

## Design and Technology: Key stage 2

Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].



When designing and making, pupils are taught to:

<b>Design</b>	<b>Y3</b>	<b>Y4</b>	<b>Y5</b>	<b>Y6</b>
▪ use <b>research</b> to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups	✓	✓	✓	✓
▪ <b>develop design criteria</b> to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups	✓	✓	✓	✓
▪ generate, develop, model and communicate their ideas through <b>discussion</b>	✓	✓	✓	✓
▪ generate, develop, model and communicate their ideas through <b>annotated sketches</b>	✓	✓	✓	✓
▪ generate, develop, model and communicate their ideas through <b>cross-sectional diagrams</b>		✓		
▪ generate, develop, model and communicate their ideas through <b>exploded diagrams</b>	✓			
▪ generate, develop, model and communicate their ideas through <b>prototypes</b>			✓	
▪ generate, develop, model and communicate their ideas through <b>pattern pieces</b>			✓	
▪ generate, develop, model and communicate their ideas through <b>computer-aided design</b>				

<b>Make</b>	<b>Y3</b>	<b>Y4</b>	<b>Y5</b>	<b>Y6</b>
▪ select from and use a wider range of tools and equipment to perform practical tasks: <b>cutting</b> accurately	✓	✓	✓	

<ul style="list-style-type: none"> <li>select from and use a wider range of tools and equipment to perform practical tasks: <b>shaping</b> accurately</li> </ul>		✓		✓
<ul style="list-style-type: none"> <li>select from and use a wider range of tools and equipment to perform practical tasks: <b>joining</b> accurately</li> </ul>	✓		✓	✓
<ul style="list-style-type: none"> <li>select from and use a wider range of tools and equipment to perform practical tasks: <b>finishing</b> accurately</li> </ul>	✓	✓	✓	
<ul style="list-style-type: none"> <li>select from and use a wider range of materials and components, including <b>construction materials</b> according to their functional properties and aesthetic qualities</li> </ul>			✓	✓
<ul style="list-style-type: none"> <li>select from and use a wider range of materials and components, including <b>textiles</b> according to their functional properties and aesthetic qualities</li> </ul>		✓	✓	
<ul style="list-style-type: none"> <li>select from and use a wider range of materials and components, including <b>ingredients</b> according to their functional properties and aesthetic qualities</li> </ul>		✓	✓	✓

<b>Evaluate</b>	<b>Y3</b>	<b>Y4</b>	<b>Y5</b>	<b>Y6</b>
<ul style="list-style-type: none"> <li>investigate and analyse a range of existing products</li> </ul>	✓	✓	✓	✓
<ul style="list-style-type: none"> <li>evaluate their ideas and products against their own design criteria and...</li> </ul>	✓	✓	✓	✓
<ul style="list-style-type: none"> <li>...consider the views of others to improve their work</li> </ul>		✓	✓	✓
<ul style="list-style-type: none"> <li>understand how key events and individuals in design and technology have helped shape the world</li> </ul>				✓

<b>Technical Knowledge</b>	<b>Y3</b>	<b>Y4</b>	<b>Y5</b>	<b>Y6</b>
<ul style="list-style-type: none"> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> </ul>	✓	✓	✓	✓
<ul style="list-style-type: none"> <li>understand and use mechanical systems in their products [<b>gears and pulleys</b>]</li> </ul>				✓
<ul style="list-style-type: none"> <li>understand and use mechanical systems in their products [<b>cams</b>]</li> </ul>			✓	

<ul style="list-style-type: none"> <li>understand and use mechanical systems in their products [<b>levers and linkages</b>]</li> </ul>				✓
<ul style="list-style-type: none"> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> </ul>		✓		✓
<ul style="list-style-type: none"> <li>apply their understanding of computing to program, monitor and control their products.</li> </ul>				✓

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

<b>Cooking and Nutrition</b>	<b>Y3</b>	<b>Y4</b>	<b>Y5</b>	<b>Y6</b>
<ul style="list-style-type: none"> <li>understand and apply the principles of a healthy and varied diet: <b>that a healthy diet is made up from a variety and balance of different food and drink</b></li> </ul>	✓	✓	✓	
<ul style="list-style-type: none"> <li>understand and apply the principles of a healthy and varied diet: <b>that recipes can be adapted to change the appearance, taste, texture and aroma</b></li> </ul>		✓		
<ul style="list-style-type: none"> <li>understand and apply the principles of a healthy and varied diet: <b>that different food and drink contain different substances – nutrients, water and fibre – that are needed for health</b></li> </ul>	✓	✓		
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>understand how to prepare food hygienically</b></li> </ul>	✓	✓		✓
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>understand how to use a heat source safely</b></li> </ul>		✓		✓
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>understand how to use an oven</b></li> </ul>			✓	
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>peeling</b></li> </ul>		✓		✓
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>chopping</b></li> </ul>	✓	✓		✓
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>slicing</b></li> </ul>		✓		✓

<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>grating</b></li> </ul>		✓		✓
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>mixing</b></li> </ul>		✓	✓	✓
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>spreading</b></li> </ul>	✓	✓		
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>kneading</b></li> </ul>		✓	✓	
<ul style="list-style-type: none"> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques: <b>baking</b></li> </ul>			✓	
<ul style="list-style-type: none"> <li>understand seasonality (<i>how seasons may affect food available</i>)</li> </ul>	✓	✓	✓	
<ul style="list-style-type: none"> <li>know where and how a variety of ingredients are grown, reared, caught and processed. (<i>how food is processed into ingredients that can be eaten or used in cooking</i>)</li> </ul>	✓	✓	✓	