



Design and Technology Knowledge and Skills Progression Nursery to Year 6



Skills	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	<p>Know the names of simple construction materials in their immediate environment (e.g. scissors, paper, pens etc.)</p> <p>Follow simple instructions to create.</p> <p>Design with purpose by choosing appropriate materials.</p>	<p>Know which equipment they want to use and name prior to creating a design or idea.</p> <p>Follow a template design by drawing around and cutting accurately.</p> <p>Follow simple instructions to make and create. Design useful products in fitting with learning.</p>	<p>Create simple designs for a product.</p> <p>Use pictures and words to describe what he/she wants to do.</p>	<p>Design purposeful, functional, appealing products for himself/herself and other users based on design criteria.</p> <p>Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock ups and where appropriate, information and communication technology.</p>	<p>Use knowledge of existing products to design own functional product.</p> <p>Create designs using annotated sketches, cross sectional diagrams and simple computer programs.</p>	<p>Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience.</p> <p>Create designs using exploded diagrams.</p> <p>Use knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them.</p>	<p>Use research into existing products to inform the design of his/her own innovative product.</p> <p>Create prototypes to show ideas.</p> <p>Produce step by step plans demonstrating knowledge of different materials, tools and techniques.</p>	<p>Use research he/she has done into famous designers and inventors to inform the design of his/her innovative products.</p> <p>Generate, develop, model and communicate ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes pattern pieces and computer-aided design.</p>



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Make	<p>Learn how to use a glue spreader through simple collage tasks.</p> <p>Make simple functional products.</p> <p>Cut in strips accurately using appropriate scissors (loop scissors can be used).</p> <p>Make simple models from reusable materials.</p> <p>Make and manipulate using materials in different ways.</p>	<p>Hold scissors correctly and follow simple lines accurately (progress from loop scissors when possible).</p> <p>Cut around simple patterns or shapes.</p> <p>Draw lines for a purpose.</p> <p>Make simple models from reusable materials and explain the function.</p> <p>Use split pins accurately to create moving parts to a model.</p>	<p>Select from and use arrange of tools and equipment to perform practical tasks eg cutting, shaping, joining.</p> <p>Use a range of simple tools to cut, join and combine materials and components safely.</p>	<p>Choose appropriate tools, equipment, techniques and materials from a wide range.</p> <p>Safely measure, mark out, cut and shape materials and components using a range of tools.</p>	<p>Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages for using them.</p> <p>Safely measure, mark out, cut assemble and join with some accuracy.</p>	<p>Use techniques which require more accuracy to cut, shape, join and finish work eg cutting internal shapes and slots</p>	<p>Make careful and precise measurements so that joins, holes and openings are in exactly the right place.</p> <p>Build more complex 3D structures and apply knowledge of strengthening techniques to make them stronger or more stable.</p>	<p>Apply knowledge of materials and techniques to refine and rework products to improve functional properties and aesthetic qualities.</p> <p>Use technical knowledge accurate skills to problem solve during the making process.</p> <p>Select from and use a wider range of tools and equipment to perform practical tasks.</p> <p>Select from and use a wider range of materials and components, including construction, textiles and ingredients according to their functional and aesthetic qualities.</p>



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Evaluate	<p>Discuss creations made if made independently (in simple terms)</p> <p>Look carefully at their creation and add parts to models if they are missing such as eyes.</p>	<p>Follow design ideas and using past knowledge of learnt methods and techniques.</p> <p>Discuss creations made if made independently and talk about what it is, why they made it and what materials they used.</p> <p>Discuss which parts they may change and why</p>	<p>Discuss which parts worked well and parts they may change and why</p>	<p>Evaluate and assess existing products and those made using design criteria.</p>	<p>Investigate and analyse existing products and those made, considering a wide range of factors.</p>	<p>Consider how existing products and own finished products might be improved and how well they meet the needs of the intended user.</p>	<p>Make detailed evaluations of existing products and own products considering the views of others to improve work.</p>	<p>Use knowledge of famous designs to further explain the effectiveness of existing products and products he/she has made.</p>



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Technical Knowledge	How to use split pins	Thread, peg, and sew on cards. Cutting along lines.	Ask simple questions about existing products and those that he/she has made.	Explore and use mechanisms eg levers, slider s, wheels and axels in products.	Strengthen frames using diagonal struts.	Apply techniques he/she has learnt to strengthen structures and explore own ideas.	Understand how to use more complex mechanical and electrical systems.	Apply understanding of computing to program, monitor and control his/her product.
	How to cut more accurately	Control a pencil to draw freely and copy lines and patterns.	Build structures exploring how they can be made stronger, stiffer and more stable.	Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable.	Understand how mechanical systems such as levers and linkages or pneumatic systems create movement.	Understand and use electrical systems in products.		Use a wide range of methods to strengthen, stiffen and reinforce complex structures and use them accurately and appropriately.
	Following instructions carefully to achieve desired outcome	Use squashing techniques including rolling pins to achieve desired effects.	Use wheels and axels in a product.					
	Appropriate handling of materials (e.g. not sticking lots of things on in a lump)	Cut and turn along outlines. Join and separate small construction kit components by clicking and twisting.						
	Creating for a purpose Explaining a design or creation.	Carry and control small equipment. Weave, thread and tie.						
	To use loop scissors to effectively cut paper.	Use small hammers accurately.						
	Use a fork and spoon independently.	Safely use a wider range of food preparation tools including chopping boards and knives, graters, fruit squeezers.						
	Make marks with different sized equipment with a developing grip.	Use fine mark-making tools to add small details.						
	To begin to handle regular scissors.	Control printing tools to create a desired effect.						
	To make smaller pieces out of soft material eg playdough, melon, using a blunt knife. Using pincer movements to	Join with tape and glue						



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Cooking and Nutrition	<p><i>An exploration of food and preparation techniques to achieve an outcome.</i></p> <ul style="list-style-type: none"> • Shape biscuits • Baking gingerbread men, making porridge, jelly • Use a fork and spoon independently. <p><i>Cooking packs are provided as well as opportunities to taste and evaluate likes and dislikes.</i></p>	<p><i>An exploration of food and preparation techniques to achieve an outcome.</i></p> <ul style="list-style-type: none"> • Fruit kebabs • Vegetable soup • Shape biscuits • Design a summer picnic • Baking gingerbread men, making porridge, jelly • Use squashing techniques including rolling pins to achieve desired effects. 	<p>Say where food comes from and give examples of food that is grown.</p> <p>Talk about what is eaten at home and begin to discuss what healthy foods are.</p> <p>Use simple tools with help to prepare foods safely.</p>	<p>Understand that all food has to be farmed, grown or caught</p> <p>Understand the need for a variety of food in a diet.</p> <p>Use a wider range of cookery techniques to prepare food safely.</p>	<p>Talk about different food groups and name food from each group.</p> <p>Understand that food has to be farmed, grown or caught in Europe and the wider world.</p> <p>Use a wider range of ingredients and techniques to prepare and combine ingredients safely.</p>	<p>Read and follow recipes which involve several processes, skills and techniques.</p> <p>Understand seasonality and the advantages of eating seasonal and locally produced food.</p> <p>Understand what makes a healthy and balanced diet and that different foods and rinks provide different substances the body needs to be healthy and active</p>	<p>Select appropriate ingredients and use a wide range of techniques to combine them.</p> <p>Understand how a wide range of ingredients are grown, reared caught and processes to make them safe and palatable.</p> <p>Understand the main food groups and the different nutrients that are important for health.</p>	<p>Confidently plan a series of healthy meals based on the principles of a healthy and varied diet.</p> <p>Research, plan and prepare and cook a savoury dish, applying knowledge of ingredients and technical skills.</p> <p>Use information on food labels to inform choices.</p>