



Science Topic: Electricity

Year: 6 **Term:** Spring 2

Key Knowledge/Content:

- Batteries are a store of energy. This energy pushes electricity round the circuit. When the battery's energy is gone it stops pushing. Voltage measures the 'push.'
- The greater the current flowing through a device the harder it works.
- Current is how much electricity is flowing round a circuit.
- Renewable energy can be used to generate electricity.

Scientist Focus:

James Blyth (engineer)

Known for his work developing wind turbines and using wind energy to generate electricity.

Links to:

Prior learning:

To learn about the parts of a circuit and have constructed simple circuits containing bulbs, motors, buzzers and cells/ batteries.

Future learning:

To learn about series and parallel circuits and measure electrical current.

Key vocabulary with definition:

Prior vocabulary:

- Circuit- A series of smaller, electrical devices that control the flow of electricity.
- Cell- A single unit providing power, with two making a battery.
- Battery- Two cells.
- Electrical current- When an electrical flow moves through a conductor, such as a wire.
- Appliances- A device, machine or piece of equipment using electricity.
- Mains- Electricity delivered to homes and businesses through a National Grid.

New vocabulary:

- Voltage- Difference in electricity energy in parts of a circuit. .
- Circuit symbol- Different symbols to show parts of a circuit such as cell, bulb, buzzer and motor.
- Renewable energy- Energy made from resources that nature will replace such as wind, water and sun.
- Wind turbine- Tall towers topped with blades that move from the wind, used to generate electricity.

By the end of this unit

All children can: recognise what happens when elements of a circuit are changed, such as buzzers and motors, and **describe** how the level of voltage affects the brightness of a bulb.

Most children can: explain how to stay safe around electricity and **describe** how the number of buzzers can affect their volume.

Some children can: explain why renewable energy is necessary for the future of generating electricity and **describe** how static electricity works.

Background understanding for teachers and parents:

This unit will discuss electricity through the construction and drawing of circuits. Children will investigate how the level of voltage, running through cells or batteries, will affect the volume of buzzers and the brightness of bulbs. They will also consider static electricity and the impact of renewable energy.

Curriculum Driver (one):

Aspiration

Evidence outcome:

Understand that the future of electricity lies in renewable energy, which is currently being developed and advanced through new discoveries.