

GRADE FOUR CURRICULUM GUIDELINE

To Parents/Guardian: This guideline contains a brief description of each of the subjects your child will study in Fourth Grade. It is designed to provide you with a general overview of the content and skills which are taught as well as other pertinent information. For specific benchmarks for each subject area, go to www.aps1.net and visit the Parents section of the website. We hope that the continued use of this guideline and the meetings with your child's teachers and learning specialists will keep you informed about the goals of the Andover Public Schools and how they affect your child's learning progress.

The Elementary School Principals

English/Language Arts

The Balanced Literacy approach is used in our classrooms and provides students with both small and whole group instruction on specific reading strategies. Students read fiction, non-fiction, poetry, and biographies to refine decoding skills, increase fluency, and develop comprehension and vocabulary. Through class discussion, written work, and projects, students develop an appreciation and understanding of a variety of genres. Independent reading is considered an integral part of the curriculum. Students are expected to read at home as well as in school. Students write in all curricula areas and for different purposes, such as answering open-response questions and responding to literature. They are expected to compose multi-paragraph essays in response to specific prompts often relating to their personal experiences. Students learn that writing is a process as they draft, revise, rewrite, edit, and publish their work.

Language - Students will demonstrate an understanding of the structure of the English language. *Students will be expected to:* Participate appropriately in informal and formal discussions in small and large groups, pose questions, listen to the ideas of others, and contribute information in discussions. Students will make oral presentations that demonstrate consideration of audience and purpose, understand, acquire, and use new vocabulary, analyze standard English grammar and usage, recognize how other languages have influenced English vocabulary, and describe, analyze, and use formal and informal English.

Reading and Literature - *Students will learn to* respond thoughtfully to all forms of spoken and written literature, identify basic facts and main ideas in a text and use them as a basis for interpretation. *Students will learn to* make connections by relating a literary text to its contemporary context or historical background, and distinguish among various forms of literature, identify themes in a literary work, and provide evidence from the text to support the theme. *Students will learn to* identify elements of fiction such as plot, character, and setting, identify elements of non-fiction such as textual features, graphic features, and organizational structures, identify elements of poetry, and how authors use descriptive language to create imagery and mood. *Students will learn to* identify themes, structure, and elements of myths, traditional narratives and classical literature, and to identify elements of dramatic literature. *Students will* plan and present dramatic readings with consideration of audience and purpose.

Composition - Students will write well-organized compositions with a beginning, middle, and end. They will draw on a variety of strategies needed to generate and organize ideas. *Students will be expected to* write with a clear focus, coherent organization, and sufficient detail for different audiences and purposes, and to revise writing to improve content, detail, and word choice. *Students will be expected to* edit writing using knowledge of standard English conventions, gather and analyze information from a variety of sources, and develop criteria to assess their own compositions and projects.

Media - Students will obtain information by using a variety of media and evaluate the quality of materials they obtain. Students will be expected to compare and contrast stories in print with their film adaptations and students will create presentations using computer technology.

Mathematics

The goal of the *Everyday Math* program is for students to become confident problem-solvers who value and enjoy math. The philosophy of the program is to provide a rigorous and balanced curriculum that emphasizes conceptual understanding while building a mastery of basic skills. The *Everyday Math* Program is designed so that concepts are introduced, practiced, and mastered over several school years. According to the Massachusetts Frameworks, there are five strands, described as follows:

Number Sense and Operations - The study of numbers and operations is the cornerstone of the mathematics curriculum. Learning what numbers mean, how they may be represented, relationships among them, and computations with them is central to developing number sense. As students progress through the elementary grades, they compute (add, subtract, multiply, divide) with multi-digit numbers using an algorithm of their choice. No matter what method students use, they should be able to explain their method, understand that many methods exist, and see the usefulness of methods that are efficient and accurate. Students learn to estimate in order to verify results of computations with larger numbers, and use concrete objects to model operations with fractions, mixed numbers, and decimals.

Patterns, Relations, and Algebra - Through numerous explorations, students deepen their understanding of patterns and work with variables as an introduction to algebra. For example, students will solve problems such as $a + 3 = 5$, or $45 \div b = 9$. All students should be aware of the mathematics in patterns. Students will identify, extend, and analyze/explain patterns, for example, 10, 13, 16... they will probe more deeply into the study of patterns as they explore the properties of the operations of addition and multiplication.

Geometry - Students compare, analyze, describe, and draw two- and three-dimensional geometric shapes, identifying properties such as angles, sides, corners or vertices, edges, interiors, and exteriors. Students investigate these features by using mirrors, paper folding, and hand drawing. Still using concrete objects, students develop the idea of transformations by recognizing changes effected by slides, flips, and turns, not only on individual objects but also on combinations of objects. Investigations of simple transformations lead to the concept of congruence and symmetry.

Measurement - Measurement is best learned through direct applications. Many attributes, such as length, perimeter, area, volume, weight, and temperature are explored. Simple unit conversions within a system of measurement (standard and metric) are carried out. Students compute elapsed time using a clock and calendar. They learn to select the tools and units of measurement appropriate to the situation to ensure precision and accuracy.

Data Analysis, Statistics, and Probability - Students learn to collect, organize, and display relevant data. To organize and display their data, they begin by using concrete and pictorial representations, and gradually learn to use tables, bar and line graphs, and data line plots. They will draw conclusions and make predictions about data collected. In the elementary grades, students begin the study of probability by conducting chance experiments with spinners, counters, number cubes, and other concrete objects. They learn to record outcomes of individual experiments, and to organize and analyze results. They identify certain, possible, and impossible events.

HISTORY AND SOCIAL SCIENCES

Throughout the year, the focus of the curriculum is to answer the essential question or big idea, which is “How have the geographic regions of North America evolved?” *Students in fourth grade will:* Learn map and globe skills, learn the themes of geography, explore Mexico, Canada, and the ten regions of the United States by investigating the history, cultural influences, climate, natural resources, economy, and physical features of each. Students will learn the 50 states and capitals, how immigrants and indigenous people influence North American culture, and explore the role that citizenship plays in the development of a community.

SCIENCE/TECHNOLOGY/ENGINEERING

The Science Program provides our students with the foundation and understanding of scientific topics through the acquisition of scientific knowledge, the development of thinking skills, and the application of the scientific method. The topics of study which correlate with the science frameworks are: Life Science: Ecosystem & Adaptations; Physical Science: Electrical Circuits; Earth Science: Earth & Space. *Students in fourth grade will be expected to:* Ask questions and make predictions, select and use appropriate tools and technology to extend observations, keep accurate records, conduct multiple trials to test a prediction, recognize simple patterns in data, record data and communicate findings to others.

ART

Students design and create a portfolio for their work and continue to develop their skills of reflection, writing, and sharing their reasons for their aesthetic decisions. They continue to use a variety of media to cut complex shapes, apply a range of adhesives, mix colors clearly, and draw human and other figures with more details. Students will also be introduced to perspective drawing with an emphasis on one vanishing point.

MUSIC

Through singing, playing, moving, and listening, students continue to analyze songs and pieces of music using the elements of music previously learned (melody, rhythm, harmony, form, and tone), as a guide. They can identify orchestral instruments and the pattern of extensive music selections. Students can improvise melody and harmony through singing and tonal and rhythm instruments. They have the opportunity to sing in a school-wide chorus. Students are invited to begin band instruction through the Andover After School Music Program. Once students have reached a level of proficiency; students have the ability to participate in a town-wide orchestra or band.

PHYSICAL EDUCATION

Students are introduced to more specific skills that relate to team and individual sports and activities. These activities include gymnastics, dance, speed ball, basketball, track and field, volleyball, and jump rope.