

Earth Space Science Course Syllabus

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

Major Topics and Concepts:

Segment I:

Module 01: Beginning with Science

- 01.00 Beginning with Science Checklist
- 01.01 Welcome to Earth Space Science
- 01.02 Scientific Investigation
- 01.03 Theories and Laws
- 01.04 Measurement
- 01.04 Measurement (Honors)
- 01.05 Atomic Structure and Forces
- 01.06 Matter and Energy
- 01.07 Beginning with Science Discussion-Based Assessment
- 01.08 Beginning with Science Module Exam

Module 02: Climate and Meteorology

- 02.00 Climate and Meteorology Pretest
- 02.01 Water Cycle
- 02.02 The Atmosphere
- 02.03 Weather vs. Climate
- 02.04 Meteorology
- 02.05 Severe Weather
- 02.05 Severe Weather (Honors)
- 02.06 Global Climate Change
- 02.07 Climate and Meteorology Discussion-Based Assessment
- 02.08 Climate and Meteorology Module Exam

Module 03: Fresh Water

- 03.00 Fresh Water Pretest
- 03.01 Surface Water
- 03.02 Groundwater
- 03.03 Water Quality
- 03.04 Water Conservation
- 03.05 Fresh Water Discussion-Based Assessment
- 03.06 Fresh Water Module Exam

Module 04: Our Universe

- 04.00 Our Universe Pretest

- 04.01 Light and the Universe
- 04.02 Exploring the Universe
- 04.02 Exploring the Universe (Honors)
- 04.03 Life Cycle of a Star
- 04.03B Stars and Elements
- 04.04 Origin and Expansion of the Universe
- 04.04B Origin of the Moon
- 04.05 Our Universe Discussion-Based Assessment
- 04.06 Our Universe Module Exam

Module 05: Rocks and Minerals

- 05.00 Rocks and Minerals Pretest
- 05.01 Minerals
- 05.02 Rocks and the Rock Cycle
- 05.03 Rocks and Minerals as Resources
- 05.03 Rocks and Minerals as Resources (Honors)
- 05.04 Soil and Soil Formation
- 05.05 Rocks and Minerals Discussion-Based Assessment
- 05.06 Rocks and Minerals Module Exam
- 05.07 Segment One Exam

Segment II

Module 06: Geologic Time

- 06.00 Geologic Time Pretest
- 06.01 Geologic Time Scale
- 06.02 Relative and Absolute Time
- 06.02 Relative and Absolute Time (Honors)
- 06.03 Origin and Evolution of Life
- 06.03B Coevolution of Earth Systems
- 06.04 Geologic Time Discussion-Based Assessment
- 06.05 Geologic Time Module Exam
- 06.06 Engineering Design I

Module 07: Oceans

- 07.00 Oceans Pretest
- 07.01 Characteristics of the Ocean
- 07.02 Ocean Circulation
- 07.03 Waves
- 07.04 Tides and Water Power
- 07.04 Tides and Water Power (Honors)
- 07.05 Ocean Interactions
- 07.06 Oceans Discussion-Based Assessment
- 07.07 Oceans Module Exam

- 07.08 Engineering Design II

Module 08: Our Solar System

- 08.00 Our Solar System Pretest
- 08.01 Formation of Our Solar System
- 08.02 Forces in Our Solar System
- 08.03 Physical Properties of Our Sun
- 08.04 Objects in Our Solar System
- 08.04 Objects in Our Solar System (Honors)
- 08.05 The Earth in Space
- 08.06 The Earth-Sun-Moon System
- 08.07 Our Solar System Discussion-Based Assessment
- 08.08 Our Solar System Module Exam
- 08.09 Engineering Design III

Module 09: The Geosphere

- 09.00 The Geosphere Pretest
- 09.01 Structure of the Earth
- 09.02 The Carbon Cycle
- 09.03 Mechanisms of Movement
- 09.04 Structural Geology
- 09.05 Geologic Events
- 09.05 Geologic Events (Honors)
- 09.06 The Geosphere Discussion-Based Assessment
- 09.07 The Geosphere Module Exam
- 09.08 Segment Two Exam
- 09.09 Engineering Design IV

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.
