an explicit expression, a recursive process, or steps for calculation from a context.★
- **b.** Combine standard function types using arithmetic operations.★

For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.

- **c.** (+) Compose functions.★

For example, if $T(y)$ is the temperature in the atmosphere as a function of height, and h(t) is the height of a weather balloon as a function of time, then $T(h(t))$ is the temperature at the location of the weather balloon as a function of time.

2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.★

B. Build new functions from existing functions.

3. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. (Include linear, quadratic, exponential, absolute value, simple rational and radical, logarithmic and trigonometric functions.) Utilize technology to experiment with cases and illustrate an explanation of the effects on the graph. (Include recognizing even and odd functions from their graphs and algebraic expressions for them.)

4. Find inverse functions algebraically and graphically.

- **a.** Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. (Include linear and simple polynomial, rational, and exponential functions.)

For example, $f(x) = 2x^3$ or $f(x) = \frac{(x+1)}{(x-1)}$ for $x \neq 1$.

- **b.** (+) Verify by composition that one function is the inverse of another.
- **c.** (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.
- **d.** (+) Produce an invertible function from a non-invertible function by restricting the domain.

5. (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.

Linear, Quadratic, and Exponential Models F-LE

A. Construct and compare linear, quadratic, and exponential models and solve problems.

1. Distinguish between situations that can be modeled with linear functions and with exponential functions.★

- **a.** Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.★
- **b.** Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.★
- **c.** Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.★

2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (including reading these from a table).★

3. Observe, using graphs and tables, that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.★

4. For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.★

B. Interpret expressions for functions in terms of the situation they model.

5. Interpret the parameters in a linear or exponential function (of the form $f(x) = b^x + k$) in terms of a context.★

Trigonometric Functions F-TF

A. Extend the domain of trigonometric functions using the unit circle.

1. Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.
2. Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.
3. (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$, $\pi/4$ and $\pi/6$, and use the unit circle to express the values of sine, cosine, and tangent for $\pi - x$, $\pi + x$, and $2\pi - x$ in terms of their values for x, where x is any real number.
4. (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.

B. Model periodic phenomena with trigonometric functions.

5. Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.★
6. (+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.
7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.★

C. Prove and apply trigonometric identities.

8. Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant.
9. (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.

Conceptual Category: Modeling [★]

Introduction

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social, and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.

A model can be very simple, such as writing total cost as a product of unit price and number bought, or using a geometric shape to describe a physical object like a coin. Even such simple models involve making choices. It is up to us whether to model a coin as a three-dimensional cylinder, or whether a two-dimensional disk works well enough for our purposes. Other situations—modeling a delivery route, a production schedule, or a comparison of loan amortizations—need more elaborate models that use other tools from the mathematical sciences. Real-world situations are not organized and labeled for analysis; formulating tractable models, representing such models, and analyzing them is appropriately a creative process. Like every such process, this depends on acquired expertise as well as creativity.

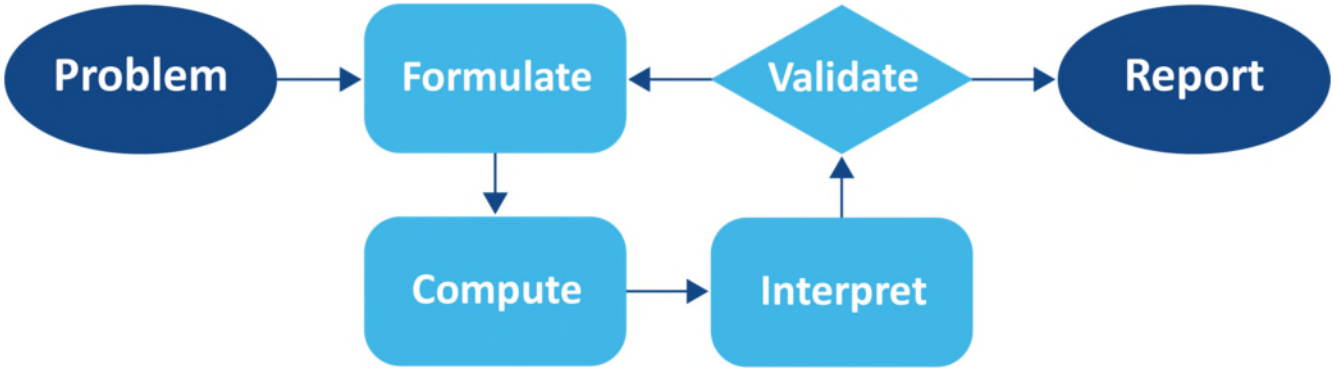
Some examples of such situations might include:

- Estimating how much water and food is needed for emergency relief in a devastated city of three million people, and how it might be distributed.
- Planning a table tennis tournament for seven players at a club with four tables, where each player plays against each other player.
- Designing the layout of the stalls in a school fair so as to raise as much money as possible.
- Analyzing stopping distance for a car.
- Modeling savings account balance, bacterial colony growth, or investment growth.
- Engaging in critical path analysis, e.g., applied to turnaround of an aircraft at an airport.
- Analyzing risk in situations such as extreme sports, pandemics, and terrorism.
- Relating population statistics to individual predictions.

In situations like these, the models devised depend on a number of factors: How precise an answer do we want or need? What aspects of the situation do we most need to understand, control, or optimize? What resources of time and tools do we have? The range of models that we can create and analyze is also constrained by the limitations of our mathematical, statistical, and technical skills, and our ability to recognize significant variables and relationships among them. Diagrams of various kinds, spreadsheets and other technology, and algebra are powerful tools for understanding and solving problems drawn from different types of real-world situations.

One of the insights provided by mathematical modeling is that essentially the same mathematical or statistical structure can sometimes model seemingly different situations. Models can also shed light on the mathematical structures themselves, for example, as when a model of bacterial growth makes more vivid the explosive growth of the exponential function.

The basic modeling cycle is summarized in the diagram below. It involves: (1) identifying variables in the situation and selecting those that represent essential features; (2) formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe relationships between the variables; (3) analyzing and performing operations on these relationships to draw conclusions; (4) interpreting the results of the mathematics in terms of the original situation; (5) validating the conclusions by comparing them with the situation, and then either improving the model or; (6) if it is acceptable, reporting on the conclusions and the reasoning behind them. Choices, assumptions, and approximations are present throughout this cycle.



In descriptive modeling, a model simply describes the phenomena or summarizes them in a compact form. Graphs of observations are a familiar descriptive model—for example, graphs of global temperature and atmospheric CO_2 over time.

Analytic modeling seeks to explain data on the basis of deeper theoretical ideas, albeit with parameters that are empirically based; for example, exponential growth of bacterial colonies (until cut-off mechanisms such as pollution or starvation intervene) follows from a constant reproduction rate. Functions are an important tool for analyzing such problems.

Graphing utilities, spreadsheets, computer algebra systems, and dynamic geometry software are powerful tools that can be used to model purely mathematical phenomena (e.g., the behavior of polynomials) as well as physical phenomena.

Modeling Standards

Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific Modeling standards appear throughout the high school standards indicated by a star symbol (★).

Conceptual Category: Geometry [G]

Introduction

An understanding of the attributes and relationships of geometric objects can be applied in diverse contexts—interpreting a schematic drawing, estimating the amount of wood needed to frame a sloping roof, rendering computer graphics, or designing a sewing pattern for the most efficient use of material.

Although there are many types of geometry, school mathematics is devoted primarily to plane Euclidean geometry, studied both synthetically (without coordinates) and analytically (with coordinates). Euclidean geometry is characterized most importantly by the Parallel Postulate that through a point not on a given line there is exactly one parallel line. (Spherical geometry, in contrast, has no parallel lines.)

During high school, students begin to formalize their geometry experiences from elementary and middle school, using more precise definitions and developing careful proofs. Later in college, some students develop Euclidean and other geometries carefully from a small set of axioms.

The concepts of congruence, similarity, and symmetry can be understood from the perspective of geometric transformation. Fundamental are the rigid motions: translations, rotations, reflections, and combinations of these, all of which are here assumed to preserve distance and angles (and therefore shapes generally). Reflections and rotations each explain a particular type of symmetry, and the symmetries of an object offer insight into its attributes—as when the reflective symmetry of an isosceles triangle assures that its base angles are congruent.

In the approach taken here, two geometric figures are defined to be congruent if there is a sequence of rigid motions that carries one onto the other. This is the principle of superposition. For triangles, congruence means the equality of all corresponding pairs of sides and all corresponding pairs of angles. During the middle grades, through experiences drawing triangles from given conditions, students notice ways to specify enough measures in a triangle to ensure that all triangles drawn with those measures are congruent. Once these triangle congruence criteria (ASA, SAS, and SSS) are established using rigid motions, they can be used to prove theorems about triangles, quadrilaterals, and other geometric figures.

Similarity transformations (rigid motions followed by dilations) define similarity in the same way that rigid motions define congruence, thereby formalizing the similarity ideas of “same shape” and “scale factor” developed in the middle grades. These transformations lead to the criterion for triangle similarity that two pairs of corresponding angles are congruent.

The definitions of sine, cosine, and tangent for acute angles are founded on right triangles and similarity, and, with the Pythagorean Theorem, are fundamental in many real-world and theoretical situations. The Pythagorean Theorem is generalized to non-right triangles by the Law of Cosines. Together, the Laws of Sines and Cosines embody the triangle congruence criteria for the cases where three pieces of information suffice to completely solve a triangle. Furthermore, these laws yield two possible solutions in the ambiguous case, illustrating that Side-Side-Angle is not a congruence criterion.

Analytic geometry connects algebra and geometry, resulting in powerful methods of analysis and problem solving. Just as the number line associates numbers with locations in one dimension, a pair of perpendicular axes associates pairs of numbers with locations in two dimensions. This correspondence between numerical coordinates and geometric points allows methods from algebra to be applied to geometry and vice versa. The solution set of an equation becomes a geometric curve, making visualization a tool for doing and understanding algebra. Geometric shapes can be described by equations, making algebraic manipulation into a tool for geometric understanding, modeling, and proof. Geometric transformations of the graphs of equations correspond to algebraic changes in their equations.

Dynamic geometry environments provide students with experimental and modeling tools that allow them to investigate geometric phenomena in much the same way as computer algebra systems allow them to experiment with algebraic phenomena.

Connections to Equations

The correspondence between numerical coordinates and geometric points allows methods from algebra to be applied to geometry and vice versa. The solution set of an equation becomes a geometric curve, making visualization a tool for doing and understanding algebra. Geometric shapes can be described by equations, making algebraic manipulation into a tool for geometric understanding, modeling, and proof.

Conceptual Category: Geometry Overview [G]

Congruence

- **A.** Experiment with transformations in the plane.
- **B.** Understand congruence in terms of rigid motions.
- **C.** Prove geometric theorems and, when appropriate, the converse of theorems.
- **D.** Make geometric constructions.

Similarity, Right Triangles, and Trigonometry

- **A.** Understand similarity in terms of similarity transformations.
- **B.** Prove theorems involving similarity.
- **C.** Define trigonometric ratios and solve problems involving right triangles.
- **D.** Apply trigonometry to general triangles.

Circles

- **A.** Understand and apply theorems about circles.
- **B.** Find arc lengths and areas of sectors of circles.

Expressing Geometric Properties with Equations

- **A.** Translate between the geometric description and the equation for a conic section.
- **B.** Use coordinates to prove simple geometric theorems algebraically.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Geometric Measurement and Dimension

- **A.** Explain volume formulas and use them to solve problems.
- **B.** Visualize relationships between two-dimensional and three-dimensional objects.

Modeling with Geometry

- **A.** Apply geometric concepts in modeling situations.

Conceptual Category: Geometry Content Standards [G]

Congruence G-CO

A. Experiment with transformations in the plane.

1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
2. Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).
3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.
4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
5. Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.

B. Understand congruence in terms of rigid motions.

6. Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.
7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.
8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.

C. Prove geometric theorems and, when appropriate, the converse of theorems.

9. Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent, and conversely prove lines are parallel; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.
10. Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent, and conversely prove a triangle is isosceles; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; and the medians of a triangle meet at a point.
11. Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.
    a. Prove theorems about polygons. Theorems include the measures of interior and exterior angles. Apply properties of polygons to the solutions of mathematical and contextual problems.

D. Make geometric constructions.

12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Constructions include: copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
13. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Similarity, Right Triangles, and Trigonometry G-SRT

A. Understand similarity in terms of similarity transformations.

1. Verify experimentally the properties of dilations given by a center and a scale factor:
   a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.
   b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.
2. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.
3. Use the properties of similarity transformations to establish the Angle-Angle (AA) criterion for two triangles to be similar.

B. Prove theorems involving similarity.

4. Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.
5. Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

C. Define trigonometric ratios and solve problems involving right triangles.

6. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.
7. Explain and use the relationship between the sine and cosine of complementary angles.
8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. ★

D. Apply trigonometry to general triangles.

9. (+) Derive the formula $A = \frac{1}{2} ab \sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.
10. (+) Prove the Laws of Sines and Cosines and use them to solve problems.
11. (+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

Circles G-C

A. Understand and apply theorems about circles.

1. Prove that all circles are similar.
2. Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.
3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral and other polygons inscribed in a circle.
4. (+) Construct a tangent line from a point outside a given circle to the circle.

B. Find arc lengths and areas of sectors of circles.

5. Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.

Expressing Geometric Properties with Equations G-GPE

A. Translate between the geometric description and the equation for a conic section.

1. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.
2. Derive the equation of a parabola given a focus and directrix.
3. (+) Derive the equations of ellipses and hyperbolas given the foci, using the fact that the sum or difference of distances from the foci is constant.

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a. (+) Use equations and graphs of conic sections to model real-world problems.★

B. Use coordinates to prove simple geometric theorems algebraically.

4. Use coordinates to prove simple geometric theorems algebraically including the distance formula and its relationship to the Pythagorean Theorem.
   For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1, $\sqrt{3}$) lies on the circle centered at the origin and containing the point (0, 2).
5. Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
6. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.
7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles (e.g., using the distance formula).★

Geometric Measurement and Dimension G-GMD

A. Explain volume formulas and use them to solve problems.

1. Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. *Use dissection arguments, Cavalieri's principle, and informal limit arguments.*
2. (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.
3. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.★

B. Visualize relationships between two-dimensional and three-dimensional objects.

4. Identify the shapes of two-dimensional cross sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.

Modeling with Geometry G-MG

A. Apply geometric concepts in modeling situations.

1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).★
2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).★
3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).★
4. Use dimensional analysis for unit conversions to confirm that expressions and equations make sense.★

Conceptual Category: Statistics and Probability [S]

Introduction

Decisions or predictions are often based on data—numbers in context. These decisions or predictions would be easy if the data always sent a clear message, but the message is often obscured by variability. Statistics provides tools for describing variability in data and for making informed decisions that take it into account.

Data are gathered, displayed, summarized, examined, and interpreted to discover patterns and deviations from patterns. Quantitative data can be described in terms of key characteristics: measures of shape, center, and spread. The shape of a data distribution might be described as symmetric, skewed, flat, or bell shaped, and it might be summarized by a statistic measuring center (such as mean or median) and a statistic measuring spread (such as standard deviation or interquartile range). Different distributions can be compared numerically using these statistics or compared visually using plots. Knowledge of center and spread are not enough to describe a distribution. Which statistics to compare, which plots to use, and what the results of a comparison might mean, depend on the question to be investigated and the real-life actions to be taken.

Randomization has two important uses in drawing statistical conclusions. First, collecting data from a random sample of a population makes it possible to draw valid conclusions about the whole population, taking variability into account. Second, randomly assigning individuals to different treatments allows a fair comparison of the effectiveness of those treatments. A statistically significant outcome is one that is unlikely to be due to chance alone, and this can be evaluated only under the condition of randomness. The conditions under which data are collected are important in drawing conclusions from the data. In critically reviewing uses of statistics in public media and other reports, it is important to consider the study design, how the data were gathered, and the analyses employed, as well as the data summaries and the conclusions drawn.

Random processes can be described mathematically by using a probability model: a list or description of the possible outcomes (the sample space), each of which is assigned a probability. In situations such as flipping a coin, rolling a number cube, or drawing a card, it might be reasonable to assume various outcomes are equally likely. In a probability model, sample points represent outcomes and combine to make up events; probabilities of events can be computed by applying the Addition and Multiplication Rules. Interpreting these probabilities relies on an understanding of independence and conditional probability, which can be approached through the analysis of two-way tables.

Technology plays an important role in statistics and probability by making it possible to generate plots, regression functions, and correlation coefficients, and to simulate many possible outcomes in a short amount of time.

Connections to Functions and Modeling

Functions may be used to describe data; if the data suggest a linear relationship, the relationship can be modeled with a regression line, and its strength and direction can be expressed through a correlation coefficient.

Conceptual Category: Statistics and Probability Overview [S]

Interpreting Categorical and Quantitative Data

- **A.** Summarize, represent, and interpret data on a single count or measurement variable. Use calculators, spreadsheets, and other technology as appropriate.
- **B.** Summarize, represent, and interpret data on two categorical and quantitative variables.
- **C.** Interpret linear models.

Making Inferences and Justifying Conclusions

- **A.** Understand and evaluate random processes underlying statistical experiments. Use calculators, spreadsheets, and other technology as appropriate.
- **B.** Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

Conditional Probability and the Rules of Probability

- **A.** Understand independence and conditional probability and use them to interpret data from simulations or experiments.
- **B.** Use the rules of probability to compute probabilities of compound events in a uniform probability model.

Using Probability to Make Decisions

- **A.** Calculate expected values and use them to solve problems.
- **B.** Use probability to evaluate outcomes of decisions.

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Conceptual Category: Statistics and Probability Content Standards [S]

Interpreting Categorical and Quantitative Data S-ID

A. Summarize, represent, and interpret data on a single count or measurement variable. Use calculators, spreadsheets, and other technology as appropriate.

1. Represent data with plots on the real number line (dot plots, histograms, and box plots).★
2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.★
3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).★
4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.★

B. Summarize, represent, and interpret data on two categorical and quantitative variables.

5. Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.★
6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.★
    a. Fit a linear function to the data and use the fitted function to solve problems in the context of the data. Use functions fitted to data or choose a function suggested by the context. Emphasize linear and exponential models.★
    b. Informally assess the fit of a function by plotting and analyzing residuals.★
    c. Fit a linear function for a scatter plot that suggests a linear association.★

C. Interpret linear models.

7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.★
8. Compute (using technology) and interpret the correlation coefficient of a linear fit.★
9. Distinguish between correlation and causation.★

Making Inferences and Justifying Conclusions S-IC

A. Understand and evaluate random processes underlying statistical experiments. Use calculators, spreadsheets, and other technology as appropriate.

1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.★
2. Decide if a specified model is consistent with results from a given data-generating process (e.g., using simulation).★

    For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of five tails in a row cause you to question the model?

B. Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

3. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.★
4. Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.★
5. Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.★
6. Evaluate reports based on data.★

Conditional Probability and the Rules of Probability S-CP

A. Understand independence and conditional probability and use them to interpret data from simulations or experiments.

1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not"). ★
2. Understand that two events *A* and *B* are independent if the probability of *A* and *B* occurring together is the product of their probabilities, and use this characterization to determine if they are independent. ★
3. Understand the conditional probability of *A* given *B* as $P(A \text{ and } B)/P(B)$, and interpret independence of *A* and *B* as saying that the conditional probability of *A* given *B* is the same as the probability of *A*, and the conditional probability of *B* given *A* is the same as the probability of *B*. ★
4. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. ★

   For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.
5. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. ★

   For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.

B. Use the rules of probability to compute probabilities of compound events in a uniform probability model.

6. Find the conditional probability of *A* given *B* as the fraction of *B*'s outcomes that also belong to *A*, and interpret the answer in terms of the model. ★
7. Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model. ★
8. (+) Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B|A) = P(B)P(A|B)$, and interpret the answer in terms of the model. ★
9. (+) Use permutations and combinations to compute probabilities of compound events and solve problems. ★

Using Probability to Make Decisions S-MD

A. Calculate expected values and use them to solve problems.

1. (+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions. ★
2. (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution. ★
3. (+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. ★

   For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.
4. (+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. ★

   For example, find a current data distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?

B. Use probability to evaluate outcomes of decisions.

5. (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values. ★
   a. (+) Find the expected payoff for a game of chance. ★

For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant.

b. (+) Evaluate and compare strategies on the basis of expected values.★

For example, compare a high-deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.

6. (+) Use probabilities to make fair decisions (e.g., drawing by lots or using a random number generator).★

7. (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, or pulling a hockey goalie at the end of a game and replacing the goalie with an extra skater).★

Common Core State Standards / Rhode Island Core Standards

Comparison Tables

K-12 Mathematics

Rhode Island Department of Education

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Rhode Island Department of Education

Common Core State Standards / Rhode Island Core Standards Comparison

Grades K-12 Mathematics

Grade K

Common Core State Standard	Rhode Island Core Standards
K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	**K.CC.A.2** Count forward beginning from a given number within the known sequence (instead of having to begin at one).
K.CC.A.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	No change
K.CC.B.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.	**K.CC.B.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.

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	C. Understand that each successive number name refers to a quantity that is one larger. Recognize the one more pattern of counting using objects
K.CC.B.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	No change
K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.* * Include groups with up to ten objects.	**K.CC.C.6** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group for groups with up to 10 objects, e.g., by using matching and counting strategies.
K.CC.C.7 Compare two numbers between 1 and 10 presented as written numerals.	No change
K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings*, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. *Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)	No change
K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	No change

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K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).	No change
K.OA.A.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	No change
K.OA.A.5 Fluently add and subtract within 5.	**K.OA.A.5** Fluently add and subtract within 5 including zero.
K.NBT.A.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (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.	No change
K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	No change
K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of” / “less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.	No change
K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.*	**K.MD.B.3**

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*Limit category counts to be less than or equal to 10.	Classify objects into given categories; count the numbers of objects in each category (up to and including 10) and sort the categories by count.
K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.	No change
K.G.A.2 Correctly name shapes regardless of their orientations or overall size.	No change
K.G.A.3 Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	No change
K.G.B.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	No change
K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	No change
K.G.B.6 Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"	No change

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Grade 1

Common Core State Standard	Rhode Island Core Standards
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**1.OA.A.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 (number sentences) with a symbol for the unknown number to represent the problem.
1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem	No change
1.OA.B.3 Apply properties of operations as strategies to add and subtract. *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*	**1.OA.B.3** Apply properties of operations to add. For example, when adding numbers order does not matter. 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). When adding zero to a number, the result is the same number (Identity property of zero for addition).
1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.*	No change

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1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	No change
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).	**1.OA.C.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use mental strategies such as counting on; making 10 (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a 10 (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).
1.OA.D.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*	No change
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*	No change
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	No change
1.NBT.B.2	No change

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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).	
1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	No change
1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	No change
1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	**1.NBT.C.5** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. Identify arithmetic patterns of 10 more and 10 less than using strategies based on place value.
1.NBT.C.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or	No change

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drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	
1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	No change
1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.	No change
1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.	No change
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	No change
No CCSS	**1.MD.D.5 (Added by Massachusetts)** Identify the values of all U.S. coins and know their comparative values (e.g., a dime is of greater value than a nickel). Find equivalent values (e.g., a nickel is equivalent to 5 pennies). Use appropriate notation (e.g., 69¢). Use the values of coins in the solutions of problems (up to 100¢).

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1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.	No change
1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.[4]	No change
1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	No change
Grade 2	
Common Core State Standard	**Rhode Island Core Standards**
2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	No change

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2.OA.B.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.	**2.OA.B.2** Fluently add and subtract within 20 using mental strategies. By end of grade 2, know from memory all sums of two single-digit numbers and related differences. For example, the sum 6 + 5 = 11 has related differences of 11 – 5 = 6 and 11 – 6 = 5.
2.OA.C.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	No change
2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	**2.OA.C.4** Use addition to find the total number of objects arranged in rectangular arrays with up to five rows and up to five columns; write an equation to express the total as a sum of equal addends.
2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: A. 100 can be thought of as a bundle of ten tens — called a "hundred." B. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	No change
2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.	**2.NBT.A.2** Count within 1000; skip-count by 5s, 10s, and 100s. Identify patterns in skip counting starting at any number.

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2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	No change
2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	No change
2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	No change
2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.	No change
2.NBT.B.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	No change
2.NBT.B.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	No change
2.NBT.B.9	No change

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Explain why addition and subtraction strategies work, using place value and the properties of operations.[3]	
2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	No change
2.MD.A.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	No change
2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.	No change
2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	No change
2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	No change
2.MD.B.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2,., and represent whole-number sums and differences within 100 on a number line diagram.	No change

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2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	**2.MD.C.7** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. A. Know the relationships of time, including seconds in a minute, minutes in an hour, hours in a day, days in a week; days in a month and a year and approximate number of weeks in a month and weeks in a year.
2.MD.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*	**2.MD.C.8** Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies (up to $10), using $ and ¢ symbols appropriately and whole dollar amounts. For example, if you have 2 dimes and 3 pennies, how many cents do you have? If you have $3 and 4 quarters, how many dollars or cents do you have? (Students are not expected to use decimal notation.)
2.MD.D.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	**2.MD.D.9** Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Organize and record data on a line plot (dot plot) where the horizontal scale is marked off in whole-number units.
2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	No Change
2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[5] Identify triangles,	No Change

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squares, rectangles, rhombuses, trapezoids, pentagons, hexagons, and cubes.	
2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	No change
2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	No change

Grade 3

Common Core State Standards	Rhode Island Core Standards
3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 × 7.*	**3.OA.A.1** Interpret products of whole numbers, e.g., interpret 5 x7 as the total number of objects in five groups of seven objects each. For example, describe a context in which a total number of objects can be expressed as 5 x 7.
3.OA.A.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example,*	No change

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describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	
3.OA.A.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]	No change
3.OA.A.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = □ ÷ 3, 6 × 6 = ?.*	No change
3.OA.B.5 Apply properties of operations as strategies to multiply and divide. *Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative property of multiplication.) 3 x 5 x 2 can be found by 3 x 5 = 15 then 15 x 2 = 30, or by 5 x 2 = 10 then 3 x 10 = 30. (Associative property of multiplication.) Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56. (Distributive property).*	**3.OA.B.5** Apply properties of operations to multiply.[14] For example, when multiplying numbers order does not matter. If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known (Commutative property of multiplication); The product 3 x 5 x 2 can be found by 3 x 5 = 15 then 15 x 2 = 30, or by 5 x 2 = 10 then 3 x 10 = 30 (Associative property of multiplication); When multiplying two numbers either number can be decomposed and multiplied; one can find 8 x 7 by knowing that 7 = 5 + 2 and that 8 x 5 = 40 and 8 x 2 = 16, resulting in 8 (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56 (Distributive property); When a number is multiplied by 1 the result is the same number (Identity property of 1 for multiplication).
3.OA.B.6 Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*	No change
3.OA.C.7	**3.OA.C.7**

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Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of grade 3, know from memory all products of two one-digit numbers**.**	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of grade 3, know from memory all products of two single-digit numbers and related division facts. *For example, the product 4 x 7 = 28 has related division facts 28 ÷ 7 = 4 and 28 ÷ 4 = 7.*
3.OA.D.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3]	**3.OA.D.8** Solve two-step word problems using the four operations for problems posed with whole numbers and having whole number answers. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies, including rounding.
3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends*.	No change
3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	No change
3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	No change
3.NBT.A.3	No change

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Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	
3.NF.A (Cluster Heading) **Develop understanding of fractions as numbers.**	**3.NF.A (Cluster Heading)** Develop understanding of fractions as numbers for fractions with denominators 2, 3, 4, 6, and 8.
3.NF.A.1 Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by *a* parts of size 1/*b*	**3.NF.A.1** Understand a fraction 1/*b* as the quantity formed by 1 part when a whole (a single unit) is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by *a* parts of size 1/*b*.
3.NF.A.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.NF.A.2** Understand a fraction as a number on the number line; represent fraction on a number line diagram. A. Represent a unit 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 fraction **1/*b,*** is located **1/*b*** of a whole unit from 0 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.NF.B.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.	**3.NF.B.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.

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B. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model. C. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram. D. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	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. For example, express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram. D. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.
3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	No change
3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	**3.MD.A.2** Measure and estimate liquid volumes and masses of objects using standard metric 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 metric units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled	**3.MD.B.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information

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bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*	presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent five pets.*
3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	**3.MD.B.4** Generate measurement data by measuring lengths of objects using rulers marked with halves and fourths of an inch. Record and show the data by making a line plot (dot plot), where the horizontal scale is marked off in appropriate units—whole numbers, halves, or fourths. (See Glossary for example.)
3.MD.C.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.	**3.MD.C.5** Recognize area as an attribute of plane figures and understand concepts of area measurement. A. A square with side length one 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.
3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	**3.MD.C.6** Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).
3.MD.C.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.	No change

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C. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning. D. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems.	
3.MD.D.8 Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	No change
3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	**3.G.A.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Compare and classify shapes by their sides and angles (right angle/non-right angle).Recognize rhombuses, rectangles, squares, and trapezoids as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
3.G.A.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*	**3.G.A.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 four parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*

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Grade 4

Common Core State Standards	Rhode Island Core Standards
4.OA.A.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	No change
4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.[1]	No change
4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. A. Know multiplication facts and related division facts through 12 x 12.
4.OA.B.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a	No change

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given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	
4.OA.C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.*	No change
4.NBT.A (Cluster Heading) **Generalize place value understanding for multi-digit whole numbers.**	**4.NBT.A (Cluster Heading)** **Generalize place value understanding for multi-digit whole numbers less than or equal to 1,000,000.**
4.NBT.A.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*	**4.NBT.A.1** Recognize that in a multi-digit whole number, a digit in any place represents 10 times as much as it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*
4.NBT.A.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	No change
4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.	No change
4.NBT.B (Cluster Heading)	**4.NBT.B (Cluster Heading)**

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Use place value understanding and properties of operations to perform multi-digit arithmetic.	**Use place value understanding and properties of operations to perform multi-digit arithmetic on whole numbers less than or equal to 1,000,000.**
4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.	No change
4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	No change
4.NBT.B.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	No change
4.NF.A (Cluster Heading) **Extend understanding of fraction equivalence and ordering.**	**4.NF.A (Cluster Heading)** **Extend understanding of fraction equivalence and ordering for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.**
4.NF.A.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the numbers and sizes of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	**4.NF.A.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 numbers and sizes of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions, including fractions greater than 1.

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4.NF.A.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.	No change
4.NF.B (Cluster Heading) **Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.**	**4.NF.B (Cluster Heading)** **Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.**
4.NF.B.3 Understand a fraction a/b with a > 1 as a sum of fractions 1/b. A. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. B. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. *Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.* C. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. D. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	**4.NF.B.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. (The whole can be a set of objects). 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 drawings or visual fraction models. *Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ;2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.* C. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. D. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using drawings or visual fraction models and equations to represent the problem.

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4.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. A. Understand a fraction a/b as a multiple of 1/b. *For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).* B. Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)* C. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*	No change
4.NF.C.5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100[4]. *For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.*	No change
4.NFC..6 Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite 0.62 as **62/100** ; describe a length as 0.62 meters; locate 0.62 on a number line diagram.*	**4.NF.C.6** Use decimal notation to represent fractions with denominators 10 or 100. *For example, rewrite 0.62 as **62/100** ; describe a length as 0.62 meters; locate 0.62 on a number line diagram.*
4.NF.C.7 .	No change

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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.	
4.MD.A.1 . Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...*	No change
4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	No change
4.MD.A.3 Apply the area and perimeter formulas for rectangles in real-world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*	**4.MD.A.3** Apply the area and perimeter formulas for rectangles in real-world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.* (*Note: When finding areas of rectangular regions answers will be in square units. For example, the area of a 1 cm x 1 cm rectangular region will be 1 square centimeter (1 cm^2, students are not expected to use this notation.) When finding the perimeter of a rectangular region answers will be in linear units. For example,*

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	the perimeter of the region is: 1cm + 1cm + 1cm +1cm = 4 cm or 2(1cm) + 2(1cm) = 4 cm).
4.MD.B.4 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a* line plot *find and interpret the difference in length between the longest and shortest specimens in an insect collection.*	**4.MD.B.4** Make a line plot (dot plot) representation to display a data set of measurements in fractions of a unit (1⁄2, 1⁄4, 1⁄8). Solve problems involving addition and subtraction of fractions by using information presented in line plots (dot plots). For example, from a line plot (dot plot) find and interpret the difference in length between the longest and shortest specimens in an insect collection.
4.MD.C.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: A. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. B. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.	No change
4.MD.C.6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	No change
4.MD.C.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction	No change

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problems to find unknown angles on a diagram in real-world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	
4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	No change
4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	No change
4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	No change

Grade 5

Common Core State Standards	Rhode Island Core Standards
5.OA.A.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	**5.OA.A.1** Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols, *e.g., (6 x 30) + (6 x 1/2).*

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5.OA.A.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*	No change
5.OA.B.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*	No change
5.NBT.A.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.	**5.NBT.A.1** Recognize that in a multi-digit number, including decimals, a digit in any 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.
5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	No change
5.NBT.A.3 Read, write, and compare decimals to thousandths.	No change

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A. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (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.	
5.NBT.A.4 Use place value understanding to round decimals to any place.	No change
5.NBT.B.5 Fluently multiply multi-digit whole numbers using the standard algorithm.	**5.NBT.B.5** Fluently multiply multi-digit whole numbers(Include two-digit x four-digit numbers and, three-digit x three-digit numbers) using the standard algorithm.
5.NBT.B.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.	No change
5.NBT.B.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.	**5.NBT.B.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 and multiplication and division; relate the strategy to a written method and explain the reasoning used.
5.NF.A.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such	No change

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a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*	
5.NF.A.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2*	**5.NF.A.2** Solve word problems involving addition and subtraction of fractions referring to the same whole (the whole can be a set of objects), including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result **2/5** + **1/2** = **3/7**, by observing that **3/7** < **1/2***
5.NF.B.B.3 Interpret a fraction as division of the numerator by the denominator *(a/b = a ÷ b)*. Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*	**5.NF.B.B.3** Interpret a fraction as division of the numerator by the denominator *(a ⁄ b = a b)*. Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret ¾ as the result of dividing 3 by 4, noting that ¾ multiplied by 4 equals 3, and that when three wholes are shared equally among four people each person has a share of size ¾. If nine 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?*
5.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. A. Interpret the product (*a*/*b*) x *q* as *a* parts of a partition of *q* into *b* equal parts; equivalently, as the result of a sequence of operations *a* x *q* ÷ *b*. *For example, use a visual fraction model to show (2/3) x 4*	**5.NF.B.4** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. A. Interpret the product (*a*/*b*) x *q* as *a* parts of a partition of *q* into *b* equal parts; equivalently, as the result of a sequence of operations *a* x *q* ÷ *b*. *For example, use a visual fraction model*

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= 8/3, and create a story context for this equation. Do the same with (2/3) x (4/5) = 8/15. (In general, (*a*/*b*) x (*c*/*d*) = *ac*/*bd*.) B. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.	*and/or area model to show (2/3) x 4 = 8/3, and create a story context for this equation. Do the same with (2/3) x (4/5) = 8/15.* (In general, (*a*/*b*) x (*c*/*d*) = *ac*/*bd*.). B. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
5.NF.B.5 Interpret multiplication as scaling (resizing), by: A. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. B. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n×a)/(n×b) to the effect of multiplying a/b by 1.	**5.NF.B.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. *For example, without multiplying tell which number is greater 225 or ¾ x 225; 11/50 or 3/2 x 11/50?* B. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n×a)/(n×b) to the effect of multiplying a/b by 1.
5.NF.B.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.	No change

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5.NF.B.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] A. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* B. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.* C. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?*	**5.NF.B.7** Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.[1] A. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* B. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.* C. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if three people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in two cups of raisins?*
5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real-world problems.	No change
5.MD.B.2 Make a line plot to display a data set of measurements in fractions of a unit. Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount*	**5.MD.B.2** Make a line plot (dot plot) to display a data set of measurements in fractions of a unit. Use operations on fractions for this grade to solve problems involving information presented in a line plot (dot plot). *For example, given different measurements of liquid in*

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of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.	*identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*
5.MD.C.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.	No change
5.MD.C.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.	No change
5.MD.C.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 formula $V = l \times w \times h$ 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	**5.MD.C.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 edge 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 formula $V = l \times w \times h$ and $V = B \times h$ (where B stands for the area of the base) 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

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adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.	adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems.
5.G.A.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).	**5.G.A.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 zero 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).
5.G.A.2 Represent real- world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	No change
5.G.B.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*	No change
5.G.B.4 Classify two-dimensional figures in a hierarchy based on properties.	**5.G.B,4** Classify two-dimensional figures in a hierarchy based on properties. *For example, all rectangles are parallelograms, because they are all quadrilaterals with two pairs of opposite sides parallel.*

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Grade 6	
Common Core State Standards	**Rhode Island Core Standards**
6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For e*xample, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*	**6.RP.A.1** Understand the concept of a ratio including the distinctions between part:part and part:whole and the value of a ratio; part/part and part/whole. Use ratio language to describe a ratio relationship between two quantities. *For example, the ratio of wings to beaks in the bird house at the zoo was 2:1, because for every two wings there was one beak"; "For every vote candidate A received, candidate C received nearly three votes", meaning that candidate C received three out of every four votes or ¾ of all votes.*
6.RP.A.2 Understand the concept of a unit rate ***a*/*b*** associated with a ratio *a*:*b* with $b \neq 0$, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is ¾ cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*	**6.RP.A.2** Understand the concept of a unit rate ***a*/*b*** associated with a ratio *a*:*b* with $b \neq 0$, and use rate language in the context of a ratio relationship, *including the use of units. For example, This recipe has a ratio of three cups of flour to four cups of sugar, so there is ¾ cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of five dollars per hamburger."*
6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. A. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot	**6.RP.A.3** Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. A. Make tables of equivalent ratios relating quantities with whole number measurements. Find missing values in the tables, and

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the pairs of values on the coordinate plane. Use tables to compare ratios. B. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?* C. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. D. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	plot the pairs of values on the coordinate plane. Use tables to compare ratios. B. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took seven hours to mow four lawns, then, at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?* C. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. D. Use ratio reasoning to convert measurement units within and between measurement systems; manipulate and transform units appropriately when multiplying or dividing quantities. *For example, Malik is making a recipe, but he cannot find his measuring cups! He has, however, found a tablespoon. His cookbook says that 1 cup = 16 tablespoons. Explain how he could use the tablespoon to measure out the following ingredients: two cups of flour, ½ cup sunflower seed, and 1¼ cup of oatmeal.*[23] E. Solve problems that relate the mass of an object to its volume.
6.NS.A.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*	**6.NSA.1** Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if three people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mile and area 1/2 square mile?*

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6.NS.B.2 Fluently divide multi-digit numbers using the standard algorithm.	No change
6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	No change
6.NS.B.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. *For example, express 36 + 8 as 4(9 + 2).*	**6.NS.B.4** Use prime factorization to find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two relatively prime numbers. *For example, express 36 + 8 as 4(9 + 2).*
6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge). Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	**6.NS.C.5** Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge). Use positive and negative numbers (whole numbers, fractions, and decimals) to represent quantities in real-world contexts, explaining the meaning of zero in each situation.
6.NS.C.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. A. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the	**6.NS.C.6** Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. A. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the

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opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite. B. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. C. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that zero is its own opposite. B. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. C. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
6.NS.C.7 Understand ordering and absolute value of rational numbers. A. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.* B. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –3 °C > –7 °C to express the fact that –3 °C is warmer than –7 °C.* C. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.* D. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.*	No change
6.NS.C.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and	No change

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absolute value to find distances between points with the same first coordinate or the same second coordinate.	
6.EE.A.1 Write and evaluate numerical expressions involving whole-number exponents.	No change
6.EE.A.2 Write, read, and evaluate expressions in which letters stand for numbers. A. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.* B. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.* C. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length s = 1/2.*	**6.EE.A.2** Write, read, and evaluate expressions in which letters stand for numbers. A. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.* B. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, and coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.* C. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas $V = s^3$ and $A = 6 s^2$ to find the volume and surface area of a cube with sides of length s = 1/2.*
6.EE.A.3 Apply the properties of operations to generate equivalent expressions. *For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive*	No change

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property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.	
6.EE.A.4 Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.*	No change
6.EE.B.5 Understand solving an equation or inequality as a process of answering a question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	No change
6.EE.B.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	No change
6.EE.B.7 Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers.	No change
6.EE.B.8 Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x > c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	No change

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6.EE.C.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time*	No change
6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	No change
6.G.A.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas *V = l w h* and *V = b h* to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	**6.G.A.2** Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas *V = l w h* and *V = B* h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
6.G.A.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	No change

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6.G.A.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	No change
6.SP.A.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*	No change
6.SP.A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	**6.SP.A.2** Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center (median, mean, and/or mode), spread (range, interquartile range), and overall shape.
6.SP.A.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	No change
6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	**6.SP.B.4** Display numerical data in plots on a number line, including dot plots, histograms, and box plots. Read and interpret circle graphs.

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6.SP.B.5 Summarize numerical data sets in relation to their context, such as by: A. Reporting the number of observations. B. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. C. Giving quantitative measures of center (median, and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. D. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	**6.SP.B.5** Summarize numerical data sets in relation to their context, such as by: A. Reporting the number of observations. B. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. C. Giving quantitative measures of center (median, and/or mean), and variability (range and/or interquartile range), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. D. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

Grade 7

Common Core State Standards	Rhode Island Core Standards
7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.*	No change
7.RP.A.2 Recognize and represent proportional relationships between quantities.	No change

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A. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. B. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. C. Represent proportional relationships by equations. *For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn.* D. Explain what a point *(x, y)* on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, *r*) where *r* is the unit rate.	
7.RP.A.3 Use proportional relationships to solve multi-step ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.*	**7.RP.A.3** Use proportional relationships to solve multi-step ratio, rate, and percent problems. *For example, simple interest, tax, price increases and discounts, gratuities and commissions, fees, percent increase and decrease, percent error.*
7.NS.A.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. A. Describe situations in which opposite quantities combine to make 0. *Examples: a hydrogen atom has 0 charge because its two constituents are oppositely charged.* B. Understand $p + q$ as the number located a distance $\|q\|$ from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite	**7.NS.A.1** Apply and extend previous understandings of addition and subtraction to add and subtract integers and other rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. A. Describe situations in which opposite quantities combine to make zero. For example, a hydrogen atom has zero charge because its two constituents are oppositely charged; if you open a new bank account with a deposit of $30 and then withdraw $30, you are left with a $0 balance.

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have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. C. Understand subtraction of rational numbers as adding the additive inverse, $p – q = p + (–q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. D. Apply properties of operations as strategies to add and subtract rational numbers.	B. Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. C. Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. D. Apply properties of operations as strategies to add and subtract rational numbers.
7.NS.A.2 Apply and extend previous understanding of multiplication and division and of fractions to multiply and divide rational numbers. A. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (-1)(-1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. B. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts. C. Apply properties of operations as strategies to multiply and divide rational numbers.	No change

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D. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	
7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.	**7.NS.A.3** Solve real-world and mathematical problems involving the four operations with integers and other rational numbers.
7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	**7.EE.A.1** Apply properties of operations to add, subtract, factor and expand linear expressions with rational coefficients. *For example, 4x + 2 = 2(2x +1) and -3(x – 5/3) = -3x + 5.*
7.EE.A.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."*	**7.EE.A.2** Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05." A shirt at a clothing store is on sale for 20% off the regular price, "p". The discount can be expressed as 0.2p. The new price for the shirt can be expressed as p – 0.2p or 0.8p.*
7.EE.B.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of*	No change

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$27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.	
7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. A. Solve word problems leading to equations of the form *px + q = r* and *p(x + q) = r,* where *p, q*, and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?* B. Solve word problems leading to inequalities of the form px + q > r or *px + q < r,* where *p, q*, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions*	**7.EE.B.4** Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. A. Solve word problems leading to equations of the form *px + q = r* and *p(x + q) = r,* where *p, q,* and *r* are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?* B. Solve word problems leading to inequalities of the form *px + q > r* or *px + q < r*, where *p, q,* and *r* are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example, as a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions* *C.* Extend analysis of patterns to include analyzing, extending, and determining an expression for simple arithmetic and geometric sequences (e.g. compounding, increasing area), using tables, graphs, words, and expressions.
7.G.A.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	**7.G.A.1** Solve problems involving scale drawings of geometric figures, such as computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

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7.G.A.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	**7.G.A.2** Draw (freehand, with ruler and protractor, and with technology) two-dimensional geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.
7.G.A.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	**7.G.A.3** Describe the shape of the two-dimensional face of the figure that results from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.
7.G.B.4 Know the formulas for the area and circumference of a circle and solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	**7.G.B.4** Circles and measurement: A. Know that a circle is a two-dimensional shape created by connecting all of the points equidistant from a fixed point called the center of a circle. B. Understand and describe the relationships among the radius, diameter, and circumference of a circle. C. Understand and describe the relationship among the radius, diameter, and area of a circle. D. Know the formulas for the area and circumference of a circle and use them to solve problems. E. Give an informal derivation of the relationship between the circumference and area of a circle.
7.G.B.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and use them to solve simple equations for an unknown angle in a figure.	**7.G.B.5** Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write simple equations and use them to solve for an unknown angle in a figure.

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7.G.B.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	No change
7.SP.A.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.	No change
7.SP.A.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*	No change
7.SP.B.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*	**7.SP.B.3** Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team and both distributions have similar variability (mean absolute deviation) of about 5cm. The difference between the mean heights of the two teams (10 cm) is about twice the variability (5 cm) on either*

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	team. On a dot plot, the separation between the two distributions of heights is noticeable.
7.SP.B.4 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*	No change
7.SP.C.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	No change
7.SP.C.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.*	No change
7.SP.C.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.	No change

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A. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.* B. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?*	
7.SP.C.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. A. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. B. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event. C. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?	No change

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Grade 8

Common Core State Standards	Rhode Island Core Standards
8.NS.A.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.	No change
8.NS.A.2 Use rational approximations of irrational lo numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). *For example, by truncating the decimal expansion of* $\sqrt{2}$ *show that* $\sqrt{2}$ *is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*	No change
8.EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example,* $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.	No change
8.EE.A.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ *and* $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.	No change

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8.EE.A.3 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as 3 × 108 and the population of the world as 7 × 109, and determine that the world population is more than 20 times larger.*	**8.EE.A.3** Use numbers expressed in the form of a single digit multiplied by an integer power of 10 to estimate very large or very small quantities, and express how many times as much one is than the other. *For example, estimate the population of the United States as 3 x 108 and the population of the world as 7 x 109, and determine that the world population is more than 20 times larger.*
8.EE.A.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	No change
8.EE.B.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*	No change
8.EE.B.6 Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation *y = mx* for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at *b*.	No change
8.EE.C.7 Solve linear equations in one variable.	No change

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A. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form *x = a, a = a, or a = b* results (where *a* and *b* are different numbers). B. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	
8.EE.C.8 Analyze and solve pairs of simultaneous linear equations. A. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. B. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.* C. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*	**8.EE.8** Analyze and solve pairs of simultaneous linear equations. A. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. B. Solve systems of two linear equations in two variables algebraically (using substitution and elimination strategies), and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.* C. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*
8.F.A.1 Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.[1]	No change
8.F.A.2	No change

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Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*	
8.F.A.3 Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.*	No change
8.F.B.4 Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	No change
8.F.B.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	No change
8.G.A.1 Verify experimentally the properties of rotations, reflections, and translations:	**8.G.A.1** Verify experimentally the properties of rotations, reflections, and translations:

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A. Lines are taken to lines, and line segments to line segments of the same length. B. Angles are taken to angles of the same measure. C. Parallel lines are taken to parallel lines.	A. Lines are transformed to lines, and line segments to line segments of the same length. B. Angles are transformed to angles of the same measure. C. Parallel lines are transformed to parallel lines.
8.G.A.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	No change
8.G.A.3 Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	No change
8.G.A.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	No change
8.G.A.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*	No change
8.G.B.6 Explain a proof of the Pythagorean Theorem and its converse.	**8.G.B.6** A. Understand the relationship among the sides of a right triangle.

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	B. Analyze and justify the Pythagorean Theorem and its converse using pictures, diagrams, narratives, or models.
8.G.B.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	No change
8.G.B.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	No change
8.G.C.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	No change
8.SP.A.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	No change
8.SP.A.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	No change
8.SP.A.3	No change

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Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*	
8.SP.A.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*	No change

Number and Quantity

Common Core Standards	Rhode Island Core Standards
N-RN.A.1 Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define 51/3 to be the cube root of 5 because we want $(5^{1/3})^3 = 5^{(1/3)3}$ to hold, so $(5^{1/3})^3$ must equal 5.	No change

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N-RN.A.2 Rewrite expressions involving radicals and rational exponents using the properties of exponents.	No change
N-RN.B.3 Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	No change
N-Q.A.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.*	No change
N-Q.A.2 Define appropriate quantities for the purpose of descriptive modeling.*	No change
N-Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.*	**N-Q.A.3** Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.* Describe the effects of approximate error in measurement and rounding on measurements and on computed values from measurements. Identify significant figures in recorded measures and computed values based on the context given and the precision of the tools used to measure.*
N-CN.A.1 Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.	No change

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N-CN.A.2 Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers	**N-CN.A.2** Use the relation $i^2 = -1$ and the Commutative, Associative, and Distributive properties to add, subtract, and multiply complex numbers
N-CN.A.3 (+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.	No change
N-CN.B.4 (+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.	No change
N-CN.B.5 (+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. *For example,* $(-1 + \sqrt{3}\, i)^3 = 8$ *because* $(-1 + \sqrt{3}\, i)$ *has modulus 2 and argument 120°.*	No change
N-CN.B.6 (+) Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.	No change
N-CN.C.7 Solve quadratic equations with real coefficients that have complex solutions.	No change
N-CN.C.8 (+) Extend polynomial identities to the complex numbers. *For example, rewrite* $x^2 + 4$ *as* $(x + 2i)(x – 2i)$*. 9.*	No change

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N-CN.C.9 (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.	No change
N-VM.A.1 (+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., *v*, $\|v\|$, $\|\| v \|\|$, *v*).	No change
N-VM.A.2 (+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.	No change
N-VM.A.3 (+) Solve problems involving velocity and other quantities that can be represented by vectors.	No change
N-VM.B.4 (+) Add and subtract vectors: A. (+) Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes. B. (+) Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum. C. (+) Understand vector subtraction *v – w* as *v + (–w)*, where *–w* is the additive inverse of w, with the same magnitude as w and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise.	**N-VM.B.4** (+) Add and subtract vectors: A. (+) Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that (+) the magnitude of a sum of two vectors is typically not the sum of the magnitudes. B. (+) Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum. C. (+) Understand vector subtraction *v – w* as *v + (–w)*, where *–w* is the additive inverse of w, with the same magnitude as w and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise.

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N-VM.B.5 (+) Multiply a vector by a scalar. A. (+) Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$. B. (+) Compute the magnitude of a scalar multiple cv using $\|\| cv \|\| = \|c\|v$. Compute the direction of cv knowing that when $\|c\|v \neq 0$, the direction of cv is either along v (for $c > 0$) or against v (for $c < 0$).	No change
N-VM.C.6 (+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.	No change
N-VM.C.7 (+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.	No change
N-VM.C.8 (+) Add, subtract, and multiply matrices of appropriate dimensions.	No change
N-VM.C.9 (+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties.	No change
N-VM.C.10 (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse	No change
N-VM.C.11	No change

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(+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.	
N-VM.C.12 (+) Work with 2 ´ 2 matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.	No change

Algebra

Common Core State Standards	Rhode Island Core Standards
A-SSE.A – Cluster heading **Interpret the structure of expressions.**	**A-SSE.A – Cluster heading** **Interpret the structure of linear, quadratic, exponential, polynomial, and rational expressions.**
A-SSE.A.1 Interpret expressions that represent a quantity in terms of its context. A. Interpret parts of an expression, such as terms, factors, and coefficients. B. Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret* $P(1 + r)^n$ *as the product of P and a factor not depending on P.*	No change
A-SSE.A.2 Use the structure of an expression to identify ways to rewrite it. *For example, see* $x^4 – y^4$ *as* $(x^2)^2 – (y^2)^2$ *, thus recognizing it as a difference of squares that can be factored as* $(x^2 – y^2)(x^2 + y^2)$.	No change
A-SSE.B.3	No change

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Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. * A. Factor a quadratic expression to reveal the zeros of the function it defines. B. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines. C. Use the properties of exponents to transform expressions for exponential functions. *For example, the expression 1.15^t can be rewritten as $(1.15^{1/12})^{12t} \approx 1.0121^{2t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.*	
A-SSE.B.4 Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. *For example, calculate mortgage payments.**	No change
A-APR.A.1 Understand that polynomials form a system analogous to the integers, namely, they are closed under operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	**A-APR.A.1** Understand that polynomials form a system analogous to the integers, namely, they are closed under certain operations. A. Perform operations on polynomial expressions (addition, subtraction, multiplication, division) and compare the system of polynomials to the system of integers when performing operations. B. Factor and/or expand polynomial expressions, identify and combine like terms, and apply the Distributive property.
A-APR.B.2 Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.	No change
A-APR.B.3	No change

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Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	
A-APR.C.4 Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	No change
A-APR.C.5 (+) Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of *x* and *y* for a positive integer *n*, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.	No change
A-APR.D.6 Rewrite simple rational expressions in different forms; write *a(x)⁄b(x)* in the form *q(x) + r(x)⁄b(x*), where *a(x), b(x), q(x*), and *r(x)* are polynomials with the degree of *r(x)* less than the degree of *b(x),* using inspection, long division, or, for the more complicated examples, a computer algebra system.	No change
A-APR.D.7 (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.	No change
A-CED.A.1 Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational functions and exponential functions.**	**A-CED.A.1** Create equations and inequalities in one variable and use them to solve problems. (Include equations arising from linear and quadratic functions, and simple root and rational functions and exponential functions.)*
A-CED.A.2	No change

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Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.*	
A-CED.A.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. *For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.**	No change
A-CED.A.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. *For example, rearrange Ohm's law V = IR to highlight resistance, R.*	No change
A-REI.A.1 Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify or refute a solution method.	No change
A-REI.A.2 Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.	No change
A-REI.B.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	**A-REI.B.3** Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters. Solve linear equations and inequalities in one variable involving absolute value.

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A-REI.B.4 Solve quadratic equations in one variable. A. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x – p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form. B. Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula, and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b.	No change
A-REI.C.5 Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.	No change
A-REI.C.6 Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	No change
A-REI.C.7 Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = –3x$ and the circle $x^2 + y^2 = 3$.	No change
A-REI.C.8 (+) Represent a system of linear equations as a single matrix equation in a vector variable.	No change

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A-REI.C.9 (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3 x 3 or greater).	No change
A-REI.D.10 Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).	**A-REI.D.10** Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line). Show that any point on the graph of an equation in two variables is a solution to the equation.
A-REI.D.11 Explain why the x-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*	No change
A-REI.D.12 Graph the solutions of a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set of a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	No change
Functions	
Common Core State Standards	**Rhode Island Core Standards**

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F-IF.A.1 Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If *f* is a function and x is an element of its domain, then *f(x)* denotes the output of f corresponding to the input x. The graph of *f* is the graph of the equation *y = f(x).*	No change
F-IF.A.2 Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	**F-IF.A.2** Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. *For example, given a function representing a car loan, determine the balance of the loan at different points in time.*
F-IF.A.3 Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. *For example, the Fibonacci sequence is defined recursively by f(0) = f(1) = 1, f(n + 1) = f(n) + f(n - 1) for n ≥ 1.*	No change
F-IF. B Cluster heading **Interpret functions that arise in applications in terms of the context.**	**F-IF.B Cluster heading** **Interpret functions that arise in applications in terms of the context (linear, quadratic, exponential, rational, polynomial, square root, cube root, trigonometric, logarithmic).**
F-IF.B.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*	No change

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F-IF.B.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes*. For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.**	No change
F-IF.B.6 Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.*	No change
F-IF.C.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* A. Graph linear and quadratic functions and show intercepts, maxima, and minima,* B. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.* C. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.* D. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.* E. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.*	No change

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F-IF.C.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. A. Use the process of factoring and/or completing the square in a quadratic function, where appropriate, to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. B. Use the properties of exponents to interpret expressions for exponential functions. Apply to financial situations such as identifying appreciation and depreciation rate for the value of a house or car some time after its initial purchase. *For example, identify percent rate of change in functions such as* $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, *and* $y = (1.2)^{t/10}$, *and classify them as representing exponential growth or decay.*	**F-IF.C.8** Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. A. Use the process of factoring and/or completing the square in quadratic and polynomial functions, where appropriate, to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. B. Use the properties of exponents to interpret expressions for exponential functions. Apply to financial situations such as identifying appreciation and depreciation rate for the value of a house or car some time after its initial purchase. *For example, identify percent rate of change in functions such as* $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, *and* $y = (1.2)^{t/10}$, *and classify them as representing exponential growth or decay.*
F-IF.C.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.*	**F-IF.C.9** Translate among different representations of functions (algebraically, graphically, numerically in tables, or by verbal descriptions). Compare properties of two functions each represented in a different way. *For example, given a graph of one polynomial function (including quadratic functions) and an algebraic expression for another, say which has the larger/smaller relative maximum and/or minimum.*
No CCSS standard	**F-IF.C.10** Given algebraic, numeric and/or graphical representations of functions, recognize the function as polynomial, rational, logarithmic, exponential, or trigonometric.

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F-BF.A.1 Write a function that describes a relationship between two quantities.* A. Determine an explicit expression, a recursive process, or steps for calculation from a context.* B. Combine standard function types using arithmetic operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.** C. (+) Compose functions. *For example, if T(y) is the temperature in the atmosphere as a function of height, and h(t) is the height of a weather balloon as a function of time, then T(h(t)) is the temperature at the location of the weather balloon as a function of time*.*	**F-BF.A.1** Write a function (linear, quadratic, exponential, simple rational, radical, logarithmic, and trigonometric) that describes a relationship between two quantities.* A. Determine an explicit expression, a recursive process, or steps for calculation from a context.* B. Combine standard function types using arithmetic operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.** C. (+) Compose functions. *For example, if T(y) is the temperature in the atmosphere as a function of height, and h(t) is the height of a weather balloon as a function of time, then T(h(t)) is the temperature at the location of the weather balloon as a function of time*.*
F-BF.A.2 Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.*	No change
F-BF.B.3 Identify the effect on the graph of *replacing f(x) by f(x) + k, kf(x), f(kx)*, and *f(x + k)* for specific values of *k* (both positive and negative); find the value of *k* given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.*	**F-BF.B.3** Identify the effect on the graph of replacing *f(x) by f(x) + k, kf(x), f(kx*), and *f(x + k)* for specific values of *k* (both positive and negative); find the value of *k* given the graphs. (Include linear, quadratic, exponential, absolute value, simple rational and radical, logarithmic and trigonometric functions.) Utilize technology to experiment with cases and illustrate an explanation of the effects on the graph. (Include recognizing even and odd functions from their graphs and algebraic expressions for them.)
F-BF.B.4 Find inverse functions.	**F-BF.B.4** Find inverse functions algebraically and graphically.

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A. Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. *For example, f(x) =2x^3 or f(x) = (x + 1)/(x - 1) for x ≠ 1.* B. (+) Verify by composition that one function is the inverse of another. C. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse. D. (+) Produce an invertible function from a non-invertible function by restricting the domain.	A. Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. (Include linear and simple polynomial, rational, and exponential functions.) *For example, f(x) =2x 3 or f(x) = (x + 1)/(x - 1) for x ≠ 1.* B. (+) Verify by composition that one function is the inverse of another. C. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse. D. (+) Produce an invertible function from a non-invertible function by restricting the domain.
F-BF.B.5 (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.	No change
F-LE.A.1 Distinguish between situations that can be modeled with linear functions and with exponential functions.* A. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.* B. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.* C. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.*	No change
F-LE.A.2 Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (including reading these from a table).*	No change

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F-LE.A.3 Observe, using graphs and tables, that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.*	No change
F-LE.A.4 For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where *a, c*, and *d* are numbers and the base *b* is 2, 10, or *e*; evaluate the logarithm using technology.*	No change
F-LE.B.5 Interpret the parameters in a linear or exponential function in terms of a context.*	**F-LE.B.5** Interpret the parameters in a linear or exponential function (of the form $f(x) = b\,x + k$) in terms of a context.*
F-TF.A.1 Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.	No change
F-TF.A.2 Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.	No change
F-TF.A.3 (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for p /3, p /4 and p /6, and use the unit circle to express the values of sine, cosine, and tangent for p - x, p + x, and 2p - x in terms of their values for x, where x is any real number.	No change
F-TF.A.4 (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.	No change

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F-TF.B.5 Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.*	No change
F-TF.B.6 (+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.	No change
F-TF.B.7 (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.*	No change
F-TF.C.8 Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant.	No change
F-TF.C.9 (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.	No change

Geometry

Common Core State Standards	Rhode Island Core Standards
G-CO.A.1 Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.	No change

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G-CO.A.2 Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).	No change
G-CO.A.3 Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself	No change
G-CO.A.4 Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.	No change
G-CO.A.5 Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.	No change
G-CO.B.6 Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.	No change
G-CO.B.7 Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.	No change

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G-CO.B.8 Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.	No change
G-CO.C Cluster heading **Prove geometric theorems.**	**G-CO.C Cluster heading** **Prove geometric theorems and, when appropriate, the converse of theorems.**
G-CO.C.9 Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.	**G-CO.C.9** Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent, and conversely prove lines are parallel; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.
G-CO.C.10 Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; and the medians of a triangle meet at a point.	**G-CO.C.10** Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent, and conversely prove a triangle is isosceles; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; and the medians of a triangle meet at a point.
G-CO.C.11 Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.	**G-CO.C.11** Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals. A. Prove theorems about polygons. Theorems include the measures of interior and exterior angles. Apply properties of polygons to the solutions of mathematical and contextual problems.

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G-CO.D.12 Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). *Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.*	**G-CO.D.12** Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Constructions include: copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
G-CO.D.13 Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.	No change
G-SRT.A.1 Verify experimentally the properties of dilations given by a center and a scale factor: A. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged. B. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.	No change
G-SRT.A.2 Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.	No change
G-SRT.A.3 Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.	**G-SRT.A.3** Use the properties of similarity transformations to establish the Angle-Angle (AA) criterion for two triangles to be similar.

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G-SRT.B.4 Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.	No change
G-SRT.B.5 Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	No change
G-SRT.C.6 Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	No change
G-SRT.C.7 Explain and use the relationship between the sine and cosine of complementary angles.	No change
G-SRT.C.8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.*	No change
G-SRT.D.9 (+) Derive the formula A = ½ ab sin(C) for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.	No change
G-SRT.D.10 (+) Prove the Laws of Sines and Cosines and use them to solve problems.	No change

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G-SRT.D.11 (+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).	No change
G-C.A.1 Prove that all circles are similar.	No change
G-C.A.2 Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.	No change
G-C.A.3 Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral and other polygons inscribed in a circle.	No change
G-C.A.4 (+) Construct a tangent line from a point outside a given circle to the circle.	No change
G-C.B.5 Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.	No change
G-GPE.A.1	No change

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Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.	
G-GPE.A.2 Derive the equation of a parabola given a focus and directrix.	No change
G-GPE.A.3 (+) Derive the equations of ellipses and hyperbolas given the foci, using the fact that the sum or difference of distances from the foci is constant.	**G-GPE.A.3** (+) Derive the equations of ellipses and hyperbolas given the foci, using the fact that the sum or difference of distances from the foci is constant. (+) Use equations and graphs of conic sections to model real-world problems.*
G-GPE.B.4 Use coordinates to prove simple geometric theorems algebraically. *For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1, √3) lies on the circle centered at the origin and containing the point (0, 2).*	**G-GPE.B.4** Use coordinates to prove simple geometric theorems algebraically including the distance formula and its relationship to the Pythagorean Theorem. *For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1, √3) lies on the circle centered at the origin and containing the point (0, 2).*
G-GPE.B.5 Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).	No change
G-GPE.B.6 Find the point on a directed line segment between two given points that partitions the segment in a given ratio.	No change

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G-GPE.B.7 Use coordinates to compute perimeters of polygons and areas of triangles and rectangles (e.g., using the distance formula).*	No change
G-GMD.A.1 Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.	No change
G-GMD.A.2 (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.	No change
G-GMD.A.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.*	No change
G-GMD.B.4 Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	No change
G-MG.A.1 Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).*	No change
G-MG.A.2 Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).*	No change

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G-MG.A.3 Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).*	No change
No CCSS standard	**G-MG.A.4** Use dimensional analysis for unit conversions to confirm that expressions and equations make sense.*

Statistics and Probability

Common Core State Standards	Rhode Island Core Standards
Statistics and Probability Conceptual Category Statistics and Probability in the CCSS is starred for modeling at the conceptual category level.	**Statistics and Probability Conceptual Category** Individual standards are starred for modeling in the Massachusetts Curriculum Frameworks.
S-ID.A Cluster heading **Summarize, represent, and interpret data on a single count or measurement variable.**	**S-ID.A Cluster heading** **Summarize, represent, and interpret data on a single count or measurement variable.** Use calculators, spreadsheets, and other technology as appropriate.
S-ID.A.1 Represent data with plots on the real number line (dot plots, histograms, and box plots).	No change
S-ID.A.2 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.	No change

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S-ID.A.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).	No change
S-ID.A.4 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.	No change
S-ID.B.5 Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.	No change
S-ID.B.6 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. A. Fit a linear function to the data; use functions fitted to data to solve problems in the context of the data. *Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.* B. Informally assess the fit of a function by plotting and analyzing residuals. C. Fit a linear function for a scatter plot that suggests a linear association.	**S-ID.B.6** Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. A. Fit a linear function to the data and use the fitted function to solve problems in the context of the data. Use functions fitted to data or choose a function suggested by the context. Emphasize linear and exponential models. B. Informally assess the fit of a function by plotting and analyzing residuals. C. Fit a linear function for a scatter plot that suggests a linear association.

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S-ID.C.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.	No change
S-ID.C.8 Compute (using technology) and interpret the correlation coefficient of a linear fit.	No change
S-ID.C.9 Distinguish between correlation and causation.	No change
S-IC.A Cluster heading **Understand and evaluate random processes underlying statistical experiments.**	**Understand and evaluate random processes underlying statistical experiments. Use calculators, spreadsheets, and other technology as appropriate.**
S-IC.A.1 Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	No change
S-IC.A.2 Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?	**S-IC.A.2** Decide if a specified model is consistent with results from a given data-generating process (e.g., using simulation). For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of five tails in a row cause you to question the model?
S-IC.B.3 Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.	No change
S-IC.B.4	No change

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Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.	
S-IC.B.5 Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	No change
S-IC.B.6 Evaluate reports based on data.	No change
S-CP.A Cluster heading **Understand independence and conditional probability and use them to interpret data.**	**S-CP.A Cluster heading** **Understand independence and conditional probability and use them to interpret data from simulations or experiments.**
S-CP.A.1 Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not").	No change
S-CP.A.2 Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	No change
S-CP.A.3 Understand the conditional probability of A given B as P(A and B)/P(B), and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.	No change

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S-CP.A.4 Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. *For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.*	No change
S-CP.A.5 Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. *For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.*	No change
S-CP.B.6 Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the answer in terms of the model.	No change
S-CP.B.7 Apply the Addition Rule, P(A or B) = P(A) + P(B) – P(A and B), and interpret the answer in terms of the model.	No change
S-CP.B.8 (+) Apply the general Multiplication Rule in a uniform probability model, P(A and B) = P(A)P(B|A) = P(B)P(A|B), and interpret the answer in terms of the model.	No change
S-CP.B.9	No change

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(+) Use permutations and combinations to compute probabilities of compound events and solve problems.	
S-MD.A.1 (+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.	No change
S-MD.A.2 (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.	No change
S-MD.A.3 (+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. *For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.*	No change
S-MD.A.4 (+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. *For example, find a current data distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?*	No change
S-MD.B.5 (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.	No change

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A. (+) Find the expected payoff for a game of chance. *For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant.* B. (+) Evaluate and compare strategies on the basis of expected values. *For example, compare a high-deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.*	
S-MD.B.6 (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).	**S-MD.B.6** (+) Use probabilities to make fair decisions (e.g., drawing by lots or using a random number generator).
S-MD.B.7 (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).	**S-MD.B.7** (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, or pulling a hockey goalie at the end of a game and replacing the goalie with an extra skater).

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