



# Pinner Wood School



<b>Year Group</b>	6	<b>Term:</b>	Summer 1	<b>Subject</b>	Science	<b>Topic</b>	Electricity
						<b>Key Question</b>	How do we make circuits?
<b>Prior Learning and other Curriculum Links</b>	<u>Year 4</u>				<b>Skills statements</b>	<ul style="list-style-type: none"> <li>I can show that the brightness of a lamp or the volume of a buzzer depends on the number and voltage of cells used in the circuit.</li> <li>I can 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.</li> <li>I can draw a diagram using recognised symbols to represent a simple circuit.</li> </ul>	
	<ul style="list-style-type: none"> <li>common appliances that run on electricity</li> <li>Labelled circuits</li> <li>Know and explain what the role of a switch is</li> <li>Identifying insulators and conductors</li> </ul>						
<b>Fundamentals</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</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</li> <li>Use recognised symbols when representing a simple circuit in a diagram.</li> </ul>				<b>Key Facts/Sticky Knowledge</b>	<ul style="list-style-type: none"> <li>Know the components and can construct a simple circuit using the correct scientific language and symbols.</li> <li>Know that the change in number or type of components in a circuit can affect how the circuit operates</li> <li>Cells can increase the capacity of the components</li> <li>Relationship between the components and the brightness of a bulb or volume of a buzzer.</li> <li>State the main points relating to current and voltage and what they are.</li> </ul>	
<b>Our Curriculum Journey</b>	<p><b>Journey:</b> To start this topic off, the children will be challenged to make a simple, complete circuit to light a lamp from their prior knowledge. They will be given statements to sort into true and false that relate to electricity and circuits and will be given extra components to investigate and explore how they can affect the effectiveness of a circuit. Following on from this, we will be exploring switches and their importance to a circuit. They will be using their observations to find real life switches to understand how this controls the flow of electricity. The children will be revisiting electrical symbols as well as learning new ones. For the next part, the children will be looking at current and voltage and exploring different</p>						

	batteries to identify the voltages. Finally, the children will investigate how the brightness of a bulb or the volume of a buzzer changes depending on other parts and componenets in a circuit.			
<b>Key Vocabulary (revisited)</b>	electricity, electrical, mains, plugged in, battery, power, rechargeable, solar, wind up, movement, cell, wire, bulb, bulb holder, buzzer, motor, component, circuit, complete circuit, flow, break, make, metal, connect, disconnect, positive, negative, switch, property, electrical conductor, Venn diagram, Carroll diagram, table, conclusion, evidence, annotate.	<table border="1"> <tr> <td data-bbox="1086 284 1303 617"><b>Key Vocabulary (new)</b></td> <td data-bbox="1303 284 2101 617">cell, battery, lamp, wire, buzzer, motor, circuit, current, filament, electrical insulator, electrical conductor, mains electricity, terminal, switch, toggle switch, push switch, slide switch, tilt switch, trembler switch, pressure switch, reed switch, series circuit, resistance, resistor, current, circuit diagram, recognised symbols, generate, generator, coal, gas, oil, fossil fuels, nuclear, biomassfired power stations, wind turbine, wave hub, tidal fl ow, hydro-electric, grid, pylon, transmission, transformer, solar panel.</td> </tr> </table>	<b>Key Vocabulary (new)</b>	cell, battery, lamp, wire, buzzer, motor, circuit, current, filament, electrical insulator, electrical conductor, mains electricity, terminal, switch, toggle switch, push switch, slide switch, tilt switch, trembler switch, pressure switch, reed switch, series circuit, resistance, resistor, current, circuit diagram, recognised symbols, generate, generator, coal, gas, oil, fossil fuels, nuclear, biomassfired power stations, wind turbine, wave hub, tidal fl ow, hydro-electric, grid, pylon, transmission, transformer, solar panel.
<b>Key Vocabulary (new)</b>	cell, battery, lamp, wire, buzzer, motor, circuit, current, filament, electrical insulator, electrical conductor, mains electricity, terminal, switch, toggle switch, push switch, slide switch, tilt switch, trembler switch, pressure switch, reed switch, series circuit, resistance, resistor, current, circuit diagram, recognised symbols, generate, generator, coal, gas, oil, fossil fuels, nuclear, biomassfired power stations, wind turbine, wave hub, tidal fl ow, hydro-electric, grid, pylon, transmission, transformer, solar panel.			