

Battery Demonstration

Subject: Science

Grade Level: 6-8

Rational or Purpose:

The students will make a wet battery and will locate and describe its components.

Materials needed:

For each group:

- Lemons
- Coins (pennies)
- Paper Towels
- Foil (Al)
- Bowl
- Scissors
- Plastic Tape
- Toilet Paper Tube (Or a smaller paper towel tube)
- Plastic- covered electrical wire

For all groups

- Lemon juicer
- Wire strippers

Lesson Duration: 1 hour

Source:

http://www.rbrc.org/call2recycle/docs/rbrc_lesson_plan.pdf

TEKS:

Science Grade 6-8:

6th Grade: 1 A, B; 7 A

7th Grade: 1 A, B; 7 A

8th Grade: 1 A, B; 9 A.

Background:

Read Learning Module: "What is a Battery?"

Activity:

Students will be able to develop a wet battery, and explain the components of the battery.

Procedure:

1. Have students read the background information.
2. When they finish, the students will need to get into groups of four.

3. The students will follow directions on How to Make a Wet Battery Cell.
4. While building the model, have students answer questions.
5. The students should also draw and label the model they made.

Name: _____

How to Make a Wet Battery Cell

Materials:

- Lemons
- Coins (pennies)
- Paper Towels
- Foil (Al)
- Bowl
- Scissors
- Plastic Tape
- Toilet paper tube (smaller paper towel tube)
- Plastic- covered electrical wire
- Lemon juicer
- Wire strippers

Procedure:

1. Wrap one end of the paper tube with foil and secure it with tape.
2. Use the wire cutters to strip 1 to 2 inches of wire on each side.
3. Tape one end of the wire to the foil. (on the outside)
4. Have another member of the group squeeze the juice of your lemons into the bowl.
5. Soak the paper towels in the juice.

Now we will be making the part of the battery that collects the current.

6. Take a small piece of the paper towel and roll it up. Put it in the inside part of the paper roll. Next put a penny and then a piece of foil.
7. Keep repeating the layering of the inside of the paper towel to make it into a battery.
8. Once you have enough to fill the paper roll, end the layering with a coin.
9. Tape another wire that is striped like the one before and tape one side to the coin.
10. Each person in the group should moisten their fingers and touch the two ends of the wires together. (There will be a shock, but it will be weak. Depending on how well you have made this wet cell battery depends on the strength of shock.)
11. Students may also use a light bulb and connect it to the ends of the wires to see if it will use the weak current to produce light.

Questions:

What is producing the electricity?

What is the electrolyte and terminals of the battery?

Draw a diagram of you battery on the back of this sheet and label all of the parts.