

Unit 01: Nature of Life

Content Area: **Template**
Course(s):
Time Period:
Length:
Status: **Published**

Unit 1: Nature of Life

Learning Objectives

- Analyze experimental data and draw conclusions.
- Apply the steps of the scientific method to investigate a testable question.
- Communicate findings using scientific vocabulary.
- Define the characteristics of living things.
- Distinguish between living and non-living based on biological criteria.

Essential Questions

- How does scientific inquiry help us understand the natural world?
- What makes something 'alive'?
- Why is it important to use evidence when making scientific claims?

Standards

9-12.HS-LS1-3	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
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State Mandated Topics Addressed in this Unit

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What is Biology?	
Characteristics of Life	
Scientific Method Overview	
Variables & Experimental Design	

Scientific Claims & Evidence	
Lab Day 1 – Investigation	
Lab Day 2 – Data Analysis	
Graphing & Data Visualization	
Communication in Science	

Instructional Tasks/Activities

- Chapter tests
- Characteristics of living things game
- Design and carry out a novel experiment (indicate all steps of scientific method and variables and use metric system to collect data)
- Exit Cards (answer to daily objective questions)
- Guided Notes
- Homework
- In Class activity identifying living things vs. non living things
- Marty the Martian Activity
- Metric system measurement practicum (length, volume, mass)
- Review game
- Safety Poster/Presentation (identification of safety rule from student-designed posters)
- Section Review Questions
- SpongeBob Experimental Variables Worksheets
- Study Guide Packets
- Use scientific method to solve various environmental scenarios
- Vocabulary flash cards or map (word, picture, sentence, example)
- Vocabulary Quizzes

Assessment Procedure

- Classroom Total Participation Technique
- Classwork
- DBQ
- Essay
- Exit Ticket/Entrance Ticket/Do Now
- Foldables – organization of material (scientific method & features of living things)
- Group discussion
- Journal / Student Reflection

- Kahoot
- Metric system - demonstration of instruments
- Metric system practice with instruments (meter stick – measure size of room; graduated cylinder; balance)
- Other named in lesson
- Peer Review
- Performance
- PowerPoint presentation of material
- Problem Correction
- Project
- Quiz
- Rubric
- Teacher Collected Data
- Test
- Think, pair, share (read assigned section of text individually, discuss with a partner, present material in pairs to class – use PowerPoint as a reference)
- Worksheet

Recommended Technology Activities

- Appropriate Content Specific Online Resource
- Chromebook
- GoGuardian
- Google Classroom
- Google Docs
- Google Forms
- Google Slides
- Kahoot
- MagicSchool AI
- Other- Specified in Lesson
- Quiziz

Accommodations & Modifications & Differentiation

Accommodations and Modifications should be used to meet individual needs. Their IEP and 504 plans should be used in addition to the following suggestions.

Gifted and Talented

- Compare & Contrast
- Conferencing
- Debates
- Jigsaw
- Peer Partner Learning
- Problem Solving
- Structured Controversy
- Think, Pair, Share
- Tutorial Groups

Instruction/Materials

- alter format of materials (type/highlight, etc.)
- color code materials
- eliminate answers
- extended time
- extended time
- large print
- modified quiz
- modified test
- Modify Assignments as Needed
- Modify/Repeat/Model directions
- necessary assignments only
- Other (specify in plans)
- other- named in lesson
- provide assistance and cues for transitions
- provide daily assignment list
- read class materials orally
- reduce work load
- shorten assignments
- study guide/outline
- utilize multi-sensory modes to reinforce instruction

Environment

- alter physical room environment
- assign peer tutors/work buddies/note takers
- assign preferential seating

- individualized instruction/small group
- modify student schedule (Describe)
- other- please specify in plans
- provide desktop list/formula

Honors Modifications

N/A

Resources
