

# Seventh Grade Curriculum

## Language Arts

### READING

#### Word Recognition and Vocabulary Development

- use knowledge of Greek, Latin, and Anglo-Saxon roots and affixes to understand content area vocabulary
- use word definition, example, restatement, or contrast to clarify word meaning
- identify and explain the meaning of idioms, analogies, metaphors, and similes in prose and poetry

#### Comprehension (Focus on Informational Materials)

- locate information by using a variety of consumer, work place, and public documents
- identify and trace the development of the author's argument, point of view, or perspective in text
- analyze the structure and purpose of various informational texts (signs, newspapers, manuals)
- analyze text which uses cause and effect patterns
- understand and explain the use of a simple mechanical device by following technical directions
- analyze the accuracy of an author's evidence to support claims, noting instances of bias and stereotyping

#### Comprehension (Focus on Literature)

- identify the purposes for and characteristics of different forms of prose (short story, novel, essay)
- identify, analyze, and compare recurring themes in literature (bravery, loyalty, friendship)
- draw a conclusion (infer) from evidence in a literary work and give examples to support the inference
- analyze the characters in a story and explain how their words, thoughts, and actions affect the plot and conclusion of the work
- contrast points of view (first and third person, limited and omniscient, subjective and objective) in narrative text and explain how they affect the overall theme of the work

#### Fluency

- read numerous books to build fluency and comprehension
- read narrative (classic and contemporary) literature and expository text (newspapers, magazines, and on-line information)

## Mathematics

### Number Sense

- add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers
- know the difference between rational and irrational numbers
- know that every rational number is either a terminating or repeating decimal and be able to convert terminating decimals into reduced fractions
- solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest
- add and subtract fractions by using factoring to find common denominators
- multiply, divide, and simplify rational numbers by using exponent rules
- understand the meaning of the absolute value of a number; interpret the absolute value as the distance of the number from zero on a number line; and determine the absolute value of real numbers

### **Algebra and Functions**

- simplify numerical expressions by applying properties of rational numbers (identity, inverse, distributive, associative, commutative) and justify the process used
- graph linear functions, knowing that the vertical change per unit of horizontal change is always the same and know that the ratio is called the slope of a graph
- plot the values of quantities whose ratios are always the same (cost of the number of an item, feet to inches, circumference to diameter of a circle)
- solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution, and verify the reasonableness of the results
- solve multi-step problems involving rate, average speed, distance, and time or a direct variation

### **Measurement and Geometry**

- know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments
- know when two geometrical figures are congruent and what congruence means about the relationships between the sides and angles of the two figures
- identify elements of three-dimensional geometric objects and describe how two or more objects are related in space

### **Statistics, Data Analysis, and Probability**

- collect, organize, and represent data sets that have one or more variables and identify relationships among variables within a data set
- understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set

### **Science**

History - Social Science

Focus on Life Sciences

Cell Biology

Genetics

Evolution

Earth and Life History

Structure and Function in Living Systems

Physical Principles in Living Systems

Investigation and Experimentation Students will:

Select and use appropriate tools and technology to perform tests, collect data, and display data.

Use a variety of print and electronic resources to collect information and evidence as part of a research project.

Communicate the logical connection among hypotheses, science concepts, tests conducted, data collected, and conclusions drawn from the scientific evidence.

Construct scale models, maps, and appropriately labeled diagrams to communicate scientific knowledge.

Communicate the steps and results from an investigation in written reports and oral presentations.

World History and Geography: Medieval and Early Modern Times

Connecting with Past Learning: Uncovering the Remote Past

Connecting with Past Learning: The Fall of Rome

Growth of Islam

African States in the Middle Ages and Early Modern Times

Civilizations of the Americas

China

Japan

Medieval Societies: Europe and Japan

Europe During the Renaissance, the Reformation, and the Scientific Revolution

Early Modern Europe: The Age of Exploration to the Enlightenment

Linking Past to Present