6th 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 sixth 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 sixth 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

Students in grade 6 apply skills they learned in earlier grades to make sense of longer, more challenging books and articles. They are able to better understand how authors try to influence readers and find reasons to support their ideas. By focusing on how authors make their points and support their arguments with evidence and reasoning, students will sharpen their ability to write and speak with more clarity and coherence. They will expand their vocabularies and use new words in their stories, reports and essays.

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

- Students will explain what happened in a text by analyzing, comparing information in more than one text and summarizing information, citing specific evidence from credible sources to show how they know.
- Students will determine the meaning of unknown words and phrases using a variety of strategies (context, affixes and roots, reference materials) and use the words correctly when speaking and writing.
- Students will write arguments to support claims, informative texts and narrative stories.
- Students will present claims and findings they investigate from texts (print and digital) and short research, using multiple presentation formats (orally, diagrams, illustrations, data tables, etc.)
- Students will come to classroom discussions prepared and then participate fully and engage thoughtfully with others (e.g., contribute accurate, relevant information; elaborate on the remarks of others; synthesize ideas).
- Students will demonstrate command of the English language when writing and speaking by using correct capitalization, punctuation and word selection.

What might my student be learning in their classroom?

- Your student will read closely and cite evidence from grade-level fiction and nonfiction to support an analysis of what the materials say.
- Your student will analyze how chapters of a book, scenes of a play or stanzas of a poem fit into the overall structure of the piece and contribute to the development of ideas or themes.
- Your student will gain knowledge from materials that make extensive use of elaborate diagrams and data to convey information and illustrate concepts.
- Your student will evaluate the argument and specific claims in written materials or a speech and distinguish claims that are supported by reasons and evidence from claims that are not.
- Your student will present claims and findings to others orally, by sequencing ideas logically and by accentuating main ideas or themes.
- Your student will write arguments that provide clear reasons, relevant evidence and use credible sources.
- Your student will determine the correct meaning of a word based on the context in which it is used (e.g., the rest of the sentence or paragraph; a word's position or function in a sentence).
- Your student will develop a rich vocabulary of complex and sophisticated words and use them to speak and write more precisely and coherently.

What can I do to support my student at home?

- Listen with your student to a television reporter, politician, or other speaker. Ask your student to tell you the speaker's main points (e.g., was the speaker trying to convince the audience of something? How?).
- Visit a library or bookstore together and ask the librarian or bookseller to recommend young adult books, such as Roll of Thunder, Hear My Cry by Mildred D. Taylor.
- Invite your student to participate in an adult gathering, such as a meal with friends, to practice listening skills and to make conversation.
- Encourage your student to learn at the library or on the Internet what life in your community was like 100 years ago. Have your student write a story, poem, or play about that time.
- Pick a topic to learn about together. Read books, look online and do short research projects together. Have them share with you, friends or other family members.
- Encourage regular writing by keeping a journal or diary, writing letters or emails, or taking notes for you to remember future tasks.
- Ask your student to practice re-reading a poem, short story, or passage. Focus on expression and rate.

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

- Ask your student to show something new they have learned about a text or a topic. This can be in any form. Ask your student for additional details.
- As your student to provide justification for claims or arguments made in writing. Ask them how they supported the claims or arguments with precise and reliable evidence from credible sources.
- Ask your student how the author of the book they are reading used specific words or character actions to impact the meaning or tone of the book.
- Ask your student to summarize what they are reading to you.
- Ask your student what questions they would ask the author if he or she were in front of them?

What questions can I ask my student's teacher?

- Is my student writing and answering questions in a way that shows you they understand what they are reading and learning?
- Is my student able to speak and listen in class discussions and conversations in ways to provide meaningful exchanges with classmates?
- Does my student show struggles in class? How might I help them at home?
- What types of books should I help my student pick to read?
- What topics are you studying in class? How can I help my student learn more about these topics at home?

Mathematics

Sixth grade is an exciting year where students dive into deeper mathematical concepts, including ratios, algebraic thinking and statistical reasoning. This year sets the foundation for more advanced math in middle and high school. Your involvement and encouragement can help your student navigate these new challenges with confidence and curiosity.

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

- **Ratios and Proportions:** Understanding and solving problems involving ratios, rates and percentages.
- **Numbers and Operations:** Working with multi-digit numbers, fractions and decimals, including division and operations with negative numbers.
- **Expressions and Equations:** Writing and solving one-variable equations and understanding inequalities.
- **Geometry:** Understanding area, surface area and volume of 2D and 3D shapes.
- **Statistics and Probability:** Analyzing data sets, calculating mean, median and mode and understanding variability.

What might my student be learning in their classroom?

- Developing fluency in solving problems with fractions, decimals and percentages.
- Exploring real-world scenarios through ratios, rates and proportional reasoning.
- Learning to write, evaluate and solve algebraic expressions and simple equations.
- Investigating geometric concepts, such as surface area and volume, through hands-on activities.
- Interpreting data and understanding statistical concepts like variability and central tendency.

What can I do to support my student at home?

- Practice calculating percentages, such as discounts or tips, during everyday activities.
- Use cooking or shopping to reinforce fraction and ratio concepts.
- Encourage your student to solve real-world math problems and explain their thought process.
- Provide opportunities for hands-on learning, such as building projects to explore surface area and volume.
- Discuss and analyze data from news articles or online sources to connect math to real life.

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

- How did you use ratios or percentages today?
- Can you explain how to solve a problem with fractions or decimals?
- What have you learned about area, surface area, or volume?
- What kinds of data are you analyzing in class?
- How are you using algebra in your math work?

What questions can I ask my students' teacher?

- How is my student progressing with ratios, percentages and proportional reasoning?
- What can I do to support their understanding of algebra and equations?
- Are there specific tools or activities you recommend for practicing geometry concepts at home?
- What resources can help my student with data analysis and statistics?

Science

The Iowa Academic Standards for Science empower teachers to provide all students in sixth 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 sixth 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 does a thermos keep drinks hot or cold?
- How can sound travel through walls or water and what happens when light hits a mirror or glass?
- How do parts of cells interact with the body as a whole?
- What might happen to Earth's surface if plates beneath it are constantly moving?

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?