Fifth Grade Learning Standards

Reading Standards

5R1: Locate and refer to relevant details and evidence when explaining what a text says explicitly/implicitly and make logical inferences.
5R2: Determine a theme or central idea and explain how it is supported by key details; summarize a text.
5R3: In literary texts, compare and contrast two or more characters, settings, and events, drawing on specific details in the text. In informational texts, explain the relationships or interactions between two or more individuals, events, ideas, or concepts based on specific evidence from the text.
5R4: Determine the meaning of words, phrases, figurative language, academic, and domain specific words and analyze their effect on meaning, tone, or mood.
5R5: In literary texts, explain how a series of chapters, scenes, or stanzas fits together to determine the overall structure of a story, drama, or poem. In informational texts, compare and contrast the overall structure in two or more texts using terms such as sequence, comparison, cause/effect, and problem/solution.
5R6: In literary texts, explain how a narrator's or speaker's point of view influences how events are described. In informational texts, analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.
5R7: Analyze how visual and multimedia elements contribute to meaning of literary and informational texts.
5R8: Explain how claims in a text are supported by relevant reasons and evidence, identifying which reasons and evidence support which claims.
5R9: Use established criteria to categorize texts and make informed judgments about quality; make connections to other texts, ideas, cultural perspectives, eras and personal experiences.

Foundational Skills

5RF3: Know and apply grade-level phonics and word analysis skills in decoding words.
- 5RF3a: 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.

5RF4: Read grade-level text with sufficient accuracy and fluency to support comprehension.
- 5RF4a: Read grade-level text across genres orally with accuracy, appropriate rate, and expression on successive readings.
- 5RF4b: Use context to confirm or self-correct word recognition and understanding,rereading as necessary.

Writing Standards

5W1: Write an argument to support claims with clear reasons and relevant evidence.

- 5W1a: Introduce a precise claim and organize the reasons and evidence logically.
- 5W1b: Provide logically ordered reasons that are supported by facts and details from various sources.
- 5W1c: Use precise language and content-specific vocabulary while offering an opinion on a topic.
- 5W1d: Use appropriate transitional words, phrases, and clauses to clarify and connect ideas and concepts.
- 5W1e: Provide a concluding statement or section related to the argument presented.
- 5W1f: Maintain a style and tone appropriate to the writing task.

5W2: Write informative/explanatory texts to explore a topic and convey ideas and information relevant to the subject.

- 5W2a: Introduce a topic clearly, provide a general focus, and organize related information logically.
- 5W2b: Develop a topic with facts, definitions, concrete details, quotations, or other relevant information; include text features, illustrations, and multimedia to aid comprehension.
- 5W2c: Use precise language and domain-specific vocabulary to explain a topic.
- 5W2d: Use appropriate transitional/linking words, phrases, and clauses to clarify and connect ideas and concepts.
- 5W2e: Provide a concluding statement or section related to the information or explanation presented.
- 5W2f: Establish a style aligned to a subject area or task.

5W3: Write narratives to develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences.

- 5W3a: Establish a situation and introduce a narrator and/or characters.
- 5W3b: Use narrative techniques, such as dialogue and description, to develop experiences and events or show the responses of characters to situations.
- 5W3c: Use a variety of transitional words, phrases, and clauses to manage the sequence of events.
- 5W3d: Use concrete words and phrases and sensory details to convey experiences and events precisely.
- 5W3e: Provide a conclusion that follows from the narrated experiences or events.

5W4: Create a poem, story, play, art work, or other response to a text, author, theme, or personal experience.

5W5: Draw evidence from literary or informational texts to respond and support analysis, reflection, and research by applying the Grade 5 Reading

5W6: Conduct research to answer questions, including self-generated questions, and to build knowledge through investigation of multiple aspects of a topic using multiple sources.

5W7: Recall relevant information from experiences or gather relevant information from multiple sources; summarize or paraphrase; avoid plagiarism and provide a list of sources.

Speaking and Listening

5SL1: Engage effectively in a range of collaborative discussions with diverse partners; express ideas clearly and persuasively, and build on those of others.

- 5LS1a: Come to discussions prepared, having read or studied required material; draw on that preparation and other information known about the topic to explore ideas under discussion.
- 5SL1b: Follow agreed-upon norms for discussions and carry out assigned roles.
- 5SL1c: Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
- 5SL1d: Consider the ideas expressed and draw conclusion about information and knowledge gained from the discussions.

5SL2: Summarize information presented in diverse format (e.g., including visual, quantitative, and oral).
5SL3: Identify and evaluate the reasons and evidence a speaker provides to support particular points.
5SL4: 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 and volume appropriate for audience.
5SL5: Include digital media and/or visual displays in presentations to emphasize and enhance main ideas or themes.
5SL6: Adapt speech to a variety of contexts and tasks, using formal English when appropriate.

Language Standards

Please note: Language Standards 1 and 2 are organized within grade bands. For the Core Conventions Skills and Core Punctuation and Spelling Skills for Grades 3-5, the student is expected to know and be able to use the skills by the end of Grade 5. The → is included to indicate skills that connect and progress across the band.

Standard 5L1: Demonstrate command of the conventions of Standard English **grammar and usage** when writing or speaking.

Core Conventions Skills for Grades 3-5:

- Produce simple, compound, and complex sentences.
- Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general as well as in particular sentences.
- Use relative pronouns (who, whose, whom, which, that) and relative adverbs (where,when, why).
- Explain the function of conjunctions, prepositions, and interjections in general, as well as in particular sentences.
- Form and use regular and irregular plural nouns.
- Use abstract nouns.

- Form and use regular and irregular verbs.
- Form and use the simple verb tenses (e.g., I walked; I walk; I will walk).
- Form and use the progressive verb tenses (e.g., I was walking; I am walking; I will be walking).
- Form and use the perfect verb tenses (e.g., I had walked; I have walked; I will have walked).
- Use verb tense to convey various times, sequences, states, and conditions.
- Recognize and correct inappropriate shifts in verb tense.
- Ensure subject-verb and pronoun-antecedent agreement.
- Use coordinating and subordinating conjunctions.
- Use and identify 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).

Standard 5L2: Demonstrate **command of the conventions** of Standard English capitalization, punctuation, and spelling when writing.

Core Punctuation and Spelling Skills for Grades 3→5:

- Capitalize appropriate words in titles.
- Use correct capitalization.
- Use commas in addresses.
- Use commas and quotation marks in dialogue.
    - Use commas and quotation marks to mark direct speech and quotations from a text.
- Use a comma before a coordinating conjunction in a compound sentence.
- Use a comma to separate an introductory element from the rest of the sentence.
- Use punctuation to separate items in a series.
- Form and use possessives.
- Use conventional spelling for high-frequency and other studied words, and to add suffixes to base words (e.g., sitting, smiled, cries, happiness).
- Use spelling patterns, rules, and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.
    - Spell grade-appropriate words correctly, consulting references as needed.
- Use quotation marks or italics to indicate titles of works.

5L3: Use knowledge of language and its conventions when writing, speaking, reading, or listening.

5L3a: Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.

5L3b: Compare and contrast the varieties of English (e.g., dialects, registers) used in stories, dramas, or poems.

5L4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.

5L4a: Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.

5L4b: Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., photograph, photosynthesis).

5L4c: Consult reference materials (e.g., dictionaries, glossaries, thesauruses) to find the pronunciation and determine or clarify the precise meaning of keywords and phrases.

5L5: Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

5L5a: Interpret figurative language, including similes and metaphors, in context.

5L5b: Recognize and explain the meaning of common idioms, adages, and proverbs.

5L5c: Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.

5L6: Acquire and accurately use general academic and content-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., however, although, nevertheless, similarly, moreover, in addition).

Fifth Grade Math Standards

A. Write and interpret numerical expressions.

5.OA.A.1. Apply the order of operations to evaluate numerical expressions.

***Note**: Exponents and nested grouping symbols are not included.

5.OA.A.2. Write simple expressions that record calculations with numbers, and interpret e.g. express the calculation “add 8 and 7, then multiply by 2” as (8 + 7) × 2. Recognize that 3 × (18,932 + 921) is three times as large as 18,932 + 921, without having to calculate the indicated sum or product.

B. Analyze patterns and relationships.

5.OA.B.3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. e.g. given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

C. Understand the place value system.

5.NBT. A.1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1 10 of what it represents in the place to its left.

5.NBT. A.2. Use whole-number exponents to denote powers of 10. Explain patterns in the number of zeros of the product when multiplying

a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10.

5.NBT. A.3. Read, write, and compare decimals to thousandths.

5.NBT. A.3a 3a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form.

5.NBT. A.3b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

5.NBT. A.4. Use place value understanding to round decimals to any place.

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

***Note:** Division problems are those that allow for the use of concrete models or drawings, strategies based on properties of operations, and/or the relationship between operations.

5.NBT. B.5. Fluently multiply multi-digit whole numbers using a standard algorithm.

5.NBT. B.6. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on

place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

5.NBT. B.7. Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: add and subtract decimals to hundredths; multiply and divide decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.

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

5.NF.A.1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

5.NF.A.2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

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

5.NF.B.3. Interpret a fraction as division of the numerator by the denominator ($aa\ bb$ = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers. e.g., using visual fraction models or equations to represent the problem

5.NF.B.4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

5.NF.B.4a. Interpret the product

5.NF.B.4b. Find the area of a rectangle with fractional side lengths by tiling it with rectangles of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

5.NF.B.5. Interpret multiplication as scaling (resizing).

5.NF.B.5a. Compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing

the indicated multiplication.

5.NF.B 5b. Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relate the principle of fraction equivalence.

5.NF.B.6. Solve real world problems involving multiplication of fractions and mixed numbers. e.g., using visual fraction models or equations

to represent the problem.

5.NF.B.7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit Fractions.

***Note:** Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement until grade 6

5.NF.B.7a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.

5.NF.B.7b. Interpret division of a whole number by a unit fraction, and compute such quotients

5.NF.B.7c. Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions. e.g., by using visual fraction models and equations to represent the problem.

G. Convert like measurement units within a given measurement system.

5.MD.A.1. Convert among different-sized standard measurement units within a given measurement system when the conversion factor is given. Use these conversions in solving multi-step, real world problems.

H. Represent and interpret data.

5.MD.B.2. Make a line plot to display a data set of measurements in fractions of a unit e.g., given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

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

5.MD.C.3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

5.MD.C.3a Recognize that a cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.

5.MD.C.3b Recognize that a solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.

5.MD.C.4 Measure volumes by counting unit cubes, using cubic cm, cubic in., cubic ft., and improvised units.

5.MD.C.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

5.MD.C.5a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base.

5.MD.C.5b. Apply the formulas V =(l)(w)(h) and V = (B)(h) for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.

5.MD.C.5c Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

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

5.G.A.1. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond. e.g., x-axis and x-coordinate, y-axis and y-coordinate.

5.G.A.2. Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

K. Classify two-dimensional figures into categories based on their properties.

5.G.A.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that Category. e.g., all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

5.G.A.4 Classify two-dimensional figures in a hierarchy based on properties.

Fifth Grade S.S. Standards

Grade 5: The Western Hemisphere

Grade 5 Social Studies is based on the history and geography of the Western Hemisphere, including the development of cultures, civilizations, and empires; interaction between societies; and the comparison of the government and economic systems of modern nations. It also incorporates elements of archaeology. The course is divided into seven Key Ideas that cover a time span from prehistory into modern times. Teachers are encouraged to make and teach local connections throughout the course, especially in the examination of citizenship related to modern political and economic issues. Teachers should note that some Key Ideas and Concepts may require extra time or attention. These include Key Ideas 5.3 European Exploration and its Effects, 5.6 Government, and 5.7 Economics.

5.1 The first humans in the Western Hemisphere modified their physical environment as well as adapted to their environment. Their interactions with their environment led to various innovations and to the development of unique cultures.

5.1a Various forms of scientific evidence suggest that humans came to North America approximately 25,000 to 14,000 years ago and spread southward to South America.

5.1b Human populations that settled along rivers, in rainforests, along oceans, in deserts, on plains, in mountains, and in cold climates adapted to and made use of the resources and environment around them in developing distinct ways of life.

5.1c Early peoples living together in settlements developed shared cultures with customs, beliefs, values, and languages that give identity

to the group. These early peoples also developed patterns of organization and governance to manage their societies.

5.2 Between 1100 B.C.E. and 1500 C.E, complex societies and civilizations developed in the Western Hemisphere. Although these complex societies and civilizations have certain defining characteristics in common, each is also known for unique cultural achievements and contributions.

5.2a Civilizations share certain common characteristics of religion, job specialization, cities, government, language and writing systems, technology, and social hierarchy.

*For this document, the term “Native American” is used with the understanding that it could say “American Indian.”

5.2b Complex societies and civilizations adapted to and modified their environment to meet the needs of their people.

5.2c Political states can take different forms, such as city-states and empires. A city-state is comprised of a city with a government that controls the surrounding territory, while an empire is a political organization developed when a single, supreme authority conquers other geographic and/or cultural regions beyond its initial settlements.

5.3 Various European powers explored and eventually colonized the Western Hemisphere. This had a profound effect on Native Americans and led to the transatlantic slave trade.

5.3a Europeans traveled to the Americas in search of new trade routes, including a northwest passage, and resources. They hoped to gain wealth, power, and glory.

5.3b Europeans encountered and interacted with Native Americans in a variety of ways.

5.3c The transatlantic trade of goods, movement of people, and spread of ideas and diseases resulted in cultural diffusion. This cultural diffusion became known as the Columbian Exchange which reshaped the lives and influenced the beliefs of people.

5.3d Africans were captured, brought to the Americas, and sold as slaves. Their transport across the Atlantic was known as the Middle Passage.

5.4 The diverse geography of the Western Hemisphere has influenced human culture and settlement in distinct ways. Human communities in the Western Hemisphere have modified the physical environment.

5.4a Physical maps reflect the varied climate zones, landforms, bodies of water, and natural resources of the Western Hemisphere.

5.4b The Western Hemisphere can be divided into regions. Regions are areas that share common, identifiable characteristics such as physical, political, economic, or cultural features. Regions within the Western Hemisphere include: North America (Canada and the United States), Mesoamerica (Mexico and Central America), Caribbean, & South America

5.4c The physical environment influences human population distribution, land use, and other forms of economic activity.

5.5 The countries of the Western Hemisphere are diverse and the cultures of these countries are rich and varied. Due to their proximity to each other, the countries of the Western Hemisphere share some of the same concerns and issues.

5.5a The countries of the Western Hemisphere have varied characteristics and contributions that distinguish them from other countries.

5.5b. Countries in the Western Hemisphere face a variety of concerns and issues specific to the region.

5.6 The political systems of the Western Hemisphere vary in structure and organization across time and place.

5.6a Government structures, functions, and founding documents vary from place to place in the countries of the Western Hemisphere.

5.6b Legal, political, and historic documents define the values, beliefs, and principles of constitutional democracy.

5.6c Across time and place, different groups of people in the Western Hemisphere have struggled and fought for equality and civil rights or

sovereignty.

5.6d Multinational organizations and nongovernmental organizations in the Western Hemisphere seek to encourage cooperation between nations, protect human rights, support economic development, and provide assistance in challenging situations.

5.7 The peoples of the Western Hemisphere have developed various ways to meet their needs and wants. Many of the countries of the Western Hemisphere trade with each other, as well as with other countries around the world.

5.7a Different types of economic systems have developed across time and place within the Western Hemisphere.These economic systems, including traditional, market, and command, address the three economic questions: what will be produced, how it will be produced, and who will get what is produced?

5.7b Peoples of the Western Hemisphere have engaged in a variety of economic activities to meet their needs and wants.

5.7c Countries trade with other countries to meet economic needs and wants. They are interdependent.

Fifth Grade Science Standards

Structure and Properties of Matter

- Develop a model to describe that matter is made of particles too small to be seen.
- Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances the total amount of matter is conserved.
- Make observations and measurements to identify materials based on their properties.
- Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

Matter and Energy in Organisms and Ecosystems

- Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the Sun.
- Support an argument that plants get the materials they need for growth chiefly from air and water.
- Develop a model to describe the movement of matter among plants (producers), animals (consumers), decomposers, and the environment.

Earth's Systems

- Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- Describe and graph the amounts of saltwater and freshwater in various reservoirs to provide evidence about the distribution of water on Earth.

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

Space Systems: Stars and the Solar System

- Support an argument that the gravitational force exerted by Earth on objects is directed down.
- Support an argument that differences in the apparent brightness of the Sun compared to other stars is due to their relative distances from Earth.
- Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

Engineering Design

- Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.