






## Science Medium Term Plan

	<b>Year Group:</b>	<b>Term:</b>	<b>Topic/Unit :</b>		
	4	Spring	Electricity		
<b>National Curriculum Programme of Study</b>	<ul style="list-style-type: none"> <li>Identify common appliances that run on electricity.</li> <li>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</li> <li>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.</li> <li>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</li> <li>Recognise some common conductors and insulators, and associate metals with being good conductors.</li> </ul>				
<b>Prior Learning</b>	<ul style="list-style-type: none"> <li>Explore how things work. (Pre-school - Electricity)</li> </ul>				
<b>Future Learning</b>	<ul style="list-style-type: none"> <li>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. (Y6 - Electricity)</li> <li>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. (Y6 - Electricity)</li> <li>Use recognised symbols when representing a simple circuit in a diagram. (Y6 - Electricity)</li> </ul>				
<b>Links to other subjects</b>	PSHE				
<b>Enrichment</b>	Interview an electrician				
<b>Working Scientifically</b>	<b>Comparative tests</b> 	<b>Identify and classify</b> 	<b>Observation over time</b> 	<b>Pattern seeking</b> 	<b>Research</b> 
	Which metal is the best conductor of electricity?	How would you group these electrical devices based on where the electricity comes from?	How long does a battery light a torch for?	Which room has the most electrical sockets in a house?	How has electricity changed the way we live?
<b>Working Scientifically Assessment Focus</b>	<p><b>Review: Interpret and Report: Electricity – conductors</b></p> <p><b>Working Scientifically: Review: Report on findings from enquires, including oral and written explanations, displays or presentations of results and conclusions.</b></p> <p><b>Assessment Focus</b></p> <ul style="list-style-type: none"> <li>Can children explain results and their conclusions?</li> <li>Can children recognise common conductors and insulators?</li> </ul>				
<b>Sticky vocabulary</b>	<p>Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol</p> <p><b>Working scientifically vocabulary: explanation, reason, key, diagram, findings.</b></p>				
<b>End points</b>	<ul style="list-style-type: none"> <li>Many household devices and appliances run on electricity.</li> <li>Some plug in to the mains and others run on batteries.</li> <li>An electrical circuit consists of a cell or battery connected to a component using wires.</li> <li>If there is a break in the circuit, a loose connection or a short circuit, the component will not work.</li> </ul>				

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|  | <ul style="list-style-type: none"><li>• A switch can be added to the circuit to turn the component on and off.</li><li>• Metals are good conductors so they can be used as wires in a circuit.</li><li>• Non-metallic solids are insulators except for graphite (pencil lead).</li><li>• Water, if not completely pure, also conducts electricity.</li></ul> |
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