

Texas Science Grade 7 delivers instruction, practice, and review to help students develop scientific literacy, deepen conceptual understanding, and apply scientific practices. Students explore concepts such as interactions of matter and energy; components of our solar system; disruptions of both living and nonliving systems; the relationship of organisms to their environment; and the complementary nature of structure versus function.

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: Science and Engineering

- What Is Science?
- Types of Investigations
- What Is Engineering?
- Wrap-Up: Science and Engineering

Unit 2: Tools of Inquiry

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

Unit 3: Changes in Matter

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

Unit 4: Life on Earth

- Characteristics of Life
- Chemistry of Life
- Classification of Living Things
- Wrap-Up: Life on Earth

Unit 5: Cells

- Cell Structure

- Cell Nutrition and Transport
- Cell Growth and Reproduction
- Wrap-Up: Cells

Unit 6: Reproduction and Development

- Patterns of Reproduction
- Life Cycles
- Wrap-Up: Reproduction and Development

Unit 7: Genetics

- Inheritance
- Genes and DNA
- Biotechnology
- Wrap-Up: Genetics

Unit 8: Semester Wrap-Up**Unit 9: Organization in Living Things**

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

Unit 10: Response to Stimuli

- Animal Behaviors
- Plant Responses
- Wrap-Up: Response to Stimuli

Unit 11: Evolution

- Theory of Evolution
- Natural Selection
- Wrap-Up: Evolution

Unit 12: Ecology

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

Unit 13: Changes to Matter on Earth

- Freshwater and Ice
- Weathering and Erosion
- Impacts of Humans
- Wrap-Up: Changes to Matter on Earth

Unit 14: Earth's Place in Space

- Our Solar System

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- Space Exploration
 - Wrap-Up: Earth's Place in Space

Unit 15: Semester Wrap-up

Science Grade 7
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