

1st Grade Science

SCI0101

Course Description

The first-grade standards continue to stress basic science skills in understanding familiar objects and events. Students are expected to begin conducting simple experiments and be responsible for some of the planning. Students are introduced to the concept of classifying plants and animals based on simple characteristics. Emphasis is placed on the relationships among objects and their interactions with one another. Students are expected to know the basic relationships between the sun and Earth and the relationship between seasonal changes and plant and animal activities. Students will also begin to develop an understanding of moving objects, simple solutions, and important natural resources.

Rationale

First grade students will use their inquiry skills to discover scientific relationships in the world around them. They will explore experimentally how to classify, relate, and understand objects around them.

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 that moving objects exhibit different kinds of motion.
- C. The student will investigate and understand how different common materials interact with water.
- D. The student will investigate and understand that plants have basic life needs and functional parts and can be classified according to certain characteristics.
- E. The student will investigate and understand that animals and humans have basic needs and certain distinguishing characteristics.

- F. The student will investigate and understand the basic relationships between the sun and Earth.
- G. The student will investigate and understand weather and seasonal changes.
- H. The student will investigate and understand that natural resources are limited.
- I. The student will identify the basic components and functions of human body systems and the importance of safe practices, positive interpersonal relationships, and environmental health.
- J. The student will explain that good health is related to healthy decisions.
- K. The student will identify specific rules and practices to promote personal safety and socially responsible behaviors.

Materials List

Please see the [Supply List](#) page on LUOA's website as well as the [Digital Literacy Requirements](#) page for general supplies and requirements with LUOA curriculum. Due to the nature of this course, several additional materials will be required for various assignments throughout the curriculum. Please see the Materials list toward the bottom of this syllabus for a complete list of materials.

Digital Tools

This course makes use of third-party digital resources to enhance the learning experience. These resources have been curated by LUOA staff and faculty and can be safely accessed by students to complete coursework. Please ensure that internet browser settings, pop-up blockers, and other filtering tools allow for these resources to be accessed.

The following resources are used throughout this course:

- YouTube videos
- EducationCity
- ReadingEggs

Note: Embedded YouTube videos are utilized to supplement LUOA curriculum. YouTube videos are the property of the respective content creator, licensed to YouTube for distribution and user access. As a non-profit education institution, LUOA is able to use YouTube video content under the YouTube Terms of Service and the provisions of the TEACH Act of 2001. For additional information on copyright, please contact the Jerry Falwell Library.

Course Grading Policies

The students' 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

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Assignment Weights

Tier 0	0%
Tier 1	25%
Tier 2	35%
Tier 3	40%

Course Policies

Students are accountable for all information in the Student Handbook. Below are a few policies that have been highlighted from the Student Handbook.

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 a title like “1.2.3 Quiz: The American Revolution.” These identifiers were placed on the Modules page to help students understand which Honor Code and Resubmission policies apply to that assessment (see the Honor Code and Resubmission policies on the page to follow 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 their 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. The student may freely resubmit for their first two attempts without the need for teacher approval.
- **Assignment:** Students are intended to 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 crashing, the student should message his or her teacher to make the request, and that request will need to be approved by a Department Chair.

Consequences for Violations to the Honor Code

Every time a student violates the Honor Code, the teacher will fill out an Honor Code Incident Report, email the advisor, and carbon copy the Department Chair with the report. The advisor will verify which number offense this is and inform the teacher and parent. The teacher will then leave a comment on the student's assignment and award the appropriate consequences. Replies to any correspondence must be made within 24 hours of the last email received.

- **Warning:** This ONLY applies to high school Lessons and elementary/middle school Assignments and Lessons. These will be taken as a teaching moment for the student.
 - **Lessons:** A zero will be assigned for the question only.
 - **Elementary/Middle School Assignment:** The student must redo their work. However, they may retain their original grade.
- **1st Offense:**
 - **Lesson, Quiz, or Test:** The student will receive a zero on the entire assessment.
 - **Assignment:** The student will:
 - Receive a 0% or 80% of his or her original grade per the teacher's discretion
 - Be required to complete the Plagiarism Workshop
 - Be permitted to retry for a higher grade on the next attempt at the teacher's discretion

- **2nd Offense:** The student will receive a zero and be placed on Academic Probation.
- **3rd Offense:** The student will receive a zero and the Department Chair will determine the consequences that should follow, possibly including Academic Withdrawal from the course or expulsion from the academy.

Materials List

1st Grade Science

For the Whole Course

100-page spiral notebook to be used as a learning journal for the whole course
Markers and/or crayons
Scissors
White glue
Multi color pack of construction paper
Black permanent marker
Scotch tape

Module 1

Large ball for experiment
Magnifying glass
Sidewalk chalk
Clear container
Binoculars
Poster paper - any color
Optional Art - flour and salt
Optional Experiment - shortening, disposable glove, bowl and ice

Module 2

Clear containers and jar
Bubbles
Sandwich size clear zipper baggie
Baking powder
One full and one empty water bottle
Vinegar
Measuring spoons
Small funnel
Blue food coloring
Sponge that will fit over glass jar opening
Thermometer
Optional art - 2 bottles of white liquid glue, liquid starch, iridescent glitter

Module 3

Old magazines
bucket/shovel
Poster paper - any color
Gallon size clear zipper baggie
4-6 dry lima beans
Soil

Module 4

Various sizes of magnets
Drawing paper
Various materials to create a musical instrument - supplies depend on your choice of instrument
Various supplies to create a landfill model - most items can be found around your home and yard

Module 5

Nothing new

Module 6

Poster paper - any color
Shoe box or plastic box to use in first aid kit activity
First aid kit supplies - list of suggestions in lesson - most will be items in your home

Scope and Sequence

1st Grade Science

Module 1: A Scientist Can Observe

Week 1: The Sun

Week 2: Weather Changes

Week 3: Season Changes

Module 2: A Scientist Can Record

Week 4: Types of Matter and Water Cycle

Week 5: Types of Precipitation

Week 6: Temperatures

Module 3: A Scientist Can Investigate

Week 7: Natural Resources

Week 8: Plants

Week 9: Animals

Module 4: A Scientist Can Create

Week 10: Ecology

Week 11: Motion and Magnets

Week 12: Sound

Module 5: My Health-My Body

Week 13: My Body

Week 14: My Feelings

Week 15: My Choices

Module 6: Health-My Safety

Week 16: Bike, Passenger, Street, and Safety Helpers

Week 17: Fire, Medicine, and First Aid Safety

Week 18: Playground, Sun, and Water Safety