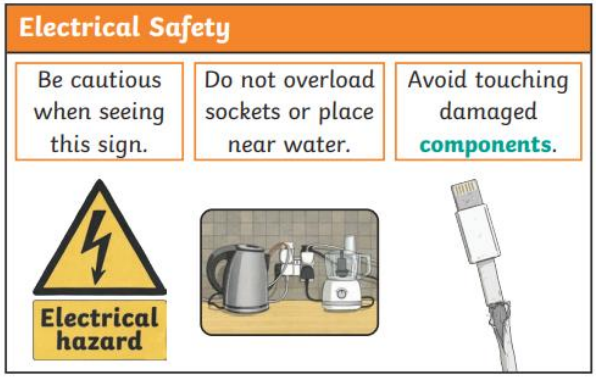
Knowledge Organiser for Science: Electricity **Class Two**

Umbrella question

How do we increase the power of electricity?

Hinge questions
What precautions are needed when working with electricity?
What is a circuit diagram?
What effect does a change in voltage have?
How do components in a circuit work?
What are the major discoveries within electricity?
How do I make a torch?



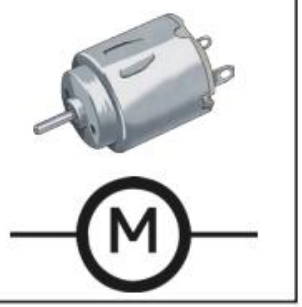
Key Vocab	
Buzzer	A buzzer is a small device that makes a loud noise, often used to signal when a game is over or when it's time to pay attention to something important.
Component	A component is a part of something bigger. In electronics, components are tiny parts like resistors or switches that work together in a circuit.
Motor	A motor is a machine that uses electricity to make things move. It can be found in toys, fans, and even cars!
Circuit	A circuit is like a special road that electricity travels along. It must be complete for the electricity to move all the way around and make things work.
Diagnostic	Diagnostic is a way to find out what is wrong with something by checking different parts. It is like being a detective and solving a puzzle!
Electrical Appliance	An electrical appliance is a tool or machine that works when it is plugged in or uses batteries, like a toaster, lamp, or television.
Voltage	Voltage is a bit like the 'push' that makes electricity move through a circuit. It's measured in volts and helps decide how powerful the electricity is.

Key Learning: Electricity is a fascinating topic that we explore through understanding circuits. A circuit is like a path that allows electricity to flow. To make a circuit, we need components such as wires, batteries, and bulbs. The battery provides the push, which we call voltage, to move the electricity around the circuit. If the circuit is complete, the electricity flows through and powers components like a light bulb. However, if there's a break anywhere in the path, the electricity can't flow, and the bulb won't light up!

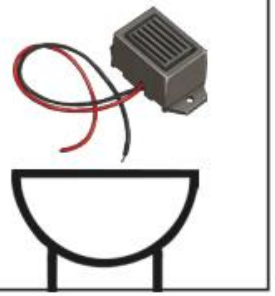
Bulb



Motor



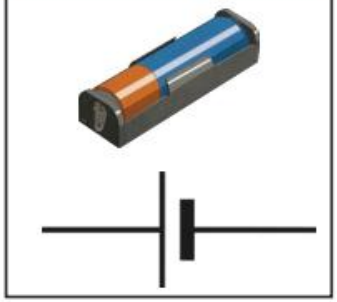
Buzzer



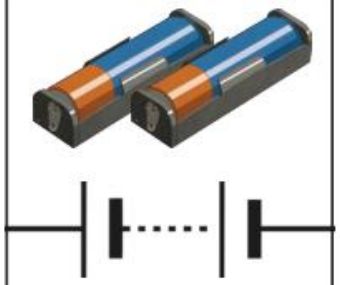
Wire



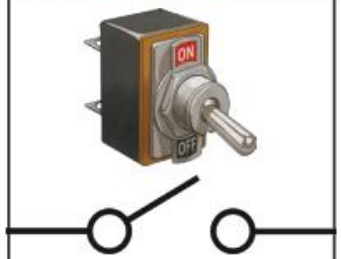
Cell



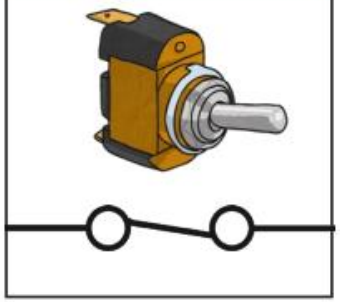
Battery



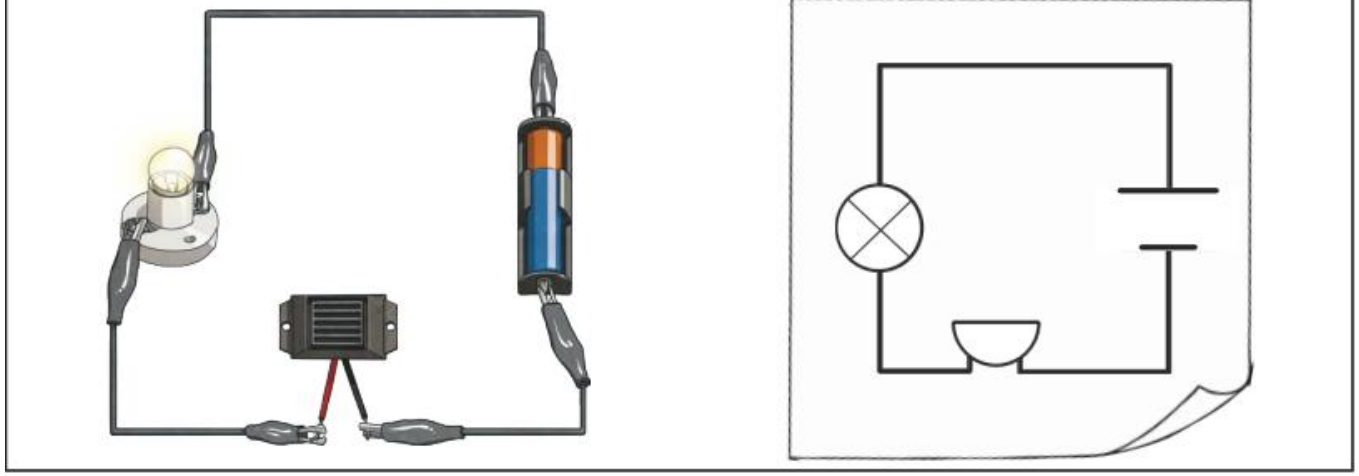
Open Switch



Closed Switch

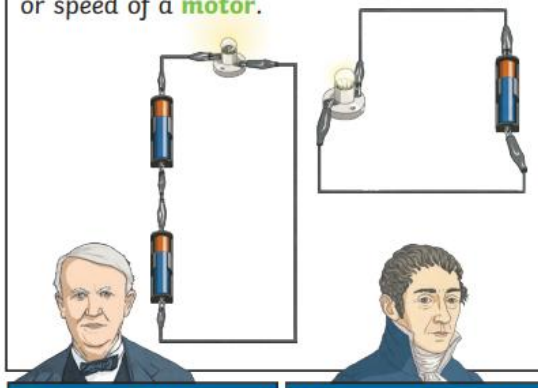


Circuit Diagram



Voltage

Adding multiple **cells** to a **circuit** can increase the **voltage**. This can increase the brightness of a **bulb**, volume of a **buzzer** or speed of a **motor**.

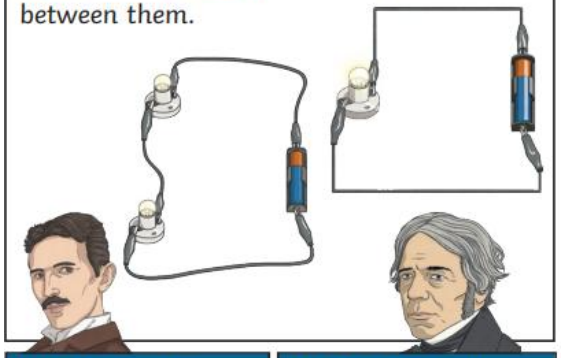


Thomas Edison (1847–1931)

Alessandro Volta (1745–1827)

Varied Components

Adding additional **components** has an effect on the **circuit**. Adding additional **bulbs**, for example, can result in dimmer **bulbs**, since **voltage** has to be shared between them.



Nikola Tesla (1856–1943)

Michael Faraday (1791–1867)