

EXTENSION ACTIVITIES



The students have had a chance to build a telegraph machine and send messages across the table to each other. The real test of a good communication device is to be able to send messages over a long distance. Challenge your students to build a telegraph system that could work between classrooms at a distance of more than 25 feet.



Do advertisers really tell the truth? Have your students challenge the claims of various battery companies by creating a test to find out whose battery lasts the longest. Ensure they identify any variables that need to be held constant to ensure a fair test. Using a flashlight as a tester, buy all types of batteries: different brands, alkaline, carbon, etc. Test how long it takes for each cell to run out and graph the results.



Have the students write a biography of a significant figure in the history of electricity and its related fields. Have them research different events and discoveries associated with the scientist (see list of scientists' names found in this guide). Afterward, have the students design a time line based on the dates of the many discoveries of these figures. Students can then present their research orally in the sequence of the time line. Bind your students' reports into a book and add it to your classroom library.



Have the students write an "atomic diary". Ask them to write about a day in the life of an electron. What's it like to be an electron when it's static electricity or are there differences if it's current electricity?



Using the map entitled Power Generation in Ontario as a guide, have the students identify the different ways electricity is generated in our province (fossil fuel, nuclear, wind, natural gas, hydroelectric). Have the students state whether the sources are renewable or non-renewable and then evaluate the advantages and disadvantages of each.

Extension Activities (continued)



Make an Electrifying Card Game! Have the students research as many circuit symbols as they can find. Using poster board cut out at least 20 cards (10 cm x 15 cm). On these cards, have the students write the NAME of the symbol on one side, ex. Cell, Battery, etc. You may have to repeat the names if your class cannot find 20. These are your “Name” cards. Using another poster board of a different colour, DRAW the symbols, ensuring you draw only the symbols that have a match in the Name cards. These are your “Symbol” cards. One player uses the Name cards and another player uses the Symbol cards. The players each turn over the top card from their piles. If the cards match, the first player to shout “ZAP!” keeps the two cards. If the cards do not match, put them face down to one side in separate Name and Symbol piles. When all the cards have been turned over, the player with the most matches, wins.



Have the students develop an experiment to test the conductivity of various solids and liquids.



Here’s a suggestion: When trying to evaluate whether a student truly understands series and/or parallel circuits, give the student a sheet explaining what results you want and all the equipment needed to put the circuit together, except the battery. Keep the battery in your pocket and test the student’s circuit when they call you over. This shows you if the student truly understands because they do not have the battery to use for troubleshooting.