

FIFTH GRADE AT-A-GLANCE

MATH SOL

NUMBER AND NUMBER SENSE

- 5.1** Read, write, and identify place values of decimals through thousandths; round decimals to the nearest tenth or hundredth; and compare the value of two decimals through thousandths using the symbols $>$, $<$, or $=$
- 5.2** Recognize and name commonly used fractions (halves, fourths, eighths, and tenths) in their equivalent decimal form; order a given set of fractions/mixed numbers (including like and unlike denominators of 12 or less) and decimals from least to greatest.

COMPUTATION & ESTIMATION

- 5.3** Create and solve problems involving addition, subtraction, multiplication, and division of whole numbers
- 5.4** Find the sum, difference, and product of two numbers expressed as decimals through thousandths
- 5.5** Given a dividend of four digits or less and a divisor of two digits or less, find the quotient and remainder
- 5.6** Given a dividend expressed as a decimal through thousandths and a single-digit divisor, find the quotient
- 5.7** Add and subtract with fractions and mixed numbers (denominators of 12 or less) and express answers in simplest form

MEASUREMENT

- 5.8** Describe and determine the perimeter of a polygon and the area of a square, rectangle, and right triangle
- 5.9** Identify and describe the diameter, radius, chord, and circumference of a circle

- 5.10** Differentiate between perimeter, area, and volume; identify whether the application of the concept is appropriate for a given situation
- 5.11** Choose an appropriate measuring device and unit of measure to solve problems involving measurement of length, weight/mass, liquid volume, area, and temperature (including Celsius/Fahrenheit conversions)
- 5.12** Determine an amount of elapsed time in hours and minutes within a 24-hour period

GEOMETRY

- 5.13** Measure and draw right, acute, and obtuse angles and triangle, using appropriate tools
- 5.14** Classify angles and triangles as right, acute, or obtuse
- 5.15** Using the plane figures, square, rectangle, triangle, rhombus, parallelogram, kite, and trapezoid:
- recognize, identify, describe, and analyze properties in order to develop definitions of the figures
 - identify and explore congruent, noncongruent and similar figures
 - investigate and describe the results of combining and subdividing shapes
 - identify and describe a line of symmetry
 - recognize the images of figures resulting from transformations
- 5.16** Identify, compare, and analyze properties of the solid geometric shapes (cylinder, cone, cube, square pyramid, and rectangular prism)

PROBABILITY & STATISTICS

- 5.17** Solve problems involving probability of a single event by using tree diagrams or by constructing a sample space representing all possible results; predict the probability of outcomes of simple experiments by representing it with fractions or decimals from 0 to 1; create a

- problem statement involving probability based on information from a given problem situation
- 5.18** Given a problem situation, collect, organize, and display a set of numerical data in a variety of forms, using bar graphs, stem-and-leaf plots, and line graphs
- 5.19** Find the mean, median, mode and range of a set of data

PATTERNS, FUNCTIONS, & ALGEBRA

- 5.20** Analyze the structure of numerical and geometric patterns and express the relationship using words, tables, graphs, or a mathematical sentence
- 5.21** Investigate and describe the concept of variable; use a variable expression to represent a given verbal quantitative expression; and write an open sentence to represent a given mathematical relationship using a variable
- 5.22** Create a problem situation based on a given open sentence using a single variable

SCIENCE SOL

SCIENTIFIC INVESTIGATION, REASONING, & LOGIC

- 5.1** Plan and conduct investigations
- Identify organisms using various classification keys
 - Make estimates and accurate measurements of length, mass, volume, and temperature in metric units using proper tools
 - Make estimates and accurate measurements of elapsed time using proper tools
 - Form hypotheses from testable questions
 - Identify independent and dependent variables
 - Identify constants in an experimental situation
 - Collect, record, analyze, and communicate data using proper graphical representations and using metric measurements
 - Make predictions using patterns from collected data and generate simple graphical data

- Make inferences and draw conclusions
- Construct models to clarify explanations, demonstrate relationships, and solve needs
- Use current applications to reinforce science concepts

FORCE, MOTION, & ENERGY

- 5.2** Creation, transmission, and use of sound
- Compression waves
 - Vibration, compression, wavelength, frequency, amplitude
 - The ability of different media (solids, liquids, and gases) to transmit sound
 - Uses and applications of sound waves
- 5.3** Basic characteristics of visible light and how it behaves
- Transverse waves
 - The visible spectrum
 - Opaque, transparent, and translucent
 - Reflection of light from reflective surfaces
 - Refraction of light through water and prisms

MATTER

- 5.4** Matter is anything that has mass, takes up space, and occurs as a solid, liquid, or gas
- Distinguishing properties of each phase of matter
 - Atoms and elements
 - The effect of temperature on the states of matter
 - Molecules and compounds
 - Mixtures including solutions

LIVING SYSTEMS

- 5.5** Organisms are made of one or more cells and have distinguishing characteristics that play a vital role in the organism's ability to survive and thrive in its environment
- Basic cell structures and functions
 - Classification of organisms using physical characteristics, body structures, and behavior of the organism
 - Traits of organisms that allow them to survive in their environment

INTERRELATIONSHIPS IN EARTH/SPACE SYSTEMS

- 4.6** Weather conditions and phenomena occur and can be predicted
- Weather phenomena
 - Weather measurements and meteorological tools
 - Use of weather measurements and weather phenomena to make weather predictions
- 5.6** Characteristics of the ocean environment
- Geological characteristics
 - Physical characteristics
 - Ecological characteristics

EARTH PATTERNS, CYCLES, & CHANGE

(5.7 MOVED TO 4TH GRADE)

ENGLISH SOL

ORAL LANGUAGE

- 5.1** Listen, draw conclusions, and share responses in subject-related group learning activities.
- Participate in and contribute to discussions across content areas.
 - Organize information to present reports of group activities.
 - Summarize information gathered in group activities.
- 5.2** Use effective nonverbal communication skills.
- Maintain eye contact with listeners.
 - Use gestures to support, accentuate, and dramatize verbal message.
 - Use facial expressions to support and dramatize verbal message.
 - Use posture appropriate for communication setting.
- 5.3** Make planned oral presentations.
- Determine appropriate content for audience.
 - Organize content sequentially or around major ideas.
 - Summarize main points before or after presentation.
 - Incorporate visual aids to support the presentation.
 - Use grammatically correct language and specific vocabulary.

- Use knowledge of root words, prefixes, and suffixes.
 - Use dictionary, glossary, thesaurus, and other word-reference materials.
- 5.5** Read and demonstrate comprehension of fiction.
- Describe the relationship between text and previously read materials.
 - Describe character development in fiction and poetry selections.
 - Describe the development of plot and explain how conflicts are resolved.
 - Describe the characteristics of free verse, rhymed, and patterned poetry.
 - Describe how an author's choice of vocabulary and style contributes to the quality and enjoyment of selections.
- 5.6** Read and demonstrate comprehension of nonfiction.
- Use text organizers, such as type, headings, and graphics, to predict and categorize information.
 - Identify structural patterns found in nonfiction.
 - Locate information to support opinions, predictions, and conclusions.
 - Identify cause-and-effect relationships.
 - Identify compare-and-contrast relationships.
 - Skim materials to develop a general overview of content and to locate specific information.
 - Identify new information gained from reading.
- 5.7** Demonstrate comprehension of information from a variety of print resources.
- Develop notes that include important concepts, summaries, and identification of information sources.
 - Organize information on charts, maps, and graphs.

WRITING

- 5.8** Write for a variety of purposes: to describe, to inform, to entertain, and to explain.
- Choose planning strategies for various writing purposes.
 - Organize information.
 - Demonstrate awareness of intended audience.

- Use precise and descriptive vocabulary to create tone and voice.
 - Vary sentence structure.
 - Revise writing for clarity.
 - Use available technology to access information.
- 5.9** Edit writing for correct grammar, capitalization, spelling, punctuation, and sentence structure.
- Use plural possessives.
 - Use adjective and adverb comparisons.
 - Identify and use interjections.
 - Use apostrophes in contractions and possessives.
 - Use quotation marks with dialogue.
 - Use commas to indicate interrupters and in the salutation and closing of a letter.
 - Use a hyphen to divide words at the end of a line.
 - Edit for clausal fragments, run-on sentences, and excessive coordination.

HISTORY SOL

- USI.1** Develop skills for historical and geographical analysis, such as: use of primary & secondary sources; sequencing events; interpreting ideas and events from different historical perspectives; analyze and interpret maps.
- USI.2** Use maps, globes, photographs, pictures, and tables to:
- locate the seven continents
 - locate and describe the location of geographic regions of North America
 - locate and identify the water features important to the early history of the U.S.
 - recognize key geographic features on maps, diagrams, or photos
- USI.3** Demonstrate knowledge of how early cultures developed in North America by:
- locate where the American Indians (First Americans) settled
 - describing how the American Indians

- USI.4** Demonstrate knowledge of European exploration in North America and West Africa by:
- describing the motivation, obstacles, and accomplishments of European explorers
 - describing cultural interactions between Europeans and American Indians
 - identifying the location and describing the characteristics of West African societies with traders
- USI.5** Demonstrate knowledge of the factors that shaped colonial America by:
- describing the religious and economic events and conditions that led to the colonization of America
 - comparing and contrasting life in New England, Mid-Atlantic, and Southern colonies
 - describing colonial life in America from the perspectives of large landowners, farmers, artisans, women, indentured servants, and slaves
 - identifying the political and economic relationships between the colonies and England
- USI.6** Demonstrate knowledge of the causes and results of the American Revolution by:
- identifying the issues of dissatisfaction that led to the American Revolution
 - identifying how political ideas shaped the revolutionary movement and led to the Declaration of Independence; emphasizing the ideas of John Locke
 - describing key events and roles of key individuals in the Revolution
 - explaining reasons why the colonies were able to defeat Britain
- USI.7** Demonstrate knowledge of the challenges faced by the new nation by:
- identifying the weaknesses of the of the government established by the Articles of Confederation
 - identifying the basic principles of the new government established by the Constitution and the Bill of Rights
 - describing the historical development of the new Constitution

- USI.8** Demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by:
- describing territorial expansion and how it affected the political map of the United States
 - identifying the geographic and economic factors that influenced the westward movement of settlers
 - describing the impact of inventions on life in America
 - identifying the main ideas of the abolitionist and suffrage movements
- USI.9** Demonstrate knowledge of the causes, major events, and effects of the Civil War by:
- describing the cultural, economic, and constitutional issues that divided the nation
 - explaining how the issues of the states' rights and slavery increased sectional tensions
 - identifying on a map the states that seceded from the Union and those that remained in the Union
 - describing the roles of Abraham Lincoln, Jefferson Davis, Ulysses S. Grant, Robert E. Lee, Stonewall Jackson, and Frederick Douglass in events leading to and during the war
 - using maps to explain critical developments in the war, including major battles
 - describing the effects of war from the perspectives of the Union and Confederate soldiers, women, and slaves

READING

- 5.4** Read fiction and nonfiction with fluency and accuracy.
- Use context to clarify meaning of unfamiliar words.



FIFTH GRADE SOL AT-A-GLANCE Salem City Schools

English, Reading, Writing, Speaking: The Fifth Grade Standards of Learning for English continue to focus on meaningful communication skills in reading, writing, and speaking. Students prepare presentations using a variety of resources. Fifth graders read a variety of selections from nonfiction, fiction, and poetry. They apply reading, writing, and speaking skills in all subject areas. Students plan, write, revise, and edit their writing: writing skills emphasized include organizing information, using vocabulary effectively, varying sentence structures, and editing carefully for spelling, grammar, and punctuation. They continue to practice cursive writing skills.

Math: The Fifth Grade Standards of Learning for Math extend students' problem solving proficiencies in using whole numbers, fractions, and decimals. Students collect, display, and analyze data using a sample space or tree diagram. Students solve problems involving: fractions with unlike denominators; area of squares, rectangles, and triangles; perimeter of polygons; parts of a circle; classification of angles and triangles; and plotting points in the coordinate plane. Students develop algebraic skills including use of variables, expressions, and open sentences.

History: The Fifth Grade Standards of Learning for History cover the history of the United States from Pre-Columbian Times until 1865. Students will continue to learn fundamental concepts in civics, economics, and geography as they study United States history in chronological sequence and learn about change and continuity in our history. They will also study documents and speeches that laid the foundation of American ideals and institutions and will examine the everyday life of people at different times in the country's history through the use of primary and secondary sources.

Science: The Fifth Grade Standards of Learning for Science emphasize the importance of selecting appropriate instruments for measuring and recording observations, organizing, analyzing, and applying data in classroom inquiry. Questioning, using and validating evidence, and systematic experimentation are reinforced. Students investigate in detail the concepts of sound and light and the tools used for studying them. They examine weather phenomena and conditions – identifying various factors, making predictions based on weather data, and evaluating their results. Students study key concepts and properties of matter (including atoms, molecules, elements, and compounds), the cellular makeup of organisms, the classification of groups of organisms, and the characteristics of ocean environments.

The fifth-grade standards focus on student growth in understanding the nature of science. This scientific view defines the ideas that explanations of nature are developed and tested using observation, experimentation,

- used their environment
- describe archeological evidence of new settlements in Cactus Hill

- describing the major accomplishments of the first five presidents of the U.S.

models, evidence, and systematic processes. The nature of science includes the concepts that scientific explanations are based on logical thinking; are subject to rules of evidence; are consistent with observational, inferential, and experimental evidence; are open to rational critique; and are subject to refinement and change with the addition of new scientific evidence. The nature of science includes the concept that science can provide explanations about nature, can predict potential consequences of actions, but cannot be used to answer all questions.