



Prior Knowledge Retrieval

Electricity is a form of energy.

- It can be carried by wires.
- It is used for heating, lighting and power.
- Sources of light and sound may need electricity to work.

Appliances that run of electricity

- Some appliances use batteries and some use mains electricity.
- Batteries come in different sizes depending on how much and how long they are used.



Constructing a simple circuit

- A complete circuit is a loop that allows electrical current to flow through wires.
- A circuit contains a battery (a cell), wires and an appliance that requires electricity to work (bulb, motor, buzzer).
- The electrical current flows through the wires to the bulb, motor or buzzer.
- A switch can break or reconnect a circuit.
- A switch controls the flow of the electrical current around the circuit.

Conductors and insulators

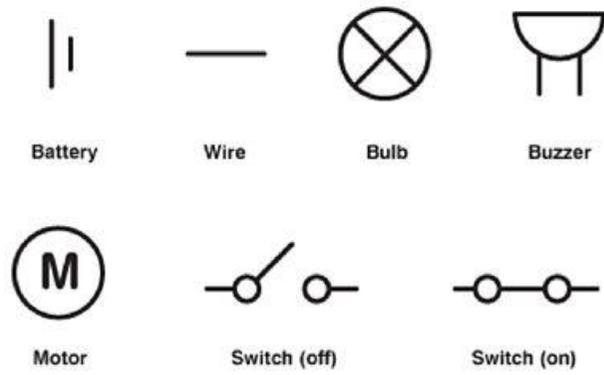
- When objects are placed in a circuit they may or may not allow electricity pass through_
- Objects that are made from materials that **allow** electricity to pass through and complete a circuit are called **conductors**.
- Objects that are made from materials that **do not allow** electricity to pass through and complete a circuit are called **insulators**.



Recognising circuit symbols

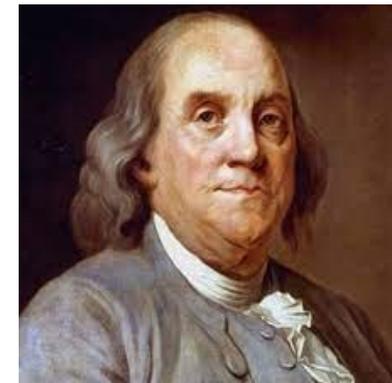
To recognise circuit symbols.

To use circuit symbols to create a circuit.

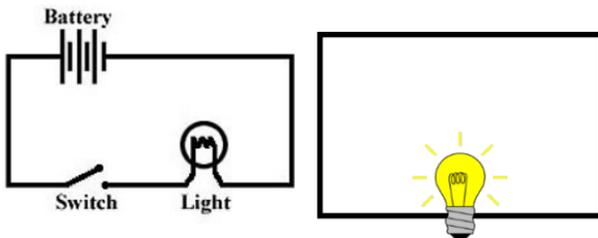
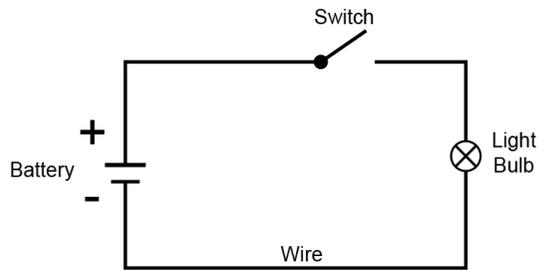


Benjamin Franklin

Benjamin Franklin was the first person to study electricity in depth. One of the most important findings showed that lightning was indeed electrical. In order to prove the theory that lightning was electrical, he flew a kite during a storm, to which he had attached a key. When the kite was struck by lightning he felt electric sparks from the key. When the kite was struck by lightning he felt sparks from the key. This experiment proved that lightning was electrical.

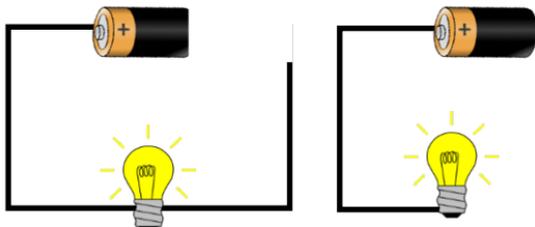


Diagrams



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.



Key Vocabulary

Appliances - A device or machine in your home that you use to do a job.

Battery - small devices that provide the power for electrical items such as torches.

Bulb- the glass part of an electric lamp, which gives out light when electricity passes through it.

Buzzer- an electrical device that is used to make a buzzing sound.

Cell- a synonym for battery.

Circuit- a complete route which an electric current can flow around.

Component- the parts that make a circuit.

Conductor- a substance that heat or electricity can pass through.

Current- a flow of electricity through a wire.

Device- an object that has been invented for a particular purpose.

Key Vocabulary

Electricity- a form of energy that can be carried by wires and is used for heating, lighting and power.

Energy- the power from sources such as electricity that make machines work.

Fuel-a substance such as coal, oil and petrol that is burnt to provide heat or power.

Generate- cause something to begin or develop.

Insulator- a non conductor of electricity.

Mains- where the supply of water, electricity or gas enters a building.

Motor- a device that uses electricity to produce movement.

Power- is energy especially electricity and it is used to operate light, heating and machinery.

Source- where something comes from.

Switch- a control that can turn a device on or off