

LINCOLN PUBLIC SCHOOLS
Science Learning Expectations: Grade 5:

Physical Science

Electrical Energy

Mass Standard

Recognize that electricity in circuits requires a complete loop through which an electrical current can pass, and that electricity can produce light, heat, and sound.

Big Ideas

- Electricity and magnetism are two aspects of a single electromagnetic force, which has many practical applications that have changed our world.

Key Outcomes

- Students will demonstrate an understanding of **electrical current and magnetism** by drawing, demonstrating, and explaining circuit function.

Essential Knowledge and Skills

Students will know:

- How to use scientific inquiry* to access, explore and explain their understanding of core knowledge
- Electricity can be used to produce motion
- Batteries, wires, motors and bulbs can be connected in specific ways to create electrical circuits
- Electrical current has direction
- Diagram complete circuits
- Explain that if you disconnect a light bulb in a series circuit, the bulb goes out
- Explain that if you disconnect a light bulb in a parallel circuit, the rest stay on
- Recognize that a circuit requires a closed pathway for electricity
- Describe how electrical circuits are constructed to allow for the flow of electrical charges

* Scientific Inquiry Standards are embedded in each unit of study