

**Design Technology Progression Map**

	<b>Early Years</b>	<b>Key Stage 1</b>	<b>Lower Key Stage 2</b>	<b>Upper Key Stage 2</b>
<b>Strand</b>	<b>Reception</b>	<b>Year 1/2</b>	<b>Year 3/4</b>	<b>Year 5/6</b>
<b>Design National Curriculum</b>	<p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> <li>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;</li> <li>Make use of props and materials when role playing characters in narratives and stories.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> </ul>	<p>Pupils should be taught to:</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, 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>	
<b>Design Contexts, Uses and Purposes</b>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Begin to use the language of designing and making, e.g. join, build and shape.</li> <li>Learning about planning and adapting initial ideas to make them better.</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>State the purpose of the design and the intended user</li> <li>Explore materials, make templates and mock ups e.g. moving picture / lighthouse</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Gather information about the needs and wants of particular individuals and groups</li> <li>Discuss design criteria and use these to inform their ideas</li> <li>Research designs and existing products</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Carry out research, using surveys, interviews, and questionnaires</li> <li>Identify the needs, wants, preferences and values of particular individuals and groups</li> <li>Develop a simple design specification to guide their thinking</li> </ul>
<b>Design Ideas</b>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Explain what they are making and which materials they are using</li> <li>Begin to use the language of designing and making, e.g. join, build and shape.</li> <li>Learning about planning and adapting initial ideas to make them better.</li> <li>Discuss their work as it progresses</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Generate own ideas for design by drawing on own experiences or from reading</li> <li>Use drawing to record ideas</li> </ul>	<p>For instance:</p> <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 diagrams where appropriate</li> <li>Use computer-aided design</li> </ul>	<p>For instance:</p> <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> <li>Develop prototypes</li> </ul>
<b>Make National Curriculum</b>	<p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> <li>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;</li> <li>Use a range of small tools, including scissors, paintbrushes and cutlery</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select from and use a range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing]</li> <li>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristic</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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>	
<b>Make Planning</b>	<p>For instance:</p> <ul style="list-style-type: none"> <li>To learn to construct with a purpose in mind.</li> <li>Selects tools and techniques needed to shape, assemble and join materials.</li> <li>Select materials from a limited range that will meet a simple design criteria e.g. shiny.</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <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>	<p>For instance:</p> <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> <li>Order the main stages of making</li> <li>Produce detailed lists of tools, equipment and materials that they need</li> </ul>	



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<p><b>Make</b> Practical Skills and Techniques</p>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Work spontaneously and enjoy the act of making/creating</li> <li>Sustain concentration and control when experimenting with tools and materials</li> <li>Explore using/holding basic tools - scissors</li> <li>Use adhesives to join material</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Follow procedures for safety</li> <li>Measure, mark out, cut out and shape materials and components</li> <li>Assemble, join and combine materials and components</li> <li>Use simple fixing materials e.g. temporary - paper clips, tape and permanent - glue, staples</li> <li>Use finishing techniques, including those from art and design</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Follow procedures for safety</li> <li>Use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components</li> </ul>
		<ul style="list-style-type: none"> <li>Measure, mark out, cut and shape materials and components with some accuracy</li> <li>Assemble, join and combine materials and components with some accuracy</li> <li>Apply a range of finishing techniques, include those from art and design, with some accuracy</li> </ul>	<ul style="list-style-type: none"> <li>Accurately measure to nearest mm, mark out, cut and shape materials and components</li> <li>Accurately assemble, join and combine materials/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> </ul>
<p><b>Evaluate</b> National Curriculum</p>	<p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> <li>Share their creations, explaining the process they have used;</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products</li> <li>Evaluate their ideas and products against design criteria</li> </ul>	<p>Pupils should be taught to:</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>Understand how key events and individuals in design and technology have helped shape the world</li> </ul>
<p><b>Evaluate</b> Own Ideas and Products</p>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Begin to talk about changes made during the making process, e.g. making a decision to use a different joining method.</li> <li>Talk about what they like and dislike about their products</li> </ul>	<p>For instance:</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> <li>Evaluating products and components used</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Identify the strengths and weaknesses of their ideas and products and carry out appropriate tests</li> <li>Consider the views of others, including intended users, to improve their work</li> <li>Refer back to their design criteria as they design and make</li> <li>Use their design and design criteria to evaluate their completed products</li> </ul>
<p><b>Evaluate</b> Existing Products</p>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Recognise and describe key features of their own and others' work</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Investigate - what products are, who they are for, how they are made and what materials are used</li> <li>Describe, show interest and preference when thinking about the work of others</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Investigate - how well products have been designed, how well products have been made, why materials have been chosen, what methods of construction have been used, how well products work, how well products achieve their purposes and how well products meet user needs and wants</li> </ul>
			<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>Compare their ideas and products to their original design specification</li> </ul>
<p><b>Evaluate</b> Key Events/Individuals</p>			<p>For instance:</p> <ul style="list-style-type: none"> <li>Identify great designers and their work and use research of designers to influence work</li> <li>Evaluate the key designs of individuals in design and technology and how it has helped shape the world.</li> </ul>





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<p><b>Technical Knowledge National Curriculum</b></p>	<p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> <li>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>explore and use mechanisms [e.g. levers, sliders, wheels and axles], in their products</li> </ul>	<p>Pupils should be taught to:</p> <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 [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products</li> </ul>		
<p><b>Technical Knowledge Making Products Work</b></p>	<p>For instance:</p> <ul style="list-style-type: none"> <li>To learn how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters.</li> <li>Learn how everyday objects work by dismantling things.</li> <li>Explain what they are doing</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Understand about the simple working characteristics of materials and components</li> <li>Understand about the movement of simple mechanisms including levers, sliders (Year 1) wheels and axles (Year 2)</li> <li>Understand that food ingredients should be combined according to their taste</li> <li>Know the correct technical vocabulary for the projects they are undertaking</li> <li>Understand how freestanding structures can be made stronger, stiffer and more stable</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Know that materials have both functional properties and aesthetic qualities</li> <li>Know that materials can be combined and mixed to create more useful characteristics</li> <li>Know that mechanical and electrical systems have an input, process and output</li> <li>Use the correct technical vocabulary for the projects they are undertaking</li> </ul> <table border="1"> <tr> <td> <ul style="list-style-type: none"> <li>Understand how levers and linkages create movement</li> <li>Understand how simple electrical circuits and components can be used to create functional products</li> <li>Know how to make strong, stiff shell and frame structures</li> <li>Know that a single fabric shape can be used to make a 3D textiles product</li> <li>Know that food ingredients can be fresh, pre-cooked and processed</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Understand how cams, pulleys and gears create movement</li> <li>Understand how more complex electrical circuits and components can be used to create functional products</li> <li>Know how to reinforce/strengthen a 3D framework</li> <li>Know that a recipe can be adapted a by adding or substituting one or more ingredients</li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li>Understand how levers and linkages create movement</li> <li>Understand how simple electrical circuits and components can be used to create functional products</li> <li>Know how to make strong, stiff shell and frame structures</li> <li>Know that a single fabric shape can be used to make a 3D textiles product</li> <li>Know that food ingredients can be fresh, pre-cooked and processed</li> </ul>	<ul style="list-style-type: none"> <li>Understand how cams, pulleys and gears create movement</li> <li>Understand how more complex electrical circuits and components can be used to create functional products</li> <li>Know how to reinforce/strengthen a 3D framework</li> <li>Know that a recipe can be adapted a by adding or substituting one or more ingredients</li> </ul>
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<p><b>Cooking and Nutrition National Curriculum</b></p>	<p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> <li>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;</li> <li>Use a range of small tools, including scissors, paintbrushes and cutlery</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>use the basic principles of a healthy and varied diet to prepare dishes</li> <li>understand where food comes from</li> </ul>	<p>Pupils should be taught to:</p> <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>		
<p><b>Cooking and Nutrition Where Food Comes From</b></p>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Explore familiar foods products and names</li> <li>Begin to develop a food vocabulary using taste, smell, texture and sight</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Know where food comes from - animals or plants</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Know 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> <li>Know that seasons may affect the food available</li> <li>Understand how food is processed into ingredients that can be eaten or used in cooking</li> </ul>		
<p><b>Cooking and Nutrition Food Preparation, Cooking and Nutrition</b></p>	<p>For instance:</p> <ul style="list-style-type: none"> <li>To begin to understand some of the tools, techniques and processes involved in food preparation - stir, spread, knead and shape;</li> <li>Children have basic hygiene awareness.</li> <li>Begin to measure using non-statutory measures - spoons, cups</li> </ul>	<p>For instance:</p> <ul style="list-style-type: none"> <li>Prepare simple dishes safely and hygienically, without using a heat source</li> <li>Use techniques such as cutting, peeling, grating</li> <li>Start to understand how to name and sort foods into the five groups of the 'Eat Well Plate'</li> <li>Know that everyone should eat at least five portions of fruit and vegetables every day</li> </ul>	<p>For instance:</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>		





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|  |  |  | <ul style="list-style-type: none"><li>• Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'Eat Well Plate'</li><li>• Know that to be active and healthy, food is needed to provide energy for the body</li><li>• Measure using grams</li></ul> | <ul style="list-style-type: none"><li>• Know that recipes can be adapted to change the appearance, taste, texture and aroma</li><li>• Know that different foods contain different substances - nutrients, water and fibre - that are needed for health</li><li>• Measure accurately</li></ul> |
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