



MY CHILD'S LEARNING:

# a Parent's Guide to the Iowa Core

This guide provides an overview of what your child will learn by the end of 8th grade as directed by the Iowa Core, our statewide academic standards. The guide focuses on the key concepts and skills in mathematics, literacy, science, social studies and 21st century skills. In addition, the Iowa Core builds a strong foundation for success in other subjects he or she studies throughout the school year. If your child is meeting the expectations outlined in the Iowa Core, he or she will be well prepared for high school.

## Why are Academic Standards Important?

Academic standards are important because they help ensure that all students, no matter where they live or what school they attend, are prepared for success in college and the workforce. They help set clear and consistent expectations for what students should know and be able to do from kindergarten through 12th grade. Standards are a set of goals, not a curriculum, so decisions about teaching remain with local schools.

High standards help teachers and parents work together to ensure students succeed. They guide parents and teachers to know when students need extra assistance or when they need more challenge in the classroom. They also help your child develop critical-thinking skills that will prepare him or her for college and career.



## How are the standards organized?

Some of the Iowa Core standards are arranged grade by-grade, while others are grouped into a span of grade levels such as 9th-12th grade. In all cases, the standards set appropriate expectations for what students need to learn, but not how to teach.

**Read the complete standards at:**

**[www.iowacore.gov](http://www.iowacore.gov)**

Some content adapted from the National PTA's *Parent's Guide to Student Success*.



## Mathematics

Your child will continue to learn how to write and reason with algebraic expressions. He or she also will make a thorough study of linear equations with one and two variables. By building on previous work with relationships between quantities, your child will be introduced to the idea of a mathematical function. Your child will prepare for high school geometry by learning about congruence (same shape and size) and similarity of geometric figures.

### Examples of Your Child's Work at School:

- Understand that slope of a line is a constant rate of change, and relate linear equations in two variables to lines in the coordinate plane.
- Solve linear equations (e.g.,  $-x + 5(x + \frac{1}{3}) = 2x - 8$ ); solve pairs of linear equations (e.g.,  $x + 6y = -1$  and  $2x - 2y = 12$ ); and write equations to solve related word problems.
- Understand functions as rules that assign a unique output number to each input number; use linear functions to model relationships.
- Analyze statistical relationships by using a best-fit line (a straight line that models an association between two quantities).
- Understand congruence and similarity by using physical models, transparencies or geometry software (e.g., when given two congruent figures, show how to obtain one from the other by a sequence of rotations, translations and/or reflections).
- Understand and apply the Pythagorean Theorem ( $a^2 + b^2 = c^2$ ) to solve problems.

### How to Help Your Child at Home:

Ask your child to share with you how to:

- Solve interesting problems that involve cylinders and spheres to figure out, for example, how much water fits inside a garden hose, or how many Earths would fit inside the sun.
- Analyze data with a scatterplot to decide, for example, how exercise and obesity are potentially related.
- Solve algebra problems, such as: "You have a coupon worth \$18 off the purchase of a scientific calculator. At the same time the calculator is offered with a discount of 15%, but no further discounts may be applied. For what tag price on the calculator do you pay the same amount for each discount?"

## English Language Arts & Literacy

To prepare for bigger challenges in high school, students this year must grapple with major works of fiction and nonfiction that extend across cultures and centuries. As they work to understand precisely what an author or speaker is saying, students also must learn to question an author or speaker's assumptions and assess the accuracy of his or her claims. They also must be able to report findings from their own research and analysis of sources in a clear manner.

### Examples of Your Child's Work at School:

- Analyze where materials about the same topic disagree on matters of fact, interpretation or point of view.
- Learn how authors support their ideas through word choice, sentence and paragraph structure, and other methods.
- Build writing around strong central ideas or points of view; support the ideas with sound reasoning and evidence, precise word choices, smooth transitions and different sentence structures.
- Analyze the purpose of information presented in diverse media (e.g., print, TV, web), and evaluate its social, political or commercial motives.
- Use strong, active verbs to create a clear picture for the reader (e.g., walk, skip, meander, lurch, limp).
- Interpret figures of speech (e.g., irony, puns) and develop a large vocabulary of general academic words and phrases.

### How to Help Your Child at Home:

- Make time in everyone's busy schedule for family discussions about things happening around the world. Weekends can be a chance for everyone to catch up.
- Visit the campus of a local college with your teen. Begin talking about college early. What does he or she expect from college? What high school courses will your child need to pass to prepare for college?
- Keep books and magazines around the house that your child will enjoy reading and learning from.



## Science

In 8th grade students' engage in Science and Engineering Practices and apply Crosscutting Concepts to deepen their understanding of science. Core ideas included in 8th grade are, *Matter and Interactions*, *Motion and Stability: Forces and Interactions*, *Energy and Waves*, *Ecosystems*, *Biological Evolution: Unity and Diversity*, *Earth's systems/Earth and Human Activity*, and *Engineering Design*. Your child will have multiple opportunities to demonstrate science learning. Including, but not limited to, using models, providing evidence to support arguments, obtaining and analyzing data about relationships and interactions among observable components of different systems.

### Examples of Your Child's Work at School:

- Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.
- Evaluate competing design solutions for maintaining biodiversity in ecosystems.
- Gather and synthesize information about the technologies that have changed the way humans influence inheritance of desired traits in organisms.
- Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
- Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

### How to Help Your Child at Home:

- Encourage finding answers to questions through research and experimentation.
- Help your child create and test a Rube Goldberg device to solve a problem.
- Join a group or club that offers activities such as robotics and computer programming.
- Provide opportunities to observe and talk about changes in matter related to cooking.
- Encourage and help design, create and maintain a terrarium to observe the interactions among Earth's spheres.
- Keep track of weather data at your home and compare with local news weather data.

## Social Studies

In eighth grade, students will focus on the history of the United States, especially early American history. Students will analyze the powers and civic responsibilities of citizens and examine the origins, functions and structures of the U.S. government.

### Examples of Your Child's Work at School:

- Present original arguments to an authentic audience using credible sources.
- Analyze how a specific problem can manifest itself at the local, regional, and global levels over time.
- Analyze various primary sources such as the Declaration of Independence, the Constitution, Washington's Farewell Address, and the Missouri Compromise, etc.
- Explain the powers and responsibilities of citizens, political parties, and the media in a variety of contexts.
- Explain how push and pull factors contributed to immigration and migration in early American history.
- Explain how global interconnections influenced early American history.
- Calculate the cost of borrowing money for different types of goods.

### How to Help Your Child at Home:

- Encourage your child to read every day and to especially seek out rich nonfiction materials related to social studies. Use the National Council for the Social Studies Notable Trade Book List at <http://www.socialstudies.org/notable> as a resource to help your child select reading materials.
- Visit local museums and cultural institutions and look for information on early American history and any role Iowa played in that history.
- Work with your child to do authentic research in the field of social studies. Work to ensure resources are credible and students are able to formulate an argument based off evidence from research.
- Use a variety of news sources, both print and digital, to discuss current events and their connection to early American history.
- Encourage your child to participate in social studies programs such as National History Day, mock trial, We the People, etc.
- Discuss the role of borrowing money and the cost of it.



## 21st Century Skills (6-8)

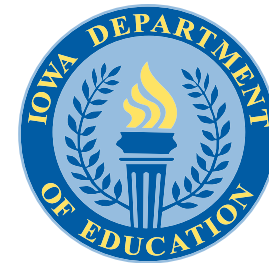
Your child will apply literacy and critical-thinking skills to interpret and understand health, financial and technology concepts. Students will practice career-readiness skills necessary for success in every job; refine their written/oral communication skills; and choose from a variety of exploratory courses to broaden their life skill experiences. They will have opportunities to volunteer within their schools and in the community.

### Examples of Your Child's Work at School:

- Use technology (monitors) to record heart rate during different types of exercise and analyze the results.
- Understand how volunteerism contributes to the good of society.
- Demonstrate legal and ethical use of technology and copyrighted material, and an understanding of how disregard for this responsibility affects others.
- Explore employability skills by creating a list based on current research from websites and/or interviews, and write and publish an article about the findings.
- Explain the difference between saving and investing money.

### How to Help Your Child at Home:

- Visit [www.stopbullying.gov](http://www.stopbullying.gov).
- Encourage your child to read and discuss books with 21st Century skills content: *What Color Is Your Parachute for Teens: Discovering Yourself and Defining Your Future* by Carol Christen, *The 7 Habits of Highly Effective Teens* by Sean Covey, and *The Voluntweens: A Guide* by Stephanie Moncilovich.
- Help your child develop a personal spending plan for money he or she receives through gifts, allowance or work.
- Include your child in lifelong activities you enjoy, such as golf, handball, running, or tennis.



Read the complete standards at:  
[www.iowacore.gov](http://www.iowacore.gov)