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Great Expectations

Partnering for your child's future



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**Department of
Education**

Joel I. Klein, Chancellor

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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 sixth 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 sixth grade. What about the other standards? What should your child have learned before starting sixth grade? What will he or she be learning in seventh 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 children develop good study habits:

- ❑ Set up a comfortable location at home for doing homework with simple supplies, such as pens, pencils, paper, scissors, and tape, near at hand.
- ❑ Have them write down and organize assignments each day. They need to learn how to manage their time and work toward long-range goals.
- ❑ Encourage them to do the most difficult homework first, not last.
- ❑ Check to see that assignments are complete and on time. Be more concerned with the process they use to complete work than with getting a right answer.

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:

- Is my child working on 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?
- 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:

- Use a variety of strategies, such as asking questions, rereading, summarizing, and visualization, to support understanding of text that is read.
- Determine how the use of literary devices (such as simile and metaphor) conveys the author's message. Simile is the direct comparison of two different things; metaphor is an indirect comparison or reference to how different things are alike.
- Recognize how characters in a story change over time.
- Read and understand at least 25 books, including at least four books about one subject or by the same author or in one genre of literature.
- Keep a portfolio of original writing with different styles and purposes, such as informational writing (articles and reports); literary writing (stories, poems, and nonfiction); interpretive writing (such as book or movie reviews); and responsive writing (such as letters to the editor).
- Read silently and aloud from a variety of genres.
- Present five- to seven-minute reports on topics related to school subjects, using notes, outlines, and visual aids.
- Use persuasive language, tone, volume, and gestures to convince an audience of a point of view.
- Take notes while listening, recognizing, and recording the essential details.
- Use a thesaurus to identify synonyms (words that mean the same thing) and antonyms (words that have opposite meanings).



Learning at Home

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

Encourage your child to ask a librarian or a salesperson in a bookstore to recommend books of interest to him or her.

Show interest in your child's writing. Ask to read his or her recent work and talk about ideas your child is thinking about developing into poems, essays, or stories.

Challenge your child to find new ways to express ideas in writing. For example, see how many ways your child can describe an emotion, such as "happy" or "excited." To find synonyms online, go to www.m-w.com and click on "Thesaurus."

Invite your child to attend an adult gathering, such as a neighborhood meeting or a meal at a restaurant, to develop his or her speaking and listening skills.

Mathematics



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

- Read and write numbers through 1 trillion (1,000,000,000,000).
- Locate rational numbers (numbers that can be expressed as fractions or ratios) on a number line. For example, $\frac{1}{4}$ can be shown as 0.25 on a number line.
- Represent rational numbers in different ways. For example, $\frac{1}{2}$ also can be shown as a decimal (0.50) or as a percent (50 percent).
- Add, subtract, multiply, and divide fractions and mixed numbers with unlike denominators. For example, $\frac{1}{4} + \frac{1}{2} = \frac{3}{4}$ and $2\frac{3}{4} - 1\frac{1}{2} = 1\frac{1}{4}$.
- Find the area (the surface within the sides) of regular polygons (shapes in which all sides are the same length and all angles are the same measure) and irregular polygons.
- Find the circumference (distance around) and area of a circle.
- Identify customary units of capacity, such as cups, pints, quarts, or gallons as well as metric units of capacity, such as milliliters, cubic centimeters, or liters.
- Solve simple proportions. For example, solve the proportion $4:x = 5:25$. (Five is one-fifth of 25, so four has to have the same proportion or be one-fifth of x . Four is one-fifth of 20, so $4:20 = 5:25$.)
- Read and interpret graphs.
- Use a variety of ways to represent and solve problems. For example, use algebraic expressions or use a table.

Learning at Home

With your child, visit the Rose Center for Earth and Space at the American Museum of Natural History, www.amnh.org/rose, on the Upper West Side, locate images of space at www.nasa.gov, or find books on astronomy at the New York Public Library, kids.nypl.org. Talk about the very large numbers used to describe the universe and solar system.

Encourage your child to play board games, such as chess and backgammon, with you and other family members. Board games help develop children's discipline, critical thinking, and problem-solving skills. Visit the Chess in the Schools Web site, www.chessintheschools.org, to find out about their programs in New York City schools.

Invite your child to explore "Figure This," www.figurethis.org/index.html, a Web site from the National Council of Teachers of Mathematics that offers challenges, ideas, and resources to help children and families enjoy and use math.

Science

Science in sixth grade explores simple and complex machines, weather, and the diversity and interdependence of life.

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

- Identify simple machines, including levers, pulleys, wheels and axles, and inclined planes. Understand that complex machines, such as bicycles, use combinations of interacting simple machines.
- Understand potential energy (energy that is stored), kinetic energy (energy of motion), and mechanical energy (the combination of potential and kinetic energy that is applied to an object during work).
- Understand that all weather is caused by the unequal heating of the earth's surface. Pressure, relative humidity, temperature, and wind are some of the conditions that cause changes in weather.
- Understand extreme weather events, such as hurricanes, tornadoes, blizzards, and droughts.
- Understand cell theory: that a cell is the basic unit of structure and function in all living things.
- Compare and contrast unicellular and multicellular organisms—that is, those with a single cell and those with many cells.
- Understand the factors that affect the population growth of living things. For example, predators, rainfall, and available food supply all help determine the size of a herd of grazing animals.
- Understand how changes in the environment, such as global warming, can affect human beings and other living things.
- Understand how living things adapt to their environments to survive. For example, many animals change how they use food energy to keep their body temperatures constant.
- Use a compound microscope (a microscope that uses more than one lens to magnify objects) to determine the size of an object too small to be seen with the human eye alone.

Learning at Home

Is your neighborhood in the path of high water from coastal storms or hurricanes? Ask your child to check out the map of impact zones at www.oasisnyc.net/OASISNYC_CoastalStormZones.htm.

With your child, visit the American Museum of Natural History's Ology Web site for kids, amnh.org/ology/earth/stufftodo/weather_main.html, to learn how to make your own family weather station.

Encourage your child to visit the U.S. Environmental Protection Agency's Global Warming Web site for kids, epa.gov/climatechange/kids/index.html for information, games, links, and more.

Talk with your child about how your family can conserve water, energy, and other resources in your home. Ask your child to make a plan your family can follow.



Learning at Home

With your child, browse an online newspaper from a country in the Eastern Hemisphere—for example, *Pravda* from Russia, english.pravda.ru; *China Daily* from China, www.chinadaily.com.cn; or *The Times*, from London, England, www.timesonline.co.uk/tol/news.

Encourage your child to learn more about New York City’s “sister cities” in the Eastern Hemisphere. Go to the New York City Global Partners Web site, www.nyc.gov/html/unccp/scp/html/scphome/home.shtml and click on “NYC’s Sister Cities.”

With your child, explore the art from many Eastern Hemisphere cultures and many periods in history at New York’s Metropolitan Museum of Art. Browse the museum’s online timeline of art history, www.metmuseum.org/toah/splash.htm.



Social Studies

In sixth grade, students explore the geography and development of the Eastern Hemisphere, including the nations of Africa, Asia, and Europe.

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

- Understand that time can be measured in years, decades, centuries, and millennia.
- Identify the key turning points and events for Eastern Hemisphere nations (for example, the Roman Empire, the Middle Ages, and the Russian Revolution).
- Compare and contrast current events with historical events.
- Use primary sources to report on historic periods in countries of the Eastern Hemisphere. For example, use original photographs, films, diaries, and other firsthand materials to report on World War II and the Holocaust.
- Understand the development of early civilizations of the Eastern Hemisphere. For example, know why the lands along the Tigris and Euphrates Rivers are known as the Cradle of Civilization.
- Read and interpret maps to understand that civilizations developed where geographic conditions were most favorable.
- Use special-purpose maps, globes, and photographs to understand the natural resources of countries of the Eastern Hemisphere.
- Understand that the migration of peoples has led to the exchange of ideas.
- Understand how governments in the Eastern Hemisphere have changed to meet people’s needs (for example, changes in China, South Africa, etc.).
- Compare and contrast views on authority and the law held by people in different nations of the Eastern Hemisphere.

More Essential Knowledge and Skills

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

- **Arts:** Sixth grade students participate in visual arts, dance, music, and theater. They increase their skills in each art form and learn how to research the histories of the forms. They connect their studies to the historic, cultural, economic, and other factors that influence the arts, and they explore New York City's varied and rich arts resources. For more details, visit www.nyc.gov/schools/artseducation.
- **Fitness and Health:** Students continue to improve their personal health and well-being, the health of their families and friends, and the health of their schools and communities. For instance, across all content areas, students learn how to analyze the influence of family, peers, and media on health behaviors and how to practice healthy behaviors and avoid dangerous behaviors, such as smoking and drugs. For more details, visit www.nyc.gov/schools/academics/fitnessandhealth.
- **Library and Research:** By the end of the year, sixth grade students can write questions that lead to interesting investigations; use the online catalog to locate specific books and browse the shelves; use several formats, including Web sites and subscription databases as sources of information; combine information and inferences to draw conclusions and create meaning; present facts and conclusions in a variety of ways; and follow safety procedures when using the Internet. For more details, visit www.nyc.gov/schools/academics/libraryservices.
- **Technology:** Students in the sixth grade know safe and responsible uses of technology and information. Students can describe steps for using common Web search engines and basic search functions of other technology resources to locate and evaluate information from a variety of sources. Students properly cite their work and understand the consequences of plagiarizing. 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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