What Is Energy?

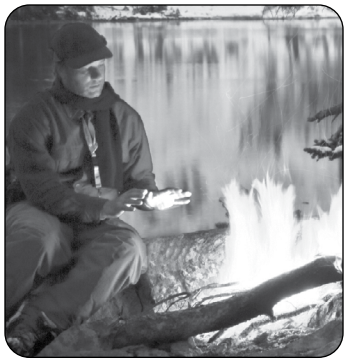
Energy helps us do things. It gives us light. It warms our bodies and homes. It bakes cakes and keeps milk cold. It runs our TVs and our cars. It makes us grow and move and think. Energy is the power to change things. It is the ability to do work.

Energy Is Light

Light is a form of energy we use all the time. We use it so we can see. We get most of our light from the sun. Working during the day saves money because sunlight is free.

At night, we must make our own light. Usually, we use electricity to make light. Flashlights use electricity, too. This electricity comes from **batteries**.

Energy Is Heat



We use energy to make heat. The food we eat keeps our bodies warm. Sometimes, when we run or work hard, we get really hot. In the winter, our jackets and blankets hold in our body heat.

We use the energy stored in plants and other things to make heat. We burn wood and natural gas to cook food and warm our houses. Factories burn fuel to make the products they sell. Power plants burn natural gas and coal to make electricity.

Energy Makes Things Grow

All living things need energy to grow. Plants use light from the sun to grow. Plants change the energy from the sun into sugar and store it in their roots and leaves. This is called **photosynthesis.**

Animals can't change light energy into sugars. Animals, including people, eat plants and use the energy stored in them to grow. Animals can store the energy from plants in their bodies.

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Energy Makes Things Move

It takes energy to make things move. Cars and motorcycles run on the energy stored in **gasoline**. Many toys run on the energy stored in batteries. Sailboats are pushed by the energy in the wind.

After a long day, do you ever feel too tired to move? You've run out of energy. You need to eat some food to refuel.

Energy Runs Machines

It takes energy to run our TVs, computers, and video games—energy in the form of **electricity**. We use electricity many times every day. It gives us light and heat, makes things move, and runs our toys, electronics, and microwaves. Imagine what your life would be like without electricity.

We make electricity by burning coal, oil, gas, and even trash. We make it from the energy that holds atoms together. We make it with energy from the sun, the wind, and falling water. Sometimes, we use heat from inside the Earth to make electricity.

Energy Doesn't Disappear

There is the same amount of energy today as there was when the world began. When we use energy, we don't use it up completely; we change it into other forms of energy. When we burn wood, we change its energy into heat and light. When we drive a car, we change the energy in the gasoline into heat and motion.

Image courtesy of BP

There will always be the same amount of energy in the world, but more and more of it will be changed into heat. Most of that heat will go into the air. It will still be there, but it will be hard to use.