

Electric Invention Models

Fifth Grade

Activity: 6

Time: 2-3 Class Periods

General Description

Students will create an invention to help solve a problem or fill a need. The invention should include electricity as its energy source. The invention will be described in an information brochure. Students will create a model of what their invention might look like and how it would solve a problem

Objectives

Students will use creative skills to develop an electrical invention and a corresponding brochure.

Arizona State Standards

SC05 S1C1 PO3 Locate information (e.g., book, article, website) related to an investigation

SC05 S1C4 PO1 Communicate verbally or in writing the results of an inquiry

SC05 S1C4 PO3 Communicate with other groups or individuals to compare the results of a common investigation

SC05 S2C1 PO1 Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Percy Lavon Julian [scientist], supports Strand 4; Niels Bohr [scientist], supports Strand 5; Edwin Hubble [scientist], supports Strand 6)

R05 S3C1 PO5 Locate appropriate print and electronic reference sources (e.g., encyclopedia, atlas, almanac, dictionary, thesaurus, periodical, textbooks, CD-ROM, website) for a specific purpose

W05 S3C6 PO1 Paraphrase information from a variety of sources (e.g., Internet, reference materials)

Teacher Information

Inventions are generally created to improve the quality of life. Inventions are sometimes the result of careful planning and other times they are developed by accident. Most often, inventions are developed to fill a need or desire of the inventor.

Materials

Gather materials students can use to create a model of their invention. Collect car brochures, appliance information booklets, etc. that show examples of inventions, their features and how to operate the item.

Procedures/Exploration

1. Develop or review the class definition of the word “invention”, if you have not already done so, and discuss some of the reasons inventions are created (how and why).
2. Tell students they are going to create an invention that uses electricity. They will describe the features of their invention by creating a brochure that describes how it works, what it looks like, etc.
3. Hand out the examples of invention brochures from the car companies, home appliances, etc. Discuss the types of information present in the booklets.
4. Have students brainstorm a list of inventions. Discuss the fact that many inventions are often an improvement of existing products and how others are new products. Do a class example of how to improve an existing invention. For example, a wooden pencil and a mechanical pencil.
5. Have students list five inventions on a piece of paper and think of ways to improve these inventions.
6. Allow students time to think of an invention that uses electricity. Hand out folded sheets of white typing paper. Tell students to create a brochure that describes their invention. It should contain:
 - a. A diagram of the invention
 - b. A description of how it works
 - c. Steps to properly use the invention
 - d. A description of how this invention would improve or enhance life.
7. Allow the students to begin the project. Tell them they can make a model of their invention as an optional assignment.
8. Have the students present their inventions with the class.