

SCI0400_202338_Staging_EMBR_TEM

SCI-400

2023 05/01/2023 to 04/30/2024 Modified 03/21/2023

Course Description

This science course challenges students to understand God better as they investigate the world through research, projects, and hands-on activities. The course comprises exciting modules covering concepts related to Creation, space, weather, rocks and minerals, plants, insects, ecosystems, friction, force, and electricity. The student will engage in investigating and solving problems utilizing the scientific method.

Rationale

This course builds on the foundations of critical scientific thinking. God has given everyone an inquisitive mind for thinking beyond what we see. He has provided ways to explore His creation. Students will learn to apply critical scientific thinking skills through the guidance of this curriculum.

Course Learning Outcomes

- A. The student will know what occurred on each day of creation.
- B. The student will investigate the timing of the creation of the Earth, moon, and sun.
- C. The student will investigate and understand how plants and animals in an ecosystem interact with one another and the nonliving environment.
- D. The student will investigate and understand basic plant anatomy and life processes.
- E. The student will investigate and understand the relationships among the Earth, moon, sun, and the planets.
- F. The student will investigate and understand how weather conditions and phenomena occur and can be predicted.
- G. The student will investigate and understand important natural resources.
- H. The student will investigate and understand characteristics and interaction of moving objects.
- I. The student will investigate and understand the characteristics of electricity.

Biblical Integration Outcomes

- A. The student will understand that God created the world in seven days.
- B. The student will understand that God's hand is in all of creation from weather phenomena to the specific placement of the sun, moon, and stars.
- C. The student will understand that God has created a universe that is orderly.
- D. The student will understand that God has given people the ability to create things like electricity.
- E. The student will understand that God has put forces in place to keep the world working.

Course Resources

See Ember's [Systems Requirements](#) for computer specifications necessary to operate this curriculum.

- Note: Embedded YouTube videos may be utilized to supplement Ember's YouTube videos are the property of the respective content creator, licensed to YouTube for distribution and user access. As a non-profit educational institution, Ember is able to use YouTube video content under the YouTube Terms of Service. For additional information on copyright, please contact the [Jerry Falwell Library](#)

* Course Policies

Types of Assessments

To simplify and clearly identify which policies apply to which assessment, each assessment has been categorized into one of four categories: Lesson, Assignment, Quiz, or Test. Each applicable item on the course Modules page has been designated with an identifier chosen from among these categories. Thus, a Quiz on the American Revolution may be designated by the title, "1.2.W Quiz: The American Revolution."

- **Lesson:** *Any item on the Modules page designated as a "Lesson"*

These include instructional content and sometimes an assessment of that content. Typically, a Lesson will be the day-to-day work that a student completes.

- **Assignment:** *Any item on the Modules page designated as an "Assignment"*

Typical examples of Assignments include, but are not limited to, papers, book reports, projects, labs, and speeches. Assignments are usually something that the student should do his or her best work on the first time.

- **Quiz:** *Any item on the Modules page designated as a "Quiz"*

This usually takes the form of a traditional assessment where the student will answer questions to demonstrate knowledge of the subject. Quizzes cover a smaller amount of material than Tests.

- **Test:** *Any item on the Modules page designated as a "Test"*

This usually takes the form of a traditional assessment where the student will answer questions to demonstrate knowledge of the subject. Tests cover a larger amount of material than Quizzes.

Materials Selection Policy

Ember curates educational materials that are consistent with the school's philosophy; however, the fallen human condition depicted in literature (as in Scripture itself) is not always pleasant. Valuable works sometimes have objectionable or profane elements. Good books provide four (4) recognized values.

- They build godly attitudes and character traits.
- They deepen our social and cultural awareness.
- They strengthen our use of written language.
- They provide a lifelong source of enjoyment and relaxation.

In order to instill these values in students and fulfill the stated objectives of the school, all Ember students are expected to read and study good books on a regular basis. Recognizing that materials designed for one level may not be appropriate for another, three (3) levels of criteria are applied:

- Elementary materials must contain no objectionable material,
- Objectionable elements in sixth through eighth-grade materials must be limited and must serve a specific educational purpose, and
- Objectionable content may be included in high school materials but must be outweighed by positive literary, curricular, and/or Christian values.

The curriculum department has approved required educational materials for students.

Resubmission Policy

Students are expected to submit their best work on the first submission for every Lesson, Assignment, Quiz, and Test. However, resubmissions may be permitted in the following circumstances:

- **Lesson:** Students are automatically permitted two attempts on a lesson. Students may freely resubmit for their first two attempts without the need for teacher approval.

If a student feels that he or she deserves a resubmission on a Lesson, Assignment, Quiz, or Test due to a technical issue such as a computer malfunction, the student should message his or her teacher to make the request. With Ember, the teacher may be a physical school teacher or the student's parent/guardian. The teacher can give another attempt from his or her Canvas account. For more information on how to do this, please review the Ember orientation course.

Schedule

Module 1: Creation

- Week 1: Earth's Beginning
- Week 2: Creation Complete

Module 2: The Solar System

- Week 3: The Earth
- Week 4: The Sun
- Week 5: The Moon
- Week 6: The Stars

Module 3: The Planets

- Week 7: Mercury, Venus, Earth
- Week 8: Mars, Jupiter, Saturn, Uranus, Neptune
- Week 9: Review Week

Module 4: The Scientific Method and Weather

- Week 10: The Scientific Method
- Week 11: Weather
- Week 12: Scientific Weather Instruments
- Week 13: Weather Forecasting

Module 5: Extreme Weather and Natural Disasters

- Week 14: Extreme Weather
- Week 15: Natural Disasters
- Week 16: Natural Disasters Continued
- Week 17: Using the Scientific Method
- Week 18: Review Week

Module 6: Plants and Insects

- Week 19: Plants and Flowers
- Week 20: Photosynthesis and Pollination
- Week 21: Insects and Arachnids

Module 7: Ecosystems

- Week 22: Terrestrial Biomes
- Week 23: Terrestrial Biomes Continued

- Week 24: Aquatic Biomes

Module 8: Adaptations and Food Chains

- Week 25: Adaptations
- Week 26: Food Chains
- Week 27: Review Week

Module 9: Rocks and Earth's Resources

- Week 28: Introduction to Rocks
- Week 29: Erosion and Important Rocks
- Week 30: Resources
- Week 31: Topography

Module 10: Friction, Force, Motion, and Energy

- Week 32: Friction, Force, and Motion
- Week 33: Types of Energy
- Week 34: Electricity
- Week 35: Electricity Continued
- Week 36: Review Week