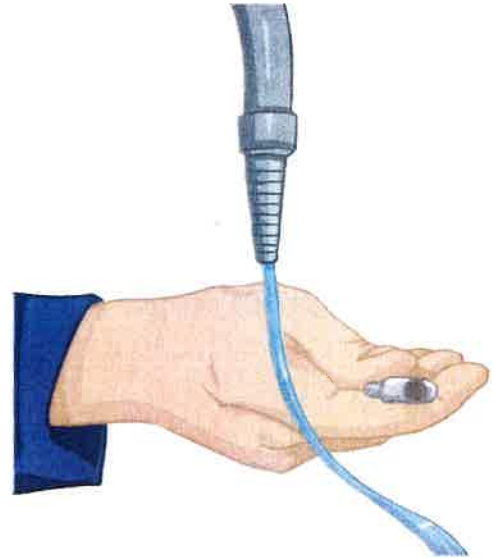


# Electricity and Magnetism Test Yourself 3

## Why?

Explain why the comb alters the path of the water.



## Match and Draw

Match the definitions and units of measurement.

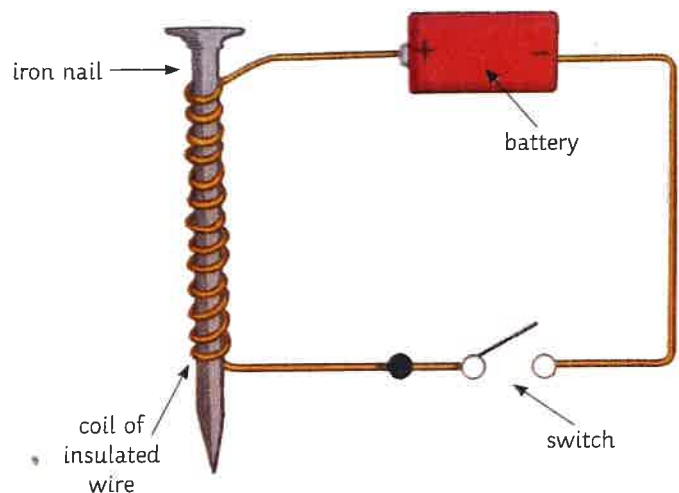
potential difference	the flow of electrons around a circuit	amps (A)
current	the energy that the cell provides.	volts (V)

## Electromagnets

The image shows a simple electromagnet. State two ways to increase the strength of the electromagnet.

1.

2.



State three uses of electromagnet

1.

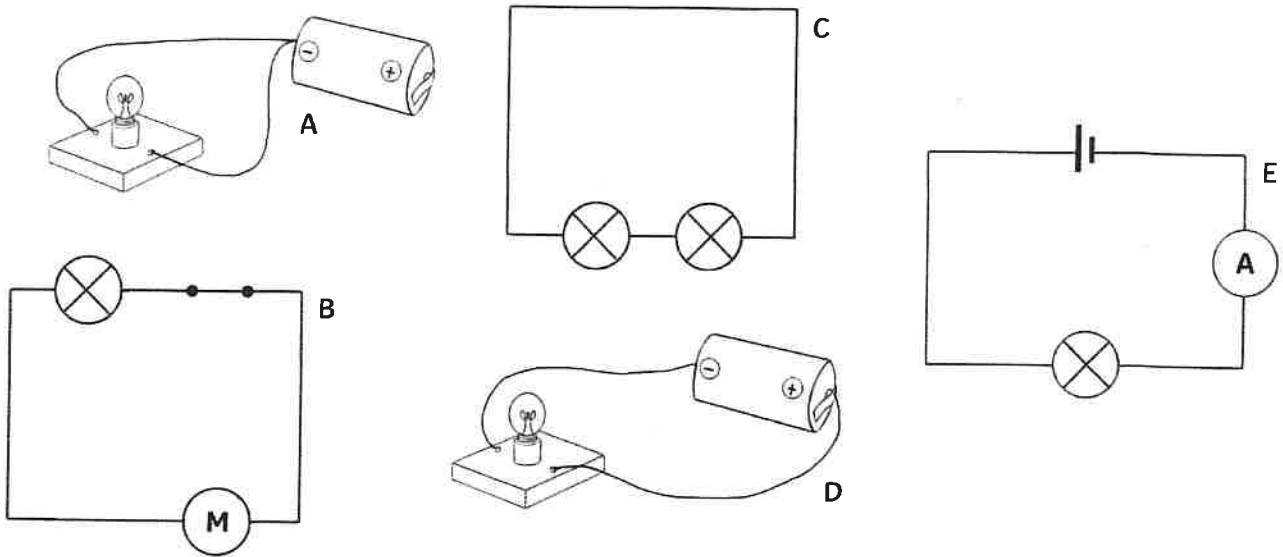
2.

3.

# Electricity and Magnetism Test Yourself 2

## Will it Work?

Look at the circuits below. State which circuits would not work, and how you would correct them.



## Magnets

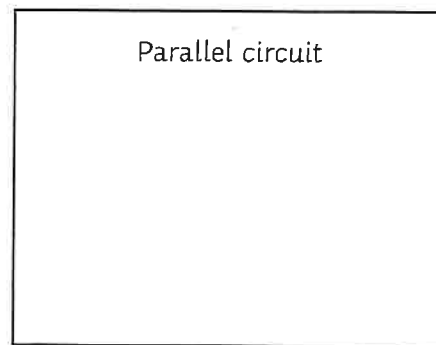
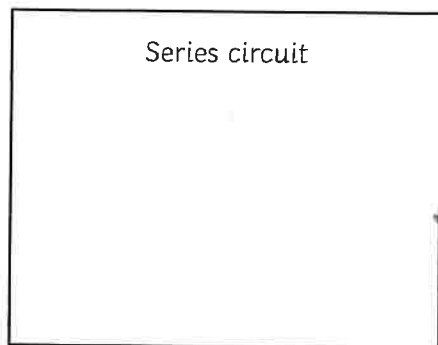
For each diagram, state whether the magnets would repel or attract.

N	S
S	N
S	N

S	N
S	N
N	S

## Potential Difference

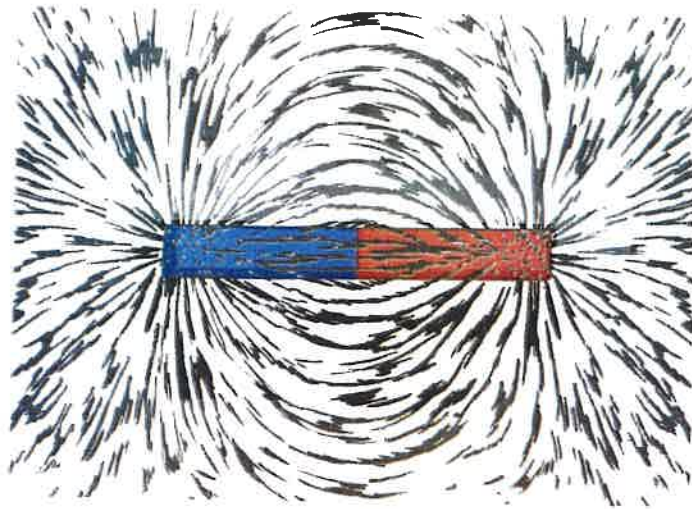
A 6v battery and three identical bulbs were used to make a series and a parallel circuit. In the boxes below, draw the circuits and show where the voltmeter would be placed. What would be the voltage in each of the bulbs?



# Electricity and Magnetism Test Yourself 1

## What is Happening?

Explain what is happening in the picture.



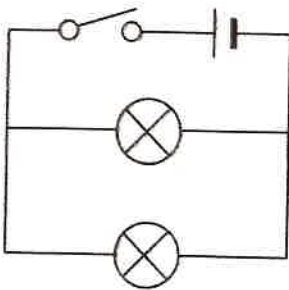
## Magnetic Materials

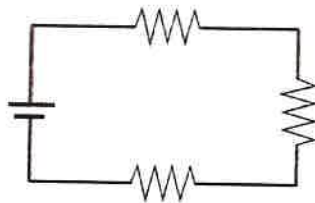
Circle the magnetic materials.

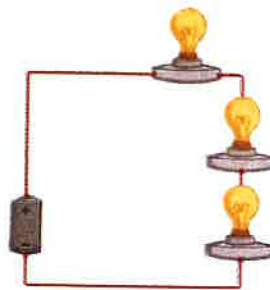
iron	magnetism	aluminium	steel
lead	nickel	silver	cobalt

## Series or Parallel?

Are the following series or parallel circuits?





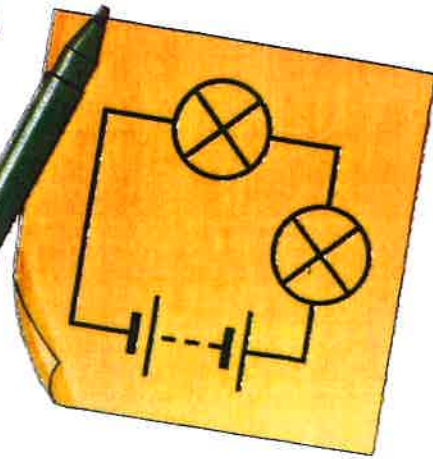
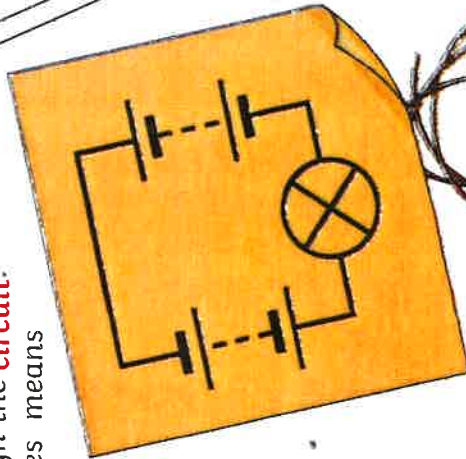




Key Knowledge

What will make a bulb brighter or a buzzer louder?

- More **batteries** or a higher voltage create more power to flow through the **circuit**.
- Shortening the wires means the electrons have less **resistance** to flow through.

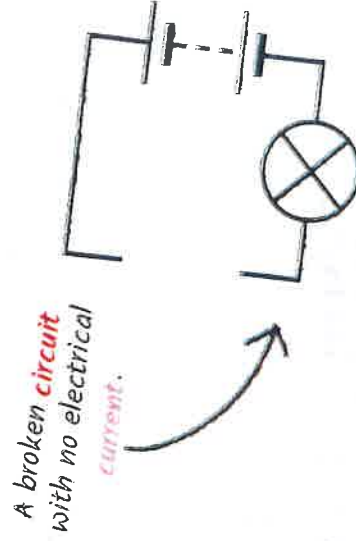
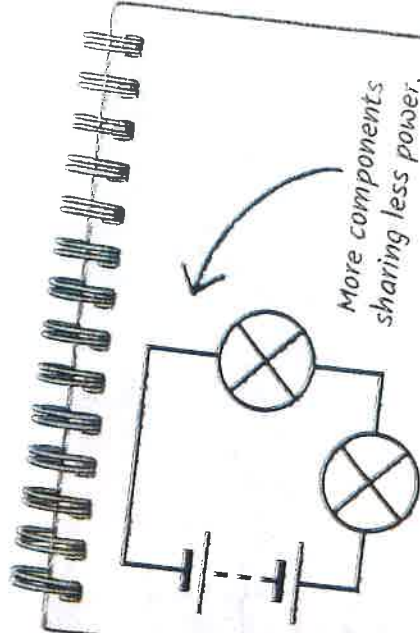


What will make a bulb dimmer or a buzzer quieter?

- Fewer **batteries** or a lower **voltage** give less power to the **circuit**.
- More buzzers or bulbs mean the power is shared by more components.
- Lengthening the wires means the **electrons** have to travel through more **resistance**.

Series **Circuit**

A **circuit** that has only one route for the **current** to take. If more bulbs or buzzers are added, the power has to be shared and so they will be dimmer or quieter. If just one part of this series **circuit** breaks, the **circuit** is broken and the flow of **current** stops.





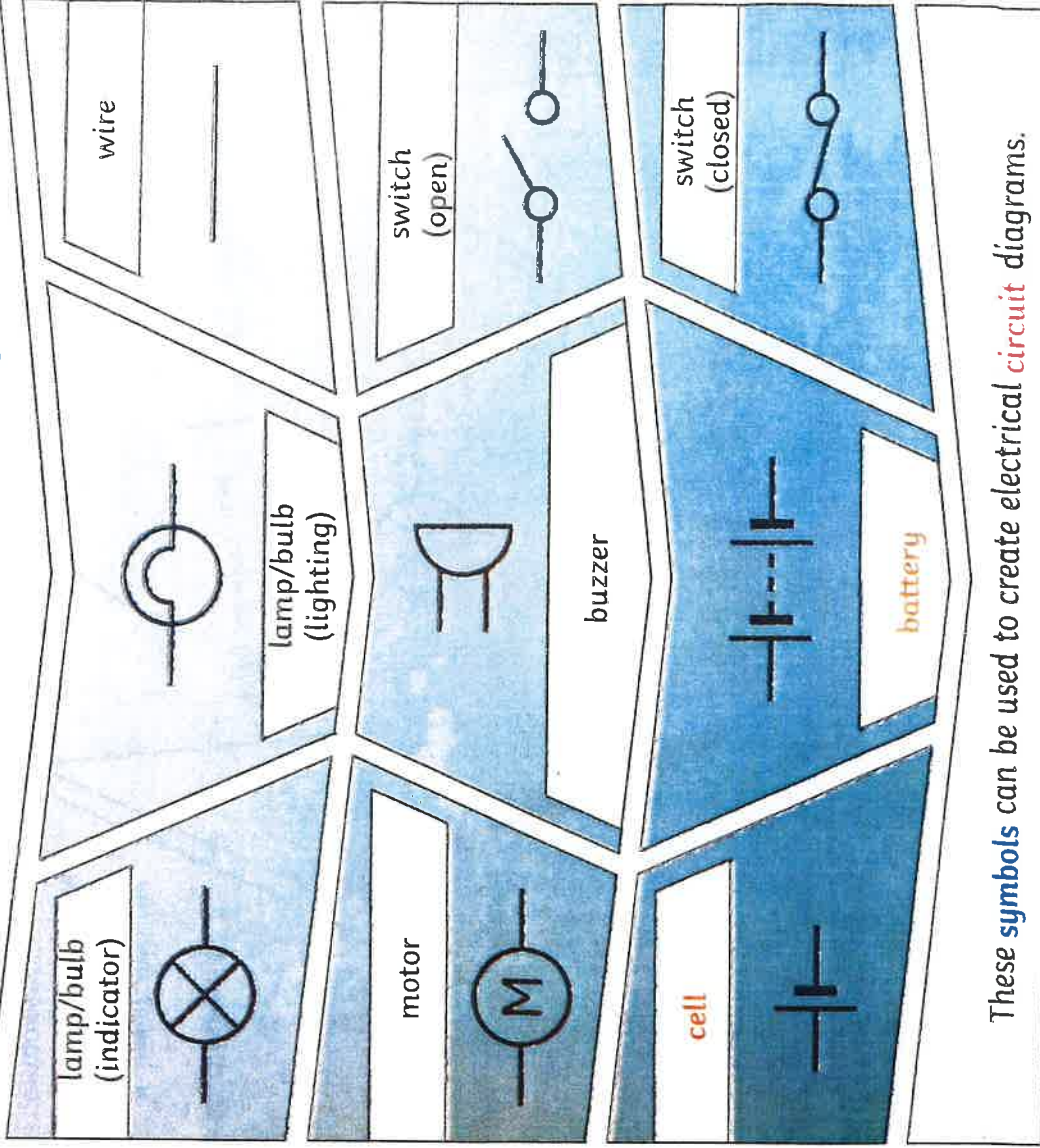
**Key Vocabulary**

<b>circuit</b>	A path that an electrical <b>current</b> can flow around.
<b>symbol</b>	A visual picture that stands for something else.
<b>cell/battery</b>	A device that stores energy as a chemical until it is needed. A <b>cell</b> is a single unit. A <b>battery</b> is a collection of <b>cells</b> .
<b>current</b>	The flow of <b>electrons</b> , measured in <b>amps</b> .
<b>amps</b>	How electric <b>current</b> is measured.
<b>voltage</b>	The force that makes the electric <b>current</b> move through the wires. The greater the <b>voltage</b> , the more <b>current</b> will flow.
<b>resistance</b>	The difficulty that the electric <b>current</b> has when flowing around a <b>circuit</b> .
<b>electrons</b>	Very small particles that travel around an electrical <b>circuit</b> .

To look at all the planning resources linked to the Electricity unit, click [here](#).

**Key Knowledge**

**Components of a Circuit and Their Symbols**



These **symbols** can be used to create electrical **circuit** diagrams.