



## Progression of Knowledge, Skills and Understanding in Design and Technology

DESIGNING	EYFS/Reception	Key Stage 1	Key Stage 2
<b>Understanding contexts, users and purposes</b>	<b>EYFS pupils should:</b> <ul style="list-style-type: none"> <li>• Talk about what they want to make.</li> <li>• Select materials from a limited range to meet basic design criteria e.g. shiny</li> <li>• Select tools needed for their chosen materials e.g. scissors.</li> <li>• Begin to use the language of designing and making, e.g. build, shape, join.</li> <li>• Discuss their work as it progresses.</li> </ul>	<b>Across KS1 pupils should:</b> <ul style="list-style-type: none"> <li>• Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment.</li> <li>• State what products they are designing and making.</li> <li>• Say whether their products are for themselves or other users.</li> <li>• Describe what their products are for.</li> <li>• Say how their products will work.</li> <li>• Say how they will make their products suitable for their intended users.</li> <li>• Use simple design criteria to help develop their ideas.</li> </ul>	<b>Across KS2 pupils should:</b> <ul style="list-style-type: none"> <li>• Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</li> <li>• Describe the purpose of their products.</li> <li>• Indicate the design features of their products that will appeal to intended users.</li> <li>• Explain how particular parts of their products work.</li> </ul>
			<div style="background-color: #c00000; color: white; padding: 2px;"><b>Lower KS2</b></div> <b>In early KS2 pupils should also:</b> <ul style="list-style-type: none"> <li>• Gather information about the needs and wants of particular individuals and groups.</li> <li>• Develop their own design criteria and use these to inform their ideas.</li> </ul>
<b>Generating, developing, modelling and communicating ideas</b>		<b>Across KS1 pupils should:</b> <ul style="list-style-type: none"> <li>• Generate ideas by drawing on their own experiences.</li> <li>• Use knowledge of existing products to help come up with ideas.</li> <li>• Develop and communicate ideas by talking and drawing.</li> <li>• Model ideas by exploring materials, components and construction kits and by making templates and mock-ups.</li> <li>• Use information and communication technology,</li> </ul>	<b>Across KS2 pupils should:</b> <ul style="list-style-type: none"> <li>• Share and clarify ideas through discussion.</li> <li>• Model their ideas using prototypes and pattern pieces.</li> <li>• Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</li> <li>• Use computer-aided design to develop and communicate their ideas.</li> </ul>
			<div style="background-color: #c00000; color: white; padding: 2px;"><b>Lower KS2</b></div> <b>In early KS2 pupils should also:</b> <ul style="list-style-type: none"> <li>• Generate realistic ideas, focusing on the needs of the user.</li> <li>• Make design decisions that take account of the availability of resources.</li> </ul>

		where appropriate, to develop and communicate their ideas.	<b>Upper KS2</b>
			<b>In late KS2 pupils should also:</b> <ul style="list-style-type: none"> <li>• Generate innovative ideas, drawing on research.</li> <li>• Make design decisions, taking account of constraints such as time, resources and cost.</li> </ul>

MAKING	EYFS/Reception	Key Stage 1	Key Stage 2
<b>Planning</b>	<b>EYFS pupils should:</b> <ul style="list-style-type: none"> <li>• Explore using and holding basic tools e.g. hammers.</li> <li>• Use glue/adhesives to join materials.</li> <li>• Begin to use scissors to create straight and curved edges.</li> <li>• Explore basic wheels, axles and hinges.</li> </ul>	<b>Across KS1 pupils should:</b> <ul style="list-style-type: none"> <li>• Plan by suggesting what to do next.</li> <li>• Select from a range of tools and equipment, explaining their choices.</li> <li>• Select from a range of materials and components according to their characteristics.</li> </ul>	<b>Across KS2 pupils should:</b> <ul style="list-style-type: none"> <li>• Select tools and equipment suitable for the task.</li> <li>• Explain their choice of tools and equipment in relation to the skills and techniques they will be using.</li> <li>• Select materials and components suitable for the task.</li> <li>• Explain their choice of materials and components according to functional properties and aesthetic qualities.</li> </ul>
			<b>Lower KS2</b>
<b>Practical skills and techniques</b>		<b>Across KS1 pupils should:</b> <ul style="list-style-type: none"> <li>• Follow procedures for safety and hygiene.</li> <li>• Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components.</li> <li>• Measure, mark out, cut and shape materials and components.</li> <li>• Assemble, join and combine materials and components.</li> <li>• Use finishing techniques, including those from art and design.</li> </ul>	<b>Across KS2 pupils should:</b> <ul style="list-style-type: none"> <li>• Follow procedures for safety and hygiene.</li> <li>• Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components.</li> </ul>
			<b>Lower KS2</b>
			<b>Upper KS2</b>

			<p><b>In late KS2 pupils should also:</b></p> <ul style="list-style-type: none"> <li>• Accurately measure, mark out, cut and shape materials and components.</li> <li>• Accurately assemble, join and combine materials and components.</li> <li>• Accurately apply a range of finishing techniques, including those from art and design.</li> <li>• Use techniques that involve a number of steps.</li> <li>• Demonstrate resourcefulness when tackling practical problems.</li> </ul>
<b>Evaluating</b>	<b>EYFS/Reception</b>	<b>Key Stage 1</b>	<b>Key Stage 2</b>
<b>Own ideas and products</b>	<p><b>EYFS pupils should:</b></p> <ul style="list-style-type: none"> <li>• Say what they like and do not like about items they have made and attempt to say why.</li> <li>• Start to talk about changes they made during the making process.</li> <li>• Discuss whether their finished product turned out as expected or met their design criteria.</li> </ul>	<p><b>Across KS1 pupils should:</b></p> <ul style="list-style-type: none"> <li>• Talk about their design ideas and what they are making.</li> <li>• Make simple judgements about their products and ideas against design criteria.</li> <li>• Suggest how their products could be improved.</li> </ul>	<p><b>Across KS2 pupils should:</b></p> <ul style="list-style-type: none"> <li>• Identify the strengths and areas for development in their ideas and products.</li> <li>• Consider the views of others, including intended users, to improve their work.</li> </ul> <p><b>Lower KS2</b></p> <p><b>In early KS2 pupils should also:</b></p> <ul style="list-style-type: none"> <li>• Refer to their design criteria as they create.</li> <li>• Use their design criteria to evaluate their completed products.</li> </ul> <p><b>Upper KS2</b></p> <p><b>In late KS2 pupils should also:</b></p> <ul style="list-style-type: none"> <li>• Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.</li> <li>• Evaluate their ideas and products against their original design specification.</li> </ul>
		<b>Existing products</b>	<p><b>Across KS1 pupils should:</b></p> <ul style="list-style-type: none"> <li>• What products are.</li> <li>• Who products are for.</li> <li>• What products are for.</li> <li>• How products work.</li> <li>• How products are used.</li> <li>• Where products might be used.</li> <li>• What materials products are made from.</li> <li>• What they like and dislike about products.</li> </ul>

			<b>Upper KS2</b>	
			<b>In late KS2 pupils should also:</b> <ul style="list-style-type: none"> <li>• How much products cost to make.</li> <li>• How innovative products are.</li> <li>• How sustainable the materials in products are.</li> <li>• What impact products have beyond their intended purpose.</li> </ul>	
<b>Key events and individuals</b>	Not a requirement in EYFS.	Not a requirement in KS1.	<b>Across KS2 pupils should know:</b> <ul style="list-style-type: none"> <li>• About inventors, designers, engineers, chefs and manufacturers who have developed ground- breaking products.</li> </ul>	
<b>Technical Knowledge</b>	<b>EYFS/Reception</b>	<b>Key Stage 1</b>	<b>Key Stage 2</b>	
<b>Making products work</b>	<b>EYFS pupils should:</b> <ul style="list-style-type: none"> <li>• Use technical vocabulary where appropriate.</li> <li>• Explore how simple mechanisms work e.g. sliders.</li> </ul>	<b>Across KS1 pupils should:</b> <ul style="list-style-type: none"> <li>• About the simple working characteristics of materials and components.</li> <li>• About the movement of simple mechanisms such as levers, sliders, wheels and axles.</li> <li>• How freestanding structures can be made stronger, stiffer and more stable.</li> <li>• That a 3-D textiles product can be assembled from two identical fabric shapes.</li> <li>• That food ingredients should be combined according to their sensory characteristics.</li> <li>• The correct technical vocabulary for the projects they are undertaking.</li> </ul>	<b>Across KS2 pupils should:</b> <ul style="list-style-type: none"> <li>• How to use learning from science to help design and make products that work.</li> <li>• How to use learning from mathematics to help design and make products that work.</li> <li>• That materials have both functional properties and aesthetic qualities.</li> <li>• That materials can be combined and mixed to create more useful characteristics.</li> <li>• That mechanical and electrical systems have an input, process and output.</li> <li>• The correct technical vocabulary for the projects they are undertaking.</li> </ul>	
			<b>Lower KS2</b>	
			<b>In early KS2 pupils should also:</b> <ul style="list-style-type: none"> <li>• How mechanical systems such as levers and linkages or pneumatic systems create movement.</li> <li>• How simple electrical circuits and components can be used to create functional products.</li> <li>• How to program a computer to control their products.</li> <li>• How to make strong, stiff shell structures.</li> <li>• That a single fabric shape can be used to make a 3D textiles product.</li> <li>• That food ingredients can be fresh, pre-cooked and processed.</li> </ul>	
		<b>Upper KS2</b>		

			<p><b>In late KS2 pupils should also:</b></p> <ul style="list-style-type: none"> <li>• How mechanical systems such as cams or pulleys or gears create movement.</li> <li>• How more complex electrical circuits and components can be used to create functional products.</li> <li>• How to reinforce and strengthen a 3D framework.</li> <li>• That a 3D textiles product can be made from a combination of fabric shapes.</li> <li>• That a recipe can be adapted by adding or substituting ingredients.</li> </ul>
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Cooking and Nutrition	EYFS/Reception	Key Stage 1	Key Stage 2
<b>Where food comes from</b>	<p><b>EYFS pupils should:</b></p> <ul style="list-style-type: none"> <li>• Begin to develop food vocabulary using taste, smell, texture and feel.</li> <li>• Explore familiar food products e.g. fruits, vegetables.</li> <li>• Begin to work safely and hygienically.</li> </ul>	<p><b>Across KS1 pupils should:</b></p> <ul style="list-style-type: none"> <li>• That all food comes from plants or animals.</li> <li>• That food has to be farmed, grown elsewhere or caught.</li> </ul>	<p><b>Across KS2 pupils should:</b></p> <ul style="list-style-type: none"> <li>• That food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.</li> </ul>
			<p><b>Upper KS2</b></p> <p><b>In late KS2 pupils should also:</b></p> <ul style="list-style-type: none"> <li>• That seasons may affect the food available.</li> <li>• How food is processed into ingredients that can be eaten or used in cooking.</li> </ul>
<b>Food preparation, cooking and nutrition</b>	<ul style="list-style-type: none"> <li>• Stir, spread and shape a range of ingredients.</li> <li>• Begin to measure and weigh food items where appropriate.</li> </ul>	<p><b>Across KS1 pupils should:</b></p> <ul style="list-style-type: none"> <li>• How to name and sort foods into the five groups in The Guide.</li> <li>• That everyone should eat at least five portions of fruit and vegetables every day.</li> <li>• How to prepare simple dishes safely and hygienically, without using a heat source.</li> <li>• How to use techniques such as cutting, peeling and grating.</li> </ul>	<p><b>Across KS2 pupils should:</b></p> <ul style="list-style-type: none"> <li>• How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</li> <li>• How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</li> </ul>
			<p><b>Lower KS2</b></p> <p><b>In early KS2 pupils should also:</b></p> <ul style="list-style-type: none"> <li>• That a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Guide.</li> <li>• That to be active and healthy, food and drink are needed to provide energy for the body.</li> </ul> <p><b>Upper KS2</b></p>

			<p><b>In late KS2 pupils should also:</b></p> <ul style="list-style-type: none"> <li>• That recipes can be adapted to change the appearance, taste, texture and aroma.</li> <li>• That different food and drink contain different substances – nutrients, water and fibre – that are needed for health.</li> </ul>
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The 'Design & Technology Progression of Skills' across Hardwick is informed by, and based on, the progression set out by the 'The Design and Technology Association' and other ASST schools.

