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**Department of
Education**

Joel I. Klein, Chancellor

Great Schools Start with Great Expectations

Learning standards describe the foundation of what students should know and be able to do in each grade. These standards ensure that all children are prepared to move forward to the next grade and, later, to succeed in college, earn a living, and become productive members of their communities. Children need to develop a love of learning that will serve them well in a world where crucial information changes and grows rapidly.

To find work in the competitive global economy and function in a quickly changing world, our children will need to know more than ever before. This is true for graduates who plan to enroll in four-year colleges; it is equally true for students who want to start careers right out of high school.

The New York State standards we use are designed to provide our students with rigorous curricula to ensure that they develop the creativity, critical thinking skills, and ability to problem solve that they will need to meet the challenges of the modern world. But standards are a starting point, not a destination. By meeting and building on a solid foundation of knowledge, our students will get the most from their education.

Here you will find examples of what fourth grade students should know and be able to do by the end of the school year in language arts, mathematics, social studies, and science. You also will find ways you can support learning as a family, including things you can do at home, in your neighborhood, and around our great City.

This guide provides only a small sample of the standards for fourth grade. What about the other standards? What should your child have learned before starting fourth grade? What will he or she be learning in fifth grade and beyond? You can find answers to all these questions from your child's teacher or on our Web site at www.nyc.gov/schools/academics.

Good Study Habits

To help your child develop good study habits:

- ❑ Set up a comfortable location at home for doing homework.
- ❑ Help your child get organized.
- ❑ Set up a regular homework time.
- ❑ Make sure your child knows the teacher's homework policies.

For other ideas, visit www.nyc.gov/schools/academics.



Students with Disabilities

Unless otherwise stated on the student's Individualized Education Program (IEP), students with disabilities will participate in the general education curriculum, which can be adapted for different instructional levels and different settings (such as Collaborative Team Teaching classes or self-contained special education classes). Adaptations may include using instructional aids such as calculators and visual aids, providing additional time to learn new skills, and reducing the length of assignments to help students with disabilities meet the standards.

Ask Your Child's Teacher



Learning standards provide a great opportunity for you to talk with teachers about what your child is learning in school and how you can support this learning at home. Here are some questions you may want to ask.

To learn more about a standard:

- Can you show me examples of student work that meets this standard?
- May I look at some of my child's work related to this standard?
- When will my child work on this standard during the school year?
- What activities and materials are you using in school to help my child meet and exceed this standard? What classwork and homework do you expect to assign?
- What are some exercises I can do with my child to help him or her with this standard?
- Besides the standards covered in this guide, what else is my child expected to learn this year?

To learn how your child is doing in school:

- In what subjects is my child working at grade level? Are there any areas that need improvement?
- Is my child reading at grade level? Can you show me some books that my child can read?
- How much time each day does my child spend working on each subject area?
- How do you assess my child on these subjects during the year?

To learn how to support your child:

- Besides report cards, what are the best ways to keep up to date on how my child is doing?
- If your child is not on grade level: What support is the school able to offer my child? What can I do at home to help my child do better in school?
- If your child is on grade level or above: What extra enrichment and support do you suggest for my child? How can I help at home?

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Language Arts

By the end of the school year, all students should be able to:

- Read print-based and electronic literary texts silently on a daily basis.
- Set personal reading goals and reflect on changes in reading patterns.
- Recognize how authors use literary devices, such as simile and metaphor. Simile is the direct comparison of two different things; metaphor is an indirect comparison or reference to how different things are alike.
- Evaluate content by identifying important and unimportant details, themes across works, and different perspectives (such as cultural, ethnic, and historical).
- Use organizational structures such as compare/contrast, cause/effect, and chronological order for expository writing.
- Produce imaginative stories and personal narratives that show insight, logical progression, organization, and effective language.
- Produce a variety of original nonfiction writing, such as school reports.
- Recognize the perspectives of others, distinguishing among fact, opinion, and exaggeration.
- Ask clarifying questions, summarize, and explain a line of reasoning.
- Review own writing to edit for grade-level spelling, punctuation, and consistency in verb tense.



Learning at Home

The following strategies can be done in the families' native languages as well as in English.

Ask your child to make a list of books to read. Have your child check off books as he or she finishes reading them and keep adding new ones. We'd like each fourth grader to read at least 25 books this year, but this is a list that should never end.

Start a family book club. Choose a book that you, your child, and other members of the family will read. Set a time to talk about the book together.

Discuss the news of the day. Pick one important story in the news and talk about what it means to your neighborhood and your family.

Explore the many books, programs, exhibits, and other resources for children offered all year by the New York Public Library, nypl.org; the Brooklyn Public Library, www.brooklynpubliclibrary.org; and the Queens Library, www.queenslibrary.org.

Make visits to your local library a weekly ritual.

Mathematics



Learning at Home

Encourage your child to spot geometric shapes in buildings or familiar scenes. For example, find acute, obtuse, and right angles in a photo of the Brooklyn Bridge; the quadrilateral on a baseball field; or different kinds of polygons on street signs.

Ask your child to make a chart of the high and low temperatures reported in New York City for a month. What patterns can be seen? Talk about how the numbers might change next week or next month.

Start a spare change jar and invite everyone to contribute to a family goal. Once a week, ask your child to add up the coins and estimate when you will reach the goal.

Find a family recipe that serves four people. Ask your child to calculate how much of each ingredient it would take to serve eight people and how much to serve two people.

By the end of the school year, all students should be able to:

- Read and write whole numbers through 10,000.
- Round numbers to the nearest 10 (for example, round 878 to 880) and to the nearest 100 (for example, round 446 to 400).
- Understand that a decimal is a part of a whole. For example, Sarah has two dimes and two pennies. It can be represented as \$0.22. Recognize benchmark fractions (halves, thirds, fourths, fifths, sixths, and tenths), and identify equivalent fractions (for example, $\frac{1}{2} = \frac{2}{4}$) using visual models.
- Know the names of polygons, such as triangles, pentagons, and octagons. Know that the names of polygons are related to the number of sides and angles. For example, a triangle has three sides and three angles.
- Find the perimeter of a polygon by adding the lengths of its sides.
- Classify angles as acute (less than 90 degrees), obtuse (greater than 90 degrees), right (exactly 90 degrees), and straight (180 degrees).
- Use a ruler to measure to the nearest whole inch, half inch, quarter inch, foot, yard, centimeter, and meter.
- Use data to develop and make predictions.
- Use observations, surveys, and experiments to collect and record data. Show the data using tables, bar graphs, and pictographs.
- Figure out whether a mathematical statement is true or false and explain why.

Science

Science in fourth grade explores animals and plants in their environment; electricity and magnetism; properties of water; and interactions of air, water, and land.

By the end of the school year, all students should be able to:

- Explore how plants make food by using air, water, and energy from the sun.
- Describe how conditions in the environment—such as the amount of available food, water, air, space, shelter, heat, and sunlight—can affect how living things develop and grow.
- Understand that magnetism is a force that may attract or repel certain materials.
- Observe, describe, and explore the physical properties of water.
- Test objects to determine whether they sink or float.
- Observe different substances, such as oil or liquid soap, to see how they mix with water.
- Study and describe how matter transforms from one state to another, for example, from solid (ice) to liquid (water) to gas (water vapor).
- Describe how erosion changes the surface of land.
- Describe how water is recycled on earth through the natural processes of precipitation, condensation, and evaporation.
- Explore the effects—both positive and negative—that a hurricane, forest fire, or other extreme natural events can have on living things.

Learning at Home

Talk with your child about how electricity affects your home. List some ways your lives would be different if there were no electricity.

Help your child make a terrarium (find instructions on the Web, www.kids.nationalgeographic.com/Activities/Crafts/Miniature-garden, or at the library). Talk about how the plants get their water and nourishment when the terrarium is closed.

Together, look for examples of erosion near your home. Where did the water come from that caused the erosion? Where did it go?

Your child can learn more about the role of water in different areas of science on Ology, the American Museum of Natural History's Web site for kids, www.amnh.org/ology/water.



Learning at Home

As a family, visit a New York City park or playground near your home. Look for the historical sign that tells the story of the location and the person after whom the park is named. To locate a park or sign near your home, visit www.nycgovparks.org/sub_your_park/historical_signs.html.

South Street Seaport Museum re-creates sights and sounds of New York's early shipping industry. Visit the museum's Web site, www.southstreetseaportmuseum.org, for a history and timeline of the seaport and images from exhibits.

The African Burial Ground commemorates the contributions and legacy of Africans to colonial New York City. Visit the memorial's Web site at www.africanburialground.gov.

Ask your child to find the names and addresses of your borough president and the City Council member for your neighborhood. What kinds of issues does each one handle? Write a letter to one of them about an issue in your area.



Social Studies

In fourth grade social studies, students explore the history and government of New York City and State.

By the end of the school year, all students should be able to:

- Know and understand basic ideas about how our nation, State, and City developed, including early Native American Indian life in New York State; the Colonial and Revolutionary War periods; and the growth of industry, cities, and governments.
- Use skills that help them get information and form opinions about social studies topics. For example, take notes to gather and organize information, to identify points of view, to work together to create group presentations, and to summarize current events and issues.
- Research and make presentations on various topics in social studies, such as geography, history, government, and economics, related to New York and American history.
- Understand and describe the sequence of events that led to the Revolutionary War, including the economic factors, such as taxes and resources.
- Understand and explain how the location of New York City was important in the development of industry, New York State, and the United States.
- Research and learn about the many immigrant groups that settled in New York City past and present.
- Know the important founding documents of the United States, such as the Declaration of Independence, the Constitution, and the Bill of Rights, and how they help us understand the role of government in a democracy.
- Compare and contrast the duties of local, state, and federal governments.
- Appreciate the importance of citizenship and active participation in government.

More Essential Knowledge and Skills

Our fourth grade students are learning much more than to read, write, do math, and understand key concepts in science and social studies.

- **Arts:** Fourth grade students study the visual arts, dance, music, and theater education. They're not only learning about these subjects, they're also given the chance to create and/or perform their own works of art, whether it's a painting, a dance, a play, or a piece of music. For more details, visit www.nyc.gov/schools/artseducation.
- **Fitness and Health:** Students engage in a wide variety of opportunities to be physically active, learn how to make healthy decisions, develop a healthy lifestyle, and experience a wide variety of traditional and nontraditional fitness activities. For more details, visit www.nyc.gov/schools/academics/fitnessandhealth.
- **Library and Research:** Students can check out great books to read at home and learn the skills to use a wide range of instructional resources that help them in all subjects, such as selecting and using appropriate sources to answer questions; identifying facts and details that support main ideas; and presenting information clearly so that the main points are evident. For more details, visit www.nyc.gov/schools/academics/libraryservices.
- **Technology:** Fourth grade students are using computers, calculators, the Web, and other technology tools throughout the school day and at home for accessing information, writing, communicating, problem solving, and publishing their work. They also should be able to discuss common uses of technology in daily life, as well as basic issues related to responsible use of technology and the personal consequences of inappropriate use. For more details, visit www.nyc.gov/schools/studentssupport/instructionaltechnology.

Learn More

This guide provides only an overview of the many standards your child will be learning this year. You can view and download copies of these guides for grades K–8 as well as the complete standards for all subjects and all grades on our Web site at www.nyc.gov/schools/academics.

The Division of Teaching and Learning and the Office for Family Engagement and Advocacy (OFEA) offer additional information about your child's education and ideas on how you can support it, both at home and at your child's school. For more information, visit both the Teaching and Learning Web site, www.nyc.gov/schools/offices/teachlearn, and the OFEA Web site, www.nyc.gov/schools/offices/OFEA. You also can contact your school's parent coordinator or OFEA at (212) 374-2323 or ofea@schools.nyc.gov. Plus, you can call 311 for additional

cultural and historical institutions in the City to visit with your children.



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