Name _____

What Is Energy?

By Patti Hutchison

Energy is defined as the ability to do work. Every living thing needs energy. Most of it comes from the sun. Plants are producers. They capture the sun's energy. They use it to grow and reproduce. Any energy that is not used by the plant is stored. Animals are consumers. They eat the plants to get energy for their own life processes. We need energy in order to be able to do anything.

What did you eat this morning? Did you have a bowl of cereal? A piece of toast? These foods are made from grains, which come from plants. When you eat them, you are consuming the energy the plants have stored from the sun. This energy is released by your body. It helps you to do work.

Solar energy flows through the food chain. The food chain is a diagram that shows how energy from the sun is used by producers. It also shows how this energy is transferred to consumers in an ecosystem.

There is energy all around us. What do we use it for? We use it to keep warm. We use it to power our vehicles. Did you ever stop to think of where this energy comes from? If you heat with wood, it comes from plants. Even fossil fuels such as gasoline come from decayed plants and animals. Where did they get this energy they are now giving off? You guessed it- from the sun!

Energy sources are like natural resources. They can be renewable or nonrenewable. Solar energy is, of course, a renewable resource. The sun isn't likely to burn out for billions of years. It will keep sending solar energy our way.

Energy from plants is also a renewable energy source. Trees are cut for firewood to heat our homes. They can be replanted. If our forests are managed in this way, we will have wood to use as energy for years to come.

Fossil fuels, on the other hand, took millions of years to form. It would take millions of years for them to form again. These are nonrenewable sources of energy. Some examples are coal, oil, and natural gas.

There is a scientific law that says that energy cannot be created or destroyed. However, it can change from one form to another. There are two basic types of energy. Energy is either potential or kinetic.

Potential energy is stored energy. Think of Niagara Falls. The water at the top of the falls has potential energy. Kinetic energy is the energy of motion. As the water falls over the cliff, the energy changes from potential to kinetic.

Gasoline, made from oil, is stored in a tank below the ground. At this point, it has potential energy. When it is burned in a car engine, it makes the car move. It now has kinetic energy.

Energy also comes in different "kinds." Some of these include chemical, electrical, mechanical, and nuclear energy. They light our homes. They power our machines and cars. All these different types of energy have one thing in common- they have the ability to do work.

What Is Energy?

Questions

1. What is the definition of energy?

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Name _____

_____ 2. Most of Earth's energy comes from:

A. Niagara Falls
B. automobiles
C. the sun

3. What is a food chain?

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_____ 4. Resources such as solar energy and wood are called:

A. nonrenewable
B. fossil fuels
C. renewable

_____ 5. Resources such as oil, natural gas, and coal are:

A. renewable
B. nonrenewable
C. nuclear energy

6. Name the two types of energy.

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Explain the difference between potential and kinetic energy. Give your own examples of each.

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Find an example of a food chain. Explain how energy from the sun flows through each link in the chain.

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