

Little Green Design and Technology Curriculum Map

(based on from unit The Design and Technology Association (DATA))

In Year 3 and 4

Key Skills Food: <ul style="list-style-type: none"> Prepare ingredients hygienically using appropriate utensils. Measure ingredients to the nearest gram accurately. Follow a recipe. Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking) Materials: <ul style="list-style-type: none"> Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest millimetre. Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). Select appropriate joining techniques. Textiles: <ul style="list-style-type: none"> Understand the need for seam allowance. Join textiles with appropriate stitching. Select the most appropriate techniques to decorate textiles. Electricals and electronics: <ul style="list-style-type: none"> Create series and parallel circuits. Construction: <ul style="list-style-type: none"> Choose suitable techniques to construct products. Strengthen materials using suitable techniques. Mechanics: <ul style="list-style-type: none"> Use scientific knowledge of transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). Computing: <ul style="list-style-type: none"> Control and monitor models using software designed for this purpose. To design, make, evaluate and improve <ul style="list-style-type: none"> Design products that have a clear purpose and an intended user. 	Year 3		
	<u>Packaging</u> <i>Aspect of D&T: Structures Focus: Shell structures</i>	<u>Healthy Snacks</u> <i>Aspect of D&T: Food Focus: Healthy and varied diet</i>	<u>Moving Monster</u> <i>Aspect of D&T: Mechanical systems Focus: Levers and Linkages</i>
	Year 4		
	<u>Puzzle Mazes</u> <i>Aspect of D&T: Structures Focus: Shell structures</i>	<u>Alarms/ Lighting up</u> <i>Aspect of D&T: Electrical systems Focus: Simple circuits and switches</i>	<u>Money Containers</u> <i>Aspect of D&T: Textiles Focus: 2-D shape to 3-D product</i>

<ul style="list-style-type: none"> • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. <p>To take inspiration from design throughout history</p> <ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reason for choices. • Disassemble products to understand how they work. 			
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Little Green Design and Technology Curriculum Map

In Year 5 and 6

Key Skills Food: <ul style="list-style-type: none"> Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. Demonstrate a range of baking and cooking techniques. Create and refine recipes, including ingredients, methods, cooking times and temperatures. Materials: <ul style="list-style-type: none"> Cute materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper). Textiles: <ul style="list-style-type: none"> Create objects (such as a cushion) that employ a seam allowance. Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). Use qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion). Electricals and electronics: <ul style="list-style-type: none"> Create circuits using electronics kit that employ a number of components (such as LEDs, resistors, transistors and chips). Construction: <ul style="list-style-type: none"> Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding). Mechanics: <ul style="list-style-type: none"> Convert rotary motion to linear using cams. 	Year 5		
	<u>Moving Toys</u> <i>Aspect of D&T: Mechanical systems Focus: Pulleys, Gears and Cams</i>	<u>Bread Making</u> <i>Aspect of D&T: Food Focus: Celebrating culture and seasonality</i>	<u>Outdoor structures</u> <i>Aspect of D&T: Structures Focus: Frame structures (covered briefly at Cuffley Camp)</i>
	Year 6		
	<u>Controllable vehicles</u> <i>Aspect of D&T: Mechanical systems Focus: Pulleys or Gears</i>		<u>Bag it up</u> <i>Aspect of D&T: Textiles Focus: Combining different fabric shapes</i>

<ul style="list-style-type: none"> • Use innovative combinations of electronics (or computing) and mechanics in product designs. <p>Computing:</p> <ul style="list-style-type: none"> • Write code to control monitor models or products. <p>To design, make, evaluate and improve</p> <ul style="list-style-type: none"> • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high quality finish, using art skills where appropriate. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. <p>To take inspiration from design throughout history</p> <ul style="list-style-type: none"> • Continue elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. 			
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