7th Grade Family Guide

What is the purpose of this family guide?

This guide was made to help families understand the Iowa Academic Standards and to show what students will learn by the end of seventh grade. It provides information about the key ideas and skills teachers will introduce in mathematics, English Language Arts/Reading and science. It also includes possible examples of what students will be asked to do in class, how to help your student at home, questions you can ask your student and questions families can ask the teacher.

This guide was also designed to help families understand how they can work with teachers to support the learning of their seventh grader. When teachers and families work together to help students master Iowa's Academic Standards, students can develop the skills they will need for success in school and life. If you have questions about this information or if your student needs extra help, please contact the teacher.

Why are Iowa's 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. The standards 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. They guide families and teachers to know when students need extra assistance or when they need more of a challenge in the classroom. They also help your student develop critical-thinking skills in preparation for college and career.

English/Language Arts

Your grade 7 student will analyze, define, compare and evaluate ideas when reading, writing, speaking and listening. He or she will continue to analyze how themes in fiction and nonfiction develop over the course of a book or article. Readings will include classic and contemporary pieces with diverse perspectives. Your student's ability to cite specific evidence when interpreting a text matures. Students will use relevant evidence to support their own points in writing and speaking, make their reasoning clear to readers or listeners and constructively evaluate others' use of evidence.

What might students be learning in their classroom in connection to the standards?

- Students will cite several sources of specific evidence from a piece when offering an oral or written analysis of a book, essay, article or play.
- Students will determine an author's point of view or purpose in a nonfiction work and analyze how the author takes a position different from other authors.
- Students will organize and focus writing with supporting statements and conclusions based on evidence and show that the evidence is accurate and reliable.
- Students will avoid plagiarism and follow a standard format for citations (e.g., footnotes, bibliography).
- Students will evaluate a speaker's key points and reasoning, ask questions and state their own well-supported ideas in discussions.
- Students will use common, grade-appropriate Greek or Latin affixes and roots as clues to define the meaning of a word (e.g., semi-, semi-annual, semicircle).

What might my student be learning in their classroom?

- Your student will cite several sources of specific evidence from a piece when offering an oral or written analysis of a book, essay, article, or play.
- Your student will organize and focus his or her own writing, including supporting statements and conclusions with evidence and showing that the evidence is accurate and reliable.
- Your student will conduct research in response to a specific question by drawing on evidence from several credible literary or informational sources to support an analysis or reflection.
- Your student will present claims and findings to others emphasizing main points, making eye contact, speaking loudly enough, pronouncing words clearly and using formal English when the situation calls for it.

What can I do to support my student at home?

- Visit a local art museum together. Take time to closely observe the details of the paintings or other art objects and talk about what you see there.
- Let your student help plan a family outing by using the Internet or library to research a place he or she is interested in.
- Ask your student about a favorite author. Why does your student like the book? What ideas do the authors write about? Who are your student's favorite characters? Why?
- Encourage regular writing: keeping a journal or diary, writing letters or emails and/or taking notes on what they are learning. Encourage your student to write to you and then write back to them.
- Listen to podcasts together, or encourage your student to listen to podcasts of their choice and tell you about it. Ask if the information was credible. How do you know?

What questions can I ask my student about the learning happening at school?

- Tell me the main idea of this story or article. What type of evidence did you find to help you determine that?
- Tell me how you know something is a credible source.
- Ask your student to explain something about what they are reading. What do they find the most important or engaging about it?

What questions can I ask my student's teacher?

- What resources would you suggest I use to support my student?
- Where do you notice my student is struggling? How can I support my student in this area?
- What topics are you studying? How might I support continued learning with these topics at home?
- What strategies can my student use when choosing books based on interest?
- How can I support my student in building strong relationships with you and take age-appropriate responsibility for their own learning?

Mathematics

Seventh grade is an important year where students build on foundational concepts and engage with more advanced topics, such as proportional reasoning, algebraic thinking and probability. These skills prepare them for higher-level math courses in the future. Your involvement and support at home can help your student succeed and develop a strong appreciation for math.

What might students be learning in their classroom in connection to the standards?

- **Ratios and Proportions**: Solving problems involving ratios, rates and percentages, including real-world applications.
- **The Number System:** Adding, subtracting, multiplying and dividing rational numbers, including negative numbers.
- **Expressions and Equations:** Solving multi-step equations and inequalities; using algebraic expressions to represent real-world situations.
- **Geometry:** Understanding scale drawings, working with two- and three-dimensional shapes and calculating surface area and volume.
- **Statistics and Probability:** Analyzing data distributions, understanding probability concepts and making predictions based on data.

What might my student be learning in their classroom?

- Mastering operations with rational numbers, including fractions, decimals and negative numbers.
- Exploring real-world problems involving ratios, rates and percentages.
- Writing, solving and interpreting equations and inequalities in various contexts.
- Investigating geometric concepts like scale drawings, surface area and volume.
- Using probability and data analysis to make predictions and solve problems.

What can I do to support my student at home?

- Encourage your student to solve everyday problems involving percentages, like discounts and taxes.
- Use real-world examples, such as recipes or maps, to explore proportional reasoning and scale drawings.
- Practice solving equations and inequalities together with step-by-step reasoning.
- Reinforce geometry concepts by building or measuring objects around the house.
- Discuss data and probability in everyday contexts, such as weather predictions or sports statistics.

What questions can I ask my student about the learning happening at school?

- How did you use ratios or percentages in math today?
- Can you show me how to solve an equation or inequality?
- What are you learning about shapes or measurements in geometry?
- What kinds of data or probability problems have you worked on?
- How do you use negative numbers in solving problems?

What questions can I ask my students' teacher?

- How is my student doing with rational numbers and proportional reasoning?
- What are the key skills they should master to prepare for algebra?
- Are there any resources or activities you recommend for practicing geometry or probability at home?
- How can I support their problem-solving and critical thinking skills in math?

Science

The Iowa Academic Standards for Science empower teachers to provide all students in seventh grade with engaging science instruction that emphasizes data analysis and interpretation, critical thinking, problem solving and interdisciplinary connections—all while maintaining high expectations for academic achievement.

The science standards work in harmony with English/Language Arts and mathematics standards, allowing classroom instruction to better reflect real-world problem-solving, which often draws on multiple disciplines. Additionally, these standards aim to ensure all students have access to an equitable, high-quality science education.

What might students be learning in their classroom in connection to the standards?

The Iowa Academic Standards for Science incorporate the most current research and developments in modern science. To prepare students to think critically, analyze information and solve complex problems, the standards are structured to allow students—starting in elementary school and continuing through high school—to build on prior knowledge and skills. Key concepts are revisited and deepened over time, helping students strengthen their understanding of connections across scientific disciplines. Parents should be aware that while some content may seem familiar, the way it is taught may differ from their own school experience.

During the late elementary and middle school years, many students begin to form preferences and interests that shape their educational paths. More than any other stage, these formative years are critical for determining whether a student will pursue an interest in STEM. A strong foundation in science education, paired with encouragement from parents, can help students develop a sense of themselves as scientific thinkers—curious, analytical and capable problem-solvers. This self-perception not only supports future success in STEM fields but also fosters essential skills that will benefit them in any career they choose.

What might my student be learning in their classroom?

Each year, students are expected to show increased ability to connect knowledge across the physical sciences, life sciences, Earth and space sciences and engineering design. In seventh grade, your student will continue developing these connections by exploring concepts and skills such as understanding relationships between objects, planning and conducting investigations and constructing explanations.

The Iowa Academic Standards for Science are set in a grade-specific sequence that integrates all of the science disciplines into every year. In order for students to fully make sense of a phenomena, they often need to draw on ideas from chemistry, biology and earth science all at once. By sequencing standards in an integrated manner, teachers are encouraged to use various relevant concepts when planning their lessons, promoting student efforts at sensemaking that draw on all of their experiences.

What can I do to support my student at home?

Parents play a vital role in supporting their student's science learning at home, especially when aligned with the Iowa Academic Standards for Science. The vision in the standards emphasizes three-dimensional learning, which integrates disciplinary core ideas (what scientists know), science and engineering practices (what scientists do) and crosscutting concepts (how scientists think). At home, parents can nurture curiosity by encouraging students to ask questions about the world around them and helping them explore possible answers through observation, discussion and hands-on investigation. Everyday activities—like cooking, gardening, fixing things, or observing weather patterns—can be opportunities to engage in these practices in meaningful, relevant ways.

Sensemaking is another key element of effective science learning, and parents can support it by prompting their students to explain their thinking, connect new ideas to their prior knowledge and revise their understanding as they gather more evidence. Rather than giving immediate answers, parents can ask open-ended questions like, "What do you think is happening here?" or "What makes you say that?" This helps students build confidence in using reasoning and evidence to make sense of phenomena. By creating a supportive environment that values questioning, exploration and reflection, parents help reinforce the goals of three-dimensional science education and foster deeper, long-lasting scientific understanding.

What questions can I ask my student about the learning happening at school?

- How do forces affect the motion of objects?
- How can we use evidence to predict future motion?
- How do the interactions between living organisms, their environments and Earth's processes, such as the flow of energy and water, help sustain life on Earth?
- How do the motions of objects in our solar system, such as planets and moons, relate to the forces of gravity and the scale of these objects?
- How can we design and explain the workings of an energy-efficient amusement park ride?

What questions can I ask my student's teacher?

- What kinds of phenomena is my student going to be making sense of this year?
- How is my student going to be engaging with the practices of science?