

Simple Circuits — At-Home Activity

A safe, hands-on experiment to explore how electrical circuits work, with observations and a sketch.

Name

:

Date

:

A safe, simple experiment to see how electricity flows through a complete circuit.

Safety: use only a low-voltage battery (AA or D, 1.5V) as listed below. Never experiment with a wall outlet or household wiring.

What You Need — Check Off as You Gather

- ☐ 1 AA or D battery (1.5V)
- ☐ 1 small light bulb (flashlight bulb) or LED
- ☐ 2 pieces of insulated wire, ~15 cm each, ends stripped
- ☐ Electrical tape (optional, to hold connections)

Steps

- 1 Look at the battery and find the flat end (–) and the bump end (+).
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- 2 Connect one wire from the (+) end of the battery to one side of the bulb.
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- 3 Connect the second wire from the other side of the bulb to the (–) end.
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- 4 If the bulb doesn't light, check that both wire ends touch bare metal.
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- 5 Disconnect one wire — notice the bulb turns off. This is an “open circuit.”
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- 6 Reconnect it to make a “closed circuit” again and the bulb lights up.
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Your Observations

Closed circuit — what did you see happen?

Open circuit — what did you see happen?

Draw your circuit: