

## Design & Technology Progression

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
<b>Designing</b>	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	<p>Understand how to identify a target group for what they intend to design and make based on a design criteria.</p> <p>Children design purposeful, functional, appealing products for themselves, and others based on design criteria; look at existing products and pictures to develop their own ideas;</p> <p>identify a purpose for what they intend to design and make;</p> <p>develop their ideas through talk and drawings;</p> <p>start to order the main stages of making a product using the language "First... Then... Next..."</p> <p>make templates and mock ups of their ideas in card and paper or, where appropriate, using ICT.</p> <p>Children will start to generate ideas by drawing on their own and other people's experiences;</p>		<p>Children use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at individuals or groups.</p> <p>Children will learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.</p> <p>generate ideas for an item, considering its purpose and aimed at a specific user/s;</p> <p>use annotated sketches and cross-sectional drawings to develop and communicate their ideas;</p> <p>when designing, explore different initial ideas before coming up with a final design;</p> <p>when planning explain their choice of materials and components including function and aesthetics;</p> <p>develop a clear idea of what has to be done, planning how to use materials, equipment and processes.</p>		<p>Children will continue to 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.</p> <p>Children will learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products;</p> <p>design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user;</p> <p>explain how particular parts of their products work;</p> <p>generate a range of design ideas using annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas and final idea;</p> <p>with growing confidence select appropriate materials, tools and techniques; consider the availability and costings of resources when planning out designs.</p>		
<b>Making</b>	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.  For example,	Children will begin to select tools and materials and use correct vocabulary to name and describe	Children will begin to select tools and materials and use correct vocabulary to name and describe	Children will select a wider range of tools and techniques to allow them to make their product safely.	Children will select a wider range of tools and techniques to allow them to make their product safely.	Children will Appropriately select from, and use, a wider range of materials and components and Employ appropriate techniques to allow	Children will Appropriately select from, and use, a wider range of materials and components and Employ appropriate techniques to allow	

	<ul style="list-style-type: none"><li>• will use various construction materials.</li></ul>					them to	them to
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	<ul style="list-style-type: none"> <li>Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces.</li> <li>Joins construction pieces together to build and balance.</li> <li>Uses available resources to create props to support role-play</li> <li>Manipulates materials to achieve a planned effect.</li> <li>Constructs with a purpose in mind, using a variety of resources.</li> <li>Uses simple tools and techniques competently and appropriately.</li> <li>Selects appropriate resources and adapts work where necessary.</li> <li>Selects tools and techniques needed to shape, assemble and join materials they are using,</li> </ul>	<p>them.</p> <p>With help, children will be able to measure, cut and score with some accuracy and learn to use hand tools safely and appropriately.</p> <p><u>Mechanisms</u></p> <ul style="list-style-type: none"> <li>Children will explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</li> </ul> <p><u>Structures</u></p> <ul style="list-style-type: none"> <li>Children will build structures, exploring how they can be made stronger, stiffer and more stable.</li> <li>Children will begin to</li> </ul>	<p>them.</p> <p>With help, children will be able to measure, cut and score with some accuracy and learn to use hand tools safely and appropriately.</p> <p><u>Mechanisms</u></p> <ul style="list-style-type: none"> <li>Children will explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</li> </ul> <p><u>Textiles</u></p> <ul style="list-style-type: none"> <li>Children will demonstrate how to cut, shape and join fabric to make a simple product and use basic sewing techniques.</li> </ul>	<p>Begin to, independently, measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. They will also be able to use tools safely and accurately.</p> <ul style="list-style-type: none"> <li>Children will select an appropriate technique to join and combine materials.</li> </ul> <p><u>Structures</u></p> <ul style="list-style-type: none"> <li>Children will understand how to reinforce and strengthen a 3D framework.</li> </ul> <p><u>Textiles</u></p> <ul style="list-style-type: none"> <li>Children will sew using a range of different stitches and may begin to weave and</li> </ul>	<p>Begin to, independently, measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. They will also be able to use tools safely and accurately.</p> <ul style="list-style-type: none"> <li>Children will select an appropriate technique to join and combine materials.</li> </ul> <p><u>Mechanisms</u></p> <ul style="list-style-type: none"> <li>Children will start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.</li> <li></li> </ul>	<p>make their product safely.</p> <p>Know how to, independently, measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.</p> <p>They will also be able to use tools safely and accurately.</p> <p>Refine the finish using techniques to improve the appearance of their product, such as <del>sanding</del> or a more precise scissor cut after roughly cutting out a shape.</p> <p><u>Mechanisms</u></p> <ul style="list-style-type: none"> <li>Children will understand how mechanical systems such as cams or <del>pulleys or gears</del> create movement.</li> </ul>	<p>Make their product safely.</p> <p>Know how to, independently, measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.</p> <p>They will also be able to use tools safely and accurately.</p> <p>Refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.</p> <p><u>Structures</u></p> <ul style="list-style-type: none"> <li>Children will construct products using permanent joining techniques.</li> </ul>
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		assemble, join and combine materials and components together using a variety of temporary joining techniques.		knit.	<u>Electrical Systems</u> <ul style="list-style-type: none"><li>• Children will know how electrical circuits and components can be used to create functional products.</li></ul>	<u>Textiles</u> <ul style="list-style-type: none"><li>• Children will pin, sew and stitch materials together to create a product,</li><li>• Children will join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch.</li></ul>	
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					<p><u>Electrical Systems</u></p> <ul style="list-style-type: none"> <li>Children will know how more complex electrical circuits and components can be used to create functional products.</li> </ul>
<p><b>Evaluating processes and products</b></p>	<p>Share their creations, explaining the process they have used.</p>	<p>Children will begin to evaluate their ideas and products against design criteria;</p> <p>explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;</p> <p>begin to explain the positives of existing products and begin to have ideas of how to improve existing products;</p> <p>explore what materials products are made from;</p> <p>talk about their design ideas and what they are making;</p> <p>as they work, start to identify strengths and possible changes they might make to refine their existing design;</p> <p>begin to evaluate their products and ideas against their simple design criteria.</p>	<p>Children will 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>explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;</p> <p>explore what materials/ingredients products are made from and suggest reasons for this;</p> <p>consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product;</p> <p>evaluate their product against their original design criteria.</p>	<p>Children will 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>complete detailed competitor analysis of other products on the market;</p> <p>critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make;</p> <p>evaluate their ideas and products against the original design criteria, making changes as needed.</p>	

<b>Technical knowledge</b>	Experimental	<u>Mechanisms</u> <ul style="list-style-type: none"> <li>Children will explore and create products using mechanisms, such as <del>levers</del>, <del>sliders</del> and <del>wheels</del>.</li> </ul>	<u>Mechanisms</u> <ul style="list-style-type: none"> <li>Children will explore and create products using mechanisms, such as levers, <del>sliders</del> and wheels.</li> </ul>	<u>Structures</u> <ul style="list-style-type: none"> <li>Children will apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products.</li> </ul>	<u>Mechanisms</u> <ul style="list-style-type: none"> <li>Children will explain how mechanical systems such as levers and linkages create movement.</li> </ul>	<u>Mechanisms</u> <ul style="list-style-type: none"> <li>Children will explain how mechanical systems, such as cams, create movement and use mechanical systems in their products.</li> </ul>	
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		<p><u>Structures</u></p> <ul style="list-style-type: none"> <li>Children will build simple structures, exploring how they can be made stronger, stiffer and more stable.</li> </ul>	<p><u>Textiles</u></p> <ul style="list-style-type: none"> <li>Children will talk about, and start to understand, the simple characteristics of materials and components.</li> </ul>	<p><u>Textiles</u></p> <ul style="list-style-type: none"> <li>Children will begin to understand that materials have both functional properties and aesthetic qualities.</li> </ul>	<p><u>Electrical systems</u></p> <ul style="list-style-type: none"> <li>Children will understand and demonstrate how mechanical and electrical systems have an input and output process.</li> <li>Children will make and represent simple electrical circuits, such as a series and parallel, and components to create functional products.</li> </ul>	<p><u>Textiles</u></p> <ul style="list-style-type: none"> <li>Children will understand that materials have both functional properties and aesthetic qualities.</li> </ul>	<p><u>Structures</u></p> <ul style="list-style-type: none"> <li>Children will apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products.</li> </ul> <p><u>Electrical systems</u></p> <ul style="list-style-type: none"> <li>Children will understand and demonstrate that mechanical and electrical systems have an input, process and output.</li> <li>Children will apply their understanding of computing to programme, monitor and control their products.</li> </ul>
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<p><b>Cooking &amp; Nutrition</b></p>	<p>Understand the importance of healthy food choices.</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<p>Children will begin to explore where in the world different foods originate from;</p> <p>understand that all food comes from plants or animals;</p> <p>understand that food has to be farmed, grown or caught;</p>	<p>name and sort foods into the five groups in the Eatwell Guide;</p> <p>understand that everyone should eat at least five portions of fruit and vegetables every day and begin to explain why;</p>	<p>understand how to prepare and cook savoury dishes safely and hygienically;</p> <p>use a heat source, with support, to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;</p> <p>use a range of techniques such as <del>mashing, whisking, crushing, grating, cutting,</del> kneading and baking.</p>	<p>Children will start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world;</p> <p>understand how to prepare and cook savoury dishes safely and hygienically;</p> <p>use a heat source, with support, to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;</p> <p>use a range of techniques such as mashing, whisking, crushing, grating, cutting, <del>kneading</del> and baking.</p>	<p>Children will know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;</p> <p>understand that food is processed into ingredients that can be eaten or used in cooking;</p>	<p>Children will know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;</p> <p>understand about seasonality, how this may affect the food availability and plan recipes according to seasonality;</p> <p>understand that food is processed into ingredients that can be eaten or used in cooking;</p>
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			<p>use what they know about the five food groups and a healthy diet to plan and create a healthy dish.</p>	<p>begin to explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes;</p> <p>understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;</p> <p>prepare ingredients using appropriate cooking utensils;</p> <p>measure and weigh ingredients to the nearest gram and millilitre;</p> <p>start to independently follow a recipe.</p>	<p>begin to explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes;</p> <p>understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;</p> <p>prepare ingredients using appropriate cooking utensils;</p> <p>measure and weigh ingredients to the nearest gram and millilitre;</p> <p>start to independently follow a recipe; begin to understand seasonality.</p>	<p>demonstrate 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>demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;</p> <p>explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;</p> <p>explore adapting and refining recipes by adding, or substituting, one or more ingredients to change the appearance, taste, texture and/or aroma;</p> <p>explore altering methods, cooking times and/or temperatures;</p> <p>measure accurately and calculate ratios of ingredients to scale up or down from a recipe;</p> <p>be able to independently follow a recipe.</p>
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