



## Design Technology Progression Map

Progression of skills and knowledge						
	3-4 years		Children in Reception		Early Learning Goals	
<b>EYFS Food</b>	<ul style="list-style-type: none"> <li>To tell adults when hungry or tired or when they want to rest or play.</li> <li>To usually manage washing and drying hands.</li> <li>Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.</li> </ul>		<ul style="list-style-type: none"> <li>To eat a healthy range of foodstuffs and understand need for variety in food.</li> <li>To show some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health. Progress towards a more fluent style of moving, with developing control and grace.</li> <li>Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</li> <li>Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.</li> </ul>		<ul style="list-style-type: none"> <li>To know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe.</li> <li>To manage their own basic hygiene and personal needs successfully, including dressing and going to the toilet independently.</li> <li>Use a range of small tools, including scissors, paintbrushes and cutlery.</li> </ul>	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Food</b>	<b>Preparing Fruit &amp; Vegetables: Fruit salad</b> <ul style="list-style-type: none"> <li>Talk about what he/she eats at home.</li> <li>Say where food comes from and give examples of food that is grown.</li> <li>Know to wash hands before food preparation.</li> <li>Use simple tools with help to prepare food safely (cut, slice and peel)</li> </ul>	<b>Preparing Fruit &amp; Vegetables: Healthy pizzas</b> <ul style="list-style-type: none"> <li>Understand the need for a varied and balanced diet.</li> <li>Understand that all food needs to be farmed, grown or caught.</li> <li>Prepare food hygienically.</li> <li>Use simple tools with help to prepare food safely (cut, slice, grate, spread, bake)</li> </ul>	<b>Healthy &amp; Varied Diet: Vegetable soup</b> <ul style="list-style-type: none"> <li>Talk about different food groups and name food from each group.</li> <li>Understand that food must be grown, farmed or caught in Europe and the wider world.</li> <li>Begin to combine different ingredients.</li> <li>Follow a recipe.</li> <li>Prepare and cook ingredients (cut, slice, peel, boil, stir, blend)</li> <li>Control the temperature of the oven or hob, while cooking.</li> </ul>	<b>Healthy &amp; Varied Diet: Vegetable stir-fry</b> <ul style="list-style-type: none"> <li>Talk about different food groups and name food from each group.</li> <li>Understand that food must be grown, farmed or caught in Europe and the wider world.</li> <li>Begin to combine different ingredients.</li> <li>Measure ingredients to the nearest gram accurately.</li> <li>Prepare and cook ingredients (cut, slice, grate, spread, juice, peel, mix, garnish)</li> <li>Create exploded diagrams.</li> </ul>	<b>Celebrating culture &amp; Seasonality: Pastry snacks</b> <ul style="list-style-type: none"> <li>Understand what makes a healthy and balanced diet.</li> <li>Understand that different substances give our body things we need to thrive.</li> <li>Read and follow recipes that follow several processes and skills.</li> <li>Plan a healthy meal.</li> <li>Use information on food labels when making choices.</li> <li>Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms).</li> </ul>	<b>Celebrating culture &amp; Seasonality: Mayan food</b> <ul style="list-style-type: none"> <li>Understand how food is caught, reared and grown to make it palatable and safe to eat.</li> <li>Select appropriate ingredient and use a wide range of techniques to combine them.</li> <li>Children carry out sensory evaluations of a variety of existing food products and ingredients relating to the project. The ingredients could include those that could be added to a basic recipe such as herbs, spices, vegetables or cheese.</li> <li>Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.</li> <li>Demonstrate how to measure out, cut, shape and combine e.g. knead, beat, rub and mix ingredients</li> </ul>

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<b>EYFS Mechanisms</b>	<ul style="list-style-type: none"> <li>To use one-handed tools and equipment, e.g. make snips in paper with child scissors.</li> <li>To understand that equipment and tools have to be used safely.</li> <li>To show an interest in technological tools with knobs or pulleys, or real objects.</li> <li>To show skill in making toys work by pressing parts or lifting flaps to achieve effects, such as new images.</li> <li>To talk about why things happen and how things work.</li> <li>Explore how things work.</li> </ul>		<ul style="list-style-type: none"> <li>To use simple tools to affect changes to materials.</li> <li>To handle tools, objects, construction &amp; malleable materials safely and with increasing control.</li> <li>To understand the need for safety when tackling new challenges and consider and manage some risks.</li> <li>To show understanding of how to transport and store equipment safely.</li> <li>To practise some appropriate safety measures without direct supervision.</li> </ul>		<ul style="list-style-type: none"> <li>To handle equipment and tools effectively, including pencils for writing.</li> <li>To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> </ul>	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Mechanisms &amp; Mechanical Systems</b>	<b>Slides &amp; Levers: Moving pictures</b> <ul style="list-style-type: none"> <li>Create a simple design and annotate where the slider or lever will appear.</li> <li>Mark out and use scissors to cut a slot.</li> <li>Explore how a lever can be used with and without a slot.</li> <li>Join using a split-pin.</li> </ul>	<b>Wheels &amp; Axles: Wheelbarrows for Easter Egg race</b> <ul style="list-style-type: none"> <li>Create simple designs for a product.</li> <li>Use pictures and words to describe what they want to create.</li> <li>Use simple tools to cut, form and shape.</li> <li>Ask questions about existing products.</li> <li>Use a wheel and point out an axel in a product.</li> </ul>	<b>Levers &amp; Linkages: Christmas card with pop-up lever</b> <ul style="list-style-type: none"> <li>Create a detailed annotated diagram that clearly shows where the lever and linkage will be added.</li> <li>Accurately measure and cut materials.</li> <li>Discuss how simple levers are used in existing products.</li> <li>Explore fixed and moving pivots.</li> <li>Discuss how a linkage connects and lever to create movement.</li> <li>Decide where to add a lever and how to create a pivot.</li> </ul>		<b>Pulleys &amp; Gears: Building the fastest car</b> <ul style="list-style-type: none"> <li>Investigate, analyse and evaluate existing everyday products and existing or pre-made toys that incorporate gear or pulley systems.</li> <li>Use videos and photographs of products that cannot be explored through first-hand experience.</li> <li>Develop measuring, marking, cutting, shaping and joining skills using junior hacksaws, G-clamps, bench hooks, square section wood, card triangles and hand drills to construct wooden frames, as appropriate.</li> <li>Demonstrate the accurate use of tools and equipment.</li> </ul>	

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<b>EYFS Structures</b>	<ul style="list-style-type: none"> <li>To use one-handed tools and equipment, e.g. make snips in paper with child scissors.</li> <li>To understand that equipment and tools have to be used safely.</li> <li>To show awareness of similarities of shapes in the environment.</li> <li>To use positional language.</li> <li>To show interest in shape by sustained construction activity or by talking about shapes or arrangements.</li> <li>To use various construction materials.</li> <li>To begin to construct, stacking blocks vertically and horizontally, making enclosures, and creating spaces.</li> <li>To join construction pieces together to build and balance.</li> <li>To realise tools can be used for a purpose.</li> <li>Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</li> <li>Explore different materials freely, in order to develop their ideas about how to use them and what to make.</li> <li>Develop their own ideas and then decide which materials to use to express them.</li> <li>Create closed shapes with continuous lines, and begin to use these shapes to represent objects.</li> </ul>		<ul style="list-style-type: none"> <li>To use simple tools to affect changes to materials.</li> <li>To handle tools, objects, construction &amp; malleable materials safely and with increasing control.</li> <li>To understand the need for safety when tackling new challenges and consider and manage some risks.</li> <li>To show understanding of how to transport and store equipment safely.</li> <li>To practise some appropriate safety measures without direct supervision.</li> <li>To use familiar objects and common shapes to create and recreate patterns and build models.</li> <li>To construct with a purpose in mind, using a variety of resources.</li> <li>To use simple tools and techniques competently and appropriately.</li> <li>To select appropriate resources and adapt work where necessary.</li> <li>To select tools and techniques needed to shape, assemble and join materials they are using.</li> </ul>		<ul style="list-style-type: none"> <li>To handle equipment and tools effectively, including pencils for writing.</li> <li>To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>To recognise, create and describe patterns.</li> <li>To explore characteristics of everyday objects and shapes and use mathematical language to describe them.</li> </ul>	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Structures</b>	<b>Freestanding Structures: Playground equipment</b>		<b>Shell Structures (incl. CAD): Chocolate box packaging</b>			<b>Frame structures: Picture frame</b>
	<ul style="list-style-type: none"> <li>Build structures exploring how they can be made stronger, stiffer and more stable.</li> <li>Use simple tools to cut, form and shape a variety of materials.</li> <li>Select appropriate materials for building a structure and give reasons.</li> </ul>		<ul style="list-style-type: none"> <li>Use knowledge of existing products to design a functional product.</li> <li>Create a design using an annotated sketch and cross-sectional diagrams.</li> <li>Safely measure (to the nearest millimetre), mark, cut and construct with accuracy.</li> <li>Strengthen frames using diagonal struts, lamination, corrugation or ribbing.</li> </ul>			<ul style="list-style-type: none"> <li>Use research into famous designers to inform their work.</li> <li>Develop their ideas through exploded and annotated diagrams.</li> <li>Make careful measurements.</li> <li>Consider ways of strengthening an existing product.</li> <li>Talk about their design and how their structure has been developed.</li> </ul>

	3-4 years		Children in Reception		Early Learning Goals	
<b>EYFS Textiles</b>	<ul style="list-style-type: none"> <li>To use one-handed tools and equipment, e.g. make snips in paper with child scissors.</li> <li>To understand that equipment and tools have to be used safely.</li> <li>To begin to be interested in and describe the texture of things.</li> <li>To capture experiences and responses with a range of media, such as music, dance and paint and other materials or words.</li> <li>Use large-muscle movements to wave flags and streamers, paint and make marks.</li> <li>Choose the right resources to carry out their own plan.</li> <li>Use one-handed tools and equipment, for example, making snips in paper with scissors.</li> </ul>		<ul style="list-style-type: none"> <li>To use simple tools to affect changes to materials.</li> <li>To handle tools, objects, construction &amp; malleable materials safely and with increasing control.</li> <li>To understand the need for safety when tackling new challenges and consider and manage some risks.</li> <li>To show understanding of how to transport and store equipment safely.</li> <li>To practise some appropriate safety measures without direct supervision.</li> <li>To experiment to create different textures.</li> <li>To understand that different media can be combined to create new effects.</li> <li>To manipulate materials to achieve a planned effect.</li> <li>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> <li>Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>Create collaboratively, sharing ideas, resources and skills.</li> </ul>		<ul style="list-style-type: none"> <li>To handle equipment and tools effectively, including pencils for writing.</li> <li>To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>To recognise, create and describe patterns.</li> <li>To represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories.</li> <li>Share their creations, explaining the process they have used.</li> </ul>	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Textiles</b>		<b>Templates &amp; Joining Techniques: Making puppets</b>		<b>2D Shape to 3D Product: Making Christmas cushions</b>		<b>Combining different fabric shapes (incl. CAD): Make Do &amp; Mend bags</b>
		<ul style="list-style-type: none"> <li>Create simple designs for a product.</li> <li>Use pictures and words to describe what they want to create.</li> <li>Ask questions about existing products.</li> <li>Use simple threading techniques.</li> <li>Work with a plastic needle.</li> <li>Use a simple running stitch with pre-punched holes.</li> <li>Add details to a product using fabric glue.</li> </ul>		<ul style="list-style-type: none"> <li>Use knowledge of existing products to design their own product for a purpose.</li> <li>Create designs using annotated sketches and cross sectional diagrams.</li> <li>Safely measure, mark and cut with accuracy.</li> <li>Create objects that employ a seam allowance.</li> <li>Discuss functionality and aesthetics.</li> <li>Use a chenille needle to sew a range of fabrics.</li> <li>Use a needle-threader for ease.</li> </ul>		<ul style="list-style-type: none"> <li>Use their research into existing products and market research to inform the design of a product.</li> <li>Create prototypes.</li> <li>Make careful and precise measurements.</li> <li>Produce step-by-step plans to guide their making.</li> <li>Measure and pin a seam allowance</li> <li>Use a wider range of stitch types (over-stitch, cross stitch, running stitch)</li> </ul>

	3-4 years		Children in Reception		Early Learning Goals	
EYFS Electrical Systems	• N/A		• N/A		• N/A	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electrical Systems				Simple circuits & switches (incl. programming & control): Electrical games	More complex switches & Circuits (incl. programming, monitoring & control): Alarms	
				<ul style="list-style-type: none"> <li>Make a variety of switches by using simple classroom materials e.g. card, corrugated plastic, aluminium foil, paper fasteners and paper clips.</li> <li>Make switches that operate in different ways e.g. when you press them, when you turn them, when you push them from side to side.</li> <li>Teach children how to avoid making short circuits.</li> <li>Discuss, investigate and, where practical, disassemble different examples of relevant battery-powered products.</li> <li>Diagnose faults in battery-operated devices (such as low battery, water damage or battery terminal damage).</li> </ul>	<ul style="list-style-type: none"> <li>Create series and parallel circuits.</li> <li>Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).</li> <li>Demonstrate the accurate use of tools and equipment.</li> <li>Communicate ideas through detailed, annotated drawings from different views and/or exploded diagrams.</li> </ul>	

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To take inspiration from design throughout history	<ul style="list-style-type: none"> <li>Explore objects and designs to identify likes and dislikes of the designs.</li> </ul>	<ul style="list-style-type: none"> <li>Explore how products have been created.</li> <li>Suggest improvements to existing designs.</li> </ul>	<ul style="list-style-type: none"> <li>Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.</li> </ul>	<ul style="list-style-type: none"> <li>Disassemble products to understand how they work.</li> <li>Improve upon existing designs, giving reasons for choices.</li> </ul>	<ul style="list-style-type: none"> <li>Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate the design of products so as to suggest improvements to the user experience.</li> <li>Create innovative designs that improve upon existing products.</li> </ul>