California's COMMON CORE

Content Standards
Third Grade

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Content Standards for ELA and Mathematics
Third Grade

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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 gradespecific standards and retain or further develop skills and understandings mastered in preceding grades.

LITERATURE

Key Ideas and Details

2_{ND}

- Ask and answer such questions as who, what,where, when, why, and how to demonstrate understanding of key details in a text.
- Recount 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.

3_{RD}

- Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- 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.
- Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

4TH

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- Determine a theme of a story, drama, or poem from details in the text; summarize the text.
- 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).
- Anchor R.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.
- Anchor R.2 Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

 Anchor R.3 Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

Craft and Structure

- Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.
- Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.
- Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.
- 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 nonliteral language.
- Distinguish their own point of view from that of the narrator or those of the characters.
- 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 a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.
- Compare and contrast the point of view from which different stories are narrated, including the difference between firstand third-person narrations.
- Anchor R.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.
- Anchor R.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.
- Anchor R.6 Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

2_{ND}

- 7. Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.
- 8. (Not applicable to literature)
- Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.

3_{RD}

- 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 to literature)
- 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).

4тн

- 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.
- 8. (Not applicable to literature)
- 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.
- Anchor R.7 Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹
- Anchor R.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.
- Anchor R.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 & Level of Text Complexity

- 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.
- 10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2–3 text complexity band independently and proficiently.
- 10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Anchor R.10 Read and comprehend complex literary and informational texts independently and proficiently.

¹ 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.

INFORMATIONAL TEXT

Key Ideas and Details

2_{ND}

- 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, or steps in technical procedures in a text.

3_{RD}

- Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- Determine the main idea of a text; recount the key details and explain how they support the main idea.
- 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.

4тн

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- 3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- Anchor R.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.
- Anchor R.2 Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

 Anchor R.3 Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

Craft and Structure

- 4. Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
- 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.

- 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.
- Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
- 6. Distinguish their own point of view from that of the author of a text.

- 4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
- 5. Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
- Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.
- Anchor R.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.
- Anchor R.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.
- Anchor R.6 Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

2_{ND}

- 7. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
- 8. Describe how reasons support specific points the author makes in a text.
- Compare and contrast the most important points presented by two texts on the same topic.

3_{RD}

- 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).
- 8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).
- Compare and contrast the most important points and key details presented in two texts on the same topic.

4тн

- 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.
- 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 about the subject knowledgeably.
- Anchor R.7 Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.²
- Anchor R.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.
- Anchor R.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 & Level of Text Complexity

- 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.
- 10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.
- 10. By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Anchor R.10 Read and comprehend complex literary and informational texts independently and proficiently.

² 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.

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. These foundational skills are not an end in and of themselves; rather, they are necessary and important components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines. Instruction should be differentiated: good readers will need much less practice with these concepts than struggling readers will. The point is to teach students what they need to learn and not what they already know—to discern when particular children or activities warrant more or less attention.

FOUNDATIONAL SKILLS

Phonics & Word Recognition

2ND

- Know and apply grade-level phonics and word analysis skills in decoding words both in isolation and in text.
- 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.

3_{RD}

- 3. Know and apply grade-level phonics and word analysis skills in decoding words **both in isolation and in text.**
 - a. Identify and know themeaning of the most common prefixes and derivational suffixes.
 - b. Decode words with common Latin suffixes.
 - c. Decode multisyllable words.
 - d. Read grade-appropriate irregularly spelled words.

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- 3. Know and apply grade-level phonics and word analysis skills in decoding words.
- a. Use combined knowledge of all lettersound correspondences, syllabicationpatterns, 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 on-level text 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.
- 4. Read with sufficient accuracy and fluency to support comprehension.
- a. Read on-level text with purpose and understanding.
- b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings
- Use context to confirm orselfcorrect word recognition and understanding, rereadingas necessary.

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

The following standards for K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples in Appendix C.

WRITING

Text Types & Purposes

2_{ND}

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.

 Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

3_{RD}

- 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.
- 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 whenuseful 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 ideaswithin categories of information.
- d. Provide a concluding statement or section.

4TH

- 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 groupedto 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 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.
- 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 domainspecific vocabulary to inform about or explain the topic.
- e. Provide a concluding statement or section related to the information or explanation presented.

Text Types & Purposes

2_{ND}

3. Write narratives in which they recount a wellelaborated 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.

3_{RD}

- 3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
 - a. Establish a situation and introduce a narrator and/or characters; organize an eventsequence that unfolds naturally.
- Use dialogue and descriptions of actions, thoughts, and feelings to develop experiencesand events or show the response of charactersto situations.
- c. Use temporal words and phrases to signal event order.
- d. Provide a sense of closure.

4тн

- Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- a. Orient the reader byestablishing 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.
- Anchor W.1 Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
- Anchor W.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.
- Anchor W.3 Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.

Production & Distribution of Writing

- 4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

 (Grade-specific expectations for writing types are defined in standards 1–3 above.)
- With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.
- 4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.
- With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.
- 4. Produce clear and coherent writing (including multiple-paragraph texts) in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
- 5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 4.)

2ND

6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

3_{RD}

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.

4тн

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.

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

Anchor W.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

Anchor W.6 Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build & Present Knowledge

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).

 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)

7. Conduct short research projects that build knowledge about a topic.

 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)

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

Anchor W.7 Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

Anchor W.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.

Anchor W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

2_{ND}

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.

3_{RD}

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.

4тн

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.

Anchor W.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.

SPEAKING & LISTENING

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 & Collaboration

2_{ND}

- 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.

- Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
 Give and follow three- and four-step oral directions.
- 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.

3_{RD}

- Engage effectively in a range of collaborative discussions (one-onone, in groups, and teacherled) 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 timeabout 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.
- 2. Determine the main ideas and supporting details of a text read aloud orinformation presented in diverse media and formats, including visually, quantitatively, and orally.
- Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

4TH

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacherled)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 specificquestions to clarify or follow up on information, and makecomments 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.
- Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- Identify the reasons and evidence a speaker <u>or media source</u> provides to support particular points.
- Anchor SL.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.
- Anchor SL.2 Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
- Anchor SL.3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

SPEAKING & LISTENING

Presentation of Knowledge & Ideas

2_{ND}

- 4. Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
- a. Plan and deliver a narrative
 presentation that: recounts a wellelaborated event, includes details,
 reflects a logical sequence, and
 provides a conclusion.
- 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.
- Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

3_{RD}

- 4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
- a. Plan and deliver an informative/
 explanatory presentation on a
 topic that: organizes ideas around
 major points of information,
 follows a logical sequence,
 includes supporting details, uses
 clear and specific vocabulary, and
 provides a strong conclusion.
- 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.
- Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

4тн

- 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.
 - a. Plan and deliver a narrative presentation that: relates ideas, observations, or recollections; provides a clear context; and includes clear insight into why the event or experience is memorable.
- 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 ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.

Anchor SL.6 Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Anchor SL.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.

Anchor SL.5 Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

LANGUAGE STANDARDS

The following standards for grades K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (*).

Conventions of Standard English

2ND

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Create readable documents with legible print.
- b. Use collective nouns (e.g., group).
- c. Form and use frequently occurring irregular plural nouns (e.g., *feet*, *children*, *teeth*, *mice*, *fish*).
- d. Use reflexive pronouns (e.g., *myself*, *ourselves*).
- e. Form and use the past tense of frequently occurring irregular verbs (e.g., sat, hid, told).
- f. Use adjectives and adverbs, and choose between them depending on what is to be modified.
- g. 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*).

3_{RD}

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- a. Write legibly in cursive or joined italics, allowing margins and correct spacing between letters in a word and words in a sentence.
- Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.
- c. Use reciprocal pronouns correctly.
- d. Form and use regular and irregular plural nouns.
- e. Use abstract nouns (e.g., childhood).
- f. Form and use regular and irregular verbs.
- g. Form and use the simple (e.g., *I* walked; *I* walk; *I* will walk) verb tenses.
- h. Ensure subject-verb and pronounantecedent agreement.*
- i. Form and use comparative and superlative adjectives and adverbs, and choose betweenthem depending on what is to be modified.
- j. Use coordinating and subordinating conjunctions.
- k. Produce simple, compound, and complex sentences.

4TH

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- a. Write fluidly and legibly in cursive or joined italics.
- b. Use <u>interrogative</u>, relative pronouns (who, whose, whom, which, that) and relative adverbs (where, when, why).
- c. Form and use the progressive (e.g., I was walking; I am walking; I will be walking) verb tenses.
- d. Use modal auxiliaries (e.g., *can*, *may*, *must*) to convey various conditions.
- e. Order adjectives within sentences according to conventional patterns (e.g., a *small red bag rather than a red small bag*).
- f. Form and use prepositional phrases.
- g. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.*
- h. Correctly use frequently confused words (e.g., *to, too, two; there, their*).*

LANGUAGE STANDARDS

2_{ND}

- 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 beginningdictionaries, as needed to check and correct spellings.

3_{RD}

- 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 highfrequency and other studied words and for addingsuffixes to base words (e.g.,sitting, smiled, cries, happiness).
- f. Use spelling patterns andgeneralizations (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.

4тн

- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Use correct capitalization.
- 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-appropriatewords correctly, consulting references as needed.

Anchor L.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

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

Knowledge of Language

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

Anchor L.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.

LANGUAGE STANDARDS

Vocabulary Acquisition and Use

2_{ND}

- 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 ofthe 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 clarifythe meaning of words and phrases in all content areas.
- 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 throughconversations, 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).

3_{RD}

- 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 in all content areas.
- Demonstrate understanding of word relationships and nuances in word meanings.
 - a. Distinguish the literal and non-literal 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).
- Acquire and use accurately gradeappropriate conversational, general academic, and domainspecific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them).

4TH

- 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.
 - 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 and to identify alternate word choices in all content areas
- 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).
- 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).
- Anchor L.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.
- Anchor L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Anchor L.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.

LANGUAGE PROGRESSIVE SKILLS, BY GRADE

The following skills, marked with an asterisk (*) in Language standards 1-3, are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

				Grade(s)	(s)			П
Standard	20	4	2	9	7	8	9-10	11-12
L.3.1f. Ensure subject-verb and pronoun-antecedent agreement.								
L.3.3a. Choose words and phrases for effect.								
L.4.1f. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.								
L.4.1g. Correctly use frequently confused words (e.g., to/too/two; there/their).								
L.4.3a. Choose words and phrases to convey ideas precisely.								
L.4.3b. Choose punctuation for effect.								
L.5.1d. Recognize and correct inappropriate shifts in verb tense.								
L.5.2a. Use punctuation to separate items in a series.'								
L.6.1c. Recognize and correct inappropriate shifts in pronoun number and person.								
L.6.1d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).								
L.6.1e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.								
L.6.2a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.								
L.6.3a. Vary sentence patterns for meaning, reader/listener interest, and style.								
L.6.3b. Maintain consistency in style and tone.								
L.7.1c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.								
L.7.3a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.								
L.8.1d. Recognize and correct inappropriate shifts in verb voice and mood.								
L.9–10.1a. Use parallel structure.								

STANDARD 10: RANGE, QUALITY, AND COMPLEXITY OF STUDENT READING K-5

Measuring Text Complexity: Three Factors



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

and knowledge demands

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

Reader variables (such as motivation, knowledge, and experiences) Matching reader to text and task:

and task variables (such as purpose and the complexity generated by the task assigned and the questions posed)

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

Range of Text Types for K-5

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

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

TEXT ILLUSTRATING THE COMPLEXITY, QUALITY, AND RANGE OF STUDENT READING K-5

		Literature: Stories, Dramas, Poetry	Informational Texts: Literary Nonfiction and Historical, Scientific, and Technical Texts	al, Scientific, and Technical Texts
	•	Over in the Meadow by John Langstaff (traditional) (c1800)*	My Five Senses by Aliki (1962)**	
	•	A Boy, a Dog, and a Frog by Mercer Mayer (1967)	Truck by Donald Crews (1980)	
*	•	Pancakes for Breakfast by Tomie DePaola (1978)	I Read Signs by Tana Hoban (1987)	
	•	· A Story, A Story by Gail E. Haley (1970)*	What Do You Do With a Tail Like This? by Steve Jenkins and Robin Page (2003)*	Jenkins and Robin Page (2003)*
	•	Kitten's First Full Moon by Kevin Henkes (2004)*	Amazing Whales! by Sarah L. Thomson (2005)*	
	•	"Mix a Pancake" by Christina G. Rossetti (1893)**	A Tree Is a Plant by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)**	d by Stacey Schuett (1960)**
	•	Mr. Popper's Penguins by Richard Atwater (1938)*	Starfish by Edith Thacher Hurd (1962)	
*	•	Little Bear by Else Holmelund Minarik, illustrated by Maurice	Follow the Water from Brook to Ocean by Arthur Dorros (1991)**	Dorros (1991)**
-		Sendak (1957)**	From Seed to Pumpkin by Wendy Pfeffer, illustrated by James Graham Hale	ted by James Graham Hale
	•	Frog and Toad Together by Arnold Lobel (1971)**	(2004)*	
	٠	Hii Fly Guy by Tedd Arnold (2006)	How People Learned to Fly by Fran Hodgkins and True Kelley (2007)*	d True Kelley (2007)*
	•	"Who Has Seen the Wind?" by Christina G. Rossetti (1893)	A Medieval Feast by Aliki (1983)	
	•	Charlotte's Web by E. B. White (1952)*	From Seed to Plant by Gail Gibbons (1991)	
Ċ	•	Sarah, Plain and Tall by Patricia MacLachlan (1985)	The Story of Ruby Bridges by Robert Coles (1995)*	5)*
۲-۷ ا	•	Tops and Bottoms by Janet Stevens (1995)	A Drop of Water: A Book of Science and Wonder by Walter Wick (1997)	by Walter Wick (1997)
	•	Poppleton in Winter by Cynthia Rylant, illustrated by Mark Teague (2001)	Moonshot: The Flight of Apollo 11 by Brian Floca (2009)	(2009)
	•	Alice's Adventures in Wonderland by Lewis Carroll (1865)	Discovering Mars: The Amazing Story of the Red Planet by Melvin Berger (1992)	I Planet by Melvin Berger (1992)
	•	"Casey at the Bat" by Ernest Lawrence Thayer (1888)	Hurricanes: Earth's Mightiest Storms by Patricia Lauber (1996)	Lauber (1996)
И.	•	The Black Stallion by Walter Farley (1941)	A History of US by Joy Hakim (2005)	
) 	٠	"Zlateh the Goat" by Isaac Bashevis Singer (1984)	Horses by Seymour Simon (2006)	
	•	Where the Mountain Meets the Moon by Grace Lin (2009)	Quest for the Tree Kangaroo: An Expedition to the Cloud Forest of New Guinea by Sy Montgomery (2006)	e Cloud Forest of New Guinea by

Note: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a wide range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of K–5 text complexity, quality, and range.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes in depth. On the next page is an example of progressions of texts building knowledge across grade levels. *Children at the kindergarten and grade 1 levels should be expected to read texts independently that have been specifically written to correlate to their reading level and their word knowledge. Many of the titles listed above are meant to supplement carefully structured independent reading with books to read along with a teacher or that are read aloud to students to build knowledge and cultivate a joy in reading.

<u>HOW TO BUILD KNOWLEDGE SYSTEMATICALLY IN ENGLISH LANGUAGE ARTS K-5</u> STAYING ON TOPIC WITHIN A GRADE AND ACROSS GRADES:

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

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

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

Introduction

Toward greater focus and coherence

Mathematics experiences in early childhood settings should concentrate on (1) number (which includes whole number, operations, and relations) and (2) geometry, spatial relations, and measurement, with more mathematics learning time devoted to number than to other topics. Mathematical process goals should be integrated in these content areas.

—National Research Council, 2009

The composite standards [of Hong Kong, Korea and Singapore] have a number of features that can inform an international benchmarking process for the development of K–6 mathematics standards in the U.S. First, the composite standards concentrate the early learning of mathematics on the number, measurement, and geometry strands with less emphasis on data analysis and little exposure to algebra. The Hong Kong standards for grades 1–3 devote approximately half the targeted time to numbers and almost all the time remaining to geometry and measurement.

— Ginsburg, Leinwand and Decker, 2009

Because the mathematics concepts in [U.S.] textbooks are often weak, the presentation becomes more mechanical than is ideal. We looked at both traditional and non-traditional textbooks used in the US and found this conceptual weakness in both.

— Ginsburg et al., 2005

There are many ways to organize curricula. The challenge, now rarely met, is to avoid those that distort mathematics and turn off students.

— Steen, 2007

For over a decade, research studies of mathematics education in high-performing countries have pointed to the conclusion that the mathematics curriculum in the United States must become substantially more focused and coherent in order to improve mathematics achievement in this country. To deliver on the promise of common standards, the standards must address the problem of a curriculum that is "a mile wide and an inch deep." These Standards are a substantial answer to that challenge.

It is important to recognize that "fewer standards" are no substitute for focused standards. Achieving "fewer standards" would be easy to do by resorting to broad, general statements. Instead, these Standards aim for clarity and specificity.

Assessing the coherence of a set of standards is more difficult than assessing their focus. William Schmidt and Richard Houang (2002) have said that content standards and curricula are coherent if they are:

articulated over time as a sequence of topics and performances that are logical and reflect, where appropriate, the sequential or hierarchical nature of the disciplinary content from which the subject matter derives. That is, what and how students are taught should reflect not only the topics that fall within a certain academic discipline, **but also the key ideas** that determine how knowledge is organized and generated within that discipline. This implies that "to be coherent," a set of content standards must evolve from particulars (e.g., the meaning and operations of whole numbers, including simple math facts and routine computational procedures associated with whole numbers and fractions) to deeper structures inherent in the discipline. These deeper structures then serve as a means for connecting the particulars (such as an understanding of the rational number system and its properties). (emphasis added)

These Standards endeavor to follow such a design, not only by stressing conceptual understanding of key ideas, but also by continually returning to organizing principles such as place value or the laws of arithmetic to structure those ideas.

In addition, the "sequence of topics and performances" that is outlined in a body of mathematics standards must also respect what is known about how students learn. As Confrey (2007) points out, developing "sequenced obstacles and challenges for students...absent the insights about meaning that derive from careful study of learning, would be unfortunate and unwise." In recognition of this, the development of these Standards began with research-based learning progressions detailing what is known today about how students' mathematical knowledge, skill, and understanding develop over time.

MATHEMATICAL PRACTICE

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council's report Adding It Up: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy).

1 Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2 Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3 Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4 Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6 Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of 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 + 2 + x + 1) might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years. Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction. The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word "understand" are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices. In this respect, those content standards which set an expectation of understanding are potential "points of intersection" between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.

Understanding mathematics

These Standards define what students should understand and be able to do in their study of mathematics. Asking a student to understand something means asking a teacher to assess whether the student has understood it. But what does mathematical understanding look like? One hallmark of mathematical understanding is the ability to justify, in a way appropriate to the student's mathematical maturity, why a particular mathematical statement is true or where a mathematical rule comes from. There is a world of difference between a student who can summon a mnemonic device to expand a product such as (a + b)(x + y) and a student who can explain where the mnemonic comes from. The student who can explain the rule understands the mathematics, and may have a better chance to succeed at a less familiar task such as expanding (a + b + c)(x + y). Mathematical understanding and procedural skill are equally important, and both are assessable using mathematical tasks of sufficient richness.

The Standards set grade-specific standards but do not define the intervention methods or materials necessary to support students who are well below or well above grade-level expectations. It is also beyond the scope of the Standards to define the full range of supports appropriate for English language learners and for students with special needs. At the same time, all students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills necessary in their post-school lives. The Standards should be read as allowing for the widest possible range of students to participate fully from the outset, along with appropriate accommodations to ensure maximum participation of students with special education needs. For example, for students with disabilities reading should allow for use of Braille, screen reader technology, or other assistive devices, while writing should include the use of a scribe, computer, or speech-to-text technology. In a similar vein, speaking and listening should be interpreted broadly to include sign language. No set of grade-specific standards can fully reflect the great variety in abilities, needs, learning rates, and achievement levels of students in any given classroom. However, the Standards do provide clear signposts along the way to the goal of college and career readiness for all students.

K	1	2	3	4	5	6	7	8	HS
Counting & Cardinality									
	Number	& Operati	ons Base T	'en			roportional onships		Number
			Num	ber & Oper Fractions		The	Number Sy	stem	& Quantity
Expressions Operations & Equations						Algebra			
& Algebraic Thinking Func						Functions	Functions		
Geometry						Geometry			
Measurement & Data Statistics & Probability						Statistics & Probability			

Findell & Foughty (2011)

College and Career-Readiness through the Common Core State Standards for Mathematics

Grade 3 - Overview

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

- 1. Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.
- 2. Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, 1/2 of the paint in a small bucket could be less paint than 1/3 of the paint in a larger bucket, but 1/3 of a ribbon is longer than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.
- 3. Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.
- 4. Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

OPERATIONS & ALGEBRAIC THINKING

REPRESENT AND SOLVE PROBLEMS INVOLVING MULTIPLICATION AND DIVISION.

- 1. Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each, or 7 groups of 5 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.¹
- 4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48, 5 = ? \div 3, 6 \times 6 = ?$.

UNDERSTAND PROPERTIES OF MULTIPLICATION AND THE RELATIONSHIP BETWEEN MULTIPLICATION AND DIVISION.

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

MULTIPLY AND DIVIDE WITHIN 100.

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

SOLVE PROBLEMS INVOLVING THE FOUR OPERATIONS, AND IDENTIFY AND EXPLAIN PATTERNS IN ARITHMETIC.

- 8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.³
- Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using
 properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a
 number can be decomposed into two equal addends.

NUMBER AND OPERATIONS IN BASE TEN

USE PLACE VALUE UNDERSTANDING AND PROPERTIES OF OPERATIONS TO PERFORM MULTI-DIGIT ARITHMETIC.

- 1. Use place value understanding to round whole numbers to the nearest 10 or 100. 1.1 Understand that the four digits of a four-digit number represent amounts of thousands, hundreds, tens, and ones; e.g. 3,706 = 3000 + 700 + 6 = 3 thousands, 7 hundreds, 0 tens, and 6 ones.
- 2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 3. Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.

NUMBER AND OPERATIONS—FRACTIONS⁵

DEVELOP UNDERSTANDING OF FRACTIONS AS NUMBERS

- 1. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.
- 2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.
 - a. Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.
 - b. Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.
- 3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
 - 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 abouttheir 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.

¹See Glossary, Table 2.

²Students need not use formal terms for these properties.

³This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

⁴A range of algorithms may be used.

⁵Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.

ASUREMENT & DATA

SOLVE PROBLEMS INVOLVING MEASUREMENT AND ESTIMATION OF INTERVALS OF TIME, LIQUID VOLUMES, AND MASSES OF OBJECTS.

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.

REPRESENT AND INTERPRET DATA.

- 2. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
- 3. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

GEOMETRIC MEASUREMENT: UNDERSTAND CONCEPTS OF AREA AND RELATE AREA TO MULTIPLICATION AND TOADDITION.

- 4. 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
- Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
- 6. 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 nonoverlapping rectangles and adding the areas of the non-overlapping parts, applying thistechnique to solve real world problems.

GEOMETRIC MEASUREMENT: RECOGNIZE PERIMETER AS AN ATTRIBUTE OF PLANE FIGURES AND DISTINGUISH BETWEEN LINEAR AND AREA MEASURES.

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

GEOMETRY

REASON WITH SHAPES AND THEIR ATTRIBUTES.

- 1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
- 2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.

⁶Excludes compound units such as cm3 and finding the geometric volume of a container.