

Design Technology Curriculum - Technical Information

2's	Nursery	Reception
<p align="center">Work in Design Technology is completed termly, across the year children complete 3 pieces following the design, make and evaluating process. These pieces are inspired by their current project (planned from the core curriculum - geography, history, science).</p>		
<p>Children make simple models which express their ideas. Shape and mould wet sand and clay with hand tools to create a particular effect.</p>	<p>Explores a range of materials and are beginning to develop their own ideas independently. Use mark making tools to make a range of enclosed shapes. Join materials in a range of ways to make things for a purpose. Uses mark making tools to make very simple representations.</p>	<p>Explain what they would like to make before they make it. Use a range of strategies to combine or join objects. Uses mark making tools to make very simple representations. Share their creations, explaining the process they have used. Make use of props and materials when role playing characters in narratives and stories.</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Work in Design Technology is completed termly, across the year children complete 3 pieces following the design, make and evaluating process. These pieces are inspired by their current project (planned from the core curriculum - geography, history, science).</p>						
<p>National Curriculum</p>	<ol style="list-style-type: none"> 1) Design purposeful, functional, appealing products for themselves and other users based on design criteria 2) Generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups and where appropriate, ICT 3) Select from and use a range of tools and equipment to perform practical tasks (eg cutting, shaping, joining and finishing) 4) Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics 5) Explore and evaluate a range of existing products 6) Evaluate their ideas and products against design criteria 7) Build structures, exploring how they can be made stronger, stiffer and more stable 8) Explore and use mechanisms (eg levers, sliders, wheels and axles) in their products 9) Use the basic principles of a healthy and varied diet to prepare dishes 10) Understand where food comes from. 	<ol style="list-style-type: none"> 1) 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 2) Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design 3) Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 4) Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities 5) Investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work 6) Understand how key events and individuals in design and technology have helped shape the world 7) Apply their understanding of how to strengthen, stiffen and reinforce more complex structures 8) Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] 9) Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] 10) Apply their understanding of computing to program, monitor and control their products. 11) Understand and apply the principles of a healthy and varied diet 12) Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques 13) Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 				

<p>Developing planning and communicating ideas</p>	<p>*Draw on their own experience to help generate ideas.</p> <ul style="list-style-type: none"> • Suggest ideas and explain what they are going to do. • Identify a target group for what they intend to design and make. • Model their ideas in card and paper. • Develop their design ideas applying findings from their earlier research 	<p>*Generate their own ideas by drawing on their own and other people's experiences.</p> <ul style="list-style-type: none"> • Develop their design ideas through discussion, observation , drawing and modelling. • Identify a purpose for what they intend to design and make. • Identify simple design criteria. • Make simple drawings and label part 	<p>*Generate ideas for an item considering its purpose and the user/s.</p> <ul style="list-style-type: none"> • Identify a purpose and establish criteria for a successful product. • Plan the order of their work before starting. • Explore, develop and communicate design proposals by modelling ideas. • Make drawings with labels when designing 	<p>*Generate ideas, considering the purposes for which they are designing.</p> <ul style="list-style-type: none"> • Make labelled drawings from different views showing specific features. • 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. • Evaluate products and identify criteria that can be used for their own designs 	<p>*Generate ideas through brainstorming and identify a purpose for their product.</p> <ul style="list-style-type: none"> • Draw up a specification for their design. • 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. • Use results of investigations, information sources, including ICT when developing design ideas. 	<p>*Communicate their ideas through detailed labelled drawings.</p> <ul style="list-style-type: none"> • Develop a design specification. • Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways. • Plan the order of their work, choosing appropriate materials, tools and techniques.
<p>Working with tools, equipment, materials and components to make quality products (inc food)</p>	<p>* Make their design using appropriate techniques.</p> <ul style="list-style-type: none"> • With help measure, mark out, cut and shape a range of materials. • Use tools eg scissors and a hole punch safely. • Assemble, join and combine materials and components together using a 	<p>*Begin to select tools and materials; use vocab' to name and describe them.</p> <ul style="list-style-type: none"> • Measure, cut and score with some accuracy. • Use hand tools safely and appropriately. • Assemble, join and combine materials in order to make a product. 	<p>*Select tools and techniques for making their product.</p> <ul style="list-style-type: none"> • Measure, mark out, cut, score and assemble components with more accuracy. • Work safely and accurately with a range of simple tools. • Think about their 	<p>*Select appropriate tools and techniques for making their product.</p> <ul style="list-style-type: none"> • Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. • Join and combine materials and components accurately in 	<p>*Select appropriate materials, tools and techniques.</p> <ul style="list-style-type: none"> • Measure and mark out accurately. • Use skills in using different tools and equipment safely and accurately. • Weigh and measure accurately (time, dry ingredients, liquids). • Apply the rules for basic food hygiene and other safe practices e.g. hazards 	<p>*Select appropriate tools, materials, components and techniques.</p> <ul style="list-style-type: none"> • Assemble components to make working models. • Use tools safely and accurately. • Construct products using permanent joining techniques. • Make modifications as they go along. • Pin, sew and stitch materials together create a product. • Achieve a quality product

	<p>variety of temporary methods e.g. glues or masking tape..</p> <ul style="list-style-type: none"> • Use simple finishing techniques to improve the appearance of their product 	<ul style="list-style-type: none"> • Follow safe procedures for food safety and hygiene. • Choose and use appropriate finishing techniques 	<p>ideas as they make progress and be willing change things if this helps them improve their work.</p> <ul style="list-style-type: none"> • Demonstrate hygienic food preparation and storage. • Use finishing techniques strengthen and improve the appearance of their product. 	<p>temporary and permanent ways.</p> <ul style="list-style-type: none"> • Sew using a range of different stitches, weave and knit • Measure, tape or pin, cut and join fabric with some accuracy. • Use simple graphical communication techniques. 	<p>relating to the use of ovens.</p> <ul style="list-style-type: none"> • Cut and join with accuracy to ensure a good-quality finish to the product. 	
<p>Evaluating processes and products Evaluating process and products</p>	<p>*Evaluate their product by discussing how well it works in relation to the purpose.</p> <ul style="list-style-type: none"> • Evaluate their products as they are developed, identifying strengths and possible changes they might make. • Evaluate their product by asking questions about what they have made and how they have gone about it 	<p>*Evaluate against their design criteria.</p> <ul style="list-style-type: none"> • Evaluate their products as they are developed, identifying strengths and possible changes they might make. • Talk about their ideas, saying what they like and dislike about them. 	<p>*Evaluate their product against original design criteria e.g. how well it meets its intended purpose.</p> <ul style="list-style-type: none"> • Disassemble and evaluate familiar products 	<p>*Evaluate their work both during and at the end of the assignment.</p> <ul style="list-style-type: none"> • Evaluate their products carrying out appropriate tests 	<p>*Evaluate a product against the original design specification.</p> <ul style="list-style-type: none"> • Evaluate it personally and seek evaluation from others. 	<p>*Evaluate their products identifying strengths and areas for development, and carrying out appropriate tests.</p> <ul style="list-style-type: none"> • Record their evaluations using drawings with labels. • Evaluate against their original criteria and suggest ways that their product could be improved

Cooking and Nutrition	<ul style="list-style-type: none"> • Understand that food comes from plants or animals. • Understand that food has to be farmed, caught, or grown. • Sort foods into the 5 groups using The Eatwell Plate. • Identify that people should eat at least 5 portions of fruit and vegetables a day. • Prepare simple dishes hygienically and safely without a heat source. • Use cooking techniques such as: cutting, peeling and grating. 	<ul style="list-style-type: none"> • Understand which foods are reared, caught, or grown and that this happens in the UK and across the globe • Understand that recipes can be changed by adding or taking away ingredients • Understand that the seasons can affect food produce • Identify that food and drink are needed to provide energy for a healthy and active lifestyle. • Identify that people should eat at least 5 portions of fruit and vegetables a day. • Prepare simple dishes hygienically and safely, where needed with a heat source. • Use cooking techniques such as: chopping, peeling, grating, slicing, mixing, spreading, kneading and baking. 	<ul style="list-style-type: none"> • Sort foods into the 5 groups using The Eatwell Plate and identify that this makes up a healthy diet • Identify that food and drink provide certain nutritional and health benefits which support a healthy lifestyle • Identify that people should eat at least 5 portions of fruit and vegetables a day • Prepare simple dishes hygienically and safely, where needed with a heat source • Weigh and measure accurately (time, dry ingredients, liquids). • Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens. • Use cooking techniques such as: chopping, peeling, grating slicing, mixing, spreading, kneading and baking
Vocabulary	<p>Functional. Design, criteria, generate, develop, model, communicate,, technology, equipment, cutting, shaping, joining, finishing, components, textiles, ingredients, structures, stronger, stiffer, stable, carbohydrates, protein, fat, fruit, vegetable, peel, grate, hygiene, ingredients, nutrition</p>	<p>Functional. design, criteria, generate, develop, model, communicate,, technology, equipment, cutting, shaping, joining, finishing, components, textiles, ingredients, structures, stronger, stiffer, stable, mechanism, iterative, context, discussion, cross section, annotate, exploded diagrams, prototypes, pattern pieces, computer-aided design, aesthetic, construction materials, investigate, analyse, reinforce, monitor, carbohydrates, protein, fat, fruit, vegetable, peel, grate, hygiene, ingredients, nutrition, peeling, kneading, savoury</p>	