LINCOLN PUBLIC SCHOOLS
Science Learning Expectations: Grade 2

STANDARD:

PHYSICAL SCIENCE/ TECHNOLOGY & ENGINEERING:

Mass Standard

Position & Motion of Objects

Engineering Design

Demonstrate that the way to change the motion of an object is to apply a force (give it a push or a pull). The greater the force, the greater the change in the motion of the object. Identify tools and simple machines used for a specific purpose (e.g., ramp, wheel, pulley, lever) Describe how human beings use parts of the body as tools (e.g., teeth for cutting, hands for grasping and catching) and compare their use with the ways in which animals use those parts of their bodies.

Big Ideas

- The way to change an object's motion is to give it a push or a pull.
- Forces cause changes in speed or direction of motion. The greater the force, the greater the change in motion.
- Humans and animals use parts of their bodies as tools.

Key Outcomes

- Students will demonstrate an understanding that **simple machines make work easier** by showing and explaining the steps needed to perform a task using simple machines.

Essential Knowledge and Skills

Students will be able to:

- How to use scientific inquiry* to access, explore and explain their understanding of core knowledge
- Simple machines are "simple" because most have only one moving part
- Machines do not reduce the amount of work for us, but they can make it easier
- Work is done when force is used to move an object over a distance
- Simple machines allow us to use less force to do the work, but the force is applied over a greater distance.
- First class levers work best when the fulcrum is closest to the load
- "Work" is only done when something is moved
- "Work" is the product of effort and distance

*Scientific Inquiry Standards are embedded in each unit of study