

البيشرا

مجموعة البشرا للتربية و العلوم
Al Bushra for Orientation and Education

Academy High School
عضو مجلس المدارس الأميركية

CLASSES | CURRICULUM

KG'S

English

Reading:

Key Ideas and Details:

- With prompting and support, ask and answer questions about key details in a text.
- With prompting and support, retell familiar stories, including key details.
- With prompting and support, identify characters, settings, and major events in a story.

Craft and Structure:

- Ask and answer questions about unknown words in a text.
- Recognize common types of texts (e.g., storybooks, poems).
- With prompting and support, name the author and illustrator of a story and define the role of each in telling the story.
- Integration of Knowledge and Ideas:
- 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).
- With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.
- Range of Reading and Level of Text Complexity:
- Actively engage in group reading activities with purpose and understanding.

Reading "Informational Text:

Key Ideas and Details:

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

Craft and Structure:

- With prompting and support, ask and answer questions about unknown words in a text.
- Identify the front cover, back cover, and title page of a book.
- Name the author and illustrator of a text and define the role of each in

presenting the ideas or information in a text.

Integration of Knowledge and Ideas:

- 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).
- With prompting and support, identify the reasons an author gives to support points in a text.
- With prompting and support, 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:

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

Reading Foundational Skills:

Print Concepts:

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

Phonological Awareness:

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Recognize and produce rhyming words.
- Count, pronounce, blend, and segment syllables in spoken words.
- Blend and segment onsets and rimes of single-syllable spoken words.
- Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words.¹ (This does not include CVCs ending with /l/, /r/, or /x/.)
- Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.

Phonics and Word Recognition:

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

- 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.
- Associate the long and short sounds with the common spellings (graphemes) for the five major vowels.
- Read common high-frequency words by sight (e.g., the, of, to, you, she, my, is, are, do, does).
- Distinguish between similarly spelled words by identifying the sounds of the letters that differ.

Fluency:

- Read emergent-reader texts with purpose and understanding.

Writing:

Text Types and Purposes:

- 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...).
- 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.
- 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.

Production and Distribution of Writing:

- 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, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.

Research to Build and Present Knowledge:

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

question.

Speaking and Listening:

Comprehension and Collaboration:

- Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
- Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).
- Continue a conversation through multiple exchanges.
- 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.
- Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

Presentation of Knowledge and Ideas:

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

Knowledge of Language:

Conventions of Standard English:

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Print many upper- and lowercase letters.
- Use frequently occurring nouns and verbs.
- Form regular plural nouns orally by adding /s/ or /es/ (e.g., dog, dogs; wish, wishes).
- Understand and use question words (interrogatives) (e.g., who, what, where, when, why, how).
- Use the most frequently occurring prepositions (e.g., to, from, in, out, on, off, for, of, by, with).
- Produce and expand complete sentences in shared language activities.

- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- Capitalize the first word in a sentence and the pronoun I
- Recognize and name end punctuation.
- Write a letter or letters for most consonant and short-vowel sounds (phonemes).
- Spell simple words phonetically, drawing on knowledge of sound-letter relationships.

Knowledge of Language:

Vocabulary Acquisition and Use:

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

Math

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

- 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.

- 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.

Grade K Overview

Counting and Cardinality

- Know number names and the count sequence.
- Count to tell the number of objects.
- Compare numbers.

Operations and Algebraic Thinking

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

Number and Operations in Base Ten

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

Measurement and Data

- Describe and compare measurable attributes.
- Classify objects and count the number of objects in each category

Geometry

- Identify and describe shapes.
- Analyze, compare, create, and compose shapes.

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Grade 1

English

English- Social Studies- Sciences

Reading:

Key Ideas and Details:

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

Craft and Structure:

- Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.
- 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 who is telling the story at various points in a text.

Integration of Knowledge and Ideas:

- Use illustrations and details in a story to describe its characters, setting, or events.
- Compare and contrast the adventures and experiences of characters in stories.

Range of Reading and Level of Text Complexity:

- With prompting and support, read prose and poetry of appropriate complexity for grade 1.

Reading “Informational Text:

Key Ideas and Details:

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

Craft and Structure:

- Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
- 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.

Reading: Foundational Skills:

- Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.
- Use the illustrations and details in a text to describe its key ideas.
- Identify the reasons an author gives to support points in a text.
- 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:
- With prompting and support, read informational texts appropriately complex for grade 1

Print Concepts:

- Demonstrate understanding of the organization and basic features of print.
- Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation).
- Phonological Awareness:
- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Distinguish long from short vowel sounds in spoken single-syllable words.
- Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.
- Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.
- Segment spoken single-syllable words into their complete sequence of

individual sounds (phonemes).

Phonics and Word Recognition:

- Know and apply grade-level phonics and word analysis skills in decoding words.
- Know the spelling-sound correspondences for common consonant digraphs.
- Decode regularly spelled one-syllable words.
- Know final -e and common vowel team conventions for representing long vowel sounds.
- Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.
- Decode two-syllable words following basic patterns by breaking the words into syllables.
- Read words with inflectional endings.
- Recognize and read grade-appropriate irregularly spelled words.

Fluency:

- Read with sufficient accuracy and fluency to support comprehension.
- Read grade-level text with purpose and understanding.
- Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.
- Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Writing:

- 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.
- Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.
- 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.

Production and Distribution of Writing:

- 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, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

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

Speaking and Listening Comprehension and Collaboration:

- Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
- 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).
- Build on others’ talk in conversations by responding to the comments of others through multiple exchanges.
- Ask questions to clear up any confusion about the topics and texts under discussion.
- Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
- 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:

- Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
- Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
- Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 here for specific expectations.)

Language

Conventions of Standard English:

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Print all upper- and lowercase letters.
- Use common, proper, and possessive nouns.
- Use singular and plural nouns with matching verbs in basic sentences (e.g., He hops; We hop).

- Use personal, possessive, and indefinite pronouns (e.g., I, me, my; they, them, their, anyone, everything).
- Use verbs to convey a sense of past, present, and future (e.g., Yesterday I walked).
- Use frequently occurring adjectives.
- Use frequently occurring conjunctions (e.g., and, but, or, so, because).
- Use determiners (e.g., articles, demonstratives).
- Use frequently occurring prepositions (e.g., during, beyond, toward).
- 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 capitalization, punctuation, and spelling when writing.
- Capitalize dates and names of people.
- Use end punctuation for sentences.
- Use commas in dates and to separate single words in a series.
- Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words.
- Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.

Knowledge of Language:

Vocabulary Acquisition and Use:

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and content, choosing flexibly from an array of strategies.
- Use sentence-level context as a clue to the meaning of a word or phrase.
- Use frequently occurring affixes as a clue to the meaning of a word.
- Identify frequently occurring root words (e.g., look) and their inflectional forms (e.g., looks, looked, looking).
- With guidance and support from adults, demonstrate understanding of word, Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent.
- 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).
- Identify real-life connections between words and their use (e.g., note places at home that are cozy).
- 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.

- 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).

Math

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.

(4) reasoning about attributes of, and composing and decomposing geometric shapes.

- 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.

- Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding

of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.

- Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.¹
- 4. Students compose and decompose plane or solid figures (e.g., put two triangles together to make a quadrilateral) and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

Grade 1 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and subtract within 20.
- Work with addition and subtraction equations.

Number and Operations in Base Ten

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

Geometry

- Reason with shapes and their attributes.

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Grade2

English

Reading:

Key Ideas and Details:

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

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.

Integration of Knowledge and Ideas:

- Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.
- 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:

- By the end of the year, read and comprehend literature, including

stories and poetry, in the grades 2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Reading “Informational Text:

Key Ideas and Details:

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

Craft and Structure:

- Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
- 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.
- Identify the main purpose of a text, including what the author wants to answer, explain, or describe.

Integration of Knowledge and Ideas:

- Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
- 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.
- Range of Reading and Level of Text Complexity:

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

Reading: Foundational Skills:

Phonics and Word Recognition:

- Know and apply grade-level phonics and word analysis skills in decoding words.
- Distinguish long and short vowels when reading regularly spelled one-syllable words.
- Know spelling-sound correspondences for additional common vowel teams.

- Decode regularly spelled two-syllable words with long vowels.
- Decode words with common prefixes and suffixes.
- Identify words with inconsistent but common spelling-sound correspondences.
- Recognize and read grade-appropriate irregularly spelled words.
- Read with sufficient accuracy and fluency to support comprehension.
- Read grade-level text with purpose and understanding.
- Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.
- Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Writing:

Text Types and Purposes:

- 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.
- 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.

Production and Distribution of Writing:

- 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, use a variety of digital tools to produce and publish writing, including in collaboration with peers.
- Research to Build and Present Knowledge:
- 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).
- Recall information from experiences or gather information from provided sources to

Speaking and Listening

Comprehension and Collaboration:

- Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
- 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).
- Build on others' talk in conversations by linking their comments to the remarks of others.
- 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.
- 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.

Presentation of Knowledge and Ideas:

- Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
- 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. (See grade 2 Language standards 1 and 3 here for specific expectations.)

Knowledge of Language:

Conventions of Standard English:

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

- 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 capitalization, punctuation, and spelling when writing.
- Capitalize holidays, product names, and geographic names.
- Use commas in greetings and closings of letters.
- Use an apostrophe to form contractions and frequently occurring possessives.
- Generalize learned spelling patterns when writing words (e.g., cage badge; boy boil).
- Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

Knowledge of Language:

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

Vocabulary Acquisition and Use:

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

scrawny).

- 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).

Math

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.

- Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).
- Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.
- 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.
- Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing,

and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

Grade 2 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Add and subtract within 20.
- Work with equal groups of objects to gain foundations for multiplication.

Number and Operations in Base Ten

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

Measurement and Data

- Measure and estimate lengths in standard units.
- Relate addition and subtraction to length.
- Work with time and money.
- Represent and interpret data.

Geometry

- Reason with shapes and their attributes.

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Grade3

English

Reading:

Key Ideas and Details:

- Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- 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

Craft and Structure:

- Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.
- 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.
- Distinguish their own point of view from that of the narrator or those of the characters.

Integration of Knowledge and Ideas:

- 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)
- 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:

- 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.

Reading "Informational Text:

Key Ideas and Details:

- Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- 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.
- Craft and Structure:
- Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
- Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
- Distinguish their own point of view from that of the author of a text.

Integration of Knowledge and Ideas:

- 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).
- 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.

Range of Reading and Level of Text Complexity:

- By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2-3 text complexity band independently and proficiently.

Reading: Foundational Skills:

Phonics and Word Recognition:

- Identify and know the meaning of the most common prefixes and derivational
- Decode words with common Latin suffixes.
- Decode multisyllable words.
- Read grade-appropriate irregularly spelled words.

Fluency:

- Read with sufficient accuracy and fluency to support comprehension.
- Read grade-level text with purpose and understanding.
- Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.
- Use context to confirm or self-correct word recognition and

understanding, rereading as necessary.

Writing:

Text Types and Purposes:

- Write opinion pieces on topics or texts, supporting a point of view with reasons.
- Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
- Provide reasons that support the opinion.
- Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.
- Provide a concluding statement or section.
- Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
- Develop the topic with facts, definitions, and details.
- Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.
- Provide a concluding statement or section.
- Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
- Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
- Use temporal words and phrases to signal event order.
- Provide a sense of closure.

Production and Distribution of Writing:

- 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 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 here.)
- 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.

Research to Build and Present Knowledge:

- 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.

Range of Writing:

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

Speaking and Listening

Comprehension and Collaboration:

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- 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
- 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).
- Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
- Explain their own ideas and understanding in light of the discussion.
- 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.
- Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

Presentation of Knowledge and Ideas:

- 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.
- Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or

- 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 here for specific expectations.)

Knowledge of Language:

Conventions of Standard English:

- Demonstrate command of the conventions of standard

English grammar and usage when writing or speaking.

- Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.
- Form and use regular and irregular plural nouns.
- Use abstract nouns (e.g., childhood).
- Form and use regular and irregular verbs.
- Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses.
- Ensure subject-verb and pronoun-antecedent agreement.*
- Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.
- Use coordinating and subordinating conjunctions.
- Produce simple, compound, and complex sentences.
- Demonstrate command of the conventions of standard

English capitalization, punctuation, and spelling when writing.

- Capitalize appropriate words in titles.
- Use commas in addresses.
- Use commas and quotation marks in dialogue.
- Form and use possessives.
- Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., sitting, smiled, cries, happiness).
- Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.
- Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

Knowledge of Language:

- Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- Choose words and phrases for effect.*
- Recognize and observe differences between the conventions of spoken

and written standard English.

Vocabulary Acquisition and Use:

- Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.
- Use sentence-level context as a clue to the meaning of a word or phrase.
- 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).
- Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., company, companion).
- Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.
- Demonstrate understanding of figurative language, word relationships and nuances in word meanings.
- Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps).
- Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful).
- 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 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).

Math

- 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.
 - (4) describing and analyzing two-dimensional shapes.

- 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.

- 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.

- 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.

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

Grade 3 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving multiplication and division.
- Understand properties of multiplication and the relationship between multiplication and division.
- Multiply and divide within 100.
- Solve problems involving the four operations, and identify and explain patterns in arithmetic.

Number and Operations in Base Ten

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

Number and Operations - Fractions

- Develop understanding of fractions as numbers.

Measurement and Data

- Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
- Represent and interpret data.
- Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
- Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

Geometry

- Reason with shapes and their attributes.

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Grade 4

English

Reading:

Key Ideas and Details:

- 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.
- 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.
- Follow agreed-upon rules for discussions and carry out assigned roles.
- 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.
- 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 provides to support particular points.

Presentation of Knowledge and Ideas:

- 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.
- Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.
- Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See grade 4 Language standards 1 here for specific expectations.)

Reading "Informational Text:

Key Ideas and Details:

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

- Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- 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.

Craft and Structure:

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

Integration of Knowledge and Ideas:

- 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.
- Explain how an author uses reasons and evidence to support particular points in a text.
- Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.
- Range of Reading and Level of Text Complexity:
- By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Reading: Foundational Skills:

Phonics and Word Recognition:

- Know and apply grade-level phonics and word analysis skills in decoding words.
- 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:

- Read with sufficient accuracy and fluency to support comprehension.
- Read grade-level text with purpose and understanding.
- Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.
- Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Writing:

Text Types and Purposes:

- Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- 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.
- Provide reasons that are supported by facts and details.
- Link opinion and reasons using words and phrases (e.g., for instance, in order to, in addition).
- 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.
- 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.
- Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).
- Use precise language and domain-specific vocabulary to inform about or explain the topic.
- Provide a concluding statement or section related to the information or explanation presented.
- Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
- Use dialogue and description to develop experiences and events or show the responses of characters to situations.
- Use a variety of transitional words and phrases to manage the sequence

of events.

- Use concrete words and phrases and sensory details to convey experiences and events precisely.
- Provide a conclusion that follows from the narrated experiences or events.

Production and Distribution of Writing:

- 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.)
- With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should
- 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.

Research to Build and Present Knowledge:

- Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- 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.
- Draw evidence from literary or informational texts to support analysis, reflection, and research.
- 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].”).
- 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”).

Range of Writing:

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

Speaking and Listening

Comprehension and Collaboration:

- Engage effectively in a range of collaborative discussions (one-on-one,

in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others’ ideas and expressing their own clearly.

- 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.
- Follow agreed-upon rules for discussions and carry out assigned roles.
- 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.
- 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 provides to support particular points.

Presentation of Knowledge and Ideas:

- 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.
- Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.
- Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See grade 4 Language standards 1 here for specific expectations.)

Knowledge of Language:

Conventions of Standard English:

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Use relative pronouns (who, whose, whom, which, that) and relative adverbs (where, when, why).
- Form and use the progressive (e.g., I was walking; I am walking; I will be walking) verb tenses.
- Use modal auxiliaries (e.g., can, may, must) to convey various conditions.
- Order adjectives within sentences according to conventional patterns

(e.g., a small red bag rather than a red small bag).

- Form and use prepositional phrases.
- Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.*
- Correctly use frequently confused words (e.g., to, too, two; there, their).
- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- Use correct capitalization.
- Use a comma before a coordinating conjunction in a compound sentence.
- Spell grade-appropriate words correctly, consulting references as needed.
- Knowledge of Language:
 - Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - Choose words and phrases to convey ideas precisely.
 - Choose punctuation for effect.
 - Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).

Vocabulary Acquisition and Use:

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.
- 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).
- 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.
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Explain the meaning of simple similes and metaphors (e.g., as pretty as a picture) in context.
- Recognize and explain the meaning of common idioms, adages, and proverbs.
- Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings

(synonyms).

- 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).

Math

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

- 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.

- 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.

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

Grade 4 Overview

Operations and Algebraic Thinking

- Use the four operations with whole numbers to solve problems.
- Gain familiarity with factors and multiples.
- Generate and analyze patterns.

Number and Operations in Base Ten

- Generalize place value understanding for multi-digit whole numbers.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Number and Operations - Fractions

- Extend understanding of fraction equivalence and ordering.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- Understand decimal notation for fractions, and compare decimal fractions.

Measurement and Data

- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Geometric measurement: understand concepts of angle and measure angles.

Geometry

- Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Grade 5

English

Reading:

Key Ideas and Details:

- Quote accurately from 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, 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.
- 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:

- Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.
- Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.
- Describe how a narrator's or speaker's point of view influences how events are described.

Integration of Knowledge and Ideas:

- 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).
- Compare and contrast stories in the same genre (e.g., mysteries and adventure stories) on their approaches to similar themes and topics.

Range of Reading and Level of Text Complexity:

- By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4-5 text complexity band independently and proficiently.

Reading “Informational Text:

Key Ideas and Details:

- Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
- Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Craft and Structure:

- Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
- 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.
- Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.
- Integration of Knowledge and Ideas:
- 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.
- Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).
- Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

Range of Reading and Level of Text Complexity:

- 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.

Reading: Foundational Skills:

Phonics and Word Recognition:

- Know and apply grade-level phonics and word analysis skills in decoding words.
- 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:

- Read with sufficient accuracy and fluency to support
- Read grade-level text with purpose and understanding.
- Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.
- Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Writing:

Text Types and Purposes:

- Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- 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.
- Provide logically ordered reasons that are supported by facts and details.
- Link opinion and reasons using words, phrases, and clauses (e.g., consequently, specifically).
- 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.
- 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.
- Develop the topic with facts, definitions, concrete details, quotations, or

other information and examples related to the topic.

- Link ideas within and across categories of information using words, phrases, and clauses (e.g., in contrast, especially).
- Use precise language and domain-specific vocabulary to inform about or explain the topic.
- Provide a concluding statement or section related to the information or explanation presented.
- Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
- Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.
- Use a variety of transitional words, phrases, and clauses to manage the sequence of events.
- Use concrete words and phrases and sensory details to
- Provide a conclusion that follows from the narrated experiences or events.

Production and Distribution of Writing:

- 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.)
- 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 here.)
- With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

Research to Build and Present Knowledge:

- Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
- 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.

- Draw evidence from literary or informational texts to
- 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]”).
- 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]”).

Range of Writing:

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

Speaking and Listening

Comprehension and Collaboration:

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly.
- 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.
- Follow agreed-upon rules for discussions and carry out assigned roles.
- Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
- Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.
- Summarize a written text read aloud or information presented in diverse media and formats, including visually,
- Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

Presentation of Knowledge and Ideas:

- 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.
- Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.
- 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 here for specific expectations.)

Knowledge of Language:

Conventions of Standard English:

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences.
- Form and use the perfect (e.g., I had walked; I have walked; I will have walked) verb tenses.
- Use verb tense to convey various times, sequences, states, and conditions.
- Recognize and correct inappropriate shifts in verb tense.*
- Use correlative conjunctions (e.g., either/or, neither/nor).
- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- Use punctuation to separate items in a series.*
- Use a comma to separate an introductory element from the rest of the sentence.
- 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?).
- Use underlining, quotation marks, or italics to indicate titles of works.
- Spell grade-appropriate words correctly, consulting references as needed.

Knowledge of Language:

- Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.
- Compare and contrast the varieties of English (e.g., dialects, registers) used in stories, dramas, or poems.

Vocabulary Acquisition and Use:

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- Use context (e.g., cause/effect relationships and comparisons 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., photograph, photosynthesis).

- 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.
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Interpret figurative language, including similes and metaphors, in context.
- Recognize and explain the meaning of common idioms, adages, and proverbs.
- Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.
- 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).

Math

In Grade 5, instructional time should focus on three critical areas (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions) (2) extending division to 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 (3) developing understanding of volume.

- 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.)

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

- Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real world and mathematical problems.

Grade 5 Overview

Operations and Algebraic Thinking

- Write and interpret numerical expressions.
- Analyze patterns and relationships.

Number and Operations in Base Ten

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to hundredths.

Number and Operations—Fractions

- Use equivalent fractions as a strategy to add and subtract fractions.
- Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Measurement and Data

- Convert like measurement units within a given measurement system.
- Represent and interpret data.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Geometry

- Graph points on the coordinate plane to solve real-world and mathematical problems.
- Classify two-dimensional figures into categories based on their properties.

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Grade 6

English

Reading:

Key Ideas and Details:

- Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- 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.
- Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.

Craft and Structure:

- 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

- 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.
- Explain how an author develops the point of view of the narrator or speaker in a text.

Integration of Knowledge and Ideas:

- 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 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:

- 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.

Reading “Informational Text:

Key Ideas and Details:

- Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- 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.
- 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:

- Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
- 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.
- 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:

- 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.
- 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.
- 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:

- 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

Writing:

Text Types and Purposes:

- Write arguments to support claims with clear reasons and relevant evidence.
- Introduce claim(s) and organize the reasons and evidence clearly.
- Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.
- Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from the argument presented.
- Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- 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.
- Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
- Use appropriate transitions to clarify the relationships among ideas and concepts.
- Use precise language and domain-specific vocabulary to inform about

or explain the topic.

- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from the information or explanation presented.
- Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
- 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.
- Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
- Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.
- Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.
- Provide a conclusion that follows from the narrated experiences or events.

Production and Distribution of Writing:

- 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.)
- 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 here.)
- Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.

Research to Build and Present Knowledge:

- Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
- 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.

- Draw evidence from literary or informational texts to support analysis, reflection, and research.
- 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”).
- Apply grade 6 Reading standards to literary nonfiction (e.g., “Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not”).

Range of Writing:

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

Speaking and Listening

Comprehension and Collaboration:

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

- Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
 - Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
- Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

Knowledge of Language:

Conventions of Standard English:

- Demonstrate command of the conventions of standard
- Ensure that pronouns are in the proper case (subjective,
- Use intensive pronouns (e.g., myself, ourselves).
- Recognize and correct inappropriate shifts in pronoun number and person.
- Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).*
- 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 capitalization, punctuation, and spelling when writing.
- Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.*
- Spell correctly.

Knowledge of Language:

- Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- Vary sentence patterns for meaning, reader/listener interest, and style.
- Maintain consistency in style and tone.

Vocabulary Acquisition and Use:

- 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.
- 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.

- Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).
- 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.
- 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).
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Interpret figures of speech (e.g., personification) in context.
- Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.
- Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., stingy, scrimping, economical, un-wasteful, thrifty).
- 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.

Math

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

- 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.
- 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.

- 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.

- Building on and reinforcing their understanding of number, students begin to develop their ability to think statistically. Students recognize that a data distribution may not have a definite center and that different ways to measure center yield different values. The median measures center in the sense that it is roughly the middle value. The mean measures center in the sense that it is the value that each data point would take on if the total of the data values were redistributed equally, and also in the sense that it is a balance point. Students recognize that a measure of variability (interquartile range or mean absolute deviation) can also be useful for summarizing data because two very different sets of data can have the same mean and median yet be distinguished by their variability. Students learn to describe and summarize numerical data sets, identifying clusters, peaks, gaps, and symmetry, considering the context in which the data were collected. Students in Grade 6 also build on their work with area in elementary school by reasoning about relationships among shapes to determine area, surface area, and volume. They find areas of right triangles, other triangles, and special quadrilaterals by decomposing these shapes, rearranging or removing pieces, and relating the shapes to

rectangles. Using these methods, students discuss, develop, and justify formulas for areas of triangles and parallelograms. Students find areas of polygons and surface areas of prisms and pyramids by decomposing them into pieces whose area they can determine. They reason about right rectangular prisms with fractional side lengths to extend formulas for the volume of a right rectangular prism to fractional side lengths. They prepare for work on scale drawings and constructions in Grade 7 by drawing polygons in the coordinate plane.

Grade 6 Overview

Ratios and Proportional Relationships

- Understand ratio concepts and use ratio reasoning to solve problems.

The Number System

- Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
- Multiply and divide multi-digit numbers and find common factors and multiples.
- Apply and extend previous understandings of numbers to the system of rational numbers.

Expressions and Equations

- Apply and extend previous understandings of arithmetic to algebraic expressions.
- Reason about and solve one-variable equations and inequalities.
- Represent and analyze quantitative relationships between dependent and independent variables.

Geometry

- Solve real-world and mathematical problems involving area, surface area, and volume.

Statistics and Probability

- Develop understanding of statistical variability.
- Summarize and describe distributions.

Mathematical Practices

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.

البنشرا

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