Standard II
Living and Nonliving

Science Benchmark

For any particular environment, some types of plants and animals survive well, some survive less well and cannot survive at all. Organisms in an environment interact with their environment. Models can be used to investigate these interactions.

STANDARD II: Students will understand that organisms depend on living and non-living things within their environment.

Objective 1: Classify living and non-living things in an environment.

a. Identify characteristics of living things (i.e., growth, movement, reproduction).
b. Identify characteristics of non-living things.
c. Classify living and non-living things in an environment.

Objective 2: Describe the interactions between living and non-living things in a small environment.

a. Identify living and non-living things in a small environment (e.g., terrarium, aquarium, flowerbed) composed of living and non-living things.
b. Predict the effects of changes (e.g., temperature, amount of water, light) upon the living organisms and non-living things in a small-scale environment.
c. Observe and record the effect of changes (e.g., temperature, amount of water, light) upon the living organisms and non-living things in a small-scale environment.
d. Compare a small-scale environment to a larger environment (e.g., aquarium to a pond, terrarium to a forest).
e. Pose a question about the interaction between living and non-living things in the environment that could be investigated by observation.

Science language students should use:	Environment, interaction, living, non-living, organism, survive, observe, terrarium, aquarium, temperature, moisture, small-scale

Intended Learning Outcomes for Third Grade Science

The Intended Learning Outcomes (ILOs) describe the skills and attitudes students should learn as a result of science instruction. They are an essential part of the science Core Curriculum and provide teachers with a standard for evaluation of student learning in science. Instruction should include significant science experiences that lead to student understanding using the ILOs.

The main intent of science instruction in Utah is that students will value and use science as a process of obtaining knowledge based upon observable evidence.

By the end of third grade students will be able to:

1. **Use Science Process and Thinking Skills**
    a. Observe simple objects and patterns and report their observations.
    b. Sort and sequence data according to a given criterion.
    c. Make simple predictions and inferences based upon observations.
    d. Compare things and events.
    e. Use instruments to measure length, temperature, volume, and weight using appropriate units.

2. **Manifest Scientific Attitudes and Interests**
    a. Demonstrate a sense of curiosity about nature.
    b. Voluntarily read or look at books and other materials about science.
    c. Pose questions about objects, events, and processes.

3. **Understand Science Concepts and Principles**
    a. Know science information specified for their grade level.
    b. Distinguish between examples and non-examples of science concepts taught.
    c. Explain science concepts and principles using their own words and explanations.

4. **Communicate Effectively Using Science Language and Reasoning**
    a. Record data accurately when given the appropriate form and format (e.g, table, graph, chart.
        a. Report observation with pictures, sentences, and models.
        b. Use scientific language appropriate to grade level in oral and written communication.
        c. Use available reference sources to obtain information.