

Science Knowledge Organiser – Electricity

Year 6 Term 5

What should I 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.
- 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.

Where this fits in.

In year 4, you looked at how some components run on electricity. You made a simple circuit, identifying and naming the main parts. You identified whether a lamp will work based on if it is a complete circuit and experimented with the use of switches. Then in year five, you will have compared and grouped materials based on conductivity. In this term in maths, year six will be finishing their unit on area and perimeter. Here they will be introduced to rectilinear shapes. This will link to their circuit drawings which will be represented in rectilinear format.

What will I know by the end of the unit?

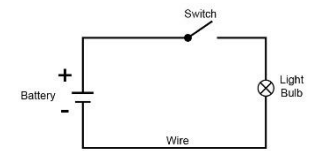
What happens to the components in a circuit when you change the number of cells in a circuit?

In this lesson, you will explore the electricity topic! You will know that electricity is the flow of electrons around the circuit.

You will be using the equipment and investigating. Can you light a bulb with only one wire, one battery and one bulb? Can you make a complete circuit?

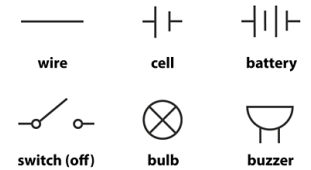
What does a scientific circuit diagram look like?

In this lesson we will be identifying and describing the function on electrical components. You will be exploring the symbols for parts in a circuit and be drawing a scientific diagram of a circuit.



How does changing the number of components in a circuit affect the brightness of bulbs?

You will be investigating how changing the number of components in a circuit can affect the brightness of bulbs, loudness of buzzers or speed of motors.



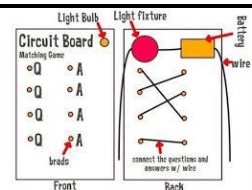
Will my predictions be correct?

In this lesson you will be using your test results from last lesson to make new predictions and use these to set up further tests.



How can I use a circuit to create a game?

For the last two lessons of the unit you will be designing your own circuit for a to create an interactive quiz where positioning the switch to the right answer produces a light.



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 something is made of.
Current	A flow of electricity through a wire or circuit
Conductor	A substance that heat or electricity can pass through or along.
Resistance	A force which slows down a moving object or Vehicle.
Voltage	The force of an electric current as measured in volts

