

## It's Electric!

**WebQuest Description:** This WebQuest will guide you through the magical world of electrical circuits. You will embark on an investigation of circuits, insulators, conductors, and switches. Prepare to be electrified by the electrical knowledge!

**Grade Level:** 3-5

**Curriculum:** Science

**Keywords:** Electricity, Insulators, Conductors, Switches, Circuits.

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## Introduction

Imagine that you are at home with your friends watching your favorite television show. The window you see the bright flash of lightning and hear loud boom of thunder. Suddenly the power flickers out! You run to the kitchen to grab your flashlight, but it won't turn on! Oh no! What could be wrong with the flashlight? Let's find out!

## Tasks

After learning about electricity you will show what you have learned by completing an Electricity Scavenger Hunt! This project will help you to demonstrate what you have learned about electrical circuits, as well as teach you new ways to search for information.

## Process

1. Begin by going to these sites to explore electricity and find out some basic information. Electricity in our Lives (resource 1) Simple Circuits (resource 2) Complete the Transfer of Energy Organizer. (resource 3) You may look back at the Electricity in our Lives site if needed. 2. Then go to these sites to practice building a circuit. BBC Changing circuits. (resource 4) Build Your Own Circuit World. (resource 5) Complete the Diagram of a Circuit worksheet. (resource 6) 3. Next, discover what materials conduct electricity and what materials are insulators by going to these sites. BBC Circuits and Conductors. (resource 7) Who Can Resist. (resource 8) Complete the Table of Conductors and Insulators. (resource 9) 4. Now that you have had fun learning about electrical circuits, we are going to put your new knowledge to the test! You are now ready for your final project! During this portion of your quest, you will be going on an electricity scavenger hunt! Make sure to read all of the directions and use all of the resources to answer the questions! When you are finished find an adult to check your work before moving on to the final stage! (resource 10) 5. Wow! By now you should be an electrical circuit pro! Test your knowledge by playing the Blobz guide to electrical circuits game. (resource 11)

## Evaluation

Category and Score	Explorer	Investigator	Lab Assistant	Scientist	Score
Electrical Circuit Explanation	Mentions elements of electrical circuit	Includes a brief explanation of electrical circuits	Includes a good explanation of electrical circuits	Includes a detailed, accurate explanation of how electrical circuits work.	10
Conductor and Insulators	Demonstrates little knowledge of conductors and insulators.	Demonstrates some knowledge of conductors and insulators.	Demonstrates adequate knowledge of conductors and insulators.	Demonstrates detailed understanding of conductors and insulators.	10
Scavenger Hunt					20

Category and Score	Explorer	Investigator	Lab Assistant	Scientist	Score
				Total Score	40

## Conclusion

Now that you are an electrical expert think about all of the ways electricity is used.&nbsp; Think about your favorite activity and write an entry in your science journal about what you have learned!

## Teacher Page

This unit is aligned with Arizona State 4th grade Science Standards: Physical ScienceTeacher

Resources:<http://c03.apogee.net/contentplayer/?coursetype=kids&utilityid=mp&id=16157><http://www.vrml.k12.la.us/curriculum/quicktip/science/electricity/elec.htm><http://www.sciencekids.co.nz/electricity.html>[http://www.eia.gov/kids/energy.cfm?page=electricity\\_home-basics](http://www.eia.gov/kids/energy.cfm?page=electricity_home-basics)<http://www.kidskonnnect.com/subject-index/15-science/72-electricity.html><http://www.enwin.com/kids/electricity/><http://www.tvakids.com/electricity/history.htm><http://www.kidcyber.com.au/http://www.kids.esdb.bg/newenergy.html><http://www1.eere.energy.gov/kids/>

### Standards

### Credits

### Other