Wonder Project

Power Challenge

Activity 2.1: Paper circuits

Can you create a simple circuit to turn the lights on? It's as easy as one, two, three!

Create a path for electricity to **move** from the power source that **generates** electricity, to the load that **uses** the electricity.

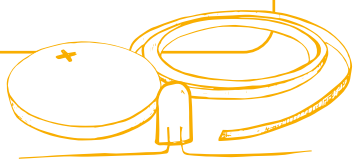
Create your circuit

Step 1

Draw a path on the image that starts at point A, connects to the LED icon, and ends at point B.

You only need three basic things:

- Coin battery (the generator)
- Copper tape (the conductive path)
- LED (the load)



Step 2

Use the copper tape to cover the path you've drawn. Make sure you leave a gap where the LED symbol is.

When you create corners on your circuit, don't cut the copper tape! The sticky part on the bottom of the tape is not conductive so it will break your circuit. Instead, bend it into a corner shape.

Step 3

Bend the legs of the LED so they're flat. Attach the LED to your circuit, on top of the LED icon.

Your LED has positive and negative legs. Make sure you connect the positive leg of your LED (the longer leg) to the positive side of your circuit, and the negative leg of the LED (the shorter leg) to the negative side of your circuit.

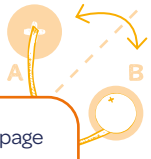
Did you know?
Materials that let electricity flow through them are called conductors. Materials that do not let electricity flow through them are called insulators.

Step 4

Place the battery on point B, on top of the copper tape.

Your battery also has a positive and negative side – the positive side is labelled with a plus symbol. Make sure the battery is placed on your circuit with the negative side down.

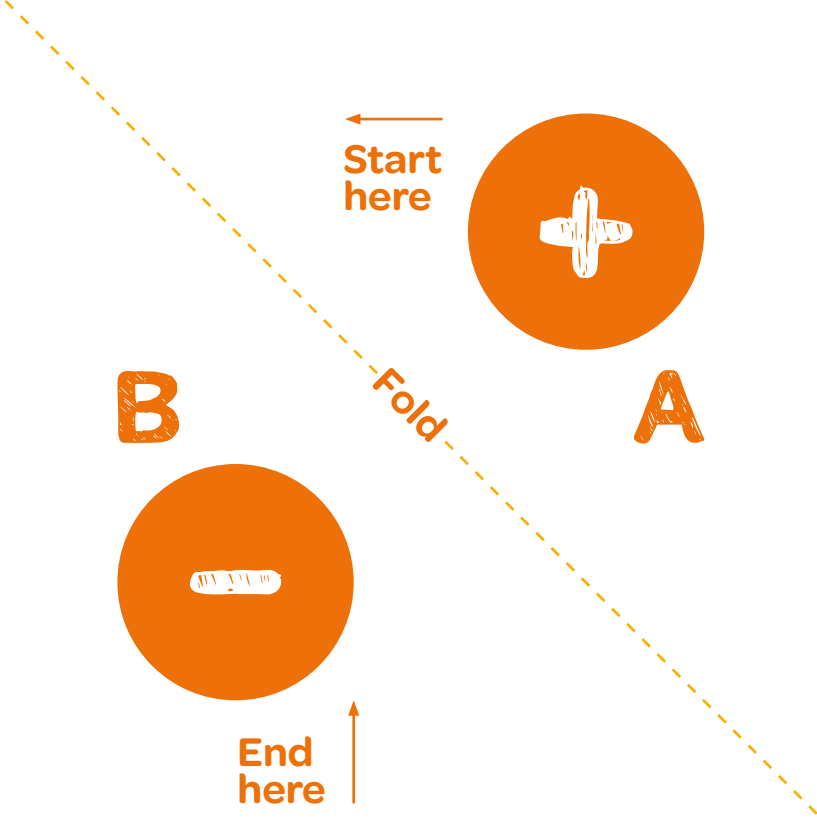
Step 5



Fold the corner of your page so that the copper tape on point A (the positive side of the circuit), touches the positive side of the battery.

Did you manage to turn the lights on?

No light? No worries! Try checking that your LED and battery are the right way around so the circuit flows from positive to negative.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