4th 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 fourth 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 fourth 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

In grade 4, students are asked to monitor their comprehension so they know if they are understanding a text. Students will gather information from text to use in collaborative conversations with their peers. Students will continue to read a variety of genres to increase their knowledge of topics and learn new vocabulary. Students are also introduced to concepts such as synonyms, antonyms and homophones to understand word nuances better. Students' writing skills will become more sophisticated as they use organizational structures to communicate their message. Students will work in a variety of teams, serving both as facilitator and contributor for a common message and product. Students will continue to engage in research projects, being careful to use multiple sources for information. Cursive writing will be reinforced.

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

- Students will use their knowledge of decoding words, including word parts, to read unknown words.
- Students will explain a text using details and examples from it.
- Students will demonstrate their understanding of a text by telling what it says explicitly and sharing inferences (meaning beyond the text) they have understood. They will use details from the text to support their inferences.
- Students will be able to summarize a text.
- Students will use the various features of a text to gain additional meaning from it.
- Students will engage in collaborative conversations around a variety of text types, expressing their ideas clearly and building on the ideas of others.
- Students will use their knowledge of word parts (morphology) to understand the meaning of unknown words.
- Students will write to inform others on a topic, create a story and factually explain information about a topic. Students will also research topics and write to share their findings..
- Students will use correct grammar, punctuation and spelling when they write.
- Students will speak about a topic to an audience, using visual displays to support what they are speaking about.

What might my student be learning in their classroom?

- Your student will use a text to determine the central topic of a text (main idea) that is supported by other points and ideas in the text (details). Your student will then use these details to draw logical conclusions (inferences) about the text.
- Your student will compare ideas, characters, events and settings in books.
- Your student will know how to use a text's format to gain a deeper understanding of the text. Formats might include the types of cause/effect, comparison, a problem with solution and a date (chronology) order.
- Your student will relate words that are common in reading to words with similar meanings (synonyms) or opposite meanings (antonyms).
- Your student will independently conduct short research projects about different aspects of a topic using evidence from books and the internet.
- Your student will write opinions, stories and share information.
- Your student will write in complete sentences with correct capitalization, word choice and spelling.
- Your student will paraphrase and respond to others and present information to a broader audience.

What can I do to support my student at home?

- Set aside quiet time for your student to read.
- Keep books, magazines and/or newspapers at home. Make sure your student sees you reading.
- Take your student to the library to check out books.
- Talk about reading together. Pick one text, read it together and discuss with your student what it means to each of you.
- Urge your student to use logical arguments to defend his or her opinion.
- Ask your student to support their knowledge with factual details or opinions with logical reasons.
- Provide quality reasons for your student to write. Encourage cursive writing.

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

- What is something you read at school today? Can you explain it to me?
- What type of story is this? How do you know?
- Tell me how we can compare and contrast [any two things].
- What do you think that word means? What helped you determine that?
- Tell me how you know that is true?

What questions can I ask my student's teacher?

- What are my student's strengths? What resources would you suggest I use to support my student's strengths?
- Where do you see my student struggling? What can I do to help?
- What topics is my student learning in school? How can I support them in learning more at home?
- Is my student reading fluently? If not, how can I support them at home?
- What should my student practice at home?

Mathematics

Fourth grade is an exciting year where students deepen their understanding of complex math concepts and learn to apply them in real-world scenarios. They'll focus on building fluency with larger numbers, exploring fractions and decimals and strengthening their problem-solving skills. Your involvement and encouragement will help your student develop confidence and a strong foundation for future success in mathematics.

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

- **Numbers and Operations:** Understanding multi-digit numbers, including place value and operations with larger numbers (addition, subtraction, multiplication and division).
- **Fractions and Decimals:** Comparing, adding, subtracting and multiplying fractions; understanding fractions as part of a whole and their relationship to decimals.
- **Measurement and Data:** Solving problems involving measurement and conversions of units; interpreting data in charts and graphs.
- **Geometry:** Classifying shapes based on their attributes, understanding angles and learning about symmetry.
- **Operations and Algebraic Thinking:** Using equations to solve multi-step word problems and exploring patterns and relationships.

What might my student be learning in their classroom?

- Building fluency with multi-digit multiplication and division.
- Deepening their understanding of fractions and decimals in practical contexts.
- Applying measurement and data skills to real-life scenarios, such as calculating area and perimeter.
- Exploring geometry through hands-on activities that involve angles and symmetry.
- Strengthening problem-solving skills with multi-step word problems.

What can I do to support my student at home?

- Practice multiplication and division of facts regularly to build fluency.
- Use real-life situations, like cooking or shopping, to introduce fractions and decimals.
- Encourage your student to measure objects at home to practice converting units of measurement.
- Play games that involve problem-solving or logical reasoning to reinforce math skills.
- Support your student in explaining their thought process when solving math problems.

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

- What math problem did you solve today that made you think hard?
- Can you show me how you solve multiplication or division problems with larger numbers?
- What have you learned about fractions and decimals?
- What shapes or angles are you working with in geometry?
- What kind of data have you graphed in math this week?

What questions can I ask my students' teacher?

- How is my student progressing with multiplication and division of larger numbers?
- What are some ways I can support their learning of fractions and decimals at home?
- Are there specific activities or tools you recommend for geometry practice?
- How can I help my student tackle multi-step word problems more effectively?

Science

The Iowa Academic Standards for Science empower teachers to provide all students in fourth 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.

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 fourth 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.

In physical science, students will explore how energy causes change—making things move, light up, or heat up. They'll learn that energy travels as sound, light, heat or electricity and can change form during collisions. Students will also study waves, which help us see, hear and move objects and how light and sound carry information.

In life science, students will learn how plants and animals use their body parts and senses to survive, grow and respond to their environment.

In Earth and space science, students will discover how rocks and fossils show Earth's history and how weathering and erosion shape the land. They’ll also explore natural resources, energy use and ways to reduce our impact on the environment.

What can I do to support my student at home?

- Encourage your student to begin to make sense of the world around them by asking questions and making observations. Ask them what they notice and what they wonder about the world around them.
- Extend classroom experiences at home by encouraging your student to explore, using their own language to describe lived experiences.
- Use the information on these pages to ask your student's teacher meaningful, informed questions.

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

Each year, students are expected to deepen their ability to make meaningful connections across physical sciences, life sciences, Earth and space sciences and engineering design. In third grade, your student will continue to build these connections by exploring key concepts such as understanding relationships between objects, planning and conducting investigations and constructing evidence-based explanations.

Through daily, hands-on science experiences, third graders will develop models and draw conclusions about both the physical and living world. By asking thoughtful questions and engaging in a variety of investigative activities, they will research, collect and analyze data—enhancing their understanding of natural processes while sharpening their critical thinking and problem-solving skills.

Encourage your student to continue to explore their world at home through asking questions, modeling, or making claims based on evidence.

- How does energy make things move, light up, or heat up?
- How can energy change from one form to another?
- How does energy travel as sound, light, heat, or electricity?
- What patterns in Earth's features, like mountains and rivers, help us make sense of how the surface changes?

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?