



6th Grade Science

SCI-600

2022 07/01/2022 to 06/30/2023 Modified 04/22/2022

Course Description

This 6th-grade science course provides students with an opportunity to discover scientific topics through interactive and engaging activities and lessons. Students will dive into God's world through the units that will employ imperative Christian values. The truths of Creation and God's design will be interwoven continuously throughout the entire course allowing students to gain solid scientific knowledge with a biblical worldview. Students will explore a wide range of topics which include the following: Creation, Nature and Method of Science, Matter, Water and the Water Cycle, the Earth and its Atmosphere, Biomes and Oceans, the Earth and its Surface, Earth's Resources, and the Universe and Solar System.

Rationale

The 6th-grade science course offers students an examination of the biblical foundations and an appreciation of science—the study of God and His creation. God is awesome! He created you and the world around you. Ponder the world around you. Think of how beautiful the mountains are and how amazing the moon and the stars look at night. The ocean is filled with life! God is amazing! His creations are amazing, as well. We could spend our entire lives investigating God's works yet never begin to scratch the surface. God wants us to learn about His amazing creation. He equips us to learn about His works. God created a spark of curiosity in each of us in desiring to learn more about Him through studying His creation.

Prerequisite

None

Measurable Learning Outcomes

- A. The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations.
- B. The student will investigate and understand basic sources of energy, their origins, transformations, and uses.
- C. The student will investigate and understand the role of solar energy in driving most natural processes within the atmosphere, the hydrosphere, and on Earth's surface.
- D. The student will investigate and understand that all matter is made up of atoms.
- E. The student will investigate and understand the unique properties and characteristics of water and its roles in the natural and human-made environment.
- F. The student will investigate and understand the properties of air and the structure and dynamics of Earth's atmosphere.
- G. The student will investigate and understand the natural processes and human interactions that affect watershed systems.
- H. The student will investigate and understand the organization of the solar system and the interactions among the various bodies that comprise it.
- I. The student will investigate and understand public policy decisions relating to the environment.

Biblical Integration Outcomes

A. The student will identify and describe Creation and the universe from a biblical worldview.

Course Resources

See LUOA's [Systems Requirements](#) for computer specifications necessary to operate LUOA curriculum. Also view [Digital Literacy Requirements](#) for LUOA's expectation of users' digital literacy.

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

Scripture Attribution

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- Grades 7-12: All Scripture quotations, unless otherwise indicated, are from the ESV® Bible (The Holy Bible, English Standard Version®), copyright © 2001 by Crossway, a publishing ministry of Good News Publishers. Used by permission. All rights reserved. May not copy or download more than 500 consecutive verses of the ESV Bible or more than one half of any book of the ESV Bible."
- Sixth grade is a "transition" grade in which both NIV® and ESV are used as students are introduced to the ESV translation.

Policies

Students are accountable for all information in the [Student Handbook \(https://www.liberty.edu/online-academy/wp-content/uploads/2021/11/LUOA-Student-Handbook.pdf\)](https://www.liberty.edu/online-academy/wp-content/uploads/2021/11/LUOA-Student-Handbook.pdf). Below are a few policies that have been highlighted from the Student Handbook.

Course Grading Policies

The student's grades will be determined according to the following grading scale and assignment weights. The final letter grade for the course is determined by a 10-point scale. Assignments are weighted according to a tier system, which can be referenced on the Grades page in Canvas. Each tier is weighted according to the table below. Items that do not affect the student's grade are found in Tier 0.

Grading Scale	Assignment Weights
A 90-100%	Tier 0 0%
B 80-89%	Tier 1 25%
C 70-79%	Tier 2 35%
D 60-69%	Tier 3 40%
F 0-59%	

In order for students to receive credit for a course, the following conditions have to be met:

- All semester exams and module tests have to be completed.
- All Tier 3 projects or papers have to be completed.
- Fewer than 10 zeros exist in the gradebook for blank submissions in a full credit course and 5 zeros for blank submissions in a semester course.

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." These identifiers were placed on the Modules page to help students understand which Resubmission and Honor Code policies apply to that assessment (see the Resubmission Policy and Honor Code Policy below for further details).

- **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.

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.
- **Assignment:** Students should do their best work the first time on all Assignments. However, any resubmissions must be completed before the student moves more than one module ahead of that Assignment. For example, a student may resubmit an Assignment from Module 3 while in Module 4, but not an Assignment from Modules 1 or 2. High School students may not resubmit an Assignment without expressed written permission from the teacher in a comment.
- **Quiz:** Students may NOT resubmit for an increased grade.
- **Test:** Students may NOT resubmit for an increased grade.

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.

Honor Code Policy

Every time a student violates the Honor Code, the teacher will submit an Honor Code Incident Report. The Student Support Coordinator will review the incident and allocate the appropriate consequences. Consequences, which are determined by the number of student offenses, are outlined below:

- **Warning:** This ONLY applies to high school Lessons and elementary/middle school Assignments and Lessons. Students should view these actions as learning opportunities.
 - **Lessons:** A zero will be assigned for the question only.
 - **Elementary/Middle School Assignment:** The student must redo his or her work; however, the student may retain his or her original grade.
- **1st Offense:**
 - **Lesson, Quiz, or Test:** The student will receive a 0% on the entire assessment.
 - **Assignment:** The student will either:

- Receive a 0% on the original assignment
- Complete the Plagiarism Workshop
- Retry the assignment for a maximum grade of 80%
- **2nd Offense:** The student will receive a 0% and be placed on academic probation.
- **3rd Offense:** The student will receive a 0% and the Director of Faculty will determine the consequences that should follow, possibly including withdrawal from the course or expulsion from the academy.

Materials Selection Policy

LUOA 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 LUOA 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.

Schedule

Module 1: Creation & the Universe

Week 1: Creation & Origins of the Earth

Week 2: Creation & Origins of the Earth

Week 3: Module 1 Review & Test

Module 2: Science

Week 4: The Nature of Science and its Method

Week 5: Experimental Components

Week 6: Module 2 Review and Test

Module 3: Matter

Week 7: Atoms

Week 8: Compounds, Bonds, and Chemical Equations

Week 9: Rock Candy Lab and Test

Module 4: Earth's Surface

Week 10: Earth's Geographic Spheres

Week 11: Earth's Weathering, Part 1

Week 12: Earth's Weathering, Part 2, Soil, and Test

Module 5: Atmosphere

Week 13: Atmosphere Introduction

Week 14: Heat in the Atmosphere

Week 15: Atmospheric Wind and Test

Module 6: Weather

Week 16: Weather Introduction and Clouds Week 17: Weather Influences and Severe Weather

Week 18: Climate Change and Test

Module 7: Water

Week 19: Characteristics of Water

Week 20: Groups of Water

Week 21: Watersheds and Test

Module 8: Earth's Resources

Week 22: Resources

Week 23: Renewable and Non-renewable Resources

Week 24: Managing Resources and Test

Module 9: Society's Impact on Earth's Resources

Week 25: Society's Impact on Water

Week 26: Society's Impact of Soil

Week 27: Society's Impact on Air and Test

Module 10: Earth, Moon, & Sun Relationship

Week 28: Tilt and Seasons of the Earth

Week 29: Characteristics of the Moon

Week 30: Tides and Test

Module 11: Solar System

Week 31: Gravity and the Sun

Week 32: Inner Planets

Week 33: Outer Planets and Test

Module 12: Space Exploration

Week 34: Dwarf Planets and Astronomical Objects

Week 35: Models of the Solar System

Week 36: Satellites and Test