



LINCOLN ANGLICAN  
ACADEMY TRUST  
DIOCESE OF LINCOLN



## Long Term Curriculum Plan

Concept	EYFS	YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE	YEAR SIX
<p>Content (NC with local adaptations)</p> <p><b>KS2</b> Understand and use electrical systems in their products for example, series circuits incorporating switches, bulbs, buzzers and motors</p>				<p>Use simple circuits in product.</p>	<p>The electrical systems in their products for example. Circuits, switches, bulbs, buzzers and motors.</p> <p>Use a number of components in a circuit.</p> <p>Understanding computing to programme monitor and control their products.</p> <p>How simple electrical circuits and components can be used to</p>	<p>Understand and use the electrical systems in their products for example; Series circuits incorporating switches, bulbs, buzzers and motors.</p> <p>Know how more complex electrical circuits and component can be used to create functional products.</p> <p>Know how more complex electrical circuits and components can</p>	<p>Use different types of circuits in product.</p> <p>Think of ways in which adding a circuit would improve product.</p> <p>Programme a computer to monitor changes in environment and control product.</p>

					create functional products	be used to create functional products.	
<b>Substantive Knowledge</b>				<p>Children will know that devices are powered by electricity.</p> <p>Children will know that electricity comes from two main sources: batteries and mains.</p> <p>Children will know that batteries push electricity to a device through wires, creating a circuit.</p> <p>Children will know that using more batteries to a circuit provides a bigger push on the electricity.</p>	<p>Children can identify common appliances that run on electricity.</p> <p>Children will know how to construct simple series of electrical circuits.</p> <p>Children can name basic parts of a circuit such as bulbs, cells, wire, switches and buzzers.</p> <p>Children know that a switch opens and closes a circuit.</p>	<p>Children know that a current is the flow of electricity around a circuit.</p> <p>Children know that the power supply (voltage) pushes the current.</p> <p>Children know that batteries have a limited energy store for pushing current.</p>	<p>Children can recognise and draw different circuit symbols when designing their own electrical circuits.</p> <p>Children know that symbols represent components like bulbs, switches and buzzers.</p> <p>Children know that cells provide power to a circuit.</p> <p>Children know that wires connect components.</p> <p>Children know that switches open and close a circuit.</p> <p>Children know that buzzers produce</p>

							<p>sound when electricity flows through them.</p> <p>Children know that electricity is dangerous.</p>
Disciplinary Knowledge				<p>Support children to identify devices that are powered by electricity.</p> <p>Children will be shown what a battery is.</p> <p>Children will be shown what a plug is.</p> <p>Children are shown which devices are run off batteries and which devices run of a plug.</p> <p>Children will be told that batteries and plugs are two types of sources that produce electricity.</p> <p>Children will be shown how batteries push</p>	<p>Children will be shown a variety of devices and they will know if they are run on batteries or mains building up from knowledge taught in year 3.</p> <p>Adults will model and explain how to create a simple circuit.</p> <p>Children will be shown what a bulb is.</p> <p>Children will be shown what a switch is.</p> <p>Children will be shown what a cell is.</p> <p>Children will be shown what wires are.</p>	<p>Children will be shown how the current (electricity) goes around a circuit.</p> <p><a href="#">Electric current and potential difference guide for KS3 physics students - BBC Bitesize</a></p> <p>Children will be shown a diagram of a battery to explain the energy source.</p> <p><a href="#">Batteries - BBC Bitesize</a></p>	<p>Children will be shown different circuit symbols.</p> <p><a href="#">Circuit symbols - BBC Bitesize</a></p> <p>Children will recall knowledge from year 4 and lessons about circuit symbols to draw an electrical circuit independently.</p> <p>Adults will explain why electricity is dangerous and how to keep themselves safe.</p>

				<p>electricity through wires.</p> <p><a href="#">Batteries - BBC Bitesize</a></p>	<p>Children will be shown what a buzzer is.</p> <p>Children will be shown how the switch opens and closes.</p>		
Why here?/ Why now?				<p>Children will begin to link their knowledge of circuits with other subject areas e.g., science.</p>	<p>Moving on from learning in lower KS2 children will be expected to apply the skills learned in a more precise way. They will be able to use most equipment but should now work with more accuracy, considering the intended outcome.</p>		
Vocabulary				<p>Crocodile clip. Battery. Battery holder. Light bulb. Light bulb holder. Circuit. Complete. Break.</p>	<p>Crocodile clip. Switches. Motor. Battery. Battery holder. Circuit. Break.</p>	<p>Light bulb. Light bulb holder. Buzzer.</p>	