

## Electrical Systems 2024-2025

	<b>Evaluate</b>	<b>Project/Make</b>	<b>Skills</b>	<b>Knowledge</b>
<b>Nursery</b>				
<b>Reception</b>				
<b>Y1</b>				
<b>Y2</b>				
<b>Y3</b>				
<b>Y4</b>	Take torches apart to investigate parts and find out how it is made.. Investigate a variety of switches to find out how they operate.	Make torches for Reception and Nursery children to use in their dark tent.	Communicate ideas using an annotated sketch setting out materials to be used, arrangement of the circuit and the kind of switch to be used. Able to make a switch using simple classroom materials. Measure, cut and join construction materials. Able to make a simple circuit with batteries and a switch.	Apply prior science learning about simple series circuits and understanding of conductors, insulators and open and closed switches. Able to explain how a torch works, identifying the features: bulb, battery, switch, casing. Know and use technical vocabulary including: circuit, fault, conductor, insulator, push-to-break switch, push-to-make switch, system, outcome devices, input devices. Know how to use tools safely. Know how to act safely around mains electricity. Begin to understand the impact of generating electricity on the environment and the benefits of rechargeable batteries. Know about Thomas Edison and the light bulb.
<b>Y5</b>				
<b>Y6</b>	Research products which respond to changes in the environment using a computer control programme.	Steady hand game	Communicate ideas through circuit diagram indicating location of the electrical components and how they work as a system with an input, process and output.	Understand and use electrical systems in the product. Apply prior learning of computing to program, monitor and control the product. Build upon taught technical vocabulary including: parallel circuit, names of switches and components, normally open/closed, computer control input. Begin to understand the purpose and effect of monitoring and control.

			Accurately measure, mark-out, cut and join construction materials. Able to make secure electrical connections.	Able to explain how the product works. Work safely. Know about Garrett Morgan and his traffic signals.
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