Name _____

Extra Support for Vocabulary and Concepts

What Is Energy?

Science Words

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

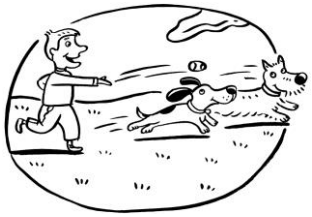
Read the tip to help you remember.

energy [EN•er•jee] the ability to cause changes in matter

If you had a lump of clay, what would you make with it? Whatever you make, will show that you have *energy,* because you will cause a change in the clay.

kinetic energy [kih•NET•ik EN•er•jee] the energy an object has because of its motion

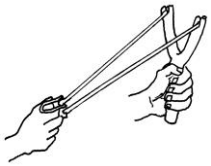
Kinetic and *kick* begin with the same sounds. When you kick something you use *kinetic* energy because your leg is in motion.



The boy, the ball, and the dogs have kinetic energy.

potential energy [poh•TEN•shuhl EN•er•jee] the energy an object has because of its position or condition

Potential and *possible* begin with the same sounds. Something that is *potential* is possible. *Potential energy* is possible energy, energy ready to be used at some future time.



The stretched rubber band of the slingshot has potential energy.

mechanical energy [muh•KAN•ih•kuhl EN•er•jee] the total energy of motion and position of an object

Mechanical and *math* begin with the same sound. Here is the math of *mechanical energy*: If you add potential energy and kinetic energy, you get *mechanical energy*.
potential energy + kinetic energy = *mechanical energy*

electrical energy [uh•LEK•trik•uhl EN•er•jee] energy caused by the movement of electric charges

Electrical and *electricity* sound almost alike. *Electrical energy* is electricity.

chemical energy [KEM•ih•kuhl EN•er•jee] energy that is stored in matter and that can be released by a chemical reaction

Burning a wood log is a chemical change because the wood changes to smoke and ash, a new type of matter. If you stand near a fire, you know that burning also gives off heat. The heat is *chemical energy* because it is given off during a chemical reaction.

Name _____

What Is Energy?

Science Concepts

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

1. Energy is never used up; it just changes from one form to another.
2. Potential energy is the energy an object has because of its position or condition.
3. The energy in a stretched rubber band is stored as potential energy.
4. When the rubber band is released, potential energy changes to kinetic energy.
5. Sound energy is a type of kinetic energy because particles of air are vibrating, or moving.
6. Thermal energy (heat) is the kinetic energy of the particles that make up matter.
7. You see objects when light energy reflects off them and enters your eyes.
8. Electrical energy changes to other forms of energy we use, such as sound and heat energy.
9. Mechanical energy is the sum of kinetic energy plus potential energy.
10. Chemical energy is released by a chemical reaction, such as your body breaking down food.