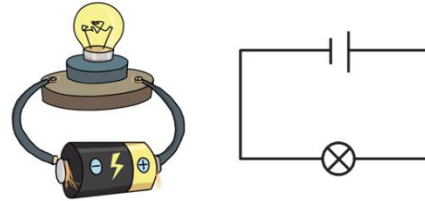


Prior Learning –

- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors and insulators, and associate metals with being good conductors

Electricity

Knowledge Organiser Y5/6



We can also make electricity using renewable energy. Renewable energy sources like **the Sun, wind and sea** can be used over and over again and should not run out. We are beginning to use these sources more as they do not damage our environment.



Sequence of Learning

1. To identify common appliances that run on electricity and to be able to explain the importance of the major discoveries in electricity.
2. To use recognised symbols when representing a simple circuit in a diagram.
3. To be able to observe and explain the effects of differing volts in a circuit.
4. Electricity investigation - investigating the relationship between wire length and the brightness of bulbs or the loudness of buzzers.

Knowledge

Most of the electricity in the UK is made using **non-renewable** power stations. These power stations **burn oil, coal or gas** to create **steam** which turns the generator.

Oil, coal and gas are **fossil fuels**. They are non-renewable which means that they will eventually run out one day. This is because they are naturally occurring and take thousands of years to make. Burning these fossil fuels can also damage **the environment** as they produce gases such as **carbon dioxide** and **methane**.



Most big appliances in our house have to be **plugged in**. These are powered by **mains power**. Some smaller appliances can be powered by **batteries**. Some appliances have batteries that need to be **charged** by mains power.

Vocabulary

appliance – a device or piece of equipment that has been made to perform a specific task

battery – a small item used to power small appliances

circuit – a route through which electricity flows

components – the parts of a circuit

conductor – allows electricity to flow through it

electrical – something that uses electricity to work

insulator – doesn't allow electricity to flow through it

mains power – electricity provided by power stations

portable – can be easily carried around

pylon – a tower used for keeping electrical wires above the ground

Electricity can be made using a simple **generator**. We could make one in school using a **magnet** and a **coil of wire**. If we turn a magnet around inside a coil of wire, it creates **electricity** in the wire. Doing this only makes a **small amount** of electricity so we need large generators to make enough for everyone. These generators are usually in **power stations**. There are **different types** of power stations.

When scientists draw electrical circuits, they use **scientific symbols** to show **different components**.

