



Project Zero

e-SMARTkids

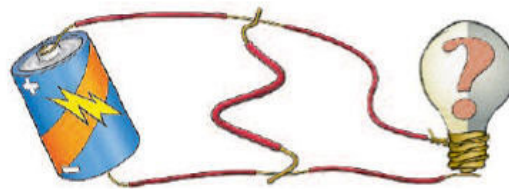


EXPERIMENT

Ben Franklin Was Lucky!

Print this page and find out why Ben Franklin was so lucky. Ask an adult to help you with this experiment.

Benjamin Franklin could have died from many of his electricity experiments. Once, while checking his electrical equipment, he touched two parts at the same time and got a big shock. His whole body vibrated, and his arms were numb until the next morning. He was lucky he wasn't burned or electrocuted!



Materials

- 1 D-cell battery
- 1 1.2-volt flashlight bulb
- Two 30-centimeter pieces of insulated solid strand copper wire (18–22 gauge), with 2.5 centimeters of insulation removed at each end, and at the center of each wire.
- 1 15-centimeter piece of a thick copper wire (18–22 gauge), with 30-centimeters removed at the center

Teamwork

Can you figure out why Ben Franklin got shocked? Discuss what will happen to the light when you set up the circuit. Record your prediction below. Set up the circuit and then lay the thick wire between the two exposed wires. Observe what happens. Then IMMEDIATELY remove the thick wire and disconnect the battery.

1. Your prediction:

2. What happened?

3. You built a short circuit. Explain why it's called a short circuit.

4. Based on your experiment, can you tell why Benjamin Franklin got shocked?
