

Grade 6

Science Curriculum Guide

HMH Into Science™ — Parent Curriculum Guide

This guide gives families an overview of what your child will learn in 6th Grade Science using the *HMH Into Science™* program. The middle school program is organized around Earth and Space Sciences content. Students tackle larger, more complex phenomena through deeper investigation, data analysis, and engineering design — building the scientific reasoning skills they will use throughout high school and beyond. The nine units below span Earth's systems, natural hazards, resources, human impacts, and the universe.

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 Circulation of Earth's Air and Water

- Circulation in Earth's Atmosphere — wind patterns and air movement
- Circulation in Earth's Oceans — ocean currents and their global effects
- The Water Cycle — evaporation, condensation, and precipitation

Students will explore questions like:

"Why does warm air rise while cool air sinks — and what does that mean for weather?"
"How do ocean currents influence climates thousands of miles away?"

Unit 2 Weather and Climate

- Weather and Weather Prediction — data collection, forecasting, and storms
- Influences on Climate — latitude, elevation, proximity to water, and more

Students will explore questions like:

“Why is the climate of a coastal city so different from a city at the same latitude inland?”

“How do meteorologists predict the path of a hurricane days in advance?”

Unit 3 The Dynamic Earth

- Geologic Change and Surface Processes — weathering, erosion, and deposition
- The Rock Cycle — igneous, sedimentary, and metamorphic rocks
- Earth's Plates — plate tectonics and the formation of mountains, volcanoes, and earthquakes

Students will explore questions like:

“How can solid rock be broken down into soil over thousands of years?”

“Why are most earthquakes and volcanoes found along the same narrow zones on Earth?”

Unit 4 Earth Through Time

- The Age of Earth's Rocks — relative and absolute dating methods
- Earth's History — major events in Earth's 4.6-billion-year story

Students will explore questions like:

“How do scientists know how old a rock or fossil is without being there when it formed?”

“What evidence tells us that Earth looked very different millions of years ago?”

Unit 5 Earth's Natural Hazards

- Natural Hazard Prediction — monitoring systems and early warning technology
- Engineer It: Reducing the Effects of Natural Hazards — designing safer structures and systems

Students will explore questions like:

“Why can scientists predict some natural hazards better than others?”

“How can engineering design make communities more resilient to natural disasters?”

Unit 6 Resources in Earth Systems

- Natural Resources — types, formation, and distribution of Earth's resources
- Human Population and Resource Use — trends in consumption and demand
- Resource Use and Earth's Systems — how extraction and use affect Earth's systems

Students will explore questions like:

"Why are fossil fuels found only in certain places on Earth?"

"How does the way we use resources today affect future generations?"

Unit 7 Human Impacts on Earth Systems

- Engineer It: Reducing Human Impacts on the Environment — solutions in practice
- Climate Change — causes, evidence, and consequences of a warming planet

Students will explore questions like:

"How do scientists know that the current rise in global temperatures is largely caused by human activity?"

"What kinds of engineering solutions can help slow or reverse human damage to Earth's systems?"

Unit 8 Patterns in the Solar System

- The Earth-Sun-Moon System — orbits, phases, tides, and eclipses
- Seasons — why Earth's tilt — not its distance from the sun — causes seasons

Students will explore questions like:

"Why do we see different phases of the moon throughout the month?"

"Why is it summer in New York when it is winter in Australia?"

Unit 9 The Solar System and Universe

- Earth and the Solar System — planets, moons, asteroids, and their properties
- Gravity and the Universe — how gravity governs motion from apples to galaxies
- Modeling in Space Science — how scientists use simulations and scale models

Students will explore questions like:

"How does gravity explain both a ball falling to the ground and the moon orbiting Earth?"

"How do scientists study objects that are billions of miles away?"

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!