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# Great Expectations

Partnering for your child's future



**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 seventh 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 seventh grade. What about the other standards? What should your child have learned before starting seventh grade? What will he or she be learning in eighth 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](http://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](http://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?

# Language Arts

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

- Recognize how authors use literary devices such as alliteration (repeating the same consonant sounds at the start of words, as in “pretty in pink”) or foreshadowing (weaving in clues about what will happen later in the story).
- Understand that their personal points of view will affect the opinions they form about texts and issues.
- Use different methods to plan and organize their writing. For example, they could keep a writer’s notebook or use a graphic organizer, such as a timeline.
- Listen to class lectures, small-group discussions, and classroom discussions to understand and interpret literature and informational text (reports, articles, etc.).
- Present original literary texts such as their own poems, plays, or stories. Use inventive language and text structures. For example, they could use an introduction that catches the listener’s interest.
- 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.
- Recognize that the way words are spoken can affect their meaning. For example, speech can convey sarcasm, irony, or enthusiasm.
- Use different comprehension strategies, such as predicting, questioning, summarizing, visualizing, and making connections, to understand and respond to reading.
- Use knowledge of word roots (such as those of Greek, Latin, or Anglo-Saxon origin) and word parts (such as prefixes and suffixes) to determine the meanings of new words.
- Read silently and aloud from a variety of genres.



## Learning at Home

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

**Encourage your child to keep a journal, blog, or other written record** of an ongoing personal experience or theme. For example, they could write about possible careers, making and keeping resolutions, undertaking a continuing volunteer project, or starting a new school year.

**Record a discussion between your child and yourself.** Analyze each other’s tone of voice, volume, pace, and choice of language. What nonverbal messages does each voice communicate?

**Encourage your child to check out online research resources** on topics of interest available through the New York Public Library’s Web site, [kids.nypl.org](http://kids.nypl.org).

# Mathematics



## Learning at Home

Open a college savings account with your child and set savings goals.

“On-Lion” for Kids, the New York Public Library’s Web site for young people, has great math and science games and explorations at [kids.nypl.org/science/math.cfm](http://kids.nypl.org/science/math.cfm), including homework help and Q&As on middle school math concepts and problems.

Talk with your child and your child’s teachers. The math curriculum may have changed since you were a student. Don’t be afraid to ask questions. For tips on how to support your child, go to [www.figurethis.org](http://www.figurethis.org), and click on “Family Corner.”

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

- Use scientific notation to express very large and very small numbers. For example, 1 trillion (1,000,000,000,000) can be written as 10 to the 12th power, or  $10^{12}$ .
- Add, subtract, multiply, and divide integers—positive whole numbers (1, 2, 3, . . .), negative whole numbers (−1, −2, −3, . . .), and zero.
- Use the circumference or area of a circle to find the radius and diameter of a circle. For example, the circumference equals the diameter multiplied by  $\pi$  ( $\approx 3.1416$ ), so if the circumference of a circle is 15 units, divide 15 by 3.1416 to get a diameter of approximately 4.77 units.
- Understand and apply the geometry of right triangles, including the Pythagorean theorem. The sum of the squares of the two sides of a right triangle equals the square of its hypotenuse, or  $a^2 + b^2 = c^2$ .
- Identify customary units of mass, such as pound and ounce, and metric units of mass, such as gram and kilogram.
- Calculate distance using a map scale. For example, if the scale is 1 inch = 10 miles, calculate the distance between two points that are  $4\frac{1}{2}$  inches apart on a map.
- Calculate and compare unit prices. For example, if an 8-ounce carton of milk costs \$0.60 and a 12-ounce bottle costs \$1.00, calculate the cost per ounce of each to find out which is the better bargain.
- Convert money between different currencies. For example, calculate how much \$100.00 is in Euros, the currency used by nations in the European Union.
- Solve multistep equations, such as  $2x + 3 + 5x = 10$ , by combining like terms.
- Use estimation to see if an answer to a problem is reasonable.

# Science

Science in seventh grade explores geology, matter and energy, and the dynamic equilibrium of the human animal and other organisms.

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

- Understand that rocks can be igneous (formed from cooled magma or lava), sedimentary (formed by settling and compression), and metamorphic (changed by heat and pressure).
- Understand that rocks go through a cycle of changes from one form to another. For example, igneous rocks can be broken down by weather or other forces into particles that can become compressed into sedimentary rocks. Under pressure and heat, both igneous and sedimentary rocks can become metamorphic rocks.
- Understand where fossils are found and understand the importance of fossils as records of the past.
- Understand that the earth's crust consists of plates that move and understand the evidence that supports that theory.
- Understand that earthquakes are caused by faults and folding in the earth's crust.
- Understand the periodic table and the concepts of atoms, elements, molecules, and compounds.
- Understand chemical reactions—the process of converting one substance into another substance with different properties. Recognize common chemical reactions, such as when hydrogen atoms and oxygen atoms join together to make molecules of water.
- Understand how the human body keeps its internal environment stable (maintains homeostasis) with its systems working smoothly together.
- Understand how the body uses processes, such as respiration and metabolism, to regulate its internal environment.
- Understand how plants and animals obtain energy and respond to their external environment.

## Learning at Home

Together, see fossil specimens of dinosaurs and other prehistoric creatures at the American Museum of Natural History's world-famous fossil halls. Ology, the museum's Web site for young people, [www.amnh.org/ology/paleontology/stuff/findfossils.html](http://www.amnh.org/ology/paleontology/stuff/findfossils.html), offers tips for fossil hunters and links to other sites.

**Challenge your child to identify chemical reactions that occur in your home.** For example, think about the chemical reactions that occur in cooking, cleaning, and other daily activities. Remember that natural processes, such as photosynthesis and respiration, also are examples of chemical reactions.

**Work up a sweat by taking a brisk walk around your neighborhood with your child.** Pay attention to how your bodies react by breathing hard, increasing your heartbeat, and other regulatory measures. Whose body returns to normal the fastest?

**Encourage your child to visit Volcano World,** [volcano.und.nodak.edu](http://volcano.und.nodak.edu), a Web site with news and information, personal reports of close volcano encounters, and updates on eruptions around the world.



## Learning at Home

**Take a walk with your family through our City's African-American history.** Ask your child to download the African heritage walking tour from the Immigrant Heritage Trail Web site, [immigrantheritagetrail.org](http://immigrantheritagetrail.org), a project of the Lower East Side Tenement Museum.

**Encourage your child to research how the Civil War changed New York State and our City.** For example, check out the Brooklyn Public Library's online history of Brooklyn's experience in the Civil War at [brooklynpubliclibrary.org/civilwar](http://brooklynpubliclibrary.org/civilwar).

**Invite your child to research your family's immigration story** and share it with the Ellis Island Immigration Museum, [www.ellisland.org](http://www.ellisland.org). Your child also can use the site to research the stories of other families.

**As a family, visit the George Gustav Heye Center of the National Museum of the American Indian in Manhattan,** [www.nmai.si.edu](http://www.nmai.si.edu). Investigate which Native American communities lived in this region when the first European explorers arrived.



# Social Studies

In seventh grade social studies, students explore United States and New York history from 1500 to the aftermath of the Civil War.

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

- Know and understand the interactions between Native Americans and early European settlers and the effect of settlement on Native Americans.
- Understand the political, economic, and social organization of the Algonquian cultures.
- Understand how different peoples view the same event or issue from a variety of perspectives. For example, how did the views of Native Americans and European explorers regarding colonial settlement differ?
- Investigate the heritage and legacies of European colonies in America. For example, examine the influence of the Dutch on the colony of New Amsterdam, or compare and contrast the English, French, and Spanish colonies.
- Describe an event in history through the eyes of an individual who was there.
- Use maps to interpret settlement patterns of the growing American nation, such as the Louisiana Purchase and westward expansion.
- Understand the complex causes of the American Revolution (economic, social, and political).
- Read and interpret documents key to the founding of the United States, such as the Magna Carta, the Declaration of Independence, and the Bill of Rights.
- Understand the causes and effects of slavery.
- Read and interpret a variety of primary sources to understand the causes and results of the Civil War and Reconstruction.

# More Essential Knowledge and Skills

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

- **Arts:** Seventh grade students complete one semester each of two art forms, such as visual arts, dance, music, and theater. They build skills and techniques in the art form; create original works; master the vocabulary and related literature; research the history; and use arts institutions as resources for learning, potential careers, and advanced learning in the arts fields. For more details, visit [www.nyc.gov/schools/artseducation](http://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](http://www.nyc.gov/schools/academics/fitnessandhealth).
- **Library and Research:** By the end of the year, seventh grade students can use background information to predict answers to inquiries; refine research questions; evaluate and use information that is useful, current, and accurate; use facts and opinions responsibly; organize information to draw conclusions; cite sources; recognize and consider the points of view of the author and others; and read a variety of genres. For more details, visit [www.nyc.gov/schools/academics/libraryservices](http://www.nyc.gov/schools/academics/libraryservices).
- **Technology:** Students in the seventh grade continue to practice, discuss, and share safe and acceptable uses for technology and information. Students learn how to identify and implement procedures for designing, creating, and populating a database and how to perform queries to process data and report results relevant to an assigned hypothesis or research question. Students use multiple types of information and communication technology tools to inform and solve a specific problem and present results or to identify and present an informed rationale for a decision. For more details, visit [www.nyc.gov/schools/studentssupport/instructionaltechnology](http://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](http://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](http://www.nyc.gov/schools/offices/teachlearn), and the OFEA Web site, [www.nyc.gov/schools/offices/OFEA](http://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](mailto:ofea@schools.nyc.gov). Plus, you can call 311 for additional cultural and historical institutions in the City to visit with your children.



Joel I. Klein, Chancellor

