



Eden Park Primary School Knowledge Organiser



Prior Knowledge (Yr4)

- 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.

Word	Meaning
Electricity	A type of energy
Circuit diagram	Specific symbols to represent components
Current	The rate of flow of electricity.
Resistance	When a component reduces the flow of electricity.
Insulator	Does not allow electricity to pass through
Series circuit	A complete circuit from one end of a cell to the other – with no branches.
Voltage	The amount of energy in a circuit – more batteries= more voltage.

The Powerful Knowledge we will take away from this science topic:

- Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.
- 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.
- Use recognised symbols when representing a simple circuit in a diagram

Investigation

How does voltage affect bulb brightness/motor speed/volume?

How does having more bulbs/thicker or thinner wire affect resistance and brightness?

Series vs parallel circuits – see resource.

Make an electric loop game.

Working scientifically

Plan different types of scientific enquiries to answer questions.

Recognise and control variables where necessary.