

Guide to Student Learning in Fourth Grade



*The student learning guide provides valuable information on what students learn in fourth grade.
Use this information to support and reinforce learning at home.*

At intermediate schools, all students will strengthen essential literacy and math skills through integrated learning experiences. The intermediate-school program provides a learning experience that encompasses all aspects of a comprehensive literacy community and prepares students for independent application of literacy skills and content understandings at the secondary level.

Classroom instruction is shaped by the guiding principle that all students are strategic readers, thinkers, and writers. Literacy skills are explicitly taught during English Language Arts instruction, and embedded within content instruction. This reinforcement model provides meaningful and consistent opportunities for the application of targeted literacy skills.

Information and Communication Technology (ICT) instruction is embedded into all content areas. The district provides each student with a device to introduce students to the use of technology tools for communication, collaboration, creativity, and critical thinking.

English Language Arts (ELA)

Fourth-grade students will continue to refine their reading and writing skills and will use these skills consistently in science, social studies, and health instruction. Students will have ample opportunity to read, write, listen, and speak in order to further understand the grade-level content. Fourth-grade students will use a variety of genres to continue to build their skills and understanding of different text types.

READING: Fourth-grade students will continue to develop their proficiency in reading as they reinforce their skills of syllabication, patterns, and morphology, and at the same time, encounter more complex text. Fourth-graders will have the opportunity to read across genres while they experience thematic units of study. Students will continue to build their skills in text analysis and will become proficient at citing evidence from text when responding.

WRITING: Fourth-grade students will continue to write in a variety of genres including narrative, informational, and argument. Students will have opportunities to expand these genres of writing as they write a short story or creative comic, animal and explorer research, a news report, and many opinion responses throughout context and texts.

SPEAKING AND LISTENING: Students will understand that being competent in speaking and listening will allow them to take advantage of new opportunities for communication. Students will listen and speak to understand, interact socially, extend discussion, and discuss content.

Mathematics

In fourth grade, instructional time is focused on three critical areas that will enable students to:

Develop an understanding of- and fluency with- multi-digit multiplication, and develop an understanding of dividing to find quotients involving multi-digit dividends

- Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place.
- Students apply their understanding of models for multiplication (equal-sized groups, arrays, area models), place value, and the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers.
- Students develop fluency with efficient procedures for multiplying whole numbers; understand and can explain why the procedures work based on place value and properties of operations; and use them to solve problems.
- Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends.

Develop an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers

- Students develop an understanding of fraction equivalence and operations with fractions.
- Students recognize that two different fractions can be equal (e.g., $15/9 = 5/3$), and they develop methods for generating and recognizing equivalent fractions.
- Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.

Understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry

- Students describe, analyze, compare, and classify two-dimensional shapes.
- Students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

Social Studies

In fourth grade, students begin to study United States and New York state history. Students will learn about the geography, history, economics, and government of the United States, with a primary focus on New York state. The course includes history from before the European colonial era to the modern period. Throughout the course students will make connections to present-day New York. Students continue to learn about the balance between rights and responsibilities in a democratic society.

Unit topics for 4th grade social studies include:

- Native Americans of New York state
- The colonial and revolutionary time period
- Forming a new government (The Constitution)
- The fight for freedom and rights for African-Americans and women
- Industrialization and Immigration.

Science

In fourth grade, students will engage in science to enhance their academic skills, independence, and confidence. Students will continue to select and read informational texts to solidify their understanding of the scientific concepts presented to them. Students will participate in a variety of hands-on activities to deepen their understanding of the following scientific **core ideas**:

Waves and Information

- Modeling wave properties such as wavelength and amplitude
- Coding and decoding information using various codes

Food Webs in Ecosystems

- Identifying the traits and characteristics of species that give them an advantage in survival
- Modeling and predicting predator/prey relationships in ecosystems
- Making inferences about how shifting animal populations affect the dynamics of an ecosystem

Structure, Function, and Information Processing

- Modeling how sensing light results in vision
- Exploring the internal structures of plants and animals
- Modeling how plants and animals receive and process information

Energy

- Analyzing the transfer of energy from one object to another
- Determining how and when energy is converted from one form to another
- Understanding how energy has contributed to new and improved technologies

Earth's Systems: Processes that Shape the Earth

- Using evidence to determine the changes in Earth's landscape overtime
- Identifying and quantifying various forms of weathering and erosion
- Evaluating the impact of natural disasters on human life

The crosscutting concepts of patterns, cause and effect, energy and matter, systems and system models, interdependence, and the influence of engineering/technology/science on society and the natural world are identified as organizing concepts for the core ideas listed above. The fourth-grade performance expectations rely heavily on students' abilities to utilize grade-appropriate **science and engineering practices**, such as asking questions, developing and using models, planning and carrying out investigations, analyzing and interpreting data, constructing explanations and designing solutions, engaging in arguments from evidence, and obtaining, evaluating, and communicating information. Students are expected to use these practices to demonstrate their understanding of the core ideas listed above.

Health

In fourth grade, the health curriculum will reinforce with students the importance of healthy behaviors.

There are four units of study.

- Respecting Myself & Others (Violence Prevention Strand, and core elements of Mental Health)
- My Immune System (HIV/AIDS)
- My Family, My Self (Family Life & Sexual Health)
- Tobacco, Alcohol & Other Drugs

Students also will continue to be encouraged to demonstrate effective communication and identify the people or systems they should turn to for support during emotional or physically harmful situations.

Helping students learn to respect themselves and to respect others is an important component of health education at all grade levels.

Physical Education

During physical-education class, fourth-grade students will participate in physical activities to improve cardio-respiratory endurance, flexibility, muscular strength, endurance, and body composition. Students will engage in:

- Fitness
- Football
- Soccer
- Orienteering
- Floor Hockey
- Basketball
- Bowling
- Recreational Games
- Movement Skills/Games
- Volleyball
- Lacrosse
- Educational Gymnastics
- Track & Field
- Whiffle Ball/Softball

It is important for children to develop regular exercise habits and activities at an early age that will be continued throughout their lives. In order for your child to become truly fit, these activities need to continue beyond the school day.

Music

In fourth-grade music, students add to their repertoire of rhythms and pitches and are able to read music on the treble staff. They use their knowledge of note reading to begin to play recorders. They continue to create music, as a class and as individuals, and ‘sing, say, and play’ music, and incorporate dance and movement. Students continue to build improvisation skills and begin incorporating composition techniques and improvisation practices as part of their regular experience. Students are also able to purposefully incorporate expressive qualities in the music they create to convey mood, emotion, or with intent. They learn that music of different cultures use the elements of music to create identifiable cultural characteristics.

Art

In fourth-grade art, students draw objects from observation and explore contour line. They expand their understanding of color to include tints and shades and create more complicated forms, such as cones and spheres. Students create digital artwork using traditional art tools in the virtual realm, including learning to use program menus and the management of file storage. Students continue to learn about the art elements and broaden their use of art media and tools as they create art works with implied textures, use techniques to create depth of space, and create pinch pots using clay. Students in this grade also continue to acquire art vocabulary, and begin to apply the art criticism process.

Performing Arts

Fourth-grade students may elect to participate in chorus, band, or orchestra. Chorus students may also participate in either band or orchestra. Students in band and orchestra will attend one lesson each week, in addition to their regularly scheduled ensemble rehearsals. Students in performing ensembles will learn how to apply the music elements to increasingly difficult levels of music and will be required to participate in at least two concerts each year.