

# Year 6 **Topic:** Electricity Strand: Physics

## What I should already know.

- Electricity is a form of energy that can be carried by wires and is used for heating and lighting, and to provide **power** for **devices**.
- Sources of light and sound may need electricity to work.
- Where electricity comes from.
- Which appliances need electricity.
- What a circuit is, the **components** of a circuit and how it works.
- What electrical conductors and insulators are.
- What happens when a switch is added to a circuit.
- What forces and resistance are.

# What will I know by the end of the unit?

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 is a 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.

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.

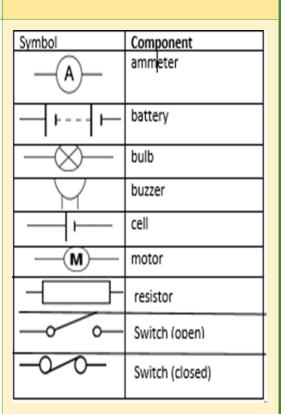
Lengthening the wires means the electrons have to travel through more **resistance**.

# Vocabulary

#### **Electrical Symbols**

Ammeter	Measures the current in a circuit.
Appliances	A <b>device</b> or machine in your home that you use to do a job such as cleaning or cooking. Appliances are often electrical.
Battery	Small <b>devices</b> that provide the <b>power</b> for <b>electrical</b> items such as torches.
Bulb	The glass part of an <b>electric</b> lamp, which gives out light when <b>electricity</b> passes through it.
Buzzer	An <b>electrical device</b> that is used to make a buzzing sound.
Cell	A synonym for <b>battery</b> .
Circuit	A complete route which an <b>electric current</b> can flow around.
Component	The parts that something is made of.
Conductor	A substance that heat or <b>electricity</b> can pass through or along.
Current	A flow of electricity through a wire or circuit.
Device	An object that has been invented for a particular purpose.
Electricity	A form of <b>energy</b> that can be carried by <b>wires</b> and in used for heating and lighting, and to provide <b>power</b> for <b>devices.</b>
Energy	The <b>power</b> from <b>sources</b> such as <b>electricity</b> that makes machines work or provides heat.
Fuel	A substance such as coal, oil, or petrol that is burned to provide heat or <b>power.</b>
Generate	Cause it to begin and develop.
Insulator	A non-conductor of electricity or heat.
Mains	Where the supply of water, <b>electricity</b> , or gas enters a building.
Motor	A <b>device</b> that uses <b>electricity</b> or fuel to produce movement.
Power	<b>Power</b> is <b>energy</b> , especially <b>electricity</b> , that is obtained in large quantities from a fuel <b>source</b> and used to operate lights, heating, and machinery.
Resistance	A force which slows down a moving object or vehicle.
Resistor	A part of an electric <b>circuit</b> that provides resistance to some of the <b>current.</b>
Source	Where something comes from.
Switch	A small control for an <b>electrical device</b> which you use to turn the <b>device</b> on or off.
Voltage	The force of an electric current as measured in <b>volts.</b>
Wires	A long thin piece of metal that is used to fasten

things or to carry electric current.



### **Diagram – Electrical Diagrams**

