

Name \_\_\_\_\_

## What Do We Use Electricity?

### Science Words

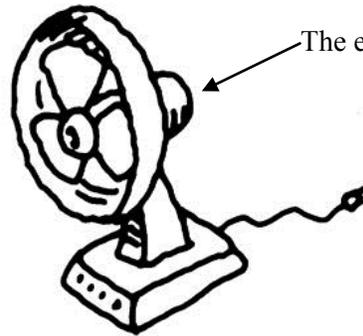
Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

**electric motor** [uh•LEK•trik MOHT•er] a machine that changes electrical energy into energy of motion

When you think of a motor, think of mechanical energy and motion. An *electric motor* turns electricity into mechanical energy, which includes the energy of motion.

When an *electric motor* is operating, the mechanical energy is mostly the energy of motion.



The electric motor is in here.

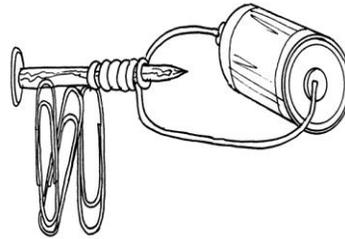
The electric motor turns electrical energy into the mechanical energy of the rotating blades.

**magnet** [MAG•net] an object that attracts iron and a few other metals

*Magnet*, *move*, and *metal* begin with the same sound. A *magnet* causes some metals to move toward it.

**electromagnet** [ee•lek•troh•MAG•net] a device in which current produces magnetism

*Electromagnet* and *electricity* start the same way. An *electromagnet* acts like a magnet only when electricity passes through it. When the electricity stops, it does not act like a magnet.



If the wire is disconnected from the battery, the nail will no longer attract the paperclips.

**generator** [JEN•er•ayt•er] a device that converts kinetic energy to electrical energy

*Generator* and *generation* are in the same word family. Both have to do with producing things. Parents produce children, who make a new generation. A *generator* produces electricity.

Name \_\_\_\_\_

# How Do We Use Electricity?

## Science Concepts

**Read the Ideas more than once. Do your best to remember them.**

1. Devices that use electricity change electrical energy into other types of energy such as heat.
2. An electric fan uses an electric motor to move air.
3. Magnetism is a physical property of matter.
2. A magnetic field is the space around the magnet where the force of the magnet acts.
3. A magnetic pole is the part of the magnet where the magnetic field is the strongest.
4. One end of a magnet is the south-seeking, or S pole; the other end is the north-seeking pole.
5. Like poles repel each other; unlike poles attract each other.
6. Moving a magnet and a wire near each other produces an electric current.
7. Wrapping a coil of current-carrying wire around a nail or other iron coil makes a magnet.
8. Electromagnets are used in electric motors, telephones, doorbells, and computers.
9. Coal, a nonrenewable resource, is burned to heat the water that runs most generators.
10. Coal and other nonrenewable resources will run out over time, so it is important to use electricity carefully.