

Grade 5 Science Curriculum Guide

HMH Into Science™ — Parent Curriculum Guide

This guide gives families an overview of what your child will learn in 5th Grade Science using the *HMH Into Science™* program. Throughout the year, students engage with real-world phenomena — observable events that raise questions — and then investigate those questions through hands-on experiments, reading, discussion, and engineering challenges. The six units below build on one another to develop a rich understanding of the physical world, living systems, Earth science, and space.

About This Curriculum

- **Phenomenon-Based Learning** — Every unit begins with a real-world event or observation that sparks curiosity and drives investigation.
- **Hands-On Investigations** — Students regularly conduct experiments, build models, and analyze data to make sense of what they observe.
- **Claims, Evidence & Reasoning** — Students practice supporting their ideas with evidence — a foundational scientific thinking skill.
- **Engineering Design** — Students apply science concepts to design and test solutions to real problems.
- **Three-Dimensional Learning** — Each lesson weaves together Science Practices, Core Ideas, and Crosscutting Concepts (the three pillars of the Next Generation Science Standards).

Unit 1 Engineering and Technology

- Engineering and Society — how technology meets human needs

Students will explore questions like:

“How do engineers decide what makes one design better than another?”

“How has technology changed the way people live and work?”

Unit 2 Matter

- Matter Has Mass and Volume — measuring and identifying matter
- Matter Has Many Properties — physical and chemical characteristics
- Matter Can Change — physical changes vs. chemical reactions

Students will explore questions like:

“Why does the total amount of matter stay the same even when it changes form?”

“How can we tell whether a new substance has been created?”

Unit 3 Energy and Matter in Organisms

- Plants Transform and Use Energy and Matter — photosynthesis and plant growth
- Organisms Use Matter and Energy — how animals get and use energy from food
- Energy and Matter Move Between Organisms — food webs and decomposers

Students will explore questions like:

“Where does the material that makes up a tree actually come from?”

“How does energy from the sun eventually end up in a lion’s muscles?”

Unit 4 Energy and Matter in Ecosystems

- Organisms Interact in Ecosystems — competition, predation, and interdependence
- Organisms Change Their Ecosystems — invasive species and ecosystem disruption

Students will explore questions like:

“What happens to an ecosystem when one species disappears or a new one arrives?”

“How do the needs of organisms shape the way they interact?”

Unit 5 Earth Interactions and Resources

- Earth's Systems Interact — how the geosphere, hydrosphere, atmosphere, and biosphere connect
- Water in Earth's Systems — the water cycle and water's role in shaping Earth
- Resource Use Affects the Environment — how we extract and use natural resources
- People Can Protect the Environment — conservation strategies and engineering solutions

Students will explore questions like:

“How does water connect Earth's major systems?”

“What can individuals and communities do to protect Earth's resources?”

Unit 6

Patterns in the Sky

- Gravity Affects Matter on Earth — Earth's gravitational pull and its effects
- Sky Patterns Over Time — daily and seasonal changes caused by Earth's motion
- The Sun — characteristics of our star and its apparent size vs. other stars

Students will explore questions like:

“Why do shadows change length and direction throughout the day?”

“Why does the sun look so much bigger and brighter than other stars?”

Questions about the curriculum? Please reach out to your child's teacher or contact the school's main office. We look forward to a wonderful year of discovery together!