

Grade 5 Science: Year-at-a-Glance

Overview

This year, your child explores the physical world by studying matter and energy. They will look closely at solids, liquids, and gases, and deepen their understandings of the physical world by investigating matter and energy [See the curriculum: 1, 2](#).

Alongside that, students deepen their understandings of the living world and Earth by investigating natural systems and their interactions. They study climate and how it connects to weather and farming, explore the inner workings of the human body and other organisms, and observe astronomical events like the phases of the moon or the movement of stars. [See the curriculum: 1, 2, 3](#).

Science class also builds thinking skills that apply everywhere. Your child will practice using the design process and develop problem solving and scientific inquiry through the knowledgeable application of creativity, design, and computational thinking [See the curriculum: 1, 2](#).

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

- The particle model of matter and the study of forces in water and air both build on the same big idea: understanding energy and matter helps explain everyday events, from a melting popsicle to a kite catching the wind. [See the curriculum: 1, 2.](#)
- Studying energy resources connects to understanding how energy is used in communities and systems. See the curriculum:.,.
- The design process used in the Computer Science strand gives students a hands-on way to apply creativity, design, and computational thinking through problem solving and scientific inquiry. See the curriculum:.,.
- Looking at body systems and observing astronomical phenomena both ask your child to notice patterns and explain what they see, a skill that ties back to the year's focus on gathering solid evidence. [See the curriculum: 1, 2, 3.](#)
- You can ask your child to explain why scientists check their evidence carefully. This habit connects every unit, from testing how objects float to observing the night sky, and it is worth practicing at home with simple household experiments, like predicting whether an object will sink or float in a sink of water. [See the curriculum: 1, 2.](#)