

Earth Science Honors offers a focused curriculum that explores Earth's composition, structure, processes, and history; its atmosphere, freshwater, and oceans; and its environment in space.

Course topics include an exploration of the major cycles that affect every aspect of life, including weather, climate, air movement, tectonics, volcanic eruptions, rocks, minerals, geologic history, Earth's environment, sustainability, and energy resources. Optional teacher-scored labs and projects encourage students to apply the scientific method. Other activities, such as practices and journals, challenge students to explore topics more deeply in order to enhance students' understanding of core concepts.

This course is built to state standards and informed by the National Science Teachers Association (NSTA).

Length: Two semesters

### **UNIT 1: WHAT IS EARTH SCIENCE?**

- Lesson 1: Thinking Like a Scientist
- Lesson 2: Discovering Planet Earth
- Lesson 3: Concepts in Earth Science
- Lesson 4: What Is Earth Science? Wrap Up

### **UNIT 2: WHERE IS EARTH?**

- Lesson 1: The Universe
- Lesson 2: Solar System Formation
- Lesson 3: Our Neighborhood
- Lesson 4: Planet Earth
- Lesson 5: Where Is Earth? Wrap-Up

### **UNIT 3: EARTH'S WATER**

- Lesson 1: The Blue Planet
- Lesson 2: Getting Fresh
- Lesson 3: The Oceans
- Lesson 4: Earth's Water Wrap-Up

### **UNIT 4: EARTH'S ATMOSPHERE**

- Lesson 1: The Sky's the Limit
- Lesson 2: Cycles in the Atmosphere
- Lesson 3: The Windy Planet
- Lesson 4: Earth's Atmosphere Wrap-Up

### **UNIT 5: WEATHER AND CLIMATE**

- Lesson 1: How's the Weather?
- Lesson 2: In the Forecast
- Lesson 3: Climate
- Lesson 4: Weather and Climate Wrap-Up

### **UNIT 6: SEMESTER REVIEW AND EXAM**

- Lesson 1: Semester 1 Wrap-Up

### **UNIT 7: LAYING THE GROUNDWORK**

- Lesson 1: Earth's Layers
- Lesson 2: Earth's Magnetism
- Lesson 3: It Is Deeply Moving
- Lesson 4: Laying the Groundwork Wrap-Up

## **UNIT 8: THE MOVERS AND SHAKERS**

- Lesson 1: Mountains to Trenches
- Lesson 2: Creaks and Hazards
- Lesson 3: Sculpting Earth
- Lesson 4: The Movers and Shakers Wrap-Up

## **UNIT 9: MINERALS AND ROCKS**

- Lesson 1: Minerals
- Lesson 2: Igneous Rocks
- Lesson 3: Sedimentary Rocks
- Lesson 4: Metamorphic Rocks
- Lesson 5: The Rock Cycle
- Lesson 6: Minerals and Rocks Wrap-Up

## **UNIT 10: ALL THE TIME IN THE WORLD**

- Lesson 1: Measuring Time
- Lesson 2: The Past Is Vast
- Lesson 3: No Time Like the Present
- Lesson 4: All the Time in the World Wrap-Up

## **UNIT 11: EARTH'S RESOURCES**

- Lesson 1: What Fuels You?
- Lesson 2: Use It and Lose It
- Lesson 3: Earth Matters
- Lesson 4: Earth's Resources Wrap-Up

## **UNIT 12: SEMESTER REVIEW AND EXAM**

- Lesson 1: Semester 2 Wrap-Up