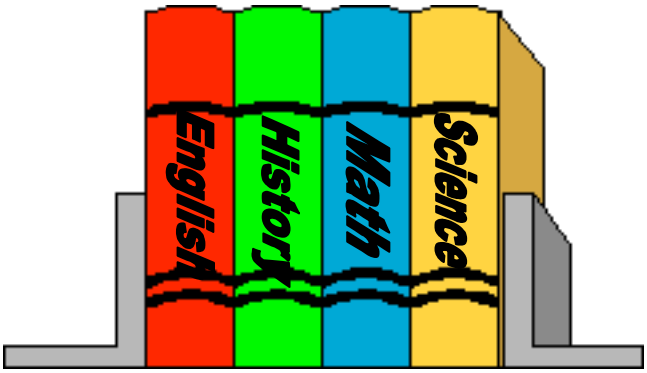
California State Board Adopted Standards

English/Language Arts
History/Social Science
Mathematics
Science

Grade 4



Compiled by:
Orange County Department of Education

4th Grade

LANGUAGE ARTS

READING

1.0 Word Analysis, Fluency, and Systematic Vocabulary Development
Students understand the basic features of reading. They select letter patterns and know how to translate them into spoken language by using phonics, syllabication, and word parts. They apply this knowledge to achieve fluent oral and silent reading.

Word Recognition

1.1 Read narrative and expository text aloud with grade-appropriate fluency and accuracy and with appropriate pacing, intonation, and expression.

Vocabulary and Concept Development

1.2 Apply knowledge of word origins, derivations, synonyms, antonyms, and idioms to determine the meaning of words and phrases.
1.3 Use knowledge of root words to determine the meaning of unknown words within a passage.
1.4 Know common roots and affixes derived from Greek and Latin and use this knowledge to analyze the meaning of complex words (e.g., *international*).
1.5 Use a thesaurus to determine related words and concepts.
1.6 Distinguish and interpret words with multiple meanings.

2.0 Reading Comprehension
Students read and understand grade-level-appropriate material. They draw upon a variety of comprehension strategies as needed (e.g., generating and responding to essential questions, making predictions, comparing information from several sources). The selections in *Recommended Readings in Literature, Kindergarten Through Grade Eight* illustrate the quality and complexity of the materials to be read by students. In addition to their regular school reading, students read one-half million words annually, including a good representation of grade-level-appropriate narrative and expository text (e.g., classic and contemporary literature, magazines, newspapers, online information).

Structural Features of Informational Materials

2.1 Identify structural patterns found in informational text (e.g., compare and contrast, cause and effect, sequential or chronological order, proposition and support) to strengthen comprehension.

HISTORY/SOCIAL SCIENCE

CALIFORNIA: A CHANGING STATE

Students learn the story of their home state, unique in American history in terms of its vast and varied geography, its many waves of immigration beginning with pre-Columbian societies, its continuous diversity, economic energy, and rapid growth. In addition to the specific treatment of milestones in California history, students examine the state in the context of the rest of the nation, with an emphasis on the U.S. Constitution and the relationship between state and federal government.

4.1 Students demonstrate an understanding of the physical and human geographic features that define places and regions in California.

1. Explain and use the coordinate grid system of latitude and longitude to determine the absolute locations of places in California and on Earth.
2. Distinguish between the North and South poles; the equator and the prime meridian; the tropics; and the hemispheres using coordinates to plot locations.
3. Identify the state capital and describe the various regions of California, including how their characteristics and physical environments (e.g., water, landforms, vegetation, climate) affect human activity.
4. Identify the locations of the Pacific Ocean, rivers, valleys, and mountain passes and explain their effects on the growth of towns.
5. Use maps, charts and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation.

4.2 Students describe the social, political, cultural and economic life and interactions among people of California from the pre-Columbian societies to the Spanish mission and Mexican rancho periods.

1. Discuss the major nations of California Indians, their geographic distribution, economic activities, legends, and religious beliefs; and describe how they depended on, adapted to, and modified the physical environment by cultivation of land and use of sea resources.
2. Identify the early land and sea routes to, and European settlements in, California with a focus on the exploration of the North Pacific, (e.g., by Captain James Cook, Vitus Bering, Juan Cabrillo), noting especially the importance of mountains, deserts, ocean currents, and wind patterns.

4th Grade

LANGUAGE ARTS	HISTORY/SOCIAL SCIENCE
Comprehension and Analysis of Grade-Level-Appropriate Text 2.2 Use appropriate strategies when reading for different purposes (e.g., full comprehension, location of information, personal enjoyment). 2.3 Make and confirm predictions about text by using prior knowledge and ideas presented in the text itself, including illustrations, titles, topic sentences, important words, and foreshadowing clues. 2.4 Evaluate new information and hypotheses by testing them against known information and ideas. 2.5 Compare and contrast information on the same topic after reading several passages or articles. 2.6 Distinguish between cause and effect and between fact and opinion in expository text. 2.7 Follow multiple-step instructions in a basic technical manual (e.g., how to use computer commands or video games). 3.0 Literary Response and Analysis Students read and respond to a wide variety of significant works of children's literature. They distinguish between the structural features of the text and the literary terms or elements (e.g., theme, plot, setting, characters). The selections in *Recommended Readings in Literature, Kindergarten Through Grade Eight* illustrate the quality and complexity of the materials to be read by students. *Structural Features of Literature* 3.1 Describe the structural differences of various imaginative forms of literature, including fantasies, fables, myths, legends, and fairy tales. *Narrative Analysis of Grade-Level-Appropriate Text* 3.2 Identify the main events of the plot, their causes, and the influence of each event on future actions. 3.3 Use knowledge of the situation and setting and of a character's traits and motivations to determine the causes for that character's actions. 3.4 Compare and contrast tales from different cultures by tracing the exploits of one character type and develop theories to account for similar tales in diverse cultures (e.g., trickster tales). 3.5 Define figurative language (e.g., simile, metaphor, hyperbole, personification) and identify its use in literary works.	3. Describe the Spanish exploration and colonization of California, including the relationships among soldiers, missionaries and Indians (e.g., Juan Crespi, Junipero Serra, Gaspar de Portola). 4. Describe the mapping of, geographic basis of, and economic factors in the placement and function of the Spanish missions; and understand how the mission system expanded the influence of Spain and Catholicism throughout New Spain and Latin America. 5. Describe the daily lives of the people, native and non-native, who occupied the presidios, missions, ranchos, and pueblos. 6. Discuss the role of the Franciscans in changing the economy of California from a hunter-gathering economy to an agricultural economy. 7. Describe the effects of the Mexican War for Independence on Alta California, including its effects on the territorial boundaries of North America. 8. Discuss the period of Mexican rule in California and its attributes, including land grants, secularization of the missions and the rise of the rancho economy. 4.3 Students explain the economic, social, and political life of California from the establishment of the Bear Flag Republic through the Mexican-American War, the Gold Rush and California statehood. 1. Identify the locations of Mexican settlements in California and those of other settlements, including Fort Ross and Sutter's Fort. 2. Compare how and why people traveled to California and the routes they traveled (e.g., James Beckwourth, John Bidwell, John C. Fremont, Pio Pico). 3. Analyze the effects of the Gold Rush on settlements, daily life, politics, and the physical environment (e.g., using biographies of John Sutter, Mariano Guadalupe Vallejo, Louise Clapp). 4. Study the lives of women who helped build early California (e.g., Biddy Mason). 5. Discuss how California became a state and how its new government differed from those during the Spanish and Mexican periods.

4th Grade

LANGUAGE ARTS

WRITING

1.0 Writing Strategies
Students write clear, coherent sentences and paragraphs that develop a central idea. Their writing shows they consider the audience and purpose. Students progress through the stages of the writing process (e.g., prewriting, drafting, revising, editing successive versions).

Organization and Focus

1.1 Select a focus, an organizational structure, and a point of view based upon purpose, audience, length, and format requirements.

1.2 Create multiple-paragraph compositions:
- a. Provide an introductory paragraph.
- b. Establish and support a central idea with a topic sentence at or near the beginning of the first paragraph.
- c. Include supporting paragraphs with simple facts, details, and explanations.
- d. Conclude with a paragraph that summarizes the points.
- e. Use correct indention.

1.3 Use traditional structures for conveying information (e.g., chronological order, cause and effect, similarity and difference, and posing and answering a question).

Penmanship

1.4 Write fluidly and legibly in cursive or joined italics.

Research and Technology

1.5 Quote or paraphrase information sources, citing them appropriately.

1.6 Locate information in reference texts by using organizational features (e.g., prefaces, appendixes).

1.7 Use various reference materials (e.g., dictionary, thesaurus, card catalog, encyclopedia, online information) as an aid to writing.

1.8 Understand the organization of almanacs, newspapers, and periodicals and how to use those print materials.

1.9 Demonstrate basic keyboarding skills and familiarity with computer terminology (e.g., cursor, software, memory, disk drive, hard drive).

Evaluation and Revision

1.10 Edit and revise selected drafts to improve coherence and progression by adding, deleting, consolidating, and rearranging text.

HISTORY/SOCIAL SCIENCE

4.4 Students explain how California became an agricultural and industrial power, tracing the transformation of the California economy and its political and cultural development since the 1850's.

1. Understand the story and lasting influence of the Pony Express, Overland Mail Service, Western Union, and the building of the transcontinental railroad, including the contributions of the Chinese workers to its construction.
2. Explain how the Gold Rush transformed the economy of California, including the type of products produced and consumed, changes in towns (e.g., Sacramento, San Francisco), and economic conflicts between diverse groups of people.
3. Discuss immigration and migration to California between 1850 and 1900, including the diverse composition of those who came; the countries of origin and their relative locations; and conflicts and accords among the diverse groups (e.g., the 1882 Chinese Exclusion Act).
4. Describe rapid American immigration, internal migration, settlement, and the growth of towns and cities (e.g., Los Angeles).
5. Discuss the effects of the Great Depression, the Dust Bowl, and World War II on California.
6. Describe the development and locations of new industries since the turn of the century, such as the aerospace industry, electronics industry, large-scale commercial agriculture and irrigation projects, the oil and automobile industries, communications and defense industries, and important trade links with the Pacific Basin.
7. Trace the evolution of California's water system into a network of dams, aqueducts, and reservoirs.
8. Describe the history and development of California's public education system, including universities and community colleges.
9. Analyze the impact of twentieth-century Californians on the nation's artistic and cultural development, including the rise of the entertainment industry (e.g., Louis B. Meyer, Walt Disney, John Steinbeck, Ansel Adams, Dorothea Lange, John Wayne).

4.5 Students understand the structure, functions, and powers of the United States local, state and federal governments as described in the U.S. Constitution.

1. Discuss what the U.S. Constitution is and why it is important (i.e., a written document that defines the structure and purpose of the U.S. government and describes the shared powers of federal, state, and local governments).

4th Grade

LANGUAGE ARTS	HISTORY/SOCIAL SCIENCE
2.0 Writing Applications (Genres and Their Characteristics) Students write compositions that describe and explain familiar objects, events, and experiences. Student writing demonstrates a command of standard American English and the drafting, research, and organizational strategies outlined in Writing Standard 1.0. Using the writing strategies of grade four outlined in Writing Standard 1.0, students: 2.1 Write narratives: a. Relate ideas, observations, or recollections of an event or experience. b. Provide a context to enable the reader to imagine the world of the event or experience. c. Use concrete sensory details. d. Provide insight into why the selected event or experience is memorable. 2.2 Write responses to literature: a. Demonstrate an understanding of the literary work. b. Support judgments through references to both the text and prior knowledge. 2.3 Write information reports: a. Frame a central question about an issue or situation. b. Include facts and details for focus. c. Draw from more than one source of information (e.g., speakers, books, newspapers, other media sources). 2.4 Write summaries that contain the main ideas of the reading selection and the most significant details. WRITTEN AND ORAL ENGLISH LANGUAGE CONVENTIONS The standards for written and oral English language conventions have been placed between those for writing and for listening and speaking because these conventions are essential to both sets of skills. 1.0 Written and Oral English Language Conventions Students write and speak with a command of standard English conventions appropriate to this grade level. *Sentence Structure* 1.1 Use simple and compound sentences in writing and speaking. 1.2 Combine short, related sentences with appositives, participial phrases, adjectives, adverbs, and prepositional phrases.	2. Describe the purpose of the California Constitution, its key principles, and its relationship to the U.S. Constitution. 3. Describe the similarities (e.g., written documents, rule of law, consent of the governed, three separate branches) and differences (e.g., scope of jurisdiction, limits on government powers, use of military) among federal, state, and local governments. 4. Explain the structures and functions of state governments, including the roles and responsibilities of their elected officials. 5. Describe the components of California's governance structure (e.g., cities and towns, Indian rancherias and reservations, counties, school districts).

4th Grade

LANGUAGE ARTS	HISTORY/SOCIAL SCIENCE
Grammar 1.3 Identify and use regular and irregular verbs, adverbs, prepositions, and coordinating conjunctions in writing and speaking. *Punctuation* 1.4 Use parentheses, commas in direct quotations, and apostrophes in the possessive case of nouns, and in contractions. 1.5 Use underlining, quotation marks, or italics to identify titles of documents. *Capitalization* 1.6 Capitalize names of magazines, newspapers, works of art, musical compositions, organizations, and the first word in quotations when appropriate. *Spelling* 1.7 Spell correctly roots, inflections, suffixes and prefixes, and syllable constructions. LISTENING AND SPEAKING 1.0 Listening and Speaking Strategies Students listen critically and respond appropriately to oral communication. They speak in a manner that guides the listener to understand important ideas by using proper phrasing, pitch, and modulation. *Comprehension* 1.1 Ask thoughtful questions and respond to relevant questions with appropriate elaboration in oral settings. 1.2 Summarize major ideas and supporting evidence presented in spoken messages and formal presentations. 1.3 Identify how language usages (e.g., sayings, expressions) reflect regions and cultures. 1.4 Give precise directions and instructions. *Organization and Delivery of Oral Communication* 1.5 Present effective introductions and conclusions that guide and inform the listener's understanding of important ideas and evidence. 1.6 Use traditional structures for conveying information (e.g., cause and effect, similarity and difference, and posing and answering a question). 1.7 Emphasize points in ways that help the listener or viewer to follow important ideas and concepts. 1.8 Use details, examples, anecdotes, or experiences to explain or clarify information. 1.9 Use volume, pitch, phrasing, pace, modulation, and gestures appropriately to enhance meaning.	

4th Grade

LANGUAGE ARTS	HISTORY/SOCIAL SCIENCE
Analysis and Evaluation of Oral Media Communication 1.10 Evaluate the role of the media in focusing attention on events and in forming opinions on issues. 2.0 Speaking Applications (Genres and Their Characteristics) Students deliver brief recitations and oral presentations about familiar experiences or interests that are organized around a coherent thesis statement. Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0. Using the speaking strategies of grade four outlined in Listening and Speaking Standard 1.0, students: 2.1 Make narrative presentations: a. Relate ideas, observations, or recollections about an event or experience. b. Provide a context that enables the listener to imagine the circumstances of the event or experience. c. Provide insight into why the selected event or experience is memorable. 2.2 Make informational presentations: a. Frame a key question. b. Include facts and details that help listeners to focus. c. Incorporate more than one source of information (e.g., speakers, books, newspapers, television or radio reports). 2.3 Deliver oral summaries of articles and books that contain the main ideas of the event or article and the most significant details. 2.4 Recite brief poems (i.e., two or three stanzas), soliloquies, or dramatic dialogues, using clear diction, tempo, volume, and phrasing.	

4th Grade

MATHEMATICS

By the end of grade four, students understand large numbers and addition, subtraction, multiplication, and division of whole numbers. They describe and compare simple fractions and decimals. They understand the properties of, and the relationships between, plane geometric figures. They collect, represent, and analyze data to answer questions.

Number Sense

1.0 Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. Students use the concepts of negative numbers:

- 1.1 Read and write whole numbers in the millions. Order and compare whole numbers and decimals to two decimal places.
- 1.2 Round whole numbers through the millions to the nearest ten, hundred, thousand, ten thousand, or hundred thousand.
- 1.3 Decide when a rounded solution is called for and explain why such a solution may be appropriate.
- 1.4 Explain different interpretations of fractions, for example, parts of a whole, parts of a set, and division of whole numbers by whole numbers; explain equivalents of fractions (see Standard 4.0).
- 1.5 Write tenths and hundredths in decimal and fraction notations and know the fraction and decimal equivalents for halves and fourths (e.g., 1/2 = 0.5 or .50; 7/4 = 1 3/4 = 1.75).
- 1.6 Write the fraction represented by a drawing of parts of a figure; represent a given fraction by using drawings; and relate a fraction to a simple decimal on a number line.
- 1.7 Use concepts of negative numbers (e.g., on a number line, in counting, in temperature, in "owing").
- 1.8 Identify on a number line the relative position of positive fractions, positive mixed numbers, and positive decimals to two decimal places.

2.0 Students extend their use and understanding of whole numbers to the addition and subtraction of simple decimals:

- 2.1 Estimate and compute the sum or difference of whole numbers and positive decimals to two places.
- 2.2 Round two-place decimals to one decimal or the nearest whole number and judge the reasonableness of the rounded answer.

SCIENCE

Physical Sciences

1. Electricity and magnetism are related effects that have many useful applications in everyday life. As a basis for understanding this concept:
   a. *Students know* how to design and build simple series and parallel circuits by using components such as wires, batteries, and bulbs.
   b. *Students know* how to build a simple compass and use it to detect magnetic effects, including Earth's magnetic field.
   c. *Students know* electric currents produce magnetic fields and know how to build a simple electromagnet.
   d. *Students know* the role of electromagnets in the construction of electric motors, electric generators, and simple devices such as doorbells and earphones.
   e. *Students know* electrically charged objects attract or repel each other.
   f. *Students know* magnets have two poles (north and south) and that like poles repel each other while unlike poles attract each other.
   g. *Students know* electrical energy can be converted to heat, light and motion.

Life Sciences

2. All organisms need energy and matter to live and grow. As a basis for understanding this concept:
   a. *Students know* plants are the primary source of matter and energy entering most food chains.
   b. *Students know* producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.
   c. *Students know* decomposers, including many fungi, insects, and microorganisms, recycle matter from dead plants and animals.

4th Grade

MATHEMATICS	SCIENCE
3.0 Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among the operations: 3.1 Demonstrate an understanding of, and the ability to use, standard algorithms for the addition and subtraction of multidigit numbers. 3.2 Demonstrate an understanding of, and the ability to use, standard algorithms for multiplying a multidigit number by a two-digit number and for dividing a multidigit number by a one-digit number; use relationships between them to simplify computations and to check results. 3.3 Solve problems involving multiplication of multidigit numbers by two-digit numbers. 3.4 Solve problems involving division of multidigit numbers by one-digit numbers. 4.0 Students know how to factor small whole numbers: 4.1 Understand that many whole numbers break down in different ways (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3). 4.2 Know that numbers such as 2, 3, 5, 7, and 11 do not have any factors except 1 and themselves and that such numbers are called prime numbers. Algebra and Functions 1.0 Students use and interpret variables, mathematical symbols, and properties to write and simplify expressions and sentences: 1.1 Use letters, boxes, or other symbols to stand for any number in simple expressions or equations (e.g., demonstrate an understanding and the use of the concept of a variable). 1.2 Interpret and evaluate mathematical expressions that now use parentheses. 1.3 Use parentheses to indicate which operation to perform first when writing expressions containing more than two terms and different operations. 1.4 Use and interpret formulas (e.g., area = length x width or A = *lw*) to answer questions about quantities and their relationships. 1.5 Understand that an equation such as $y = 3x + 5$ is a prescription for determining a second number when a first number is given. 2.0 Students know how to manipulate equations: 2.1 Know and understand that equals added to equate are equal. 2.2 Know and understand that equals multiplied by equals are equal.	3. Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept: a. *Students know* ecosystems can be characterized by their living and nonliving components b. *Students know* that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all. c. *Students know* many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter. d. *Students know* that most microorganisms do not cause disease and that many are beneficial. Earth Sciences 4. The properties of rocks and minerals reflect the processes that formed them. As a basis for understanding this concept: a. *Students know* how to differentiate among igneous, sedimentary, and metamorphic rocks by referring to their properties and methods of formation (the rock cycle). b. *Students know* how to identify common rock-forming minerals (including quartz, calcite, feldspar, mica, and hornblende) and ore minerals by using a table of diagnostic properties. 5. Waves, wind, water, and ice shape and reshape the Earth's land surface. As a basis for understanding this concept: a. *Students know* some changes in the earth are due to slow processes, such as erosion, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes. b. *Students know* natural processes, including freezing and thawing and the growth of roots, cause rocks to break down into smaller pieces. c. *Students know* moving water erodes landforms, reshaping the land by taking it away from some places and depositing it as pebbles, sand, silt, and mud in other places (weathering, transport, and deposition).

4th Grade

MATHEMATICS	SCIENCE
Measurement and Geometry 1.0 Students understand perimeter and area: a. Measure the area of rectangular shapes by using appropriate units, such as square centimeter (cm^2), square meter (m^2), square kilometer (km^2), square inch (in^2), square yard (yd^2), or square mile (m^2). b. Recognize that rectangles that have the same area can have different perimeters. c. Understand that rectangles that have the same perimeter can have different areas. d. Understand and use formulas to solve problems involving perimeters and areas of rectangles and squares. Use those formulas to find the areas of more complex figures by dividing the figures into basic shapes. 2.0 Students use two-dimensional coordinate grids to represent points and graph lines and simple figures: 2.1 Draw the points corresponding to linear relationships on graph paper (e.g., draw 10 points on the graph of the equation $y = 3x$ and connect them by using a straight line). 2.2 Understand that the length of a horizontal line segment equals the difference of the *x*-coordinates. 2.3 Understand that the length of a vertical line segment equals the difference of the *y*-coordinates. 3.0 Students demonstrate an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems: 3.1 Identify lines that are parallel and perpendicular. 3.2 Identify the radius and diameter of a circle. 3.3 Identify congruent figures. 3.4 Identify figures that have bilateral and rotational symmetry. 3.5 Know the definitions of a right angle, an acute angle, and an obtuse angle. Understand that 90°, 180°, 270°, and 360° are associated, respectively, with 1⁄4, 1⁄2, 3⁄4, and full turns. 3.6 Visualize, describe, and make models of geometric solids (e.g., prisms, pyramids) in terms of the number and shape of faces, edges, and vertices; interpret two-dimensional representations of three-dimensional objects; and draw patterns (of faces) for a solid that, when cut and folded, will make a model of the solid. 3.7 Know the definitions of different triangles (e.g., equilateral, isosceles, scalene) and identify their attributes.	Investigation and Experimentation 6. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept, and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will: a. Differentiate observation from inference (interpretation), and know that scientists' explanations come partly from what they observe and partly from how they interpret their observations. b. Measure and estimate weight, length, or volume of objects. c. Formulate and justify predictions based on cause-and-effect relationships. d. Conduct multiple trials to test a prediction and draw conclusions about the relationships between predictions and results. e. Construct and interpret graphs from measurements. f. Follow a set of written instructions for a scientific investigation.

4th Grade

MATHEMATICS	SCIENCE
3.8 Know the definition of different quadrilaterals (e.g., rhombus, square, rectangle, parallelogram, trapezoid). Statistics, Data Analysis, and Probability 1.0 Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings: 1.1 Formulate survey questions; systematically collect and represent data on a number line; and coordinate graphs, tables, and charts. 1.2 Identify the mode(s) for sets of categorical data and the mode(s), median, and any apparent outliers for numerical data sets. 1.3 interpret one- and two-variable data graphs to answer questions about a situation. 2.0 Students make predictions for simple probability situations: 2.1 Represent all possible outcomes for a simple probability situation in an organized way (e.g., tables, grids, tree diagrams). 2.2 Express outcomes of experimental probability situations verbally and numerically (e.g., 3 out of 4; 3⁄4). Mathematical Reasoning 1.0 Students make decisions about how to approach problems: 1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information, and observing patterns. 1.2 Determine when and how to break a problem into simpler parts. 2.0 Students use strategies, skills, and concepts in finding solutions: 2.1 Use estimation to verify the reasonableness of calculated results. 2.2 Apply strategies and results from simpler problems to more complex problems. 2.3 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning. 2.4 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.	

MATHEMATICS	SCIENCE
2.5 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy. 2.6 Make precise calculations and check the validity of the results from the context of the problem. 3.0 Students move beyond a particular problem by generalizing to other situations: 3.1 Evaluate the reasonableness of the solution in the context of the original situation. 3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems. 3.3 Develop generalizations of the results obtained and apply them in other circumstances.	

4th Grade

MATHEMATICS	SCIENCE