

A Parent's Guide to Student Learning

Examples of what your child will be learning at each grade level

GRADE 7

Denver Public Schools has embraced the Colorado Academic Standards to ensure students are equipped for success in the 21st Century. These parent guides provide an overview of what your child will be learning in language arts, math, science and social studies, based on the academic standards, in each grade. They also describe ways you can help at home and include additional helpful resources.



Language Arts

Developing evidence to support analysis, expanding vocabulary

- Analyze how the form or structure of a play or poem contributes to its meaning.
- Analyze how particular elements of a story or play interact (such as how the setting shapes the characters or plot).
- Determine how an author develops and contrasts the points of view of different characters or narrators in a text.
- Conduct short research projects, drawing on several sources and identifying related questions for further research and investigation.
- Compare and contrast a text to an audio, video or multimedia version of the text, analyzing how the text is portrayed in each of the different ways.
- Engage in a range of discussions on topics and texts, expressing ideas clearly and building on the ideas of others.
- Identify a speaker's argument and specific claims and evaluate the reasoning and evidence behind these claims.
- Introduce a topic clearly and develop the topic with relevant facts, definitions, concrete details, quotations or other information and provide a concluding statement when writing informative texts.
- Write for a range of purposes and audiences.
- Use clues such as word roots or add-ons to a word (such as hyper- in the words hyperactive and hypersensitive) to determine the word's meaning.

Mathematics

Analyzing proportional relationships, writing equations to solve word problems

- Analyze proportional relationships and distinguish proportional relationships from other kinds of mathematical relationships (such as buying 10 times as many items will cost you 10 times as much but taking 10 times as many aspirin will not lower your fever 10 times as much).
- Solve percent problems (such as simple interest, tax, markups and markdowns).
- Identify the unit rate of change (the constant rate at which the value of a variable changes) in tables, graphs, equations and verbal descriptions.
- Solve equations such as $3x + 12 = 2(x - 4)$ to find the missing variable (x).
- Use variables to represent quantities and construct simple equations to solve problems (such as $5x + 2 > 10$).
- Solve word problems that have a combination of whole numbers, fractions and decimals (such as a woman making \$25 per hour receives a 10% raise; she will make an additional $\frac{1}{10}$ of her salary an hour, or \$2.50, for a new salary of \$27.50 per hour).
- Understand that numbers cannot be divided by 0.
- Solve problems involving angle measure, area of two-dimensional objects, formula for circumference of a circle, and volume and surface area of three-dimensional objects.
- Use statistics to draw inferences and make comparisons (such as deciding which candidate is likely to win an election based on a survey).



Science

Understanding adaptation of organisms, how life on Earth has changed

- Understand why individual organisms with certain traits are more likely than others to survive and have offspring in a specific environment (for example, species that can live with humans, such as rats and pigeons, are more common around towns and cities).
- Develop, communicate and justify an evidence-based explanation for why a given organism with specific traits will or will not survive to have offspring.
- Learn the human body is composed of atoms, molecules, cells, tissues, organs and organ systems that have specific functions and interactions.
- Understand how each body system contributes to supporting human life.
- Learn that cells are the smallest unit of life that are able to function independently and perform all the necessary functions of life.
- Compare and contrast the basic structures and functions of plant cells, animal cells and single-celled organisms.
- Understand that photosynthesis and cellular respiration are important processes by which energy is acquired and utilized by organisms.
- Explore the multiple lines of evidence showing the evolution of organisms over geologic time.
- Analyze the evidence showing how life on earth may have changed over time.
- Analyze and critique the evidence regarding the causes and effects of a mass extinction event.

Social Studies

Learning about the Eastern Hemisphere, resource distribution

- Seek and evaluate multiple historical sources with different points of view to investigate a historical question and to form and defend a thesis.
- Understand the interdependence of people around the world during significant eras or events.
- Learn about the historical eras, individuals, groups, ideas and themes within regions of the Eastern Hemisphere and their relationships with one another.
- Describe the history and contributions of various cultures that have lived in or migrated to the Eastern Hemisphere (such as world religions, the Silk Road).
- Use maps and other geographic tools to find patterns in human and physical systems.
- Explain how the physical environment of a place influences its economy, culture and trade patterns (for example, a snow mobile business should not be located in southern American states).
- Define supply and demand.
- Understand how different factors can affect supply and demand (such as natural disasters prompting citizens to stock up on emergency supplies).
- Understand how the distribution of resources influences economic production and individual choices (such as large companies locating near transportation).
- Compare how various nations define the rights and responsibilities of citizens.
- Evaluate how various nations interact, resolve differences and cooperate.
- Analyze conflicts among nations including causes and consequences.



You Play A Key Role

You do not have to be an expert to help your child with homework. The Colorado Academic Standards are focused on critical thinking. So asking your child these three simple questions can help develop deeper understanding:

- Ask “How do you know that?” to prompt your child to think critically about reaching an answer.
- Ask “Can you prove it?” to encourage your child to defend a solution or explain an alternate route.
- Ask “Can you use this in a real-world situation?” to spark thinking about using what’s learned in everyday life.

Language arts

- Provide time and space for your child to read independently. This time should be free from distractions such as TV.
- Ask your child for favorite topics, events or activities. Then look for books, magazines or other materials about those topics to help motivate your child to read.
- Ask your child the names of favorite authors. Ask questions that invite thinking and learning, such as, “Why are these your favorite authors?” “What ideas does the author write about?” “Who are your favorite characters from their books?” “Why?” To find recommendations for books for your child, visit www.corestandards.org/assets/Appendix_B.pdf.
- It is helpful for your child to see other people reading at home. You could share what you have read.
- Make time for conversation at home. Discuss current events, shared interests and future aspirations for education and career.
- Visit a local museum together. Take time to closely observe the exhibits and talk about what you see. Local museum options include the Denver Art Museum, the Museo de las Americas or the Denver Museum and Nature and Science.

Math

- Look for “word problems” in real life. For example, figure the amount of a 15% tip or determine what percentage of weekly income goes to pay taxes.
- For a long-term project, help your child choose a stock and follow its value on the stock market using the newspaper or the Internet. Have your child calculate the stock’s percent increase or decrease each month.
- Use store advertisements to engage your child in working with numbers. For example, if a store advertises 30% off, have your child estimate the dollar amount of the discount as well as the sale price of the item.
- Have your child use four 4’s and any of the four arithmetic operations to write the numbers from 0 to 20. For example, $44 - 44 = 0$; $4 \times 4 - 4 \times 4 = 0$; How do you get 1? $\frac{4}{4} + 4 - 4 = 1$.
- For math games and challenges to do at home, go to www.figurethis.org. The site is also available in Spanish.

Want to learn more?

Resources: The DPS standards website provides additional information and parent resources on the academic standards and how you can help at home. Visit standards.dpsk12.org to find the following resources:

DPS guides:

- Parent guides for all grade levels, including activities to help your child at home.
- Standards and students with special needs.
- Technology expectations by grade level.

These guides were developed using the following outside resources (also available on the DPS standards site):

- Colorado Department of Education grade-level expectations for all 10 Colorado Academic Standards.
- National PTA parent success guides, by grade level, in language arts and math (English and Spanish).
- Council of Great City Schools parent roadmaps, by grade level, in language arts and math (English and Spanish).

Questions:

For questions, please email standards@dpsk12.org.

