TREYNOR COMMUNITY SCHOOL DISTRICT
CURRICULUM FRAMEWORK

Subject: **Science**
Course: **Kindergarten Science**
Grade Level(s): **Kindergarten**
Prerequisites: **None**

Course Description: In kindergarten science, students will build on their early experiences of observing the world around them as they begin to formulate answers to questions such as "Where do animals live and why do they live there? What is the weather like today and how is it different from yesterday?" Kindergarten students will use their senses to make observations, ask and answer questions, develop models, and plan and conduct investigations. Students in kindergarten will identify patterns and cause and effect relationships as they explore the world around them.

Examples of kindergartners' work at school include the following:

- Ask and answer questions related to the natural world.
- Use observations to identify patterns and variations in local weather.
- Observe plants and animals, determine what all animals, including humans, need to survive and identify examples of how plants and animals meet their needs through interacting with or changing their environments.
- Experiment with pushing and pulling various objects and investigate the answer to "What happens if you push or pull an object harder?"

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

I. Physical Science

1. Motion and Stability: Forces and Interactions

1) Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.
2) Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.

2. Energy

1) Make observations to determine the effect of sunlight on Earth's surface.
2) Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.

II. Life Science

1. From Molecules to Organisms: Structures and Processes

1) Use observations to describe patterns of what plants and animals (including humans) need to survive.

III. Earth and Space Science

1. Earth's Systems

1) Use and share observations of local weather conditions to describe patterns over time.
2) Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

2. Earth and Human Activity

1) Use a model to represent the relationships between the needs of different plants or animal (including humans) and the places they live.
2) Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.
3) Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environments.

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.