

## Design and Technology Landmark 3

SPTO Statements	Food (compulsory)	Textiles (Further Opportunities)	Computing (Further Opportunities)	Construction (Further Opportunities)	To design, make, evaluate and improve (compulsory)	To take inspiration from design throughout history (Further Opportunities)
<b>Design</b> <ul style="list-style-type: none"> <li>• 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.</li> <li>• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li> </ul>	I can prepare ingredients hygienically using appropriate utensils.	I can cut materials accurately and safely by selecting appropriate tools.	I can write code to control and monitor models or products.	I can choose suitable techniques to construct products or to repair items.	I can design with purpose by identifying opportunities to design.	I can identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.
<b>Make</b> <ul style="list-style-type: none"> <li>• select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately.</li> <li>• 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.</li> </ul>	I can measure ingredients to the nearest gram accurately.	I can measure and mark out to the nearest millimetre.	This will be completed in Computing lessons.	I can strengthen materials using suitable techniques.	I can make products by working efficiently (such as by carefully selecting materials).	I can improve upon existing designs, giving reasons for choices.
<b>Evaluate</b> <ul style="list-style-type: none"> <li>• investigate and analyse a range of existing products.</li> <li>• evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li> <li>• understand how key events and individuals in design and technology have helped shape the world</li> </ul>	I can follow a recipe.	I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).		I can refine work and techniques as work progresses, continually evaluating the product design.	I can use software to design and represent product designs.	I can disassemble products to understand how they work.
<b>Technical knowledge</b> <ul style="list-style-type: none"> <li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</li> <li>• understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages.</li> <li>• understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors.</li> <li>• apply their understanding of computing to programme, monitor and control their products.</li> </ul>	I can assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).	I can select appropriate joining techniques.				
<b>Cooking and nutrition</b> <ul style="list-style-type: none"> <li>• understand and apply the principles of a healthy and varied diet.</li> <li>• prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li> <li>• understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>						

