



## Markland Hill Topic Overview for DT- LKS2 Year B

|               | Autumn | Spring B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Summer B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>YEAR B</b> |        | <b>Light up robot</b><br><b>Electrical</b><br><br><b>Design</b><br>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups<br><br>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design<br><b>Make</b><br>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately<br><b>Evaluate</b><br>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work<br><b>Technical Knowledge</b><br>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]<br><b>End points</b> <ul style="list-style-type: none"> <li>I can gather ideas and research ideas for my project.</li> <li>I can cut materials precisely and use appropriate tools to refine their finish.</li> <li>I can choose quality materials and choose appropriate materials to cut and shape accurately.</li> <li>I can create a circuit to make my robot light up.</li> </ul> | <b>Egyptian Shaduf</b><br><b>Mechanical</b><br>(gears, pulleys, cams, levers and linkages)<br><br><b>Design</b><br>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups<br><b>Make</b><br>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately<br><b>Evaluate</b><br>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work<br><b>End points</b> <ul style="list-style-type: none"> <li>I can investigate the design of a Egyptian Shaduf and plan resources to make my own.</li> <li>I can apply appropriate cutting and shaping to form an Egyptian Shaduf and use appropriate joining techniques.</li> <li>I can gather ideas and research ideas for my project.</li> <li>I can cut materials precisely and use appropriate tools to refine their finish.</li> <li>I can choose quality materials and choose appropriate materials to cut and shape accurately.</li> <li>I can design my product and refine it as I progress with its process.</li> </ul> <ul style="list-style-type: none"> <li>I can evaluate my design and make changes as</li> </ul> |

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|  |  | <ul style="list-style-type: none"> <li>I can design my product and refine it as I progress with its process.</li> </ul> <p>I can use products to ensure a high quality finish, using different art skills where appropriate.</p>                                                                                                                                                    | necessary.                                                                                                                                                                                                                                                        |
|  |  | <p>Design<br/> Make create<br/> Evaluate<br/> Technical<br/> Assemble<br/> Function<br/> Component<br/> research<br/> transmit</p> <p>series circuit, fault, connection, toggle switch, push-to-make switch, push-to-breakswitch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device</p> | <p>Design<br/> Make<br/> Evaluate<br/> Select<br/> research<br/> mechanism,<br/> assemble lever, linkage, pivot, slot, bridge, guide system, input, process, output<br/> linear, rotary, oscillating, reciprocating<br/> demonstrate<br/> Construct<br/> bond</p> |