



DESIGN AND TECHNOLOGY PROGRESSION MAP OF KEY LEARNING AND KNOWLEDGE

EYFS	Early Learning Goals
	<p>Physical Development - Fine Motor Skills-</p> <ul style="list-style-type: none"> • Use a range of small tools, including scissors, paintbrushes and cutlery. • Begin to show accuracy and care when drawing. <p>Expressive Arts and Design - Creating with Materials</p> <ul style="list-style-type: none"> • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used. <p>Personal, Social and Emotional Development – Managing Self</p> <ul style="list-style-type: none"> • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and <i>understanding the importance of healthy food choices.</i>

Key learning	KS1	Lower KS2	Upper KS2	Across KS2
<p>Designing</p> <p>Understanding contexts, users and purposes.</p> <p>Generating, developing, modelling and communicating ideas.</p>	<p>Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment.</p> <p>State what products they are designing and making.</p> <p>Say whether their products are for themselves or other users.</p> <p>Describe what their products are for.</p> <p>Say how their products will work.</p> <p>Say how they will make their products suitable for their intended users.</p> <p>Use simple design criteria to help develop their ideas.</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>Gather information about the needs and wants of particular individuals and groups.</p> <p>Develop their own design criteria and use these to inform their idea.</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>Carry out research using surveys, interviews, questionnaires and web-based resources.</p> <p>Identify the needs, wants, preferences and values of particular individuals and groups.</p> <p>Develop a simple design specification to guide their thinking.</p> <p>Generate innovative ideas, drawing on research.</p> <p>Make design decisions, taking account of constraints such as time, resources and cost.</p>	<p>Work confidently within a range of contexts such as the home, school, leisure, culture, enterprise, industry and the wider environment.</p> <p>Describe the purpose of their products.</p> <p>Indicate the design features of their products that will appeal to intended users.</p> <p>Explain how particular parts of their products work.</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>Making</p> <p>Planning.</p> <p>Practical skills and techniques.</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>Order the main stages of making.</p> <p>Measure, mark out, cut and shape materials and components with some accuracy.</p> <p>Assemble, join and combine materials and components with some accuracy.</p> <p>Apply a range of finishing techniques, including those from art and design, with some accuracy.</p>	<p>Produce appropriate lists of tools, equipment and materials that they need.</p> <p>Formulate step-by-step plans as a guide to making.</p> <p>Accurately measure, mark out, cut and shape materials and components.</p> <p>Accurately assemble, join and combine materials and components.</p> <p>Accurately apply a range of finishing techniques, including those from art and design.</p> <p>Use techniques that involve a number of steps.</p> <p>Demonstrate resourcefulness when tackling practical problem.</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>Follow procedures for safety and hygiene.</p> <p>Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components.</p>
<p>Evaluating</p> <p>Own ideas and products.</p> <p>Existing products.</p> <p>Key events and individuals.</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>What products are.</p> <p>Who products are for.</p> <p>What products are for.</p> <p>How products work.</p> <p>How products are used.</p> <p>Where products might be used.</p> <p>What materials products are made from.</p> <p>What they like and dislike about products.</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>Who designed and made the products. Where products were designed and made.</p> <p>When products were designed and made.</p> <p>Whether products can be recycled or reused.</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> <p>How much products cost to make.</p> <p>How innovative products are.</p> <p>How sustainable the materials in products are.</p> <p>What impact products have beyond their intended purpose.</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>How well products have been designed.</p> <p>How well products have been made.</p> <p>Why materials have been chosen.</p> <p>What methods of construction have been used.</p> <p>How well products work.</p> <p>How well products achieve their purposes.</p> <p>How well products meet user needs and wants.</p> <p>About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.</p>
<p>Cooking and nutrition</p> <p>Where food comes from</p> <p>Food preparation, cooking and nutrition.</p>	<p>That all food comes from plants or animals.</p> <p>That food has to be farmed, grown elsewhere (e.g. home) or caught.</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>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>That seasons may affect the food available.</p> <p>How food is processed into ingredients that can be eaten or used in cooking.</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>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.</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>

<i>Technical knowledge</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>	<i>Year 6</i>
	<p>About the movement of simple mechanisms such as levers and sliders.</p> <p>How freestanding structures can be made stronger, stiffer and more stable.</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>That a 3-D textiles product can be assembled from two identical fabric shapes.</p> <p>About the simple working characteristics of materials and components.</p> <p>About the movement of simple mechanisms such as wheels and axles.</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>That a single fabric shape can be used to make a 3D textiles product.</p> <p>How mechanical systems such as levers and linkages or pneumatic systems create movement.</p> <p>That food ingredients can be fresh, pre-cooked and processed.</p> <p>The correct technical vocabulary for the projects they are undertaking.</p>	<p>How to program a computer control their products.</p> <p>How to make strong, stiff shell structures.</p> <p>How simple electrical circuits and components can be used to create functional products.</p> <p>That food ingredients can be fresh, pre-cooked and processed.</p> <p>The correct technical vocabulary for the projects they are undertaking.</p>	<p>That a 3D textiles product can be made from a combination of fabric shapes.</p> <p>How mechanical systems such as cams or pulleys or gears create movement.</p> <p>That a recipe can be adapted by adding or substituting one or more ingredients.</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 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>	