

Energy Kids Scavenger Hunt



Hello fellow energy explorers! We have spent some time updating Energy Kids and I hope you will join me on a tour of it while you learn about energy.

www.eia.doe.gov/kids

Name: _____

Date: _____

Explore the **forms of energy** at:

www.eia.doe.gov/kids/energyfacts/science/formsofenergy.html

While we are using energy in our home, scientists are studying energy in labs so that they understand the science of energy and can help develop new ways to use energy in the future. You can be an energy scientist too! What are the two categories that all forms of energy can be put into?

Explore **non-renewable sources** at:

www.eia.doe.gov/kids/energyfacts/index.html

Our first source, **oil (petroleum)**, really is a buried treasure! I know that we can find oil by drilling deep underground, but how is oil formed?

We can process oil into a lot of useful fuels to run our cars, trucks, and even airplanes. Oil is used for making lots of other valuable products that we use every day. Can you name five of those items?

There are a lot of energy sources found underground. Oil is a liquid, but what is this gas down here? It is **natural gas**! We use natural gas to heat our homes and to make electricity. Because it is a gas, what is the best way to transport it?

Our final non-renewable source also starts in the ground, but it is an element, not a fossil fuel like oil, natural gas, and coal. We don't get energy by burning it. To release the energy from **uranium**, we split uranium atoms into smaller atoms, releasing heat energy. This process is known as nuclear _____.

Coal is another nonrenewable source that can be found underground. It is a solid, so most coal is transported by

But first we have to get the coal out of the ground. What are the two methods used to mine coal out of the ground so that we can use it to make electricity?

Explore renewable sources at:

www.eia.doe.gov/kids/energyfacts/index.html

While there are many valuable treasures underground, renewable resources are sources that have unlimited amounts of energy for us. **Solar** energy is an excellent example of renewable energy. What type of cell is the most commonly used to convert solar energy into electricity?

Wind, another renewable source, has a lot to do with the sun too. How is wind formed?

Not all renewable sources are above ground: some are below the earth's surface, just like our non-renewable sources. **Geothermal** energy is heat in hot rock, steam and water from the earth that we can use to heat our homes or to generate electricity. There are certain areas of the world that have more geothermal activity. This ~~kind~~ of geothermal resources is known as:

In addition to fossil fuels, we can also use organic materials (**biomass**) for energy. We can burn it in power plants to make steam and generate electricity. We can use corn to make the transportation fuel known as

_____.

The biomass resource most often used is:

We have traveled the earth looking for energy and have found energy from the sun, the wind, trees, and even underground. Where else haven't we looked? Water! Energy from moving water is usually called **hydropower**. Evaporation and precipitation are two important parts in the _____ cycle.

The water in rivers is controlled by dams and runs through turbines to spin generators and create electricity. When a dam is put on a river, it may interrupt the natural path of some fish. Hydropower plants install _____ ladders to help fish swim upstream to reproduce.

Explore electricity at:

www.eia.doe.gov/kids/energyfacts/sources/electricity.html

Now that we have explored energy sources, let's discover the secrets of electricity. Whose kite experiment helped scientists understand the principles of electricity?

The other important thing that we need to know to understand electricity is that everything in the universe is made of tiny, tiny things called

_____ .

They are made up of tiny parts called neutrons, protons, and electrons. Electricity is moving electrons. In order for the electrons to move, they need a closed loop, called a

_____ .

Electricity is usually generated in power plants and moved to our homes and businesses through transmission lines. How is electricity measured?

Explore **uses of energy** at:

www.eia.doe.gov/kids/energyfacts/uses/consumption.html

We use many different energy sources in our home. What is the number one use of energy in homes?

Another place that we use a lot of energy is in our cars and trucks. Which energy source do we use to fuel most of our cars, trucks and airplanes?

Learn about **energy efficiency** at:

www.eia.doe.gov/kids/energyfacts/saving/efficiency/savingenergy.html

Now that you've learned so much about energy, you may want to know how to make smart energy decisions in our homes. Do you know which type of light bulbs use $\frac{1}{4}$ of the energy used by incandescent bulbs?

Now that we have completed
our energy adventure,
you are an energy
expert!



Print your certificate at:

www.eia.doe.gov/kids/certificate.gif