

# **5th Grade Curriculum**

2005-2006



**Paul Cuffee School**  
**459 Promenade Street**  
**Providence, RI 02908**

**LANGUAGE ARTS**

*By the end of fifth grade, students fluently read fifth grade material aloud and silently. When reading, they describe and connect essential ideas and support them with text evidence. Fifth grade students make text inferences about cause and effect, author's purpose, and relevant central ideas. Fifth grade students write clear, organized and focused essays, using the stages of the writing process. They effectively utilize strategies for speaking and listening and have well developed verbal communication skills. As a result, students can...*

**Reading**

- Read and regularly respond to a wide variety of texts
  - Describe and connect essential ideas, arguments, and perspectives when reading.
  - Make inferences, generalizations, and draw conclusions about what is read and support them with textual evidence, and/or prior knowledge
- Use a variety of strategies to comprehend texts, including context cues, and examining the literary elements of plot, setting, mood, theme style, and characterization
- Identify literary devices, such as imagery, metaphors, exaggeration, hyperboles, figurative language, onomatopoeia, and personification.
- Make connections while reading (text to text, text to self, text to world, text to media)
- Distinguish between various genres, and distinguish between fact and opinion
- Read aloud accurately, fluently, and with expression – adjusting intonation to convey text meaning
- Read, spell and understand fifth grade content vocabulary.
- Use a variety of strategies to unlock word meanings, including examination of word structure, prefixes, suffixes, and base words, and proficiently utilize dictionaries, glossaries, and thesaurus.
- Understand and explain commonly used synonyms (same meaning), antonyms (opposite meaning), and homonyms (same spelling)
- Participate as an integral member of guided reading groups
- Appropriately self-select texts to be read during class time, sustained silent reading periods, and nightly reading

**Writing**

- Effectively utilize prewriting tools such as graphic organizers, outlines, story maps, sequence
- Analyze writing to make it more effective.
  - Select structures and features that are appropriate for the writing's purpose and audience.
  - Use a variety of resources to edit written work (including dictionary and thesaurus).
- Write well-developed reports.
  - Write research reports about key ideas, issues, events, or a given subject.
- Write well-developed narratives.
  - Write a multiple paragraph story containing a clear beginning, a developed plot, descriptions of characters and setting, and an ending
- Write well-developed responses to literature.

- Write well-developed procedural pieces.
- Write a detailed biography and autobiography
- Write a coherent and convincing persuasive essay or letter
- Demonstrate control of grammar
  - Including the correct use of irregular verbs (lie/lay, sit/set, rise/raise).
- Demonstrate control of paragraph structure, including an introductory topic sentence, supporting details, and a conclusion
- Demonstrate control of punctuation and mechanics
- Demonstrate control of sentence construction.
- Demonstrate control of spelling.
- Identify the six traits of proficient writing including ideas, organization, focus, sentence fluency, word choice, and conventions

### **Listening and Speaking**

- Participate effectively in both small and large group discussions.
  - Ask insightful questions that seek information pertaining to topic at hand
- Prepare and deliver effective oral presentations
  - Tell a story that develops a plot and setting using descriptive words and vocabulary
  - Respond orally to literature during scheduled book talk including discussion of genre, author, mood, plot, theme, and illustrations
- Listen and respond appropriately to oral presentations.
  - Formulate inferences and draw conclusions based on an oral report
- Demonstrate proficient receptive and expressive language skills regularly

**MATHEMATICS**

*By the end of fifth grade, students will be able to independently work through a variety of problems. In doing so, students will increase their ability to use the four basic arithmetic operations applied to positive and negative numbers, fractions, and decimals. They know and use common measuring units to determine length and area; they know and use formulas to determine the volume of simple geometric figures. Students know the concept of angle measurement. They use grids, tables, graphs, and charts to record and analyze data. As a result, students can:*

**Mathematical Thinking**

- Read, write, and order the numbers to 10,000
- Use strategies, skills, and concepts to make decisions about how to approach and solve problems.
- Use a variety of strategies to solve complex multi-step word problems
- Describe numbers and numerical relationships with the terms: factor, multiple, prime, composite, and square
- Represent factor pairs as dimensions of a rectangular array
- Use factor pairs of 100 and relate them to the factor pairs of 1000 and 10,000
- Use strategies based on numerical reasoning to find quotients for landmarks up to 10,000
- Use a variety of strategies to explore number composition, such as repeated addition, skip counting, finding factors and factor pairs, and checking for divisibility
- Identify patterns as they arise with sequences of multiples such as 25, 50, 75 leading to 1000
- Explain both verbally and in writing how problems are solved

**Geometry / Picturing Polygons**

- Distinguish between polygons and shapes that are not polygons, and between regular and non-regular polygons
- Recognize and name polygons by the number of sides
- Locate and plot points on a coordinated grid
- Generate geometric figures with certain properties
- Sort and classify triangles and quadrilaterals and use math vocabulary to describe them
- Explain the meaning of parallel lines
- Distinguish between and explain relationships between turns and angles
- Use known angles to find the measurement of other angles
- Estimate the sizes of angles and turns
- Find connections between geometric and numerical patterns
- Understand relationships between angles, line lengths, and areas of similar polygons

**Name That Portion – Fractions, Percents, and Decimals**

- Explain that fractions, percents and decimals are a part to a whole ratio
- Understand decimals as part of the base ten system
- Distinguish between numerator and denominator
- Distinguish between proper and improper fractions
- Perform the operations of adding / subtracting fractions with like and unlike denominators, multiply and divide fractions

- Sequence a list of given fractions in order from least to greatest or greatest to least using a variety of strategies such as converting to percents, finding a common denominator, or pictorial representation
- Calculate decimal and percent equivalents for a given fraction
- Find decimals that are smaller than, larger than, or in between other decimals
- Compare and order positive and negative integers, mixed numerals, and decimals on a number line
- Reduce fractions to lowest terms, convert improper fractions to mixed numerals, and mixed numerals to improper fractions
- Approximate data as familiar fractions, as percents, and in circle graphs
- Solve word problems involving fractions, decimals, and percents and express answers appropriately

### **Probability – Between Never and Always**

- Can distinguish among events with different probabilities
- Understand probability as how likely something is to occur
- Can accurately describe the probability of an event using numbers or words
- Recognizes that probability can be described using fractions, decimals, or percents
- Understands that repeating a probability experiment several times can yield a variety of results
- Plot the results of a probability experiment on line plots and interprets the data represented
- Compare expected outcomes with actual outcomes
- Estimate probabilities based on results of actual trials

### **Measurement Benchmarks**

- Identify benchmarks for the measure of: length, weight, volume, and time
- Chooses and accurately uses appropriate tools for measuring length, weight, volume and time.
- Recognize and explain possible sources of measurement errors
- Distinguish between metric and U.S. standard units of measurement
- Reason about factors that influence capacity (height, width, and other features of the shape of the container)
- Convert relationships between U.S. standard and metric measures of weight and liquid capacity
- Use the scale of a map to calculate approximate distances

### **Patterns of Change**

- Compare graph shapes to describe the rate of growth
- Understand and represent distance, time and speed
- Create, interpret, and compare tables, graphs, and stories that show distance and speed
- Collect and record data in regular time intervals to analyze patterns of change

**SCIENCE**

*By the end of fifth grade, students are familiar with magnification as it relates to hand lenses and microscopes. Students identify the main characteristics of insects and other microscopic organisms. Students understand buoyancy, force & motion, and stability and how they relate to boat design. Students pose focus questions, make predictions, map out procedures, make claims with strong supporting evidence and formulate conclusions. Students identify problems and brainstorm realistic solutions. They use the scientific method to test their hypotheses and develop the best solution for the problem. As a result, students can:*

**Physical Sciences**

- Describe the properties a lens must have to magnify an object
- Correctly use a hand lens and a microscope
- Explain the meaning of buoyancy and the factors involved with making an object more or less buoyant
- Describe how friction and surface area affect the force and motion of an object
- Explain the factors involved in making an object more or less stable

**Life Sciences**

- Explain that life forms are made up of cells and that cells are organisms basic units of structure and function
- Explain the major body parts of a microbe
- Through observation, distinguish between the microorganisms volvox, vinegar eels, and blepharisma.
- Explain what germs are and how they are related to disease and hygiene.
- Describe the major characteristics of an insect

**Earth Sciences**

- Depict earth as covered mostly by water and recognize the need for water and land conservation
- Identify the main differences between salt and fresh water and identify some microbes that may live in each
- Describe the major components of a food web containing an insect

**Investigation and Experimentation**

- Use thoughtful questioning and problem solving strategies to explore the natural world
- Use scientific tools to collect data, make observations, and analyze results
- Represent and communicate data and results in multiple ways
- Develop a focus question, outline a procedure, and document claims, evidence, and a conclusion in an organized science journal, clearly communicating the process to others.
- Identify independent, dependent, and controlled variables.
- Use tools, graphs, and charts to collect data, record data, and develop inferences
- Write detailed scientific reports that include reasonable conclusions based upon scientific evidence

**SOCIAL STUDIES**

*In Social Studies, students will develop skills and habits of mind, embedded in a curriculum focused on geography and early United States History, including exploration, colonization, the early slave trade, the Declaration of Independence, and the Industrial Revolution. Students will also choose a Latin American which they will research and report on both verbally and in writing. As a result, students will...*

- Correctly use basic geographic terms, concepts and tools.
- Demonstrate an understanding of unifying concepts and content.
- Demonstrate the ability to differentiate between fact and opinion.
- Provide supporting evidence to back up claims.
- Represent and communicate concepts in a number of ways.
- Identify and define various types of landforms including mountains, plateaus, glaciers, valleys, plains and slopes
- Differentiate between longitude and latitude, and define equator, prime meridian, hemispheres, and time zones
- Identify the seven continents and oceans
- Explain the significance and impact upon slavery of the 13<sup>th</sup>, 14<sup>th</sup>, and 15<sup>th</sup> amendments to the United States Constitution
- Understand the change from agricultural labor to the industrial era, expansion of textile mills, and the shift from man power to machine powered production.
- Understand the impact of the Industrial Revolution upon families, child labor, and education in this country
- Describe the areas in which textile mills were most prominent, particularly in the New England areas, such as the Blackstone River/ Blackstone Valley corridor, and Lowell, MA.
- Understand the relationship between the railroads, rivers and textile mills during the Industrial Revolution, and the impact on the pollution of our rivers.
- Understand why the Industrial Revolution was also the age of inventions and be able to identify the inventions that had the most significance during the era.