



Electric Circuits

Leading questions:

- Use a picture to describe the path of electricity in a light bulb.
Explain: Refer to the picture of the light bulb and ask students to show the path of current through the bulb. Identify each point where current could enter or exit the bulb and the role of the filament in the circuit.
- If you had a battery, bulb and a wire, do you think you could make a bulb light?

What to do:

1. Take a battery, a bulb and a wire. Try to light the bulb.



- What conditions have to be met in order for the bulb to light?

Explain: In order for the bulb to light, there has to be (1) a continuous (complete) circuit; (2) connection to both sides of the battery; and (3) flow of current (electricity) through the bulb.

2. Try to make the bulb light with a different arrangement of the parts.
3. There are four different arrangements of the battery, bulb and wire that will light the bulb. Can you do them all?

Summary:

- A connection of electric components is called an **electric circuit**.
- In a **closed circuit**, electric current moves through all of the parts and the bulb lights.
- If there is a break in the circuit, it is called an **open circuit**. In that case, electric current ceases to flow.

Explain: Trace the path of current through the circuit and explain difference between an open and closed circuit using the diagram. You could also ask students if they could demonstrate how to light two bulbs in the same circuit.



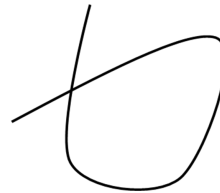
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