Life Science Curriculum

2021 - 2022

Content Addressed (by Unit)

- Ecosystems
- Populations
- Cells
- Body Systems
- Genetic Traits
- Growth and Reproduction of Organisms
- Adaptations of Organisms and Populations
- Ecosystem Interdependence

Example of Content Objective: Students will analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations in an ecosystem.

Link to full curriculum map

Science Skills Developed

Addresses Common Core Literacy Standards for Science

- Keep an organized science binder throughout the year
- Understand and demonstrate proper lab safety
- Work through the scientific process in varying scenarios and identify parts of the scientific process
- Follow multi-step instructions (to various degrees of complexity based on age) when doing experiments
- Use the CER (Claim, Evidence, Reasoning) model to communicate understanding of topics or results of experiments
- Compare and contrast data from experiments and investigations with information from text
- Practice reading/comprehending scientific texts with the preloading of vocabulary
- Determine main ideas from scientific text and write a summary of scientific texts
- Synthesize ideas from several texts/sources
- Represent scientific information in a variety of ways (e.g. chart, diagram, graph, table)

Class Breakdown

Class A	Class B	Class C
• Predominantly guided labs, experiments, investigations • Fill in the blank/short answers for post-lab questions • Introduction to researching on the Internet with assistance • Read scientific texts as a class or in small groups • More direct instruction when taking notes, doing experiments, working on projects, etc. • All tests open note	• Mix of guided and independent labs, experiments, investigations • Mix of fill in the blank/short answer and longer answers on post-lab questions • Working towards independence on projects, labs, investigations, etc. • Research with assistance or in small groups • Read scientific texts semi-independently • Structured note-taking • Tests primarily open note	• Predominantly independent labs, experiments, investigations, projects • More extensive write-ups for labs, experiments, etc. • Work towards *designing* experiments to answer questions • Research and write about scientific concepts with little to no assistance • Read scientific texts independently • Independent note-taking • Tests primarily closed note

Alaska Studies Theme Alignment

- Using data on local fish and wildlife populations
- Creating local flora guide for the region
- Ecosystem phenomena specific to region
- Comparing local ways of knowing to scientific texts
- Dissection of locally caught fish when studying body systems
- Collaboration with local scientists to obtain data
- Compare data taken in Nome with other averages
- Looking at solutions to local ecological problems