

## **Electricity, Natural Resources and Conservation**

Our school is embarking on a school wide quest to help planet earth by conserving energy. Our school will focus on two areas of conservation: conserving paper and conserving electricity.

Mrs. Murphy knows that the grade 5 students are studying electricity and has asked the students in our class to teach the grade one students about electricity and conservation. She would like her students to understand:

- How electricity is produced.
- What natural resources are used to generate electricity in Canada?
- What impact does using natural resources to create electricity have on the environment?
- What can we do to conserve electricity in our school?

So... you are going to inquire into energy resources (remember the natural resources we learned about in the presentation) electricity production, environmental impacts and conservation. You will then share your knowledge with a group of grade one buddies in an engaging and informative lesson!



To teach your grade one group you will need to prepare a lesson with visuals (it could be a series of small posters, a paper book, or a digital book created with Keynote or Power-point, or other ideas that you talk to your teacher about. You will also create a hands-on activity for your grade one students that will explore energy conservation in our school.

Working with a small group your energy inquiry will use websites (start with the sites on my web page), books and any information you can gather from home.

**Step One:** Using the chart provided. List the different natural resources that are used to generate electricity in Canada. Use your notes, and the website to determine what the resource is, if it is renewable or non-renewable, and the advantages and disadvantages of it's use.

**Step Two:** Your pair or small group will be assigned one of the natural resources. Using the websites and books find out more about that resource. Use the following questions to guide your research:

1. Where is this resource found in Canada?
2. How is it used to make electricity?
3. How does getting the resource impact the environment?
4. How does making electricity impact the environment?
5. Why is it important to conserve this energy resource?
6. Generate questions together as a class.

**Step Three:** You will need to present the information to your grade one buddy. You may want to create a digital presentation, an oral presentation with props and pictures, or a picture book. Each pair (or small group) of students will create one presentation.

**Step Four:** You will design an activity you can do with your buddy to find out more about energy conservation. For this activity you will need to think of a testable question or hypothesis that tells what you want to find out in the activity. You will need to create a list of materials and explain how to do the activity (the procedure).

Remember that we have a special piece of equipment that can measure how much electricity is being used.

**Here are some example questions:**

1. What things in the classroom use electricity and how much do they use?
2. How much electricity would an electric pencil sharpener use in a week, month or year?
3. How much electricity do computers use? When they are not being used? When they are being used?
4. Our school has many different light bulbs. Which light bulb uses the most electricity?
5. Your idea!

It is OK if many groups use the same testable question. The idea is to have your selves and your buddies actively involved in discovering that everyday items use different amounts of electricity and we can use this knowledge to make decisions to use less electricity.

**Step Five: Presentation:** You will be assigned a small buddy group to teach. Share your information and complete the electricity activity.

### Web Sites

<http://science5.greenlearning.ca/A-activity2.php>

<http://www.kids.esdb.bg/basic.html>

<http://www.dg.history.vt.edu/ch2/impact.html>

<http://www.ecospark.ca/wattwize/students/electricitygeneration>

<http://kids.saveonenergy.ca/en/videos-and-other-fun-stuff/lorax.html>

<http://library.thinkquest.org/06aug/00442/whatsupelectricity.html>

<https://www.livebinders.com/play/play?id=236785>

<http://www.eia.gov/kids/index.cfm>