

**TREYNOR COMMUNITY SCHOOL DISTRICT
CURRICULUM FRAMEWORK**

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| Subject: | Science |
| Course: | Grade 2 Science |
| Grade Level(s): | Grade 2 |
| Prerequisites: | None |

Course Description: In second-grade science, students grow in their ability to understand about larger systems and the parts that make them up. They begin to formulate answers to questions such as “How are materials similar and different from one another? How do the properties of the materials relate to their use? What do plants need to grow?” Investigations of how parts relate to the whole provide a key basis for understanding systems in later grades. Second grade students will record observations and data, will use a variety of informational texts to gather information, and will engage in scientific thinking as they begin to understand larger systems and the parts that make up the systems.

Examples of Second Graders’ Work in Science:

- Conduct investigations to classify materials based on similar properties and functions.
- Test different materials to collect and then analyze data for the purpose of determining which materials are the best for a specific function.
- Investigate how the environment in which the plants and animals live helps provide the food, water, and shelter the organisms need to survive.
- Use information to model the features of Earth’s surface and begin to answer the questions “how does land change and what are things that cause it to change?”

Content Standards: In order that our students may achieve the maximum benefit from their talents and abilities, the second graders of the Treynor Community School who demonstrate understanding of science can . . .

I. Physical Science

1. Matter and Interactions

- 1) Plan and conduct an investigation to describe and classify different kinds of material by their observable properties.
- 2) Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.

- 3) Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.
- 4) Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.

II. Life Science

1. Ecosystems: Interactions, Energy, and Dynamics

- 1) Plan and conduct an investigation to determine if plants need sunlight and water to grow.
- 2) Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

2. Biological Evolution: Unity and Diversity

- 1) Make observations of plants and animals to compare the diversity of life in different habitats

III. Earth and Space Science

1. Earth's Place in the Universe

- 1) Use information from several sources to provide evidence that Earth events can occur quickly or slowly.

2. Earth's Systems

- 1) Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.
- 2) Develop a model to represent the shapes and kinds of land and bodies of water in an area.
- 3) Obtain information to identify where water is found on Earth and that it can be solid or liquid.

IV. Engineering, Technology and Application of Science

1. Engineering Design

- 1) Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
- 2) Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
- 3) Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.