



## Design and Technology Progression

Strand	EYFS	KS1	Lower KS2	Upper KS2
Take inspiration from design throughout history		<p>Explore objects and designs to identify likes and dislikes.</p> <p>Explore how products have been created.</p>	<p>Disassemble products to understand how they work.</p> <p>Improve on existing designs, giving reasons for choices.</p> <p>Identify some of the great designers in different areas of study to generate ideas from their designs.</p>	<p>Use knowledge of inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products to create their own innovative designs.</p>
Technical knowledge	<p>To learn how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters.</p> <p>Learn how everyday objects work by dismantling things.</p>	<p>About the simple working characteristics of materials and components</p> <p>About the movement of simple mechanisms such as levers, sliders, wheels and axles</p> <p>How freestanding structures can be made stronger, stiffer and more stable</p> <p>That a 3-D textiles product can be assembled from two identical fabric shapes</p> <p>That food ingredients should be combined according to their sensory characteristics</p> <p>The correct technical vocabulary for the projects they are undertaking</p>	<p>How mechanical systems such as levers and linkages or pneumatic systems create movement</p> <p>How simple electrical circuits and components can be used to create functional products</p> <p>How to program a computer to control their products</p> <p>How to make strong, stiff shell structures</p> <p>That a single fabric shape can be used to make a 3D textiles product</p> <p>That food ingredients can be fresh, precooked and processed</p> <p>How to use learning from science to help design and make products that work</p> <p>How to use learning from mathematics to help design and make products that work that materials have both functional properties and aesthetic qualities</p> <p>That materials can be combined and mixed to create more useful characteristics</p> <p>That mechanical and electrical systems have an input, process and output</p>	<p>How mechanical systems such as cams or pulleys or gears create movement</p> <p>How more complex electrical circuits and components can be used to create functional products</p> <p>How to program a computer to monitor changes in the environment and control their products</p> <p>How to reinforce and strengthen a 3D framework</p> <p>That a 3D textiles product can be made from a combination of fabric shapes</p> <p>That a recipe can be adapted by adding or substituting one or more ingredients</p> <p>How to use learning from science to help design and make products that work</p> <p>How to use learning from mathematics to help design and make products that work</p> <p>That materials have both functional properties and aesthetic qualities</p> <p>That materials can be combined and mixed to create more useful characteristics</p> <p>That mechanical and electrical systems have an input, process and output</p> <p>The correct technical vocabulary for the projects they are undertaking</p>
Make Knowledge	<p>To show understanding of the need for safety when tackling new challenges and consider and manage some risks.</p> <p>To show understanding of how to transport and store equipment safely.</p>	<p>Plan by suggesting what to do next</p> <p>Select from a range of tools and equipment, explaining their choices</p> <p>Select from a range of materials and components according to their characteristics</p>	<p>Select tools and equipment suitable for the task</p> <p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using</p> <p>Select materials and components suitable for the task</p> <p>Explain their choice of materials and components according to functional properties and aesthetic qualities</p> <p>Order the main stages of making</p>	<p>Select tools and equipment suitable for the task</p> <p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using</p> <p>Select materials and components suitable for the task</p> <p>Explain their choice of materials and components according to functional properties and aesthetic qualities</p> <p>Produce appropriate lists of tools, equipment and materials that they need</p>



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				Formulate step-by-step plans as a guide to making
Cooking	Children have basic hygiene awareness.	That all food comes from plants or animals  That food has to be farmed, grown elsewhere (e.g. home) or caught	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	That seasons may affect the food available  How food is processed into ingredients that can be eaten or used in cooking
Design Skills	<p>Begin to use the language of designing and making, e.g. join, build and shape.</p> <p>Learning about planning and adapting initial ideas to make them better.</p> <p>To construct with a purpose in mind, using a variety of resources.</p> <p>Manipulate materials to achieve a planned effect</p> <p>Use simple tools and techniques competently and appropriately</p> <p>Select appropriate resources and adapt work where necessary</p> <p>Select tools and techniques needed to shape</p>	<p>Beginning to explore how products have been created</p> <p>Design products that have a clear purpose and an intended user with support</p> <p>Make simple diagrams to show a design</p> <p>Develop design criteria with a group</p> <p>Generate ideas by drawing on their own experiences</p> <p>Use knowledge of existing products to help come up with ideas</p> <p>Develop and communicate ideas by talking and drawing</p> <p>Model ideas by exploring materials, components and construction kits and by making templates and mock-ups</p> <p>Use information and communication technology, where appropriate, to develop and communicate their ideas</p>	<p>Show that a design meets a range of requirements</p> <p>Put together a plan which shows the equipment and tools needed</p> <p>Describe a design using an accurately labelled diagram</p> <p>Generate realistic ideas, focusing on the needs of the user</p> <p>Make design decisions that take account of the availability of resources</p> <p>Generate ideas, considering the purposes for which they are designing</p> <p>Make labelled drawings from different views showing specific features</p> <p>Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail</p> <p>Evaluate products and identify criteria that can be used for their own designs</p>	<p>Come up with a range of ideas after collecting information</p> <p>Take a user's view into account when designing</p> <p>Produce a detailed step-by-step plan</p> <p>Use cross sectional planning to show my design</p> <p>Produce prototypes to show ideas</p> <p>Share and clarify ideas through discussion</p> <p>Model their ideas using prototypes and pattern pieces</p> <p>Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas</p> <p>Use computer-aided design to develop and communicate their ideas</p> <p>Generate innovative ideas, drawing on research</p> <p>Make design decisions, taking account of constraints such as time, resources and cost</p>
Make Skills	<p>To learn to construct with a purpose in mind.</p> <p>Selects tools and techniques needed to shape, assemble and join materials.</p> <p>To explore what happens when they mix colours.</p> <p>To experiment to create different textures.</p> <p>To practise some appropriate safety measures without direct supervision.</p>	<p>Cut safely using tools provided</p> <p>Begin to demonstrate a range of cutting and shaping techniques such as tearing, cutting and folding</p> <p>Begin to demonstrate a range of joining techniques such as gluing and combining materials to strengthen?</p> <p>Begin to join textiles using running stitch?</p> <p>Colour and decorate textiles using techniques such as dyeing or adding sequins?</p> <p>Begin to use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products</p> <p>Begin to create products using levers, wheels and winding mechanisms</p> <p>Begin to refine the design as work progresses?</p>	<p>Design meets a range of requirements</p> <p>Put together a plan which shows the equipment and tools needed</p> <p>Describe a design using an accurately labelled diagram</p> <p>Select appropriate tools and techniques for making their product</p> <p>Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques</p> <p>Join and combine materials and components accurately in temporary and permanent ways</p> <p>Weave</p> <p>Measure, tape or pin, cut and join fabric with some accuracy</p> <p>Use simple graphical communication techniques</p>	<p>Come up with a range of ideas after collecting information</p> <p>Take a user's view into account when designing</p> <p>Produce a detailed step-by-step plan</p> <p>Use cross sectional planning to show a design</p> <p>Produce prototypes to show ideas</p> <p>Select appropriate tools, materials, components and techniques</p> <p>Assemble components make working models</p> <p>Use tools safely and accurately</p> <p>Construct products using permanent joining techniques</p> <p>Make modifications as they go along</p> <p>Pin, sew and stitch materials together create a product</p>



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		<p>Begin to choose the right materials for making a product according to the properties needed</p> <p>Plan by suggesting what to do next</p> <p>Select from a range of tools and equipment, explaining their choices</p> <p>Select from a range of materials and components according to their characteristics</p> <p>Follow procedures for safety and hygiene</p> <p>Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components</p> <p>Measure, mark out, cut and shape materials and components</p> <p>Assemble, join and combine materials and components</p> <p>Use finishing techniques, including those from art and design</p>	<p>Apply a range of finishing techniques, including those from art and design, with some accuracy</p>	<p>Achieve a quality product</p> <p>Weigh and measure accurately (time, dry ingredients, liquids)</p> <p>Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens</p> <p>Cut and join with accuracy to ensure a good-quality finish to the product</p> <p>Demonstrate resourcefulness when tackling practical problems</p> <p>Use techniques that involve a number of steps</p>
Evaluate Skills	<p>Begin to talk about changes made during the making process, e.g. making a decision to use a different joining method.</p>	<p>Begin to explore objects to identify likes and dislikes of the designs</p> <p>Begin to suggest improvements to existing designs</p> <p>Evaluate my design or product against given design criteria</p> <p>Begin to show an understanding of how historical events or people have helped shape the technological world today</p> <p>Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Understand how key events and individuals in design and technology have helped shape the world</p> <p>Talk about their design ideas and what they are making</p> <p>Make simple judgements about their products and ideas against design criteria</p> <p>Suggest how their products could be improved</p>	<p>Look at products and talk about how they work</p> <p>Practise my evaluation skills by evaluating existing products?</p> <p>Evaluate my own products</p> <p>Suggest a change that could be made to improve a product?</p> <p>Refer to their design criteria as they design and make</p> <p>Use their design criteria to evaluate their completed products</p> <p>Identify the strengths and areas for development in their ideas and products</p> <p>Consider the views of others, including intended users, to improve their work</p>	<p>Test and evaluate my final product</p> <p>Evaluate the design to suggest improvements, considering the materials and methods that have been used</p> <p>Evaluate the appearance and function against the original criteria</p> <p>Practise my evaluation skills by evaluating existing products against criteria set</p> <p>Explain why my finished product is going to be of good quality</p> <p>Explain how my product will appeal to the audience</p> <p>Think about the aesthetic qualities of my work</p> <p>Think about the functionality of my work</p> <p>Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</p> <p>Evaluate their ideas and products against their original design specification</p>
Cooking Skills	<p>To begin to understand some of the tools, techniques and processes involved in food preparation.</p>	<p>Begin to talk about how to be healthy</p> <p>Begin to show understanding of a varied diet</p>	<p>Choose the right ingredients for a product</p> <p>Explain what to do to be hygienic and safe</p>	<p>Understand the importance of correct storage and handling of ingredients</p>



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		<p>Show some understanding about where different foods come from</p> <p>Cut, peel or grate ingredients safely and hygienically with some support</p> <p>Begin to measure or weigh using measuring cups or electronic scales</p> <p>Begin to assemble or cook ingredients</p> <p>Show some understanding of safety when cooking ingredients</p> <p>How to name and sort foods into the five groups in the eatwell plate</p> <p>That everyone should eat at least five portions of fruit and vegetables every day</p> <p>How to prepare simple dishes safely and hygienically, without using a heat source</p> <p>How to use techniques such as cutting, peeling and grating</p>	<p>Use equipment safely</p> <p>Make sure that my product looks attractive</p> <p>Describe how my combined ingredients come together</p> <p>That a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate</p> <p>That to be active and healthy, food and drink are needed to provide energy for the body</p> <p>How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source</p> <p>How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p>	<p>Begin to measure accurately and calculate ratios of ingredients to scale up or down from a recipe</p> <p>Begin to demonstrate a range of baking and cooking techniques</p> <p>Begin to create and refine recipes, including ingredients, methods, cooking times and temperatures</p> <p>That recipes can be adapted to change the appearance, taste, texture and aroma</p> <p>That different food and drink contain different substances – nutrients, water and fibre – that are needed for health</p> <p>How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source</p> <p>How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p>
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