

Science 7 is a two-semester course aligned to the Indiana Academic Standards for Science (Grade 7). This course delivers instruction, practice, and review to help students develop scientific literacy, deepen conceptual understanding, and apply scientific practices. Students explore concepts including motion and stability, energy, the relationship between structure and function in living systems, the history of Earth, Earth's systems, and the interaction between humans and the environment. 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, 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. 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.

The materials needed for this course include specified lab materials.

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: Force and Motion

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

Unit 4: Noncontact Forces

- Electromagnetic Forces
- Gravitational Force
- Wrap-Up: Noncontact Forces

Unit 5: Energy

- Describing Energy

- Energy Transfer and Transformation
- Wrap-Up: Energy

Unit 6: Thermal Energy and Heat

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

Unit 7: Nature of Life

- Characteristics of Life
- Chemistry of Life
- Wrap-Up: Nature of Life

Unit 8: Semester Wrap-Up

- Semester Wrap-Up

Unit 9: Cells

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

Unit 10: Multicellular Bodies

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

Unit 11: Human and Animal Organ Systems

- Human Organ Systems
- Animal Behaviors
- Wrap-Up: Human and Animal Organ Systems

Unit 12: Earth's Structure and Resources

- Earth's Structure and Cycles
- Natural Resources
- Wrap-Up: Earth's Structure and Resources

Unit 13: The Geosphere

- Minerals
- The Rock Cycle
- Soil
- Wrap-Up: The Geosphere

Unit 14: Our Changing Planet

- Deforming Earth's Crust
- Weathering and Erosion
- Geologic Time

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- Wrap-Up: Our Changing Planet

Unit 15: Earth's Plates

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

Unit 16: The Hydrosphere and Weather

- Freshwater and Ice
- Severe Weather
- Wrap-Up: The Hydrosphere and Weather

Unit 17: Semester Wrap-Up

- Semester Wrap-Up