TECO TAMPA ELECTRIC AN EMERA COMPANY

e-SMARTkids

EXPERIMENT

Build an Electrical Circuit

In order for electricity to travel to where we need it, there must be a complete circuit of electricity. A complete circuit is like a circle. Electricity is produced at one place, travels around the circuit, and returns to the starting place.

Electricity that is produced in power plant generators travels along a circuit. The circuit goes from the generator to homes and businesses and back to the generator. You can build an electrical circuit of your own, using a battery as the electricity source instead of a power plant generator.

Ask an adult to help you with this experiment. Print the page before you start.

Materials

- A printed copy of this activity
- A pencil to write your answers
- 2 pieces of insulated wire with 1 inch stripped on each end
- Masking tape
- D-cell battery
- A 1.2-volt light bulb with matching base

Directions and Observations

1. Predict what will happen if you build a complete circuit from the battery to the light bulb and back again. Write down your prediction before you continue to step 2. My prediction is_____

_____

2. Use masking tape to connect one end of each wire to the light bulb base.

3. Tape one free wire end to each end of the battery. Was your prediction under step 1 correct? Circle YES or NO. If you circled NO, explain what was wrong with your prediction.

_____

_____

Going Further

1. Predict what would happen if you added 10 or more light bulbs to this circuit. My prediction is

_____

2. Watch as your teacher sets up a circuit with one battery and 11 light bulbs. Was your prediction under step 1 correct? Circle YES or NO. If you circled NO, explain what was wrong with your prediction.

_____

3. Suppose you wanted to build a circuit with 24 light bulbs. What adjustments would you have to make to be sure that all the bulbs would light up?

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