

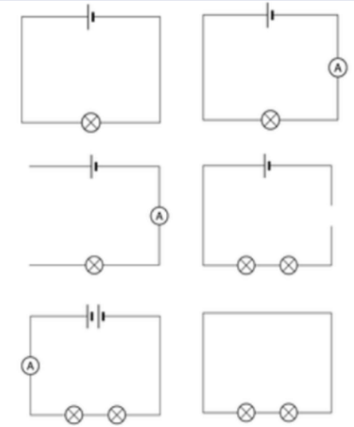
What should I already know?

- I can identify common appliances that run on electricity.
- I can build a simple series electrical circuit, identifying and naming its basic parts.
- I can identify whether or not a lamp will light in a circuit, based on whether or not it is part of a complete loop with a battery.
- I know that a switch opens and closes a circuit and associate this with whether or not a lamp lights up in a simple circuit.
- I know some common conductors and insulators and know that metals are good conductors.

Variation of Components

When changes are made to circuits, components can function differently:

- When switches are open or wires are removed from a circuit it is no longer a closed circuit so bulbs, motors and buzzers will turn off as the circuit is not complete.
- When more batteries or cells are added or batteries are included with a higher voltage the brightness of bulbs and the volume of buzzers will increase.
- When more bulbs are added to a simple circuit, they will be dimmer than if there were one bulb. This is because the electricity is shared between the bulbs. More voltage would be needed to make them brighter. Using more than one motor or buzzer will make them spin more slowly or they will be quieter for the same reason.

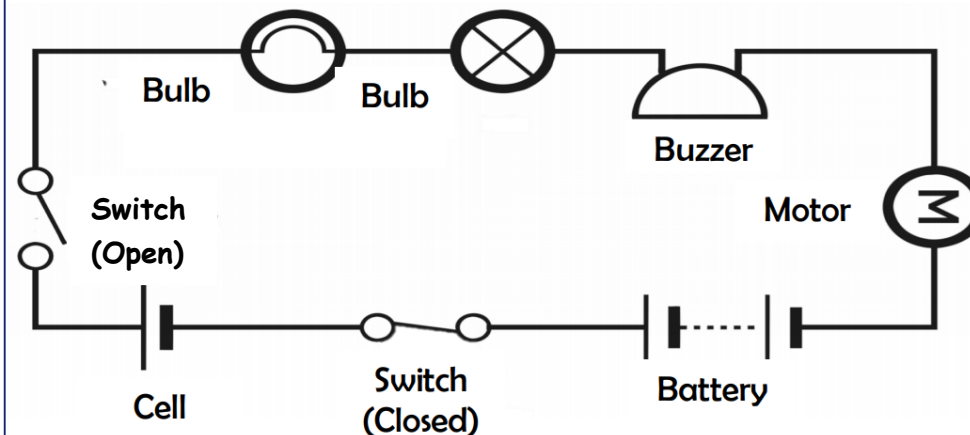


Vocabulary

circuit	Route that an electric current can flow around.
complete circuit	The path that electricity flows round that is unbroken.
cell	Another name for a battery.
battery	Small devices that provide the power for electrical items.
bulb	The glass part of an electric lamp, that gives out light when electricity passes through it.
buzzer	An electrical device that makes a buzzing sound.
motor	A device that uses electricity or fuel to produce movement.
switch	Control for a device which you use
circuit	Drawing of an electrical circuit.
circuit	Drawing representing a component.
voltage	The force of an electric current.

Circuit Diagrams

When drawing electrical circuits, there are some standard symbols to show the different components



Electrical Safety

If electricity is not used safely, it can be highly dangerous. When using electricity, make sure that you:

- never stick your fingers or objects into a plug socket
- never use frayed wires and don't pull wires
- ensure that your hands are dry when you are near sockets or electrical equipment
- do not overload a plug socket
- always get broken appliances

