SOCIAL STUDIES

History and Geography:

- Study the geography and people of the United States
- Use map and glob skills to determine absolute locations (longitude and latitude) of places of study
- Interpret a map using information from its title, compass rose, scale and legend
- Observe and describe national historic sites and describe their function and significance

Civics and Government:

- Give examples of the different ways immigrants can become citizens of the United States

Economics:

- Define and give examples of natural resources in the United States
- Give examples of limited and unlimited resources and explain how scarcity compels people and communities to make choices about goods and services, giving up some things to get other things
- Give examples of how the interaction of buyers and sellers influences the prices of goods and services in markets

The purpose of this guide is to identify the major topics, concepts, and skills that are considered essential for this grade level as identified by the Massachusetts Curriculum Frameworks.

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CURRICULUM GUIDE GRADE 4

GARDNER PUBLIC SCHOOLS

"Intelligence without ambition is a bird without wings." C. A. Danielson

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ENGLISH LANGUAGE ARTS

Reading:

Key Idea and Details:

- Read closely for meaning and purpose text says
- Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas
- Analyze how and why individuals, events, and ideas develop and interact over the course of a text

Craft and Structure:

- Interpret words and understand how specific word choices shape meaning or tone
- Analyze the structure of texts

Integration of Knowledge and Ideas:

- Integrate and evaluate content presented in diverse media
- Delineate and evaluate the argument and specific claims in a text
- Analyze how two or more texts address similar themes or topics

Language:

Conventions of Standard English:

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking
- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling and writing
- Determine or clarify the meaning of unknown and multiple-meaning words and phrases
- Demonstrate understanding of figurative language, word relationships and nuance in word meanings

Writing:

- Write opinion pieces on topic with supporting point of view with reasons and information
- Write informative/explanatory text to examine a topic and convey ideas and information clearly
- Write narratives to develop real or imagined experience or events with effective technique, descriptive details and a clear sequence

Speaking and Listening:

- Engage effectively in a range of collaborative discussions
- Paraphrase portions of text read aloud or information presented in diverse formats
- Identify the reasons and evidence a speaker provides to support particular points

MATHEMATICS

Number and Operations in Base Ten:

- Know that relative values of digits in a place value chart
- Round and compare numbers
  Multiply by one and two digit numbers.
- Divide numbers in the hundreds by a one-digit divisor

Number and Operations – Fractions:

- Compare and find equivalent fractions
- Add and subtraction fractions and mixed numbers with like denominators
- Multiply a fraction by a whole number.
- Write, model, and compare fractions as decimals in tenths and hundredths

Operations and Algebraic Thinking:

- Use the four operations to solve multi-step problems
- Construct and describe shape and number patterns
- Know multiplication and division facts through 100

Measurement and Data:

- Apply area and perimeter to the solution of problems with rectangles.
- Convert measurement units from larger to smaller (yards to feet/kilograms to grams)
- Construct a line plot with fractional units and solve problems
- Construct, classify, measure and find missing angles in a diagram

Geometry:

- Name and identify the properties of lines.
- Use these properties to name and categorize shapes.
- Recognize and draw lines of symmetry in a figure

SCIENCE AND TECHNOLOGY

Earth and Space Science:

- Construct a claim based on evidence about the role of erosion in the formation of landscape over time
- Make observations and collect data to provide evidence that rocks, soils, and sediment are broken into smaller pieces through mechanical weathering and moved around through erosion
- Analyze and interpret maps of Earth's mountain ranges, deep ocean trenches, and the placement of volcanoes and earthquakes
- Research and explain that energy and fuels humans use are derived from natural resources
- Evaluate different solutions to reduce the impacts of an earthquake, blizzard or flood on humans

Life Science:

- Construct an argument that animals and plants have internal and external structures that support their survival, growth, behavior and reproduction

Physical Science:

- Use evidence to explain how speed of an object impacts energy of that object
- Make observations of energy being transferred from place to place by sound, light, heat, and electric currents
- Ask questions and predict outcomes of changes in energy that occur when objects collide
- Apply scientific principle of energy and motion to test and refine a device that converts kinetic energy to electrical energy
- Develop a simple mechanical wave model to demonstrate regular patterns of motion
- Develop a model to demonstrate how light reflects off an object and enters the eye to be seen
- Develop and compare multiple ways to transfer information through encoding, sending, receiving, and decoding a pattern

Technology and Engineering:

- Plan and carry out tests of one or more elements of a model or prototype. Apply the results of tests to redesign a model or prototype
- Evaluate relevant design features to be considered in building a model or prototype of a solution