

Science 7 Course Syllabus

Description:

Middle School Comprehensive Science 2 is the second in a series of three consecutive middle school science classes. It builds on concepts introduced in the first course of the series, including the disciplines of life science, physical science, and earth-space science. In addition, technology, engineering, and mathematics (STEM) concepts are integrated throughout the course.

Estimated Completion Time: 2 segments / 32-36 weeks.

Major Topics and Concepts:

Segment 01:

Collaboration

- Segment One Collaboration

Module 01: Matter and Energy

- 01.00 Module Pretest
- 01.01 Food Chains and Webs
- 01.02 Advanced Classification
- 01.03 Transformation of Energy
- 01.04 Law of Conservation of Energy
- 01.05 Advanced Thermal Energy
- 01.06 Discussion-Based Assessment
- 01.07 Module Exam

Module 02: Interdependence of Life

- 02.00 Module Pretest
- 02.01 Biological Interactions
- 02.02 Limiting Factors
- 02.03 Evidence of Change
- 02.04 Evolution and Natural Selection
- 02.05 Advanced Forces That Drive Natural Selection
- 02.06 Discussion-Based Assessment
- 02.07 Module Exam

Module 03: The Earth

- 03.00 Module Pretest
- 03.01 Geological Age
- 03.02 Layers of the Earth
- 03.03 Plate Tectonics

- 03.04 Advanced Processes of Plate Movement
- 03.05 Discussion-Based Assessment
- 03.06 Module Exam
- 03.07 Segment One Exam

**Segment 02:
Collaboration**

- Segment Two Collaboration

Module 04: Patterns of Change

- 04.00 Module Pretest
- 04.01 Processes That Shape the Earth
- 04.02 Advanced Landforms on Earth
- 04.03 Heat Flow Inside Earth
- 04.04 Human Impact on Earth
- 04.05 Discussion-Based Assessment
- 04.06 Module Exam

Module 05: Energy Resources

- 05.00 Module Pretest
- 05.01 Electromagnetic Spectrum
- 05.02 Properties of Light
- 05.03 Phases of Matter
- 05.04 Adaptation to the Environment
- 05.05 Discussion-Based Assessment
- 05.06 Module Exam

Module 06: Heredity and Genetics

- 06.00 Module Pretest
- 06.01 Biotechnology
- 06.02 Heredity
- 06.03 Patterns of Inheritance
- 06.04 Mitosis and Meiosis
- 06.05 Discussion-Based Assessment
- 06.06 Module Exam
- 06.07 Segment Two Exam

Course Assessment and Participation Requirements:

To achieve success, students are expected to submit work in each course weekly. Students can learn at their own pace; however, “any pace” still means that students must make progress in the course every week. To measure learning, students complete self-checks, practice lessons,

multiple choice questions, projects, discussion-based assessments, and discussions. Students are expected to maintain regular contact with teachers; the minimum requirement is monthly. When teachers, students, and parents work together, students are successful.
