California 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 the structures and properties of matter; chemical reactions; the flow of energy through systems, including Earth's living and nonliving systems; and the history of Earth.

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: Nature of Matter

- What Is Matter?
- Atomic Structure
- The Periodic Table
- Wrap-Up: Nature of Matter

Unit 4: Describing Matter

- Properties of Matter
- Solids, Liquids, and Gases
- Mixtures of Matter
- Wrap-Up: Describing Matter

Unit 5: Changes in Matter

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- Physical and Chemical Changes
- Changes of State
- Chemical Equations
- Wrap-Up: Changes in Matter

Unit 6: Thermal Energy Transfer

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

Unit 7: Thermal Energy and Earth's Cycles

- Earth's Structure and Cycles
- The Rock Cycle
- Wrap-Up: Thermal Energy and Earth's Cycles

Unit 8: Semester Wrap-Up

Unit 9: The Geosphere

- Models of Earth
- Minerals
- Soil
- Wrap-Up: The Geosphere

Unit 10: Our Changing Planet

- Deforming Earth's Crust
- Weathering and Erosion
- Geologic Time
- Wrap-Up: Our Changing Planet

Unit 11: Earth's Plates

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

Unit 12: Life on Earth

- Chemistry of Life
- Cell Nutrition and Transport
- Wrap-Up: Life on Earth

Unit 13: Ecology

- Characteristics of Ecosystems
- Interactions in Ecosystems
- Succession and Ecosystem Stability
- Wrap-Up: Ecology

Unit 14: Humans and Earth's Systems

- Natural Resources

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- Impacts of Humans
- Severe Weather
- Wrap-Up: Humans and Earth's Systems

Unit 15: Semester Wrap-Up

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