



Pinner Wood School



Year Group	6	Term:	Summer 1	Subject	DT	Topic	Electrical Systems: Electrical Circuits
						Key Question	Can I create an effective night light using an electrical system?
Prior Learning and other Curriculum Links	<p>Year 4 - understood how to use electrical systems in products.</p> <p>Year 5 - understood how to use more complex electrical systems to create series circuits, including switches, bulbs, buzzers and motors.</p> <p>Year 6 - Science link to electricity</p>				Skills statements	<ul style="list-style-type: none"> • I can use technical knowledge accurate skills to problem solve during the making process. • I can apply my knowledge of materials and techniques to refine and rework my product to improve its functional properties and aesthetic qualities. • I can apply my understanding of computing to program, monitor and control my product. 	
Fundamentals	<ul style="list-style-type: none"> - Use research to develop a design specification for a functional product that responds automatically to changes in the environment. - Generate and develop innovative ideas and share and clarify these through discussion. - Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams. - Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product. - Continually evaluate and modify the working features of the product to match the initial design specification. - 				Key Facts/Sticky Knowledge	<ul style="list-style-type: none"> - Know the different circuits and effectiveness of them - Know how to make a functional and purposeful night light using correct components - Know what a good is made up of 	

	Test the system to demonstrate its effectiveness for the intended user and purpose. - Understand and use electrical systems in their products.		
Our Curriculum Journey	Journey: To start this unit, the children will begin by researching existing products to help them generate their own ideas. Next, they will build and explore a variety of circuits to ensure the effectiveness of them. Then, they will be creating a design specification for their ideas and communicate this through drawings and modelling. Leading up to the making process, they will be organising and planning including choosing appropriate tools and materials as well as techniques. The children will then be making their night light for their given purpose and finally finishing off the unit by evaluating their products.		
Key Vocabulary (revisited)	Prototype, evaluate, design, improve, purpose, structure, function, switch, output, input	Key Vocabulary (new)	series circuit, parallel circuit, names of switches and components, input device, output device, system, monitor, control, program, flowchart function, innovative, design specification, design brief, user, purpose