

South Carolina Middle School Grade 8 Science delivers instruction, practice, and review to help students develop scientific literacy, deepen conceptual understanding, and apply scientific practices. Students explore concepts such as waves, the relationship between force and motion, Earth's place in the universe, Earth's systems and resources, Earth's history, and the diversity of life.

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**

- What Is Science?
- Types of Investigations
- Using Models
- Wrap-Up: Nature of Science

### **Unit 2: Measurement and Data**

- Tools and Measurement
- Displaying and Interpreting Data
- Wrap-Up: Measurement and Data

### **Unit 3: Waves**

- Mechanical Waves and Sound
- Electromagnetic Waves
- Wrap-Up: Waves

### **Unit 4: Applications of Waves**

- Waves and Matter
- Waves and Technology
- Wrap-Up: Applications of Waves

### **Unit 5: Force and Motion**

- Describing Forces
- Describing Motion
- Wrap-Up: Force and Motion

### **Unit 6: Forces in Action**

- Effects of Forces
- Gravitational Force
- Wrap-Up: Forces in Action

**Unit 7: Forces in the Solar System**

- Sun-Earth-Moon System
- Our Solar System
- Wrap-Up: Forces in the Solar System

**Unit 8: Semester Wrap-Up****Unit 9: Exploring the Universe**

- The Universe
- Our Sun and Other Stars
- Space Exploration
- Wrap-Up: Exploring the Universe

**Unit 10: Exploring Planet Earth**

- Models of Earth
- Earth's Structure and Cycles
- The Rock Cycle
- Wrap-Up: Exploring Planet Earth

**Unit 11: Earth's Plates**

- Plate Tectonics
- Deforming Earth's Crust
- Earthquakes and Volcanoes
- Wrap-Up: Earth's Plates

**Unit 12: Earth's Resources**

- Natural Resources
- Minerals
- Wrap-Up: Earth's Resources

**Unit 13: Our Changing Planet**

- Climate
- Weathering and Erosion
- Geologic Time
- Wrap-Up: Our Changing Planet

**Unit 14: Our Changing Biosphere**

- Theory of Evolution
- Natural Selection
- Wrap-Up: Our Changing Biosphere

**Unit 15: Semester Wrap-Up**