

# *FORMS OF ENERGY WEBQUEST*

Follow the links to answer the following questions about the different forms of energy. Some questions are direct answers in the text while others will require some inference. All answers are included on the given websites and do not require students to click links on the side of the page (except to continue at the bottom of some websites). Students will learn about the different forms of energy and how it can be transferred between objects or converted to different forms. There is also a list of correlating Brain Pop videos that students can view, quiz on, and record their score for if your school has purchased a subscription for Brain Pop. This can be used as a whole group lesson, an individual center activity, computer lab work, extra credit, etc. Enjoy!

*Students will learn: -  
different forms of energy –  
energy transfer –  
energy conversion –  
vocabulary terms*

Name \_\_\_\_\_ Date \_\_\_\_\_ Number \_\_\_\_\_

## Forms of Energy Webquest

Follow the links to answer questions about the different types of energy. Use the lines in front of each website to check them off as you complete them.

\_\_\_\_\_ Go to: <http://tiki.oneworld.net/energy/energy1.html>

What is energy? \_\_\_\_\_

Energy can be \_\_\_\_\_ from one form to another, but it \_\_\_\_\_ be \_\_\_\_\_!

Hover over the word "changed." Give an example of how your body changes energy.

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ Go to: [http://www.enwin.com/kids/electricity/types\\_of\\_energy.cfm](http://www.enwin.com/kids/electricity/types_of_energy.cfm)

Fill out the chart on different types of energy.

Type	Define	Example
Kinetic		
Potential		
Mechanical		
Heat		
Chemical		
Electrical		
Gravitational		

Describe how kinetic and potential energy change into each other and back again.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ Click on games and "Test your smarts."

\_\_\_\_\_ Click on "What can I do?" to fill out the chart.

Type of Energy	What YOU can do to conserve it

\_\_\_\_\_ Go to: <http://www.eia.gov/kids/energy.cfm?page=riddles> Write 3 riddles:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

\_\_\_\_\_ Go to: <http://www.sciencekids.co.nz/gamesactivities/electricitycircuits.html>

Follow the directions on the screen to answer the following questions:

1. How did the light bulb grow more brightly? \_\_\_\_\_
2. Draw the circuit with the 2 dimly lit light bulbs. Why were they dimmer?

\_\_\_\_\_

\_\_\_\_\_

3. How did the coiled wire affect the brightness? Why?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Go to: <http://www.hantsfire.gov.uk/circuits>

In the space to the right draw a completed circuit.

Why do batteries have a + and – side?

\_\_\_\_\_

Video	Score
Forms of Energy	
Kinetic Energy	
Potential Energy	
Energy Sources	
Conserving Energy	

## Forms of Energy Webquest – Answer Key

Follow the links to answer questions about the different types of energy. Use the lines in front of each website to check them off as you complete them.

\_\_\_\_\_ Go to: <http://tiki.oneworld.net/energy/energy1.html>

What is energy? Energy is the ability to do work.

Energy can be changed from one form to another, but it can't be created or destroyed!

Hover over the word “changed.” Give an example of how your body changes energy.

Our bodies change stored potential energy from food into work (kinetic) energy that powers our muscles to move.

\_\_\_\_\_ Go to: [http://www.enwin.com/kids/electricity/types\\_of\\_energy.cfm](http://www.enwin.com/kids/electricity/types_of_energy.cfm)

Fill out the chart on different types of energy.

Type	Define	Example
Kinetic	<i>Energy of motion</i>	<i>Moving water, wind, electricity</i>
Potential	<i>Stored energy; when released it can do a lot of work.</i>	<i>Oil sitting in a barrel, water in a lake, a roller coaster at the top of a hill</i>
Mechanical	<i>Energy of motion that does work</i>	<i>Wind as it turns a windmill</i>
Heat	<i>Energy that is pushed into motion by heat</i>	<i>Fire in a fireplace</i>
Chemical	<i>Energy caused by a chemical reaction</i>	<i>Food when cooked; energy in batteries</i>
Electrical	<i>Electricity creates motion, light, or heat</i>	<i>Electrical coils on stove</i>
Gravitational	<i>Motion caused by gravity</i>	<i>Water flowing down a waterfall</i>

Describe how kinetic and potential energy change into each other and back again.

A roller coaster gains potential energy on its way up a hill. It has kinetic energy as it is speeding down the hill. If it goes up again, it gains more potential energy.

\_\_\_\_\_ Click on games and “Test your smarts.”

\_\_\_\_\_ Click on “What can I do?” to fill out the chart. *(Challenge students to think of others not listed)\*\*\**

Type of Energy	What YOU can do to conserve it
<i>Electric Energy</i>	<i>Turn off the lights when I leave a room.</i>
<i>Mechanical Energy</i>	<i>Turn off a faucet while I'm brushing my teeth.</i>
<i>Chemical Energy***</i>	<i>Turn off battery powered toys</i>

\_\_\_\_\_ Go to: <http://www.eia.gov/kids/energy.cfm?page=riddles> Write 3 riddles:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

\_\_\_\_\_ Go to: <http://www.sciencekids.co.nz/gamesactivities/electricitycircuits.html>

Follow the directions on the screen to answer the following questions:

1. How did the light bulb grow more brightly? Use a higher voltage battery.
2. Draw the circuit with the 2 dimly lit light bulbs. Why were they dimmer?

The circuit should show the light bulbs consecutively after one another. The higher resistance caused the light bulbs to be dimmer because they each need some of the energy.

3. How did the coiled wire affect the brightness? Why?

The coiled wire dimmed the light bulb because the wire was longer and the electricity needed to travel farther.

\_\_\_\_\_ Go to: <http://www.hantsfire.gov.uk/circuits>

In the space to the right draw a completed circuit. Illustrations should show a completed circle with wires attached to both ends of a switch, light bulb, and power source. There should be no breaks in the circuit allowing the energy to pass from one object to another.

Why do batteries have a + and – side? Wires connecting all objects must start and end at the power source so they could carry the charge all the way around.

Video	Score
Forms of Energy	
Kinetic Energy	
Potential Energy	
Energy Sources	
Conserving Energy	