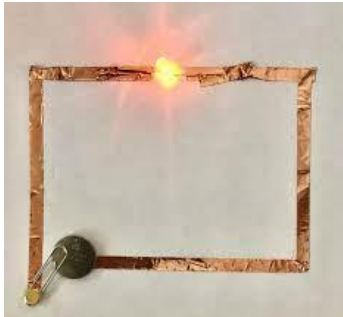






Crofton Junior School – DT Knowledge Organiser – The Lighthouse – Year 4 Summer Term



Unit of Work	DT – The Lighthouse – Electricals and electronics
Text Driver the Unit of Work Links to	The Lighthouse The Rhythm of the Rain
Key Strand	Master Practical Skills – Electricals and electronics Design, Make, Evaluate and Improve
Overview of the Unit of Work	Pupils will learn how to create a series of parallel circuits to create a paper lighthouse that lights up. They will design with the user in mind, make products through stages of prototypes and ensure the final products is finished to a high standard.
Prior Learning & Vocabulary	During the Summer Term of Year 3, pupils will have designed, made, evaluated and improved whilst making their linked lever firework toys. Vocabulary: design, make, evaluate, technical, purposeful, appealing, criteria, generate, develop, model, communicate, ideas, templates, tools, practical, materials, components, construction
Sticky Knowledge	<p>Pupils will learn:</p> <ul style="list-style-type: none">• Electrical connections between LEDs, switches and batteries may be made with copper tape, a conductive material that acts in the same way as wire. Some advantages of copper tape are that it is thin, lightweight and adhesive, which makes it ideal for small projects.• Before you attach your LED to your circuit you need to determine which is the positive and which is the negative side. The + side needs to be attached to the + side of the cell and the – side needs to be attached to the – side of the cell for the LED to turn on.• How to create a series of parallel circuits.• How to design with the user in mind, motivated by the service a product will offer.• To make products through stages of prototypes, making continual refinements.• To ensure that the final product has a high quality finish, using art skills where appropriate. <div data-bbox="819 1169 1160 1490"></div> <div data-bbox="1191 1169 1541 1490"></div> <div data-bbox="1572 1169 1895 1490"></div>

New Vocabulary	LED – Light Emitting Diode (a type of lightbulb) conductive – a material that is conductive allows electricity to pass through it adhesive – able to stick to a surface exploded diagram – a diagram that is enlarged to show detail batteries – a container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power parallel – line, planes or surfaces that are side by side and having the same distance continuously between them circuit – a complete and closed path that electricity can flow around
Post Learning	During the Autumn Term of Year 6, pupils will look at electricals and electronics again when making their constellation frames whilst studying Ancient Greeks.