

**TREYNOR COMMUNITY SCHOOL DISTRICT
CURRICULUM FRAMEWORK**

Subject:	Science
Course:	Grade 1 Science
Grade Level(s):	Grade 1
Prerequisites:	None

Course Description: In first-grade science, students will have more fluency with language, number sense and inquiry skills. Students focus on using patterns to predict events. They begin to develop answers to questions such as: “What happens when materials vibrate? What would we see in a room with no light? What are some ways plants and animals meet their needs so they can survive and grow? What objects can we see in the sky?” First grade students will conduct investigations and use models to help make predictions about the natural and designed world.

Examples of first graders’ work at school include the following:

- Explore how differing amounts of light and the ability to see objects are related.
- Plan and conduct investigations to discover how sound is produced.
- Use drawings or other models to show how young plants and animals are like, but not exactly the same as, their parents.
- Observe the external parts of plants and animals and make predictions about how plants and animals use those parts to help meet their needs.
- Use observations from looking at the sky during the day and at night and identify patterns from sunrise/sunset data to make predictions.

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

I. Physical Science

1. Waves and Their Applications in Technologies for Information Transfer

- 1) Plan and conduct investigations to provide evidence that vibrating materials can make sounds and that sound can make materials vibrate
- 2) Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.
- 3) Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.

- 4) Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

II. Life Science

1. From Molecules to Organisms: Structures and Processes

- 1) Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
- 2) Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.

2. Heredity: Inheritance and Variation of Traits

- 1) Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like their parents.

III. Earth and Space Science

1. Earth's Place in the Universe

- 1) Use observations of the sun, moon, and stars to describe patterns that can be predicted.
- 2) Make observations at different times of year to relate the amount of daylight to the time of year

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.