

Science Grade 7 is a two-semester course aligned to the Texas Essential Knowledge and Skills (TEKS) for Grade 7. The course delivers instruction, practice, and review to help students develop scientific literacy, deepen conceptual understanding, and apply scientific practices. Science 7 explores concepts including science and engineering practices; elements and compounds; solutions; chemical reactions; the effects of forces on motion; temperature and thermal energy; the solar system; changes in Earth's structure; plate tectonics; Earth's hydrosphere; classification of living things; organization in living things; reproduction; inheritance; natural and artificial selection; and the flow of energy through ecosystems. Activities throughout the course make complex ideas accessible to students as they discover the nature of science through focused content, interactive mini-investigations, multimodal 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. The course allows students to 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.

The materials needed for this course include specified lab materials.

Length: Two Semesters

Unit 1: Science and Engineering

- Introduction to Science
- Scientific Investigations
- What Is Engineering?
- Wrap-Up: Science and Engineering

Unit 2: Tools of Inquiry

- Using Models
- Measurement and Tools
- Interpreting and Displaying Data
- Wrap-Up: Tools of Inquiry

Unit 3: Matter and Its Changes

- Elements and Compounds
- Solutions
- Physical and Chemical Changes
- Wrap-Up: Matter and Its Changes

Unit 4: Force and Motion

- Analyzing Motion
- Balanced and Unbalanced Forces
- Wrap-Up: Force and Motion

Unit 5: Thermal Energy

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

Unit 6: Our Solar System

- Our Sun
- The Solar System
- Wrap-Up: Our Solar System

Unit 7: Semester Wrap-Up

- Semester Wrap-Up

Unit 8: Earth's Changing Structure

- Deforming Earth's Crust
- Geologic Time
- Wrap-Up: Earth's Changing Structure

Unit 9: Earth's Plates

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

Unit 10: Earth's Hydrosphere

- Surface Water and Groundwater
- Ocean Systems
- Wrap-Up: Earth's Hydrosphere

Unit 11: Earth's Organisms

- Kingdoms of Life
- Relationships Among Living Things
- Energy and Matter in Ecosystems
- Wrap-Up: Earth's Organisms

Unit 12: Organization in Living Things

- Specialized Cells and Tissues
- Organs and Organ Systems
- Human Body Systems
- Wrap-Up: Organization in Living Things

Unit 13: Reproduction and Inheritance

- Types of Reproduction
- Inheritance of Traits
- Wrap-Up: Reproduction and Inheritance

Unit 14: Selection of Traits

- Biotechnology

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- Natural Selection
 - Wrap-Up: Selection of Traits

Unit 15: Semester Wrap-Up

- Semester Wrap-Up
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