



# Fourth Grade Science

## Energy

Dear Families,

Here is what your child is learning in Fourth Grade, during the study of Energy and some specific ways you can help. Look for additional newsletters for upcoming units.

### Energy Unit

#### Students need to:

- Construct an explanation of speed
- Explain how energy can be transferred from place to place by sound, light, heat, and electric currents
- Build an electrical circuit using understanding of insulators and conductors
- Describe that energy and fuels are derived from natural resources and their uses affect the environment in multiple ways
- Identify and describe renewable resources and how they impact the environment.

#### Key Vocabulary

- Energy: The ability to move an object some distance or cause change
  - Sound: Sound is a type of energy that travels by making vibrations in air, water, and solids. Anything that you can hear is sound.
  - Light: When white light enters a prism, it is separated into seven component colors. A human's eyes can only see visible light.
  - Heat/Thermal: Thermal energy is gained or lost and measured by internal temperature.
- Potential Energy: The amount of energy that is stored.
- Kinetic Energy: The energy an object has because of its motion.
- Speed: The measurement of how fast an object is moving.
- Motion: The change in the position of an object.
- Natural Resource: Materials that are found in nature and are important and useful.
- Collide: When something hits something else with force while moving
- Transfer: The movement of energy from one object to another.
- Circuit: A closed path that electricity can flow through.
- Conductor: Material that spread energy
- Insulator: Material in which energy cannot pass through. The energy is blocked.

#### Ways FAMILIES Can Help

- Identify items and materials at home that contain and transfer energy.
- Design a circuit at home using a battery as your source of energy. (Use caution and discuss electrical safety with your child).
- Discuss and compare the speeds of different objects using time and distance to explain thinking.
- Discuss ways that your family could help reduce the amount of nonrenewable energy sources being used in your community.
- Build a Rube Goldberg Machine with your child to show how energy can transfer from one object to another.
- Use the attached links to learn more information and explore!