



Science

Electricity

Circuits and Symbols



Aim

- I can recognise and draw scientific circuit symbols.

Success Criteria

- I know the scientific symbols for the main parts of a circuit.
- I can create circuit diagrams using scientific symbols.

Circuits



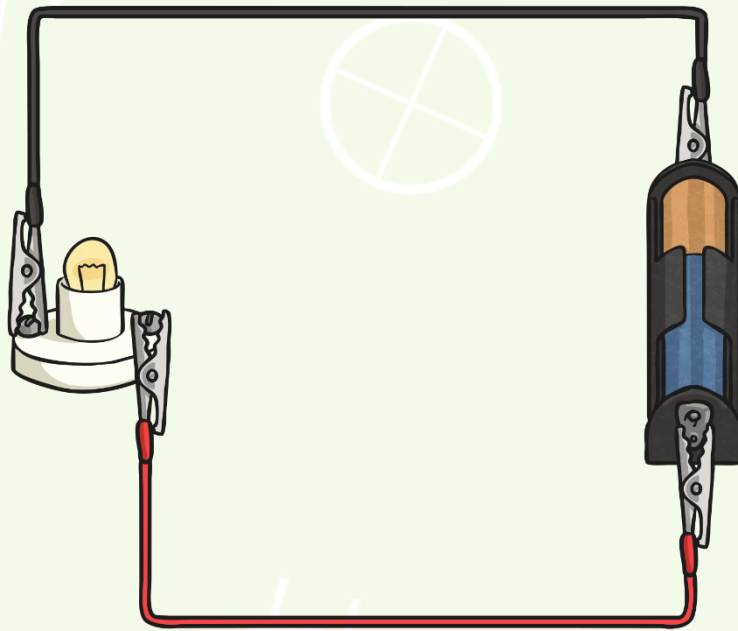
What is a circuit?

What parts do all circuits contain?

Can you draw a circuit which includes a bulb?



Circuit Diagram



Is there anything about this circuit diagram you don't remember or understand?

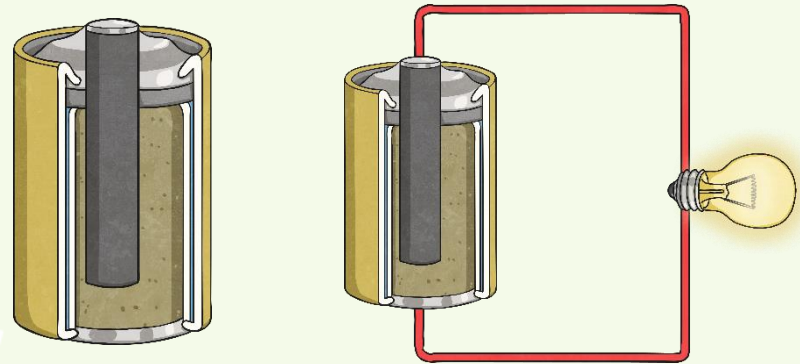
Battery or Cell?

In everyday language we call a single cell a 'battery' but this is not the correct scientific usage.



Scientifically, this is a cell. It is a single unit, containing two electrodes and an electrolyte.

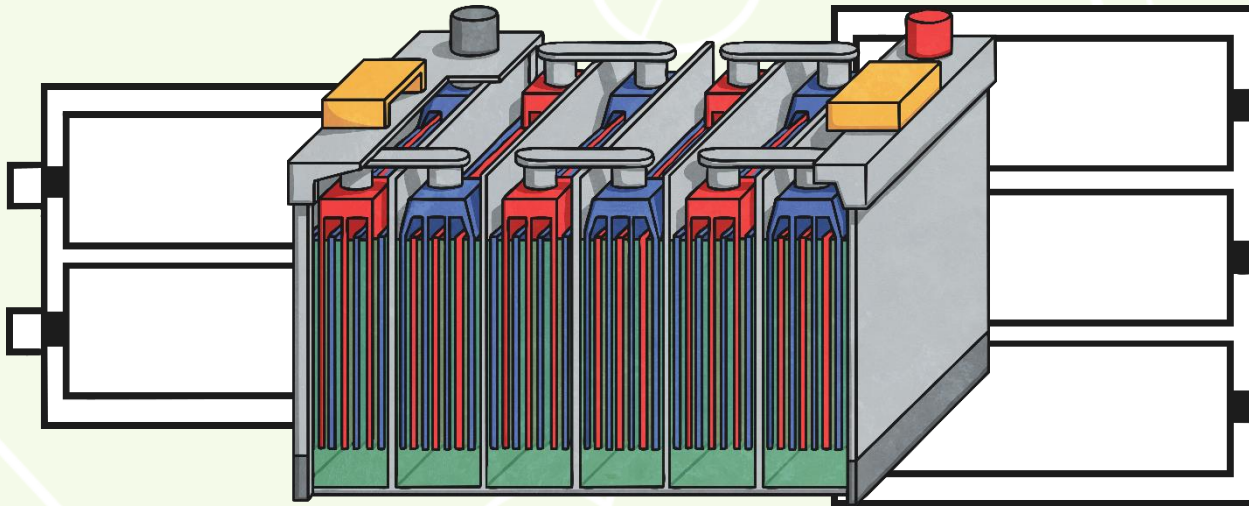
Electrodes are charged electrical conductors inside a cell. Each cell has one positive and one negative electrode.



An **electrolyte** is a chemical that reacts with the electrodes to produce an electrical current.

Battery or Cell?

A battery is the scientific name for a collection of cells joined together.

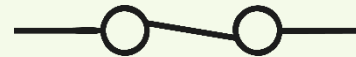
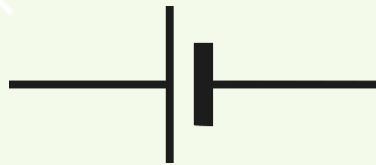
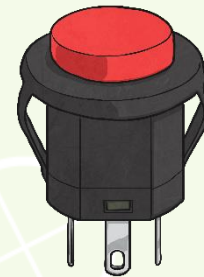
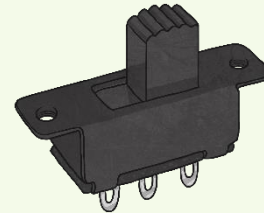
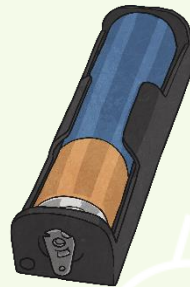
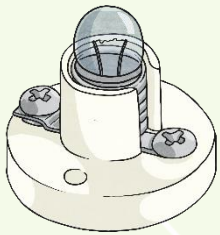
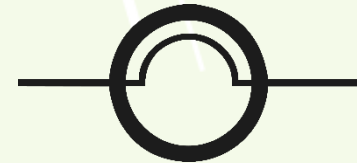


The above diagrams show single cells in individual cases linked together. Some larger batteries, such as car batteries, contain the multiple cells inside one case.

Scientific Circuit Symbols



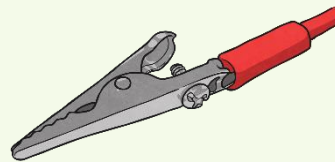
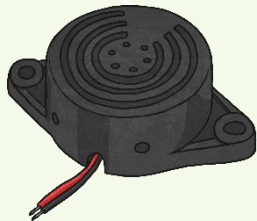
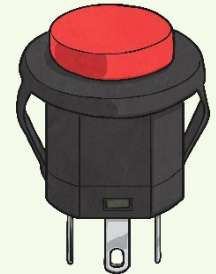
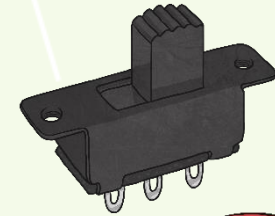
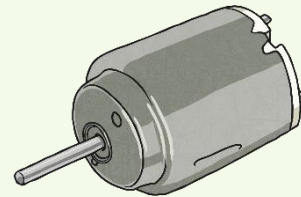
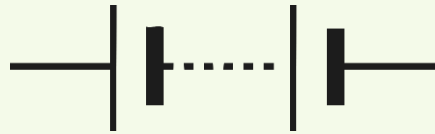
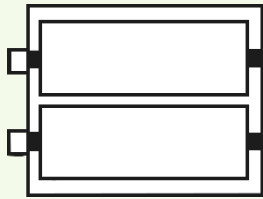
Match the parts of a circuit with their scientific symbols.
(Sometimes there will be more than one symbol for a circuit part)



Scientific Circuit Symbols



Match the parts of a circuit with their scientific symbols.
(Sometimes there will be more than one symbol for a circuit part)



Circuit Symbols Memory Test



You have 1 minute to memorise these symbols, click start and the timer will begin.



bulb



bulb



cell



battery



wire



motor



buzzer



open switch - off

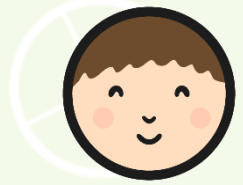


closed switch - on

Start

End

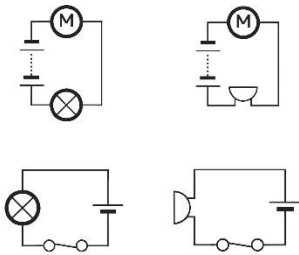
Interpreting and Drawing Circuit Diagrams



Interpreting and Drawing Circuit Diagrams

I can recognise and draw scientific circuit symbols.

Look at the circuits below and label each part.

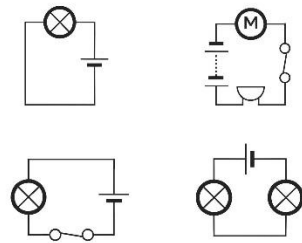


twinkl planit
twinkl.co.uk

Interpreting and Drawing Circuit Diagrams

I can recognise

Look at the circuits below and label each part.



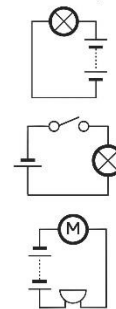
twinkl planit
twinkl.co.uk

Interpreting and Drawing Circuit Diagrams

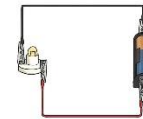
I can recognise and draw scientific circuit symbols.

Use the Scientific Circuit Symbols Mat to help.

Look at the circuits below and label each part.



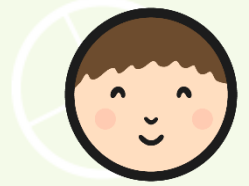
Draw the following circuit using the scientific circuit symbols.



twinkl planit
twinkl.co.uk

Science | Year 6 | Electrical Circuits and Symbols | Lesson 2

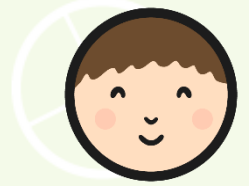
Scientific Circuit Symbols Challenge



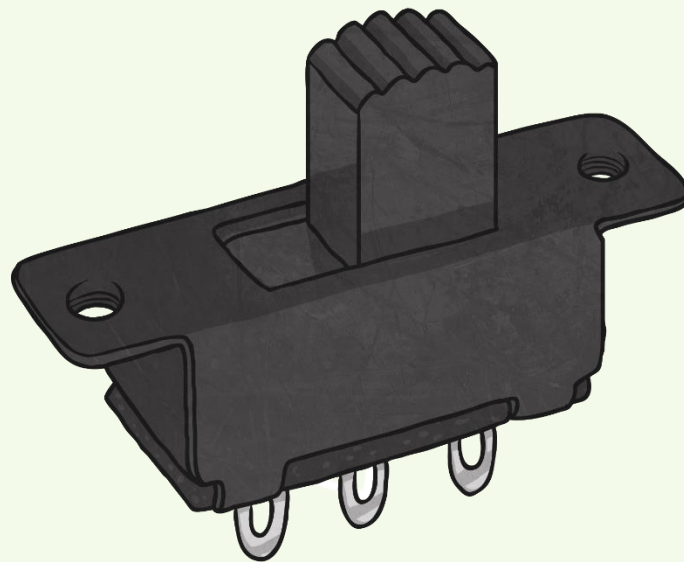
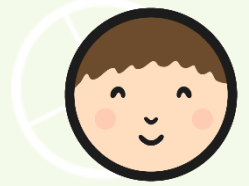
How many circuit symbols can you recall?

Write down the part of the circuit which matches the symbols that you see.

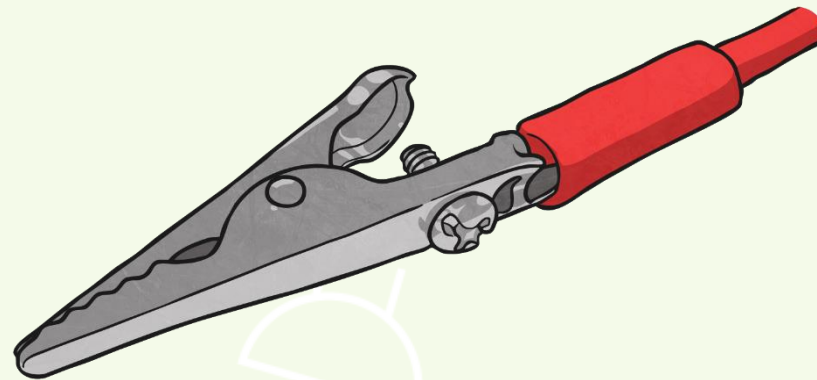
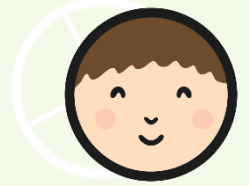
Scientific Circuit Symbols Challenge



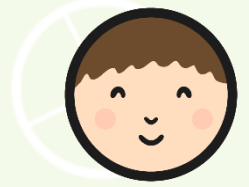
Scientific Circuit Symbols Challenge



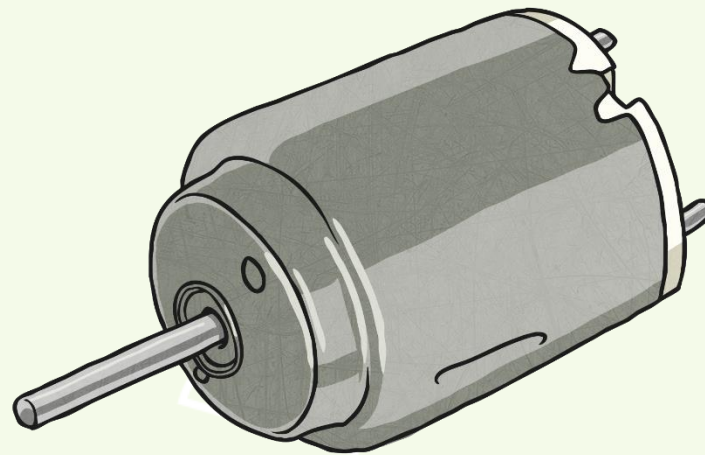
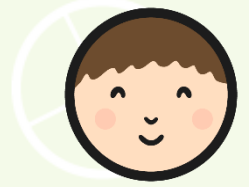
Scientific Circuit Symbols Challenge



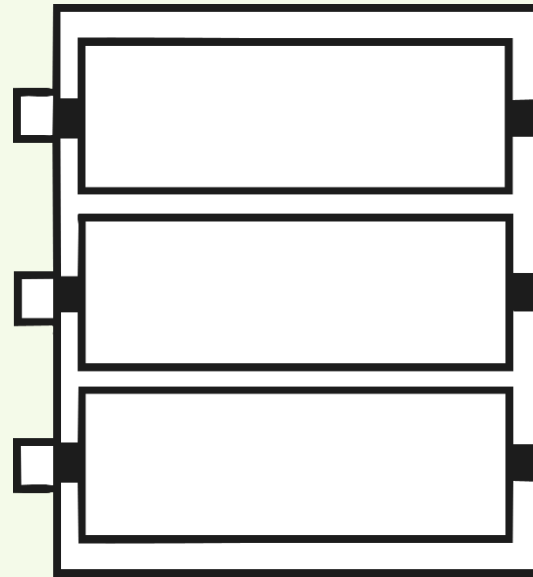
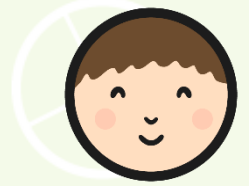
Scientific Circuit Symbols Challenge



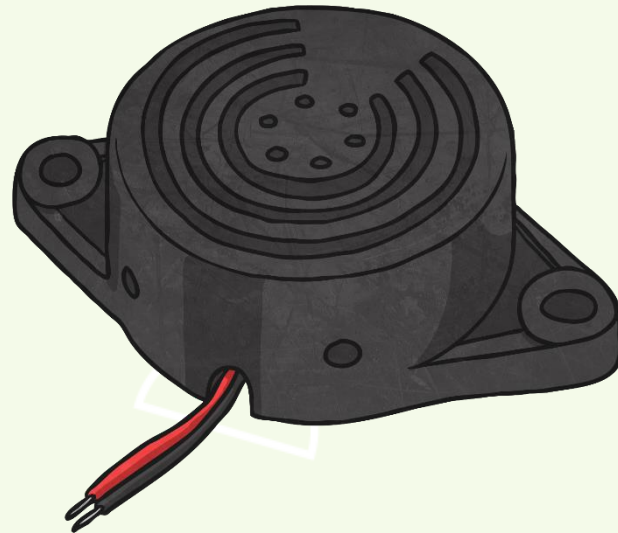
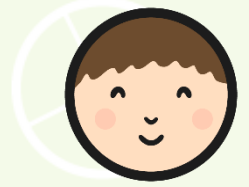
Scientific Circuit Symbols Challenge



Scientific Circuit Symbols Challenge

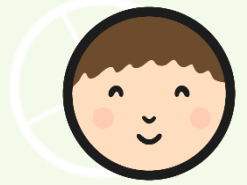


Scientific Circuit Symbols Challenge



Scientific Circuit Symbols

Challenge Answers



1.



bulb

or



bulb

2.



closed switch

or



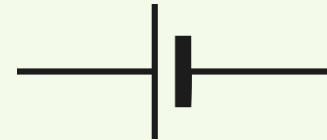
open switch

3.



wire

4.



cell

5.



motor

6.



battery

7.



buzzer

Aim



- I can recognise and draw scientific circuit symbols.

Success Criteria

- I know the scientific symbols for the main parts of a circuit.
- I can create circuit diagrams using scientific symbols.

