



Hawthorn School District 73

Curriculum Guide for Parents: Seventh Grade

What you can expect your child to learn and be able to do.

This guide shares important information about Hawthorn Learning Standards, which are aligned with the Illinois Learning Standards. These standards outline state requirements for your child's learning program and what students across the state should be able to do in certain subjects.

A good educational system provides many tools that help children learn. Curriculum standards are useful for making sure:

- ★ teachers know what is to be taught;
- ★ children know what is to be learned; and
- ★ parents and the public can determine how well the concepts are being learned.

The following pages provide information about learning standards for English language arts, mathematics, science, social studies, technology, physical development and health, and fine arts for Seventh Grade. For a more comprehensive list, which includes all of the performance indicators, you may view our Curriculum Guide online at www.hawthorn73.org.

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Seventh graders work in teams to complete science experiments.

English Language Arts

Through the study of the language arts, students will learn to read fluently and understand a broad range of written materials. They must be able to communicate well and listen carefully and effectively. They should develop a command of the language and demonstrate their knowledge through speaking and writing for a variety of audiences and purposes. In addition, students must be able to study, retain, and use information from many sources.

Big Idea/Topic: Interpreting Forms of Communication.

By the end of seventh grade, students will be able to...

Literacy

Reading

- ★ Determine the meaning of an unknown word or content-area vocabulary using knowledge of prefixes, suffixes, word roots, and context clues.
- ★ Make and verify predictions based on prior knowledge and text.
- ★ Identify organizational patterns in fiction and nonfiction.

- ★ Draw inferences, conclusions, or generalizations about text and support them with textual evidence and prior knowledge.
- ★ Differentiate between fact and opinion in a persuasive essay or excerpt.
- ★ Explain how character, theme, conflict, and point of view contribute to the meaning of a literary selection.
- ★ Compare stories to personal experience, prior knowledge, or other stories.
- ★ Identify and interpret literary devices.
- ★ Identify various subcategories of genres of literature (historical fiction, myth or legend, drama, story, poem, folktale, nonfiction, and essay).

Listening

- ★ Use a variety of listening strategies and participate in discussions.

Speaking

- ★ Deliver planned oral presentations using language and vocabulary appropriate to the purpose, message, and audience.
- ★ Design and produce group project reports in multiple formats.

Writing

- ★ Produce documents that convey a clear understanding and interpretation of ideas, organization, sentence fluency, word choice, voice, and conventions.
- ★ Edit and revise compositions using technology suitable for publications.
- ★ Identify appropriate resources to solve problems or answer questions through research.
- ★ Plan, compose, edit, and revise documents that synthesize information from multiple sources.
- ★ Prepare and orally present original work supported by research.



Mathematics

Mathematics is a language we use to identify, describe, and investigate the patterns and challenges of everyday living. It deals with numbers, quantities, shapes, and data, as well as numerical relationships and operations. Mathematics is a way of approaching new challenges through investigating, reasoning, visualizing, and problem solving with the goal of communicating the relationship observed and problems solved to others.

Big Idea/Topic: Interpreting the Real World through Mathematics.

Number Sense

- ★ Identify, locate, order, and compare integers, terminating decimals, fractions, and mixed numbers.
- ★ Solve problems involving prime factorization, greatest common factor, and least common multiple.
- ★ Solve problems involving addition, subtraction, multiplication, and division of integers, fractions, and decimals.
- ★ Apply order of operations to simplify expressions involving whole numbers, fractions, and decimals.
- ★ Identify and apply the following properties: commutative, associative, and identity.

- ★ Use proportional reasoning to model and/or solve problems.
- ★ Solve number sentences and problems involving fractions, decimals, and percents.

Estimation and Measurement

- ★ Solve problems involving the perimeter and area of polygons.
- ★ Determine or estimate length, area, and angles.
- ★ Solve problems involving scale drawings and maps.
- ★ Convert length, mass/weight, and time within the same measurement system.

Algebra and Analytical Methods

- ★ Extend a given sequence.
- ★ Write an expression using variables to represent unknown quantities.
- ★ Solve equations using the rules for addition, subtraction, multiplication, and division.
- ★ Evaluate algebraic expressions with one or more integer variable values.

Geometry

- ★ Identify and describe 2-dimensional shapes according to their characteristics.
- ★ Solve problems using properties of triangles and quadrilaterals (sum of interior angles).
- ★ Identify and describe circles, including radius and diameter.
- ★ Graph points and identify coordinates of points in all four quadrants.
- ★ Identify and construct parallel, perpendicular, and intersecting lines.
- ★ Classify and sketch acute, obtuse, and right angles.
- ★ Identify and apply relationships of congruent figures.

Data Analysis and Probability

- ★ Determine and use the mode, range, median, and mean to interpret data.
- ★ Compare different representations of the same data.



Middle school students worked with the Vernon Hills Public Works Department to design and paint snowplow blades.

Science

The goal of science education is to develop in learners an understanding of the inquiry process as it is related to key concepts and principles of the life, physical, and earth/space sciences. The curriculum addresses the integration of the sciences with technology and society as students learn to connect the importance of scientific knowledge to its application in everyday life.

Scientific Inquiry and Technological Design

- ★ Follow the scientific method by formulating hypotheses, conducting scientific experiments, collecting and recording data, and explaining, reporting, and displaying results.

Life Science: Diversity of Life Cycles

- ★ Identify and compare an ecosystem's biotic and abiotic factors.
- ★ Analyze biotic and abiotic data from a local habitat.
- ★ Choose proper tools that help measure or identify biotic or abiotic factors of a local habitat.
- ★ Analyze how biodiversity within ecosystems is related to the level of ecological health.
- ★ Describe how energy is transferred from one organism to another.
- ★ Observe structure and function in organisms.
- ★ Apply knowledge of structure and function to a design project.
- ★ Analyze cell structure, function, processes, and disease.

- ★ Compare and contrast sexual and asexual reproduction.
- ★ Compare characteristics of organisms produced by a single parent and those produced by two parents.
- ★ Explain the role of chromosomes in sex determination.
- ★ Explain that each organism is unique due to its genetic code.
- ★ Build a DNA model and explain the structure on an introductory level.

Physical Science: Energy Transfer

- ★ Explain how energy interacts with matter to conserve mass and energy.
- ★ Provide examples of how different types of energy are transformed in various situations.
- ★ Relate the interactions of matter and energy to cell processes—photosynthesis, fermentation, and respiration.
- ★ Describe chemical changes that occur within cells.
- ★ Conduct controlled experiments to investigate cell processes.
- ★ Relate the interactions of matter and energy to atmospheric conditions.
- ★ Describe chemical changes that occur in the atmosphere.

Earth /Space Science: Atmospheric Systems

- ★ Investigate the implications of ongoing changes to the Earth's atmosphere (global warming).
- ★ Explain climatic conditions given the geography of the area.
- ★ Investigate the impact of conservation practices on environmental issues.

- ★ Analyze and interpret weather data to predict short and long term weather patterns.
- ★ Use scientific processes to carry out controlled investigations.
- ★ Demonstrate how keeping accurate data, comparing results with those of others, and analyzing conclusions can improve the validity of scientific data.
- ★ Develop strategies to improve the validity of scientific data.

Science, Technology, and Society

- ★ Apply appropriate principles of safety, identifying potentially hazardous chemical combinations in the home or classroom, or provide safe and ethical care for all classroom organism collections.
- ★ Explore scientific technologies in life, environmental, physical, earth, and space sciences, identifying advances in the past century, describing technologies used by scientists to forecast, explain, or test major events in each of the sciences.

Safety and Practices of Science

- ★ Identify and reduce potential hazards in science activities.
- ★ Identify and demonstrate proper use of laboratory equipment.

Social Studies

The study of social studies helps students develop the ability to make informed and reasoned decisions for the public good. Students are preparing to become citizens of a culturally diverse, democratic society in an interdependent world. The curriculum integrates the disciplines of social science to promote civic competence.

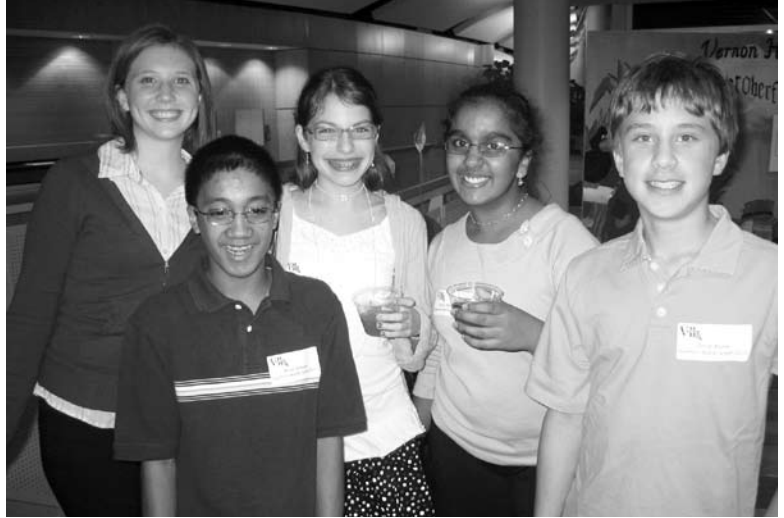
Big Idea/Topic: Key Influences on the Development of an American Identity. (Revolutionary War through the 19th century)

Political Science/Government

- ★ Analyze how state and national governments serve the purposes for which they were created.
- ★ Summarize the historical development of rights and responsibilities which are contained within the Bill of Rights and later amendments to the United States Constitution.
- ★ Analyze how cultural characteristics influence political practices (e.g., voting procedures, types of political campaigning).
- ★ Compare historical examples of issues, barriers in the election process affecting the rights of various groups.
- ★ Summarize an individual's or group's motivation for participating in the shaping of public policy.
- ★ Summarize the historical influences on the development of political ideas and practices as listed in the Declaration of Independence, the United States Constitution, the Bill of Rights, and the Illinois Constitution.
- ★ Describe both the ideas and actions of significant political figures, events, or processes that affected the formation and development of modern political parties.

Economics

- ★ Explain that consumer demand determines what producers will produce in a market economy.
- ★ Explain how technological changes have led to new and improved products.



Middle school Student Council members enjoyed themselves as they participated in a Student Government Day held by the Village of Vernon Hills.

- ★ Identify barriers to trade and their impact, and explain why nations create barriers to trade.
- ★ Analyze the impact of an increase or decrease in demand on jobs and consumers in the United States.
- ★ Identify examples of government policies and decisions and their impact on production and consumption in the economy.

History

- ★ Defend an interpretation of a significant person or event using a variety of primary and secondary sources.
- ★ Analyze the significance of cultural diversity in the social history of the United States.
- ★ Analyze the changing roles and status of men, women, and children from the colonial period through the 19th century.
- ★ Analyze the consequences of discrimination past and present.
- ★ Analyze the effects of a significant invention or technological innovation on the physical and cultural environment of one of the world's regions.

Geography

- ★ Design symbols as references for map interpretation and place them in a legend/key to be used on a map.
- ★ Demonstrate understanding of the spatial distribution of various phenomena by using latitude and longitude to plot data on a base map of the United States or the world.
- ★ Identify the reasons related to the natural characteristics of places.
- ★ Describe how legacies of the past have affected past and present human characteristics of places.
- ★ Analyze the effects of a significant invention or technological innovation on the physical and cultural environment of one of the world's regions.

Social Science

- ★ Describe how a culture is reflected in its art, music, and/or architecture and institutions.
- ★ Identify various cultures that have combined to create a larger, multicultural American society.
- ★ Analyze how various cultural groups have impacted the students' culture.
- ★ Analyze the reasons why social institutions change over time.
- ★ Explain how the changing concept of social institutions affects groups in society.

Technology

Technology is one of many tools that students have at their disposal as they engage in the learning process. Educational technology is the application of technology to the learning process. Technologically literate students access and acquire knowledge, exchange ideas and opinions, solve problems, and create, innovate, and express themselves through the skillful use of a variety of technologies. Technology is integrated into the classroom through regular planned activities and is used by students when its use will increase understanding and enhance learning.

Tools, Knowledge, and Skills

- ★ Apply strategies for identifying and solving routine hardware and software problems.
- ★ Develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
- ★ Utilize a wide variety of current and emerging technologies and media with various activities.
- ★ Use content-specific tools, software, and simulations (environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research.
- ★ Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum.
- ★ Design, develop, publish, and present products (Web pages, videos) using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom.
- ★ Collaborate with peers, experts, and others using collaborative tools to investigate curriculum-related problems, issues, and information, and to develop solutions or products for audiences inside and outside the classroom.
- ★ Select and use appropriate tools and technology resources to accomplish a variety of tasks and to design solutions to solve problems.
- ★ Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and problem solving.
- ★ Research and evaluate the reliability of Internet resources.
- ★ Know and model ethical, legal, and responsible behavior using technology.

Physical Development and Health

Physical development programs offer students the opportunity to enhance the capacity of their minds and bodies. Healthy minds and bodies are basic to academic success and, later in life, to enhancing the ability to contribute to a productive work environment. The health curriculum focuses on health promotion, safety, and understanding the human body and how it grows and develops. Problem solving, communication, responsible decision making, and team-building skills are major emphases, as well. More specific goals

are outlined in the curriculum guide in the following areas: movement skills, physical fitness, team-building, principles of health promotion, human body systems, and promoting health and well-being.

Continual Growth through Knowledge and Skills Will Ensure a Healthy Life Style

- ★ Enhance personal performance through continued growth in knowledge and physical skills.
- ★ Practice a fitness plan using a variety of practices in order to maintain a healthy life style.
- ★ Conduct basic treatment of first aid emergencies.
- ★ Use good communication skills to affect their social, emotional, and physical health.
- ★ Communicate the importance of the functions of the body's systems.

Fine Arts

In addition to their intrinsic value, the arts contribute to children's development and enrich the quality of life. The fine arts—dance, drama, music, and visual arts—are fundamental ways of knowing and thinking. The fine arts curriculum addresses the language of the fine arts, sensory elements, organizational principles, expressive qualities, and how the arts are similar, different, or related to one another. Students also learn how to interpret visual

images, sounds, movement, and story. The creation and performance of the arts is emphasized along with the role of the arts in civilization.

The Arts in My Changing World

- ★ Demonstrate the importance of utilizing a variety of elements in their original creations.
- ★ Appreciate a different culture's art.
- ★ Use observation of the world around them as a basis for the arts.
- ★ Describe qualities and elements used to convey meaning in a variety of artworks.