Science | Electricity | Year 4

Key Vocabulary

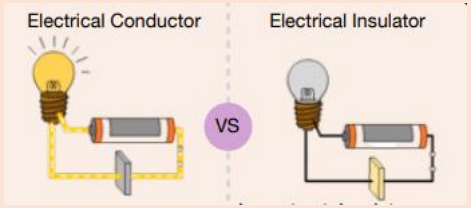
WORD	DEFINITION
batteries	a pathway that electricity flows around
bulb	the glass case that contains the filament of an electric lamp
circuit	a pathway that electricity flows around
conductor	electrical conductors are materials which allow electricity to flow through them easily
current	the flow of electricity
electricity	energy that powers electrical appliances
insulator	materials that do not let electricity pass through them easily
switch	a device which builds and breaks the connection in an electric circuit
voltage	the measure of electrical power

Key Knowledge

1. A **circuit** contains a **battery (cell), wires** and a **component** that requires electricity to work (bulb, motor or buzzer).
2. **Electrical current** flows through the wires from the battery (cell) to the bulb, motor or buzzer.
3. A **switch** can break or reconnect a circuit.
4. **A switch controls the flow of the electrical current around the circuit.** When the switch is off, the current cannot flow. This is not the same as an incomplete circuit.

Insulators and Conductors:

• Materials that **allow electricity to pass through** to create a complete circuit are called **electrical conductors.**



• Materials that **do not allow electricity to pass through** and do not complete a circuit are called **electrical insulators.**

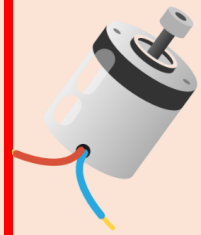
Components



Lamp



Switch



Motor



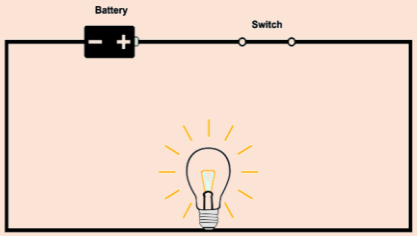
Buzzer



Battery

Simple Circuit:

A



complete circuit is a **loop** that allows electrical current to flow through wires.

These are complete circuits - they have a battery (cell) and a component (bulb). The wires are placed in the right places of the battery for the circuit to work.

Simple Electrical Circuits:

These circuits will not work as they are incomplete: