



Reading Science

Name: _____

Date: _____

Earth's Different Energy

1 Energy is key to life. We use a lot of energy to live. We use energy when we play, eat, read, or listen to music. That energy can come from many different sources. Energy is all around us. It is even in some places we may not know about.



Light and Heat Energy

- 2 Light is a form of energy. It is produced by the sun. It is also produced by electricity. Light is needed to help plants make energy. Plants take in the light energy from the sun and use it to make their own food. The energy that plants produce is then transferred to animals who eat the plant.
- 3 Light energy is also a form of heat energy. The light causes an object to warm up. This produces heat. Heat energy can be measured with a thermometer. The warmer the thermometer, the more energy that is present. Heat is needed to keep plants and animals from getting too cold and withering.

Sound Energy

- 4 Sound is a type of energy made by vibrations. When an object vibrates, it causes air to vibrate. The air particles bump into particles near them. Those particles bump into others. This creates a chain reaction. This sound energy keeps going until the energy runs out. If your ear is within the range of the vibrations, you will hear the sound. The faster the vibrations, the higher-pitched the sound.

Electrical Energy

- 5 Electricity is energy. It comes from an electrical charge. It is created by burning coal. Sometimes oil or natural gas are also burned. It is first one thing such as coal. It then changes to make electricity. Sources that give electricity can be renewable. This means they can be used again. A renewable electricity source would be wind or water. Some other electricity sources are nonrenewable.
- 6 We use electricity everywhere in our daily lives. It helps create light and heat energy. It also supplies energy to resources that can produce sound energy. It can also supply energy to make objects move. Electricity is used to make a car move. It also makes the stove work. Electricity is very useful. We must be careful to conserve it. We need to save Earth's resources.



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Energy of Motion

7 Objects have potential energy. This is stored energy that objects have built up. When the object has force applied to it, it moves. The potential energy turns into the energy of motion. For example, a brick is sitting on the floor. You pick it up and move it to a higher position. You just changed the energy of the brick with work. The brick now has more energy stored in it than before and can do things it could not do before. It can fall. In falling, it uses force and does work on other objects.

Energy of Moving Air

8 Looking like giant, white windmills, wind turbines make electricity from wind energy. Wind is a renewable resource, so there are wind farms in several states. Wind turbines are about 260 feet tall. The blades catch the wind and turn to generate electricity. Wind turbines have little weather stations on top that monitor the speed and direction of the wind. The weather stations send the information to computers located inside the turbine that actually turn the blades into the wind so they can catch the wind and rotate.

Energy From Water

9 Electricity can also be produced by moving water. Hydroelectricity is generated when water turbines spin due to the force of falling or flowing water. Hydroelectricity is a renewable resource and is used in 150 countries to produce energy. The hydroelectric power plants are built into dams that cross rivers and form reservoirs. The amount of electricity produced depends on the amount of water flowing and the height of the drop of the falling water.



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1. What evidence helps the reader know the meaning of **conserve**?
 - A. Earth's resources
 - B. Be careful
 - C. Save
 - D. Useful

2. The headings help the reader by—
 - A. listing the different types of energy.
 - B. giving the main idea of the section.
 - C. telling more information about the section.
 - D. locating information specific to different types of energy.

3. The reader can infer that low-pitched sounds will—
 - A. have a slow vibration.
 - B. have a fast vibration.
 - C. not vibrate at all.
 - D. none of the above.

4. Another word for **withering** is—
 - A. expanding.
 - B. wilting.
 - C. loosening.
 - D. drying.



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5. The reader can tell that if there is light energy—
- A. there is electricity.
 - B. there is movement.
 - C. there will be sound.
 - D. there will be heat.
6. Josh and Nick were playing catch with a football. The football was in Josh's hand. He moved his arm back and let go of the football. It soared over to Nick and he caught it.

When the football was in Josh's hand, this is an example of—

- A. sound energy.
 - B. motion energy.
 - C. light energy.
 - D. heat energy.
7. The author would probably agree with which statement?
- A. Light energy is the most important.
 - B. Heat energy is the most important.
 - C. We need to save energy to save Earth.
 - D. Football players use the most energy.



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8. Which of these is a correct description of a **wind farm**?
- A. A farm where coal and oil are burned
 - B. A place where wind is turned into electricity
 - C. A place where farmers grow things
 - D. A place where wind turbines can be recycled