



SCIENCE 4

FOR FAMILIES

FOURTH GRADE

What to expect:

In fourth grade, students are discovering answers to more difficult questions about the world around them. These include: “What are waves, and what do they do?”, “How can water, ice, wind and plants change the land?”, “What features of Earth can you see with maps?”, “How do internal and external parts support plants and animals?”, “What is energy, and how is it related to motion?”, “How is energy transferred?” and “How can energy be used to solve a problem?” This information is a snapshot of learning in science for Grade 4. For a complete set of science academic standards, [click here](http://sde.ok.gov/oklahoma-academic-standards) or visit sde.ok.gov/oklahoma-academic-standards.

By the end of the school year, your child will:

- Understand how fast rocks break down and how they move from place to place.
- Use data from maps to describe patterns in Earth’s features.
- Use a model to describe patterns of seismic, water and sound waves and how they can cause objects to move.
- Begin to understand how parts of plants and animals support their survival, growth, behavior and reproduction. (For example, our heart pumps blood to our bodies.)
- Develop a model to describe how an object can be seen when light reflected from its surface enters the eye.
- Be able to explain the relationship between the speed of an object and the energy of that object. (For example, the faster a ball moves, the more energy it has.)
- Understand how energy can be transferred from place to place by sound, light, heat and electric currents or from object to object when they collide.

What to do at home:

- Talk about why it might be harder to see at night or in a dark room compared to in daylight or a brightly lit room.
- Look at different plants growing outside. Discuss parts of the plants (stems, roots, flowers, etc.) that help them grow or survive.
- When you’re driving, ask your child why the windows on the side of the car facing the sun are warmer than the other car windows.
- Toss a ball outside and talk about how to make it go shorter and farther distances.

YOU ARE your child’s first teacher. Learn how to support the goals of Oklahoma’s academic standards and why they are important to your child. Please be in regular communication with your child’s teachers and ask how you can support science learning at home. When schools and families work together as partners, it helps your child achieve academic success!



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Fostering Curiosity

Children are naturally curious and are motivated to learn about things that interest them. Since curiosity contributes to success in the classroom, it is important to encourage it at home. Play is a wonderful way to nurture curiosity in young children, so be sure to allow plenty of playtime. Encourage your child to ask questions, discover answers and explore their world.

Support your child's curiosity with questions like these:

- What kind of material would we use to build a house that could withstand an earthquake?
- What would happen if we dropped a rubber duck or other floating object into a bowl of water? Why?
- What would happen to the land if it rained nonstop for a year?

Your child will have plenty of questions. It's okay if you don't always have the answer. The best response is always, "Let's find out together."

Fostering Communication

Build your child's vocabulary, thinking skills and curiosity by using new words and having conversations that include questions to make your child think. Communicating with others gives children a chance to see and understand that there can be more than one point of view about a given subject. Accepting different ideas helps children learn how to get along with others, encouraging positive relationships with other children and a strong self-image.

Support your child's communication skills with questions like these:

- What is the most exciting adventure you could take? Why?
- Who would you take on the adventure? Why?
- What was your favorite part of the day and why?
- How did you help someone today?

Fostering Connections

Making connections between different school subjects helps build your child's overall knowledge and learning. It's also important for your child to make connections between what they are learning at school and in the real world. Point out these connections to your child and encourage them to make them, too.

- Connect science with writing and art by asking your child to draw pictures of the things they see in the world around them (for example, adult butterflies look different from young caterpillars, some objects are difficult to see in the dark, etc.), then add short descriptive sentences to the picture that describe the object, situation or scenario they drew and how what they know about science might be connected to it.
- Connect science with engineering by asking your child what they notice and wonder about (for example, "Do you notice that magnets interact with objects differently?"), then discuss what causes the things they notice, how they work or how they could be modified to work better. (For example, after asking your child how magnets can be used to sort recyclable items, your child could research examples of how a magnetized recycling program has been engineered to work.)

Join the conversation!

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