

Ohio Middle School Grade 7 Science delivers instruction, practice, and review to help students develop scientific literacy, deepen conceptual understanding, and apply scientific practices. Students explore concepts such as how energy can be transferred and transformed, the conservation of mass and energy, the cycles and patterns of Earth and the Moon, and the cycles of matter and flow of energy through living systems.

The two-semester course is arranged in themed units, each with two to three lessons. In each unit, activities make complex ideas accessible to students as they discover the nature of science through focused content, interactive mini-investigations, multi-modal representations, and personalized feedback. Each lesson includes a variety of activities such as direct instruction, application of skills, performance tasks, and formative and summative assessments. Students engage with the subject matter in an interactive, feedback-rich environment as they progress through standards-aligned content and demonstrate their learning through computer- and teacher-scored assignments.

This course is built to the Next Generation Science Standards for middle school science.

Length: Two semesters

UNIT 1: NATURE OF SCIENCE

- Lesson 1: What Is Science?
- Lesson 2: Types of Investigations
- Lesson 3: Using Models
- Lesson 4: Wrap-Up: Nature of Science

UNIT 2: MEASUREMENT AND DATA

- Lesson 1: Tools and Measurement
- Lesson 2: Displaying and Interpreting Data
- Lesson 3: Wrap-Up: Measurement and Data

UNIT 3: NATURE OF MATTER

- Lesson 1: What Is Matter?
- Lesson 2: Atomic Structure
- Lesson 3: The Periodic Table
- Lesson 4: Wrap-Up: Nature of Matter

UNIT 4: DESCRIBING MATTER

- Lesson 1: Properties of Matter
- Lesson 2: Solids, Liquids, and Gases
- Lesson 3: Mixtures of Matter
- Lesson 4: Wrap-Up: Describing Matter

UNIT 5: CHANGES IN MATTER

- Lesson 1: Physical and Chemical Changes
- Lesson 2: Changes of State
- Lesson 3: Chemical Equations
- Lesson 4: Wrap-Up: Changes in Matter

UNIT 6: SEMESTER WRAP-UP

- Lesson 1: Semester Wrap-Up

UNIT 7: PLANET EARTH

- Lesson 1: Models of Earth
- Lesson 2: Earth's Structure and Cycles
- Lesson 3: Wrap-Up: Planet Earth

UNIT 8: THE GEOSPHERE

- Lesson 1: Minerals
- Lesson 2: The Rock Cycle
- Lesson 3: Soil
- Lesson 4: Wrap-Up: The Geosphere

UNIT 9: OUR CHANGING PLANET

- Lesson 1: Deforming Earth's Crust
- Lesson 2: Weathering and Erosion
- Lesson 3: Geologic Time
- Lesson 4: Wrap-Up: Our Changing Planet

UNIT 10: EARTH'S PLATES

- Lesson 1: Plate Tectonics
- Lesson 2: Earthquakes and Volcanoes
- Lesson 3: Wrap-Up: Earth's Plates

UNIT 11: LIFE ON EARTH

- Lesson 1: Chemistry of Life
- Lesson 2: Cell Nutrition and Transport
- Lesson 3: Wrap-Up: Life on Earth

UNIT 12: ECOLOGY

- Lesson 1: Characteristics of Ecosystems
- Lesson 2: Interactions in Ecosystems
- Lesson 3: Succession and Ecosystem Stability
- Lesson 4: Wrap-Up: Ecology

UNIT 13: SEMESTER WRAP-UP

- Lesson 1: Semester Wrap-Up