Lesson 5:
Electrical and Magnetic Energy

Discovery Education Video:

The Basics: Electricity and Magnetism

Electromagnetism is a fundamental force in our lives, powering cities, causing lightning, and guiding compasses.
Electricity

Electricity is the flow of electrons – tiny negatively charged particles in atoms.

Electricity moving through a material is called electrical current.

Electrical current provides energy for many of the things that we use each day.
Lightning is a powerful example of electricity in nature.

Conductors and insulators affect the ability of electricity to transfer between objects or substances.
A conductor is a material that transmits energy. Electrons can flow easily through a conductor.

Examples of good conductors:
- Aluminum
- Copper
- Silver
An insulator is a material that prevents the flow of energy. Electrons cannot flow easily through an insulator.

Examples of good insulators:
- Wood
- Plastic
- Styrofoam
- Rubber
Magnetic Energy

Magnets are objects or substances that produce a magnetic field. A magnet will attract ferromagnetic objects and attract or repel other magnets.

Discovery Education Video:

**Mythbusters: Electricity and Magnetism**

Is it safe to be on the phone or in the shower during a lightning storm? Explore the powers of electricity and electromagnetism with the MythBusters.
Electricity and Magnetism: Main Ideas

1. On the front of your index card, write the one most important fact about electricity. Then write one question that you still have about electricity.

2. On the back of your index card, write the one most important fact about magnetism. Then write one question that you still have about magnetism.