

Grade 5 Science: Year-at-a-Glance

Overview

This year, your child explores the physical world by investigating matter and energy. They look closely at solids, liquids, and gases, and they explore how forces work differently in water and air, along with where our energy resources come. [See the curriculum: 1, 2.](#)

Alongside that, students investigate natural systems in the living world, Earth, and space. This includes learning about climate and weather, exploring how living things' bodies support life processes, and observing and interpreting things they see in the sky. [See the curriculum: 1, 2, 3.](#)

Grade 5 also builds problem-solving and computational thinking skills, as students apply design processes to create things that solve a real problem or meet a need. [See the curriculum.](#)

Running through all of this is a focus on scientific methods: how scientists gather evidence, work to remove bias, and use ethics to guide their investigations. [See the curriculum.](#)

The year at a glance

Grade 5

Organizing idea	Guiding questions	Learning outcomes
Matter: Understandings of the physical world are deepened by investigating matter and energy.	How can states of matter and other physical properties be explained using the particle model of matter?	Students investigate the particle model of matter in relation to the physical properties of solids, liquids, and gases. (see the curriculum)
Energy: Understandings of the physical world are deepened by investigating matter and energy.	How are forces similar and different in water and air?; How are energy resources understood?	Students investigate and compare how forces affect living things and objects in water and air. (see the curriculum); Students investigate and analyze various energy resources. (see the curriculum)
Earth Systems: Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.	How can climate and its effects be understood?	Students analyze climate and connect it to weather conditions and agricultural practices. (see the curriculum)
Living Systems: Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.	How are organisms supported by vital biological processes and systems?	Students investigate the internal systems of organisms and explain how they support vital biological processes. (see the curriculum)
Space: Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.	How are astronomical phenomena observed and interpreted?	Students investigate and interpret astronomical phenomena. (see the curriculum)
Computer Science: Problem solving and scientific inquiry are developed through the knowledgeable application of creativity, design, and computational thinking.	In what ways can design be used to help achieve desired outcomes or purposes?	Students apply design processes when creating artifacts that can be used by a human or machine to address a need. (see the curriculum)

Scientific Methods: Investigation of the physical world is enhanced through the use of scientific methods that attempt to remove human biases and increase objectivity.	How does evidence lead to understanding?	Students investigate how evidence is gathered and explain the importance of ethics in science. (see the curriculum)
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Across the year

- Matter and energy studies connect directly to how organisms function, since understanding particles and forces helps explain how bodies carry out biological processes. [See the curriculum: 1, 2.](#)
- Climate and weather concepts link to Earth systems and to energy resources, since both explore how conditions on our planet affect daily life and agriculture. [See the curriculum: 1, 2.](#)
- The design process used in computer science work reinforces scientific methods, since both ask students to test ideas, gather evidence, and refine their approach. [See the curriculum: 1, 2.](#)
- Observing space phenomena builds the same observation and interpretation skills used across the year's investigations into matter, energy, and living systems. [See the curriculum: 1, 2.](#)

At home, you can ask your child to explain one thing they investigated in class this week and why it mattered. This simple conversation helps them practice putting scientific ideas into their own words, which builds understanding that lasts.