

Goonhavern Primary School- SCIENCE

TOPIC: Electricity

YEAR: 6









STRAND: Physics

What should I know already?	What will I know by the end of the unit?	
<ul style="list-style-type: none"> ● Electricity is a form of energy that can be carried by wires and is used for heating and lighting, and to provide power for devices. ● Sources of light and sound may need electricity to work. ● Where electricity comes from. ● Which appliances need electricity. ● What a circuit is, the components of a circuit and how it works. ● What electrical conductors and insulators are. ● What happens when a switch is added to a circuit. ● What forces and resistance are. 	How to draw an electrical diagram	<ul style="list-style-type: none"> ● To know the symbols for the different components of an electrical circuit. ● To be able to draw a diagram of a circuit they have made.
	Know how adding and taking things away from a circuit can affect it	<ul style="list-style-type: none"> ● Know what adding more components to a circuit will do and why. ● Know what taking components out of a circuit will do and why. ● The difference between the voltage of batteries and what effect that has. ● How different length wires can affect a circuit.
	How to measure the current of a circuit	<ul style="list-style-type: none"> ● What an ammeter is and how to use one.

Vocabulary

Ammeters	Measure of current in a circuit.
Appliances	A device or machine in your home that you use to do a job such as cleaning or cooking. Appliances are often electrical.
Battery	Small devices that provide the power for electrical items such as torches.
Bulb	The glass part of an electric lamp, which gives out light when electricity passes through it.
Buzzer	An electrical device that is used to make a buzzing sound.
Cell	A synonym for battery.
Circuit	A complete route which an electric current can flow around.
Component	The parts that something is made of.
Conductor	A substance that heat or electricity can pass through or along.
Current	A flow of electricity through a wire or circuit.
Electricity	A form of energy that can be carried by wires and is used for heating and lighting, and to provide power for devices.

Energy	The power from sources such as electricity that makes machines work or provides heat.
Fuel	A substance such as coal or oil which is burned to provide heat or power.
Generate	Cause it to begin or develop.
Insulator	A non-conductor of electricity or heat.
Mains	Where the supply of electricity enters a building.
Motor	A device that uses electricity or fuel to produce movement.
Power	Power is energy, especially electricity, that is obtained in large quantities from a fuel source and used to operate lights, heating, and machinery.
Resistance	A force which slows down a moving object or vehicle.
Resistor	A part of an electric circuit that provides resistance to some of the current.
Source	Where something comes from.
Switch	A small control for an electrical device which you use to turn the device on or of.
Voltage	The force of an electric current as measured in volts.
Wires	A long thin piece of metal that is used to fasten things or to carry electric current.

Image/diagram that helps me to articulate my knowledge/understanding	Investigate!
	<p>battery</p>
	<p>bulb</p>
	<p>buzzer</p>
	<p>cell</p>
	<p>motor</p>
	<p>resistor</p>
	<p>switch (open)</p>
	<p>switch (closed)</p>

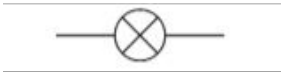

- Match circuit symbols to their meanings and their words.
- Predict, then investigate what happens when more batteries are added to a circuit. Explain why this happens.
- Predict, then investigate what happens when more bulbs, motors are added to a circuit. Explain why this happens.
- Systematically identify the effect of changing one component at a time in a circuit.
- Use circuit symbols when representing a simple circuit in a diagram.
- Design and make a set of traffic lights, a burglar alarm or some other useful circuit.
- Investigate what happens when the voltage of the battery changes.
- Investigate what happens when the length of the wires changes.
- Investigate what happens when you add a resistor to a circuit.
- Use ammeters to measure the current in a circuit.

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Q1: What is electricity?	Start of Unit	End of Unit	Q3: What is a 'circuit'?	Start of Unit	End of Unit
A form of energy that can be carried by wires			A small control for an electrical device which you use to turn the device on or of		
A form of energy that makes batteries work			A complete route which an electric current can flow around		
A force that makes objects move			Where the supply of electricity enters a building		
A force that has an equal and opposite reaction			The glass part of an electric lamp, which gives out light when electricity passes through it.		
Q2: What does this symbol mean?	Start of Unit	End of Unit	Q4: What does this symbol mean?	Start of Unit	End of Unit
					
Bulb			Cell		
Cell			Resistor		
Buzzer			Switch (open)		
Battery			Switch (closed)		
Q5				Start of Unit	End of Unit

Q6	Start of Unit	End of Unit

Q7	Start of Unit	End of Unit

Q8	Start of Unit	End of Unit