

# SCIENCE

## Nature of Science

- explains why scientific investigations should be replicable
- explains the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each
- explains that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered
- recognizes and explains that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory is science is very different than how it is used in everyday life
- recognizes and explains that a scientific law is a description of a specific relationship under given conditions in the natural world. Thus, scientific laws are different from societal laws

## Earth and Space Science

- describes and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition
- recognizes that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes, and relate these landforms as they apply to Florida
- describes how global patterns such as the jet stream and ocean currents influence local weather in measurable terms such as temperature, air pressure, wind direction and speed, and humidity and precipitation
- investigates how natural disasters have affected human life in Florida
- describes ways human beings protect themselves from hazardous weather and sun exposure

## Physical Science

- explores the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa
- measures and graphs distance versus time for an object moving at a constant speed
- explores the Law of Gravity by recognizing that every object exerts a gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are
- investigates and describes that an unbalanced force acting on an object changes its speed or direction of motion or both

## Life Science

- investigates and explains the components of the scientific theory of cells (cell theory): all organisms are composed of cells (single-celled or multi-cellular), all cells come from pre-existing cells, and cells are the basic unit of life
- identifies and investigates the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis

## Content Literacy

- reads closely and cites evidence from science documents to support analysis of what the materials say
- develops a rich vocabulary of scientific words and uses them to speak and write more precisely and coherently

### \*\*\* Ideas for Helping Your Child at Home \*\*\*

- ☺ Use common items (a pebble dropped in water; a marble dropped in sand) to demonstrate that vibrations in materials set up visible disturbances that spread away from a force in all directions
- ☺ Encourage original drawings to express main ideas of things observed or how things work
- ☺ Read and discuss news articles about health and the body's systems

# What Your Child is Expected to Learn...



# 6<sup>th</sup> Grade

## A Representative Sample of Expectations by Grade Level

For a complete list of the state-adopted standards, please go to the keyword search tab at: <http://www.cpalms.org/Standards/FLStandardSearch.aspx>

Dear Parents,

The mission of Brevard Public Schools is "to serve every student with excellence as the standard." Our elementary schools work toward this goal each school day by ensuring that every child has exciting and meaningful learning experiences. We expect all of our students to learn and demonstrate increasingly complex skills as they progress through the grades toward the goal of becoming responsible and productive adults. Toward this end, I am pleased to share with you a representative sample of the learning expectations for your child this year. These sample learning expectations are stated within the B.E.S.T ELA/Math state standards from the Florida Department of Education.

These benchmarks and standards provide focus and consistency for teachers and students and offer parents and community members a clear view of a school's expectations for student learning. The parent's role in supporting children's educational progress is increasingly important in our rapidly changing world. I urge you to review these expectations and to take advantage of opportunities to provide rewarding learning experiences for your child each day.

I wish your child a successful school year!

Sincerely,

A cursive signature that reads "Dr. Wendy Smith".

Dr. Wendy Smith, Director  
Elementary Programs

For a complete list of standards, go to the subject area links at:  
<https://www.brevardschools.org/Page/14057>

What Your Child is Expected to Learn in Sixth Grade 2023-2024

# ENGLISH LANGUAGE ARTS

## Reading

- reads grade-level text fluently and accurately;
- makes inferences to support comprehension
- analyzes how the interaction between characters contributes to the development of a plot; analyzes the development of stated or implied theme(s) throughout a literary text
- explains the influence of multiple narrators and/or shifts of view
- describes the impact of various poetic forms on meaning and style
- explains how individual text sections and/or features convey meaning
- analyzes the implied or stated central idea(s) and its development throughout a text
- analyzes authors' purpose(s) in multiple accounts of the same event or topic
- tracks the development of an argument, identifying the types of reasoning used
- explains how figurative language contributes to tone and meaning
- paraphrases content from grade-level texts; compares and contrasts how authors from different time periods address the same or different topics: identifies rhetorical appeals in a text

## Communication

- engages in collaborative discussions; uses appropriate voice and tone when speaking and writing; cites evidence to explain and justify reasoning
- presents information orally in a logical sequence with nonverbal cues (ex. posture, tone, expression), appropriate volume, clear pronunciation, and appropriate pacing
- writes detailed narratives, opinions, and expository products; improves writing by planning, revising, and editing
- follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to the grade level (students are expected to use convections from previous years):
  - *uses verbals including gerunds, infinitives, and participial phrases*
  - *uses comparative and superlative forms of adjectives*
  - *uses pronouns correctly with regard to case, number, and person, correcting for vague pronoun reference*
- conducts research to answer a question, drawing on multiple reliable and valid sources, and refocusing the inquiry when appropriate

## Vocabulary

- integrates academic vocabulary appropriately to grade level in speaking and writing; applies knowledge of Greek and Latin roots and affixes to determine the meanings of words and phrases in grade-level content
- applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases, appropriate to 6th grade

### \*\*\* Ideas for Helping Your Child at Home \*\*\*

- ☺ Read to and with your child using a variety of texts
- ☺ Encourage discussions at mealtimes, in the car, etc.
- ☺ Encourage your child to respond to text through writing, drawing, etc. to convey the understanding of the main idea
- ☺ Take your child to the library

# MATHEMATICS

## Number Sense Operations

- defines a rational number; plots, orders, and compares positive rationale numbers when given in different forms; given a mathematical or real-world context, represents quantities that have opposite direction using rational numbers, compares the quantities on a number line, and explains the meaning of zero within its context.
- given a real-world context, interprets the absolute value of a rational number as the distance

from zero on a number line; solves mathematical problems with two steps or real-world problems with up to two steps involving absolute value, including the comparison of absolute value

- multiplies and divides positive multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency; computes products and quotients of positive fractions, including mixed numbers with procedural fluency
- solves multi-step real-world problems involving any of the four operations with positive multi-digit decimals or positive fractions, including mixed numbers; given a real-world context, finds the greatest common factor within 1000 and least common multiple with factors to 25 of two whole numbers
- rewrites the sum of two composite whole numbers having a common factor as a common factor multiplied by the sum of two whole numbers; evaluates positive rational numbers and integers with natural number exponents up to 5
- expresses composite whole numbers as products of prime factors using natural number exponents; rewrites positive rational numbers in different but equivalent forms including fractions, terminating decimals, and percentages
- adds and subtracts integers with procedural fluency; multiplies and divides integers with procedural fluency.

## Algebraic Reasoning

- given a mathematical or real-world context, translates written descriptions into linear algebraic expressions limited to two terms and translates linear algebraic expressions limited to two terms into written descriptions; translates a real-world written description into algebraic inequality form and represents an inequality with the variable on the right or left side of the inequality on a number line
- evaluates algebraic expressions using substitution and order of operations with two or more variables and any integer; applies properties of operations to generate equivalent algebraic expressions with integer coefficients given an equation or inequality and a specified set of integers, determines which values make the equation or inequality true or false, including variables in multiple terms and variables on either side of the equal sign or inequality symbol
- writes and solves for a variable in an equation within a mathematical or real world context using addition and subtraction, where all terms and solutions are integers, including variables on either side of the equal sign; writes and solves for a variable in an equation within a mathematical or real-world context using multiplication and division, where all terms and solutions are integers, including variables on either side of the equal sign
- determines the unknown decimals or fractions, including mixed numbers and fractions greater than one, in an equation involving any of the four operations, relating three numbers, with the unknown in any position, including the unknown and different operations on either side of the equal sign; given a real-world context, writes and interprets part-to-part and part-to whole ratios to show the relative sizes of two quantities in the different units using appropriate notation:  $\frac{a}{b}$ ,  $a$  to  $b$ , or  $a:b$  where  $b \neq 0$
- given a real-world context, calculates and interprets a unit rate for a ratio of quantities with different units; generates a two- or three-column table to display equivalent part-to-part ratios and part-to-part-to-whole ratios; applies ratio relationships to solve real-world problems involving percentages using the relationship between two quantities; solves mathematical or real-world problems involving ratios, rates, and unit rates, including comparisons, mixtures, and ratios of lengths and a conversion within the same measurement system.

## Geometric Reasoning

- plots rational number ordered pairs in all four quadrants and on both axes and identifies the  $x$ - or  $y$ -axis as the line of reflection when two ordered pairs have an opposite  $x$ - or  $y$ -coordinate; finds distances between ordered pairs of rational numbers, limited to the same  $y$ -coordinate or the same  $x$ -coordinate, in any quadrant, represented on a coordinate plane; solves mathematical or real-world problems by plotting ordered pairs of rational numbers on a coordinate plane, including finding the perimeter or area of a rectangle with vertices in multiple quadrants.
- derives a formula for the area of a right triangle using a rectangle and applies that formula to find the area of a triangle; solves mathematical or real-world problems with positive rational numbers involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles or finds a missing side when given the area

- solves mathematical or real-world problems involving the volume of right rectangular prisms with positive rational number edge lengths or finds a missing edge length when given a volume; given a mathematical or real-world context, finds the surface area of right rectangular prisms and right rectangular pyramids using the figure's net using positive rational numbers.

## Data Analysis and Probability

- formulates statistical questions that would generate numerical data
- given a numerical data set within a real-world context, finds and interprets mean, median, mode, and range; given a box plot within a real-world context, uses this summary of the data to describe the spread and distribution
- given a histogram or line plot within a real-world context, qualitatively describes and interprets the spread and distribution of the data, including any symmetry, skewness, gaps, clusters, outliers, and the range
- creates box plots and histograms to represent the set of the numerical data within real-world contexts; given a real-world scenario, determines and describes how changes in data values impact measures of center and variation; identifies measures of center and variation appropriate for the scenario

### \*\*\* Ideas for Helping Your Child at Home \*\*\*

- ☺ Engage your child in situations that require thinking and problem-solving
- ☺ Ask your child to share the strategies s/he used when solving problems
- ☺ Ask your child to do some of the hands-on activities s/he is doing in class
- ☺ Collect data such as temperature, rainfall amounts, or miles driven per day over some time. Find the range, mean, median, and mode of the data

# SOCIAL STUDIES

## Geography

- understands how to use maps and other geographic representations, tools, and technology to report information; understands the physical and cultural characteristics of places; understands the relationships between the Earth's ecosystems and the populations that dwell within them; understands how human actions can impact the environment;
- understands how to apply geography to interpret the past and present and plan for the future

## Economics

- understands the fundamental concepts relevant to the development of a market economy
- understands the fundamental concepts relevant to institutions, structure, and functions of a national economy; understands the fundamental concepts and interrelationships of the United States economy in the international marketplace

## World History

- utilizes historical inquiry skills and analytical processes; describes the emergence of early civilizations; recognizes significant events, figures, and contributions of ancient civilizations

## Civics and Government

- identifies democratic concepts developed as a foundation for American constitutional democracy; evaluates the roles, rights, and responsibilities of United States citizens and determine methods of active participation in society, government, and the political system; develops a rich vocabulary of scientific words and uses them to speak and write more precisely and coherently

## Content Literacy

- reads closely and cites evidence from historical and social science documents to support analysis of what the materials say; develops a rich vocabulary of scientific words and uses them to speak and write more precisely and coherently

### \*\*\* Ideas for Helping Your Child at Home \*\*\*

- ☺ Read a historical fiction book or informational text with your child and discuss the content together
- ☺ Talk to your child about how the culture of a society can affect history
- ☺ Discuss current events with your child