

Grade 6 Science

Grade(s): 6

Length: two semesters

Course Overview:

Sixth grade science focuses on Earth's systems, astronomy, and gravity. In Earth's systems, students will explore the history of our changing planet through impacts of water, rock, and soil cycles on Earth's surface processes, and construct weather and climate observations to explain influences on Earth's surface. In astronomy, the students will model the solar system to observe, describe, and predict the motion of various bodies in our solar system. In gravity, students will investigate Newton's Third Law of Motion in relation to planetary motion. Throughout the year, interwoven into the curriculum content, students will design and conduct repeatable scientific investigations to continue to develop an awareness that different ways of thinking, curiosity, and the exploration of multiple paths are involved in scientific inquiry.

Adopted Textbook: *Into Science: Earth & Space Sciences*. HMH, 2022

Volumes: *Circulation of the Earth's Air and Water, Weather and Climate, The Dynamic Earth, Earth's Natural Hazards, Resources in Earth Systems, Human Impacts on Earth Systems, Patterns in the Solar System, The Solar System and Universe.*

Units (Recommended Order)	
Semester 1	Semester 2
• Circulation of Earth's Air and Water • Weather and Climate • The Dynamic Earth • Earth's Natural Hazards • Resources in Earth's Systems	• Human Impacts on Earth's Systems • Patterns in the Solar System • The Solar System and Universe • Performance Expectations*

Notes:

- The *Earth and Space Science* Unit 4 "Earth through Time" book was intentionally skipped, as it is utilized by grade 7.
- *Science process skills are best taught in context. Therefore, the performance expectations will be incorporated into the units below. Not all of these performance expectations will be incorporated into every activity; however, the opportunities to learn these skills will be provided throughout the course.

UNIT 1: CIRCULATION OF EARTH'S AIR & WATER				
Timing: Semester 1, Quarter 1 Teaching Time Required: All estimated teaching times are based on a 45 minute period. Textbook: <i>Into Science</i> book 1: <i>Circulation of Earth's Air and Water</i>				
Topic	# Days	Objectives	Key Vocabulary	Resources & Materials
Circulation in the Earth's Atmosphere	5 days	Identify and analyze movements of air masses from regions of high to low pressure (convection currents) and the effects on weather.	- Convection - Coriolis Effect - Air Pressure - Atmosphere - Circulation - Density - Energy System	- Unit 1 (Book 1, p. 3A) - Lesson 1: Circulation in the Earth's Atmosphere
Circulation in the Earth's Oceans	5 days	Describe the effects of the ocean on Earth's weather.	- Ocean Current - Density - Salinity - Temperature	- Unit 1 (Book 1, 11A) - Lesson 2: Circulation in Earth's Oceans
The Water Cycle	5.5 days	Describe and illustrate the water cycle, and the forces that drive it (gravity and sunlight).	- Evaporation - Condensation - Transpiration - Crystallization - Precipitation - Runoff - Groundwater Flow	- Unit 1 (Book 1, 19A) - Lesson 3: The Water Cycle
Unit Test/ Labs	2 days			•
Standards List: MS ESS2-4, MS ESS2-6				