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## Forms of Energy

By Brenda B. Covert

Energy is power - usable power. However, energy is not just the ability of a person to move and work and play. Every time anything moves - the wind, water, cars, clocks, animals, and more - energy is what makes it happen!

It takes energy for your remote control cars, karaoke machines, video games, and computers to work. It takes energy for people, plants, and animals to grow. It takes energy to cook a meal or read a book! As you might by now suspect, there is more than one form of energy.

First of all, energy comes in two forms: potential energy and kinetic energy. Potential energy is energy that is waiting to be used, such as when you are playing freeze tag and cannot run again until someone tags you. Batteries in a package waiting to be taken home and inserted in a game can be considered as potential energy. Kinetic energy is energy in action, such as the act of running away from "it" in your game of tag, or the playing of an electronic game that runs on batteries.



Here are some types of energy:

**Electrical energy:** You probably thought of this one right away! Power lines are everywhere. Electricity is easy to move from one place to another using wire. It is produced by the movement of electrons. We use electrical energy to light and heat our homes, run our dishwashers and washing machines, cook our food, play our music, and more. Speaking of music ...

**Sound energy:** Yes, it takes energy to make the sounds that become music or speech. All sounds and noises are forms of energy. If you have studied sound, you are aware that sound waves vibrate through the air, and even through some liquids and solids. That is movement, and all movement is energy!

**Light energy:** Light is a form of energy that we get from the sun. Light is linked to our ability to see, as well as to helping living things and plants grow. Light travels as waves from the sun to Earth.

**Chemical energy:** Batteries and plants use this form of energy. Even our bodies use chemical energy as they convert food into fuel.

**Heat energy:** We use heat for cooking, and we also need heat in order to live. Temperature is actually a measure of how much heat energy there is. The hotter something is, the faster its molecules are moving. This is also known as thermal energy.

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(Think thermal underwear -- it's long underwear whose purpose is to keep hunters, skiers, and other people warm in a cold climate.)

**Mechanical energy:** A form of energy that results from the movement of machinery. Think of gears, levers, and pulleys.

**Nuclear energy:** This is the most powerful type of energy that can be produced. It involves the energy that is stored within atoms and what happens when they are split.

These are just seven of the many forms of energy. We use energy every day. Energy is power!

Forms of Energy

## Questions

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- \_\_\_\_\_ 1. Energy involves:
- A. food
  - B. movement
  - C. shape
  - D. color

- \_\_\_\_\_ 2. There are two types of energy. They are:
- A. possible and definite
  - B. finite and infinite
  - C. potential and kindling
  - D. potential and kinetic
- \_\_\_\_\_ 3. Kinetic energy is energy waiting to happen.
- A. True
  - B. False
- \_\_\_\_\_ 4. What is produced by the movement of electrons?
- A. electrical energy
  - B. nuclear energy
  - C. elementary energy
  - D. karaoke energy
- \_\_\_\_\_ 5. What is the other name for heat energy?
- A. electric
  - B. fiery
  - C. thermal
  - D. nuclear
- \_\_\_\_\_ 6. What type of energy is at work when mini-blinds are being raised or lowered?
- A. thermal energy
  - B. light energy
  - C. nuclear energy
  - D. mechanical energy

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- \_\_\_\_\_ 7. What type of energy is produced by splitting the nuclei of atoms?
- A. electrical energy
  - B. nuclear energy
  - C. thermal energy
  - D. sound energy
- \_\_\_\_\_ 8. All movement is:
- A. entertaining
  - B. endangered
  - C. energy
  - D. electronic