Year 6 Science Spring 2 : Electricity

What I have learnt already…

• 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 & insulators, and associate metals with being good conductors.

In this unit

You will learn to represent circuits using symbols in a diagram. You will

Key Vocabulary

circuit	**a closed loop for electricity to travel around**
component	**a part used in an electrical circuit**
electricity	**a form of energy caused by electrons moving**
cell (battery)	**a stored source of electricity**
switch	**a switch turns an electrical circuit on or off by completing or breaking the circuit**
conductor	**an object that allows electricity to flow through it easily (objects made of metal are good conductors)**
insulator	**an object that does not allow electricity to flow through it easily**
circuit symbols	**see diagram**

Key knowledge

To know that the brightness of a lamp or the volume of a buzzer is dependent on the number and voltage of cells used in the circuit.

To compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.

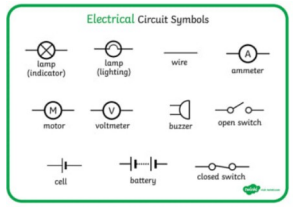
To use recognised symbols when representing a simple circuit in a diagram

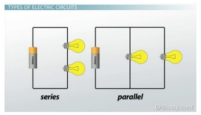
Series Circuit

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.

learn about two of the most important scientific inventors in the field of electricity – Thomas Edison and Nikola Tesla. You will get the opportunity to develop your understanding of what electricity is and how to measure it. As well as conducting your own investigation. You will have the opportunity to use an online simulator to build a circuit.





voltage	**a force that makes electricity flow through a wire (it is measured in volts)**
motor	**a machine that turns electrical energy into movement**

Key Questions

What will make a bulb brighter or a buzzer louder?
***What will make a bulb dimmer or a* buzzer quieter?**
What do electrons carry?

What do you use to measure the current?
What do you use to measure the voltage?

Year 6 Expectations

By the end of the unit you should be able:

- to draw circuit diagrams using the correct symbols and label the voltage correctly; • decide which variables to control while planning an investigation; • decide how to report your findings; • make new predictions based on the previous results; • select an appropriate scientific enquiry.

Thinking Skills