

California Middle School Grade 6 Science delivers instruction, practice, and review to help students develop scientific literacy, deepen conceptual understanding, and apply scientific practices. Students explore concepts such as the flow of energy and matter through both living and nonliving systems, including Earth's systems; Earth's weather and climate; the interaction between humans and the environment; the relationship between structure and function; and growth, development, and reproduction in organisms.

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: Energy**

- Describing Energy
- Energy Transfer and Transformation
- Wrap-Up: Energy

#### **Unit 4: Thermal Energy**

- Thermal Energy and Temperature
- Heat and Thermal Energy
- Energy Transfer and Technology
- Wrap-Up: Thermal Energy

#### **Unit 5: Thermal Energy and Earth Systems**

- Freshwater and Ice
- Oceans
- The Atmosphere
- Wrap-Up: Thermal Energy and Earth Systems

### **Unit 6: Weather and Climate**

- Weather
- Severe Weather
- Climate
- Wrap-Up: Weather and Climate

### **Unit 7: Semester Wrap-Up**

### **Unit 8: Humans and Earth's Resources**

- Natural Resources
- Impacts of Humans
- Wrap-Up: Humans and Earth's Resources

### **Unit 9: Nature of Life**

- Characteristics of Life
- Domains and Kingdoms of Life
- Patterns of Reproduction
- Wrap-up: Nature of Life

### **Unit 10: Cells**

- Cell Structure
- Cell Nutrition and Transport
- Wrap-up: Cells

### **Unit 11: Genetics**

- Inheritance
- Genes and DNA
- Wrap-up: Genetics

### **Unit 12: Multicellular Bodies**

- Specialized Cells and Tissues
- Organs and Organ Systems
- Wrap-Up: Multicellular Bodies

### **Unit 13: The Human Body**

- Human Organ Systems
- Disease and Human Health
- Wrap-Up: The Human Body

### **Unit 14: Response to Stimuli**

- Animal Behaviors
- Plant Responses

- Wrap-Up: Response to Stimuli

### **Unit 15: Semester Wrap-Up**

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