

Flick the switch

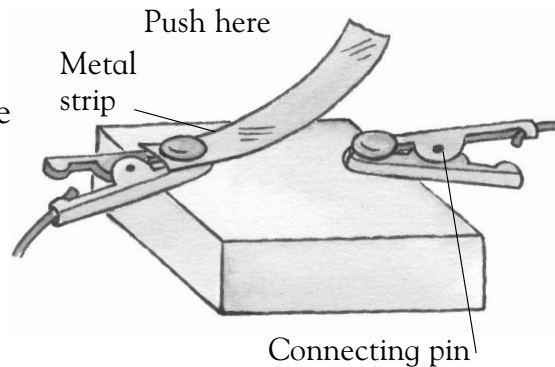


Background knowledge

When you turn on the light in your room, you are using an *electrical switch*. A switch turns a circuit on and off. The switch closes a gap, which completes a circuit so that electricity can flow through it. When the switch is opened, the gap returns and electricity stops flowing. A switch can be placed anywhere on a circuit.

Science activity

On the right is a simple switch. To make it work, push down on the metal strip until it touches the connecting pin to complete the circuit. Look at the circuit diagram below. Is the bulb on or off on each one? Circle the correct answer.



Key to diagrams



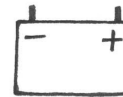
Open switch



Closed switch



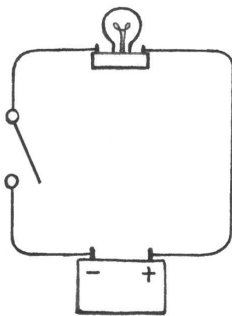
Bulb



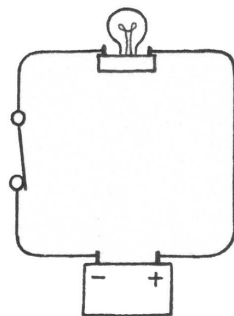
Battery



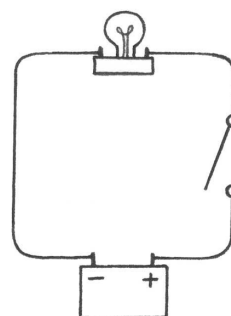
Wire



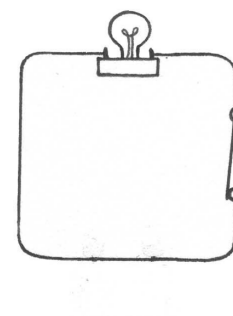
On Off



On Off



On Off

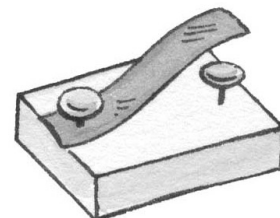


On Off

Science investigation

⚠ **Take extra care - ask an adult to supervise you.**

Build a circuit using a battery, bulb, and alligator clip wires. Now design your own switch. You might use balsa wood, metal tacks, and heavy-duty aluminum foil. Test out your switch.



Flick the switch

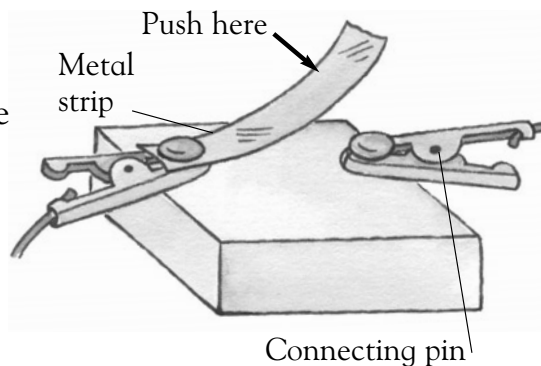


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Key to diagrams



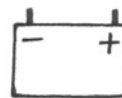
Open switch



Closed switch



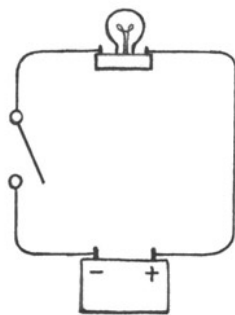
Bulb



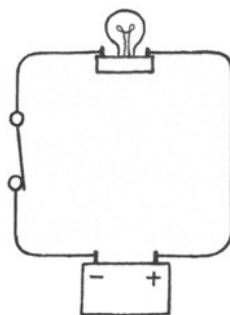
Battery



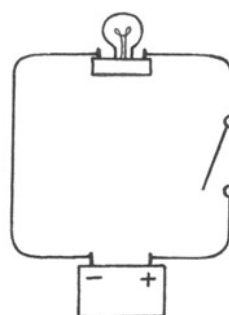
Wire



On Off



On Off



On Off



On Off

Science investigation

⚠ The child learns how switches are used to control circuits. There are a variety of switch types, including toggle, push, and knife switches. They all work by closing or opening a gap in the circuit to turn it on or off.

