

## DT CURRICULUM MAP

### Year 4



Year 4	Autumn	Spring	Summer
Theme/ Overview	<u>Theme: Electrical Systems</u>	<u>Theme: Textile passport cover</u>	<u>Theme:</u>  Cookery – a simple dish with minimal ingredients (shipwrecked meal)
<b>Design</b>	<p>Use research and develop criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <ul style="list-style-type: none"> <li>• Can they create a final design for their product based on initial ideas and revisions, based on existing ideas?</li> <li>• Can they create a detailed plan considering their target audience, design criteria and intended purpose?</li> <li>• Can they collect and use information to generate ideas?</li> <li>• Can they consider the way the product will be used when planning?</li> <li>• Do they understand designs must meet a range of criteria?</li> <li>• Can they make ongoing sketches and annotations and constraints?</li> <li>• Can they think ahead about the order of their work?</li> </ul>	<p>Use research and develop criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <ul style="list-style-type: none"> <li>• Can they create a final design for their product based on initial ideas and revisions, based on existing ideas?</li> <li>• Can they create a detailed plan considering their target audience, design criteria and intended purpose?</li> <li>• Can they collect and use information to generate ideas?</li> <li>• Can they consider the way the product will be used when planning?</li> <li>• Do they understand designs must meet a range of criteria?</li> <li>• Can they make ongoing sketches and annotations and constraints?</li> <li>• Can they think ahead about the order of their work?</li> </ul>	<p>Use research and develop criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <ul style="list-style-type: none"> <li>• Can they create a final design for their product based on initial ideas and revisions, based on existing ideas?</li> <li>• Can they collect and use information to generate ideas?</li> <li>• Can they think ahead about the order of their work?</li> </ul>
Key Skills  Technical Knowledge  Make	<p><b>Technical Knowledge</b> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <p><b>Make</b> Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p>	<p><b>Make</b> Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p>	<p><b>Cooking &amp; Nutrition</b> Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p>

<p><b>Cooking &amp; Nutrition</b></p>	<p>Apply their understanding of computing to program, monitor and control products.</p> <ul style="list-style-type: none"> <li>• Can they use a simple circuit and add components to it?</li> <li>• Can they add electricity to create motion or make light?</li> <li>• Can they make a product which uses both electrical and mechanical components?</li> <li>• Do they understand how some properties can be used – e.g. waterproof?</li> <li>• Can they select and use appropriate equipment and tools accurately and safely?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they measure accurately to build effective structures?</li> <li>• Can they experiment with a range of techniques to increase stability in a structure?</li> <li>• Can they use finishing techniques, showing an awareness of audience? (e.g. sanding, varnishing, glazing)</li> <li>• Can they consider which materials are fit for purpose and join them appropriately?</li> <li>• Can they devise a template or pattern for their product?</li> <li>• Can they increasingly model their ideas before making?</li> <li>• Can they measure accurately to centimetres and grams?</li> <li>• Can they use permanent and temporary fastenings to join?</li> <li>• Join with a greater range of techniques – e.g. staples</li> <li>• Strengthen joins and corners in a variety of ways</li> <li>• Can they use equipment and tools with increased accuracy and safety?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they select their own suitable ingredients when cooking or baking?</li> <li>• Do they present food in an appealing way?</li> <li>• Can they understand and explain safe food storage?</li> <li>• Can they evaluate food by taste, texture, flavour etc?</li> </ul>
<p><b>Evaluate – All Topics</b></p>	<p>Investigate and analyse a range of existing products. Evaluate ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals have helped shape the world.</p> <ul style="list-style-type: none"> <li>• Can they talk about what they like and dislike, giving reasons?</li> <li>• Can they develop their designs through their own reflection and the evaluation of others?</li> <li>• Can they carry out tests before making improvements?</li> <li>• Can they think about their ideas as they progress and make changes to improve their work?</li> <li>• Can they assess how well their product works in relation to the design criteria and the intended purpose?</li> <li>• Can they explain how they could improve their design and how their improvement would affect the original outcome?</li> </ul>		
<p><b>Computer-Aided Design</b></p>	<p>Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <ul style="list-style-type: none"> <li>• Can they use IT, independently, to research and plan their design?</li> <li>• Can they use digital photography to present, design or finish work?</li> </ul>		