



# Design & Technology

## Programmes of Study

## Design and Technology KS1

	<b>To know, understand and use the skills needed to design and make in a range of relevant contexts, including the home and school.</b>
	<u>Design:</u> <ul style="list-style-type: none"> <li>• Design purposeful, functional appealing products for themselves based on design criteria.</li> <li>• Generate, develop, model and communicate their ideas through talking, drawing templates and where appropriate ICT.</li> </ul>
	<u>Make:</u> <ul style="list-style-type: none"> <li>• Use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing).</li> <li>• Use a wide range of materials and components, including construction materials, textiles and food ingredients according to their characteristics.</li> </ul>
	<u>Evaluate:</u> <ul style="list-style-type: none"> <li>• Explore and evaluate a range of existing products.</li> <li>• Evaluate their ideas against design criteria.</li> </ul>
	<u>Technical knowledge:</u> <ul style="list-style-type: none"> <li>• Build structures, exploring how they can be made stronger, stiffer and more stable.</li> </ul>
	<b>To know, understand and use the skills needed to design and make in a range of relevant contexts, including the home, school, industry and local environment.</b>
	<u>Design:</u> <ul style="list-style-type: none"> <li>• Design purposeful, functional appealing products for themselves <b>and other users</b> based on design criteria.</li> <li>• Generate, develop, model and communicate their ideas through talking, drawing templates, <b>mock-ups</b> and, where appropriate ICT.</li> </ul>
	<u>Make:</u> <ul style="list-style-type: none"> <li>• <b>Select from</b> and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing).</li> <li>• <b>Select from</b> and use a wide range of materials and components, including construction materials, textiles and food ingredients according to their characteristics.</li> </ul>
	<u>Evaluate:</u> <ul style="list-style-type: none"> <li>• Explore and evaluate a range of existing products.</li> <li>• Evaluate their ideas against design criteria.</li> </ul>
	<u>Technical knowledge:</u> <ul style="list-style-type: none"> <li>• Build structures, exploring how they can be made stronger, stiffer and more stable.</li> <li>• <b>Explore and use mechanisms (e.g. levers, sliders, wheels and axles) in their products.</b></li> </ul>

## Design and Technology KS2

	<p>To know, understand and use the skills needed to design and make in a range of relevant contexts including; leisure, culture, enterprise, industry and the wider environment.</p>
	<p><u>Design:</u></p> <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.</li> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams.</li> </ul>
	<p><u>Make:</u></p> <ul style="list-style-type: none"> <li>• Use a wider range of tools and equipment to perform practical tasks for example, 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.</li> </ul>
	<p><u>Evaluate:</u></p> <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> </ul>
	<p><u>Technical knowledge:</u></p> <ul style="list-style-type: none"> <li>• <b>Apply</b> their understanding of how to strengthen, stiffen and reinforce more complex structures.</li> <li>• <b>Understand</b> and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</li> </ul>
	<p>To know, understand and use the skills needed to design and make in a range of relevant contexts including; leisure, culture, enterprise, industry and the wider environment.</p>
	<p><u>Design:</u></p>

	<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.</li> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams.</li> </ul>
	<p><u>Make:</u></p> <ul style="list-style-type: none"> <li>• Use a wider range of tools and equipment to perform practical tasks for example, 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, <b>according to their functional properties.</b></li> </ul>
	<p><u>Evaluate:</u></p> <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>• <b>Understand how key events and individuals in design and technology have helped shape the world.</b></li> </ul>
	<p><u>Technical knowledge:</u></p> <ul style="list-style-type: none"> <li>• <b>Apply</b> their understanding of how to strengthen, stiffen and reinforce more complex structures.</li> <li>• <b>Understand and use electrical systems in their products [for example series circuits incorporating switches, bulbs, buzzers and motors].</b></li> </ul>

	<p><b>To know, understand and use the skills needed to design and make in a range of relevant contexts including; leisure, culture, enterprise, industry and the wider environment.</b></p>
	<p><u>Design:</u></p> <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, <b>aimed at particular individuals or groups.</b></li> </ul>

	<ul style="list-style-type: none"> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, <b>prototypes, pattern pieces and computer-aided design.</b></li> </ul>
	<p><u>Make:</u></p> <ul style="list-style-type: none"> <li>• <b>Select from and use</b> a wider range of tools and equipment to perform practical tasks for example, 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, <b>according to their functional properties and aesthetic qualities.</b></li> </ul>
	<p><u>Evaluate:</u></p> <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>• <b>Understand how key events and individuals in design and technology have helped shape the world.</b></li> </ul>
	<p><u>Technical knowledge:</u></p> <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> <li>• Apply their understanding of computing to program, monitor and control their products.</li> </ul>