



Sacred Heart RC Primary School
 'Where Every Heart is Sacred'

Whole-School Curriculum Progression Map: Design Technology

Design Technology	EYFS	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Design	<p>Talk about and connect ideas. Explain what is happening and anticipate what might happen next when planning to build. Link statements to the theme and stick to a main theme or intention when planning to build or make. Use language of designing and making (join, build, make, longer, shorter). Select appropriate materials in continuous provision area (Making area, construction area, playdough area).</p>	<p>Generate ideas by drawing on own and other people's experiences. Research similar models. Use knowledge of existing products from research to influence ideas. Develop design ideas through discussion, observation, drawing and modelling. Identify a target group for what they intend to design and make. Use pictures and words to plan ideas. Begin to model ideas Identify a purpose for what they intend to design and make. Explain how the product will work and how it will be suitable for the user. Identify simple design criteria. Make simple drawings and label parts. Model diagrams and begin to use ICT to show ideas. Choose the correct tools to use and explain why they have made these choices.</p>	<p>Generate ideas, suited to the purposes of the design considering its purpose and the user/s Link with mathematics and science. Begin to research others needs and use this in planning. Identify a purpose and establish criteria for a successful product. Being able to explain how it will work. Make labelled drawings from different views showing aspects of specific features. Explore, develop and communicate design proposals by modelling ideas. Explain, when planning, the choice of materials and components, including function and aesthetics. Develop a clear idea of what has to be done, planning how to use materials, equipment and processes. Evaluate similar products and identify criteria that can be used for designs. Begin to use computers for design.</p>	<p>Generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern pieces. Use research of user's individual needs, wants, requirements for design and identify features of design that will appeal to the intended user. Use results of investigations, information sources, including ICT when developing design ideas. Develop a design specification – link with mathematics and science. Explore, develop and communicate aspects of my design proposals by modelling my ideas in a variety of ways. Plan the order of my work, choosing appropriate materials, tools and techniques. Suggest alternative methods of making if the first attempts fail. Use results of investigations, information sources, including ICT when developing design ideas.</p>
Make	<p>Select simple tools and techniques to assemble and join materials. Understand that different media can be combined to create new effects. Use simple tools and techniques competently and appropriately. Construct with a purpose in mind while using a variety of resources.</p>	<p>Make their design using appropriate techniques. Begin to select tools and materials. Measure, cut and score with some accuracy. Use hand tools safely and appropriately. Assemble, join and combine materials in order to make a product. Choose and use appropriate finishing techniques to improve the appearance of their product. Begin to select and use appropriate fruit and vegetables, processes and tools.</p>	<p>Confidently select appropriate tools and techniques for making their product; use vocab' to name and describe them. Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. Work safely and accurately with a wider range of simple tools Think about own ideas as they make progress and be willing to change things if this helps to improve their work. Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. Join and combine materials and components accurately in temporary and permanent ways. Confidently select and use appropriate fruit and vegetables, processes and tools.</p>	<p>Confidently select appropriate tools, materials, components and techniques; use vocabulary to name and describe them. Measure and mark out accurately using appropriate tools, equipment and techniques. Assemble components to make working models. Demonstrate skills using different tools and equipment safely and accurately. Achieve a good-quality product. Construct products using permanent joining techniques. Make modifications and necessary changes.</p>
Evaluate	<p>Use talk to organise, sequence and clarify thinking when explaining what I have built. Write simple labels and captions to describe their work.</p>	<p>Evaluate their product by discussing how well it works against their design criteria. Evaluate their products as they are developed, identifying strengths and possible changes they might make. Evaluate products by asking questions about what they have made and describe how they have gone about it. Talk about their ideas, saying what they like and dislike about them.</p>	<p>Evaluate their product both during and at the end of the assignment and identify how well it meets its intended purpose. Suggest solutions following evaluation for purpose. Evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose. Evaluate products by asking questions about what they have made and describe how they have gone about it. Evaluate their products by carrying out appropriate tests to see if it works.</p>	<p>Evaluate their design and finished products, identifying strengths and areas for development, and carrying out appropriate tests. Suggest solutions following evaluation for purpose. Complete thorough evaluations of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose. Record their evaluations using drawings with labels. Evaluate it against their original criteria and suggest ways that their product could be improved. Evaluate it personally and seek evaluation from others, considering their findings and suggestions</p>



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Materials and Structures	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	Know how to build structures, and explore how they can be made stronger, stiffer and more stable. Use joining, rolling and folding to make their structure stronger.	Know how to apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Make sure that a product is strong when building it.	Know how to apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Reinforce and strengthen a 3D frame.
Mechanisms		Explore and use mechanisms (for example: levers, sliders, wheels and axles) in their products.	Understand and use mechanical systems in their products (for example: gears pulleys, cams, levers and linkages) Use levers and linkages to create movement.	Understand and use mechanical systems in their products (for example: gears pulleys, cams, levers and linkages) Use cams, pulleys and gears to create movement.
Textiles		Measure and join textiles together to make a product and explain their processes. Carefully cut textiles to produce accurate pieces. Explain choices of textiles. Cut, shape and join fabric to make a simple garment/article. Use basic sewing techniques.	Measure and join different textiles in different ways. Choose textiles considering appearance and functionality. Think about the user when choosing textiles. Think about how to make product strong. Explain how to join things in a different way. Sew using a range of different stitches. Measure, tape or pin, cut and join fabric with some accuracy.	Think about user's wants/needs and aesthetics when choosing textiles Make products attractive and strong Use a range of joining techniques. Pin, sew and stitch materials together create a product.
Food and Nutrition	Understand the need for variety in foods. Begin to understand some food preparation tools, techniques and processes. Know that food comes from different places. Practise stirring, mixing, pouring and blending.	Know how to begin to apply the principles of a healthy and varied diet. Begin to prepare and cook a variety of simple, predominantly savoury, dishes using a range of cooking techniques. Begin to learn about seasonality and begin to understand where and how a variety of ingredients are grown, reared, caught and processed. Cut, peel and grate with increasing confidence. Understand and discuss safe procedures for food safety and hygiene.	Understand and apply the principles of a healthy and varied diet. Know how to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Demonstrate hygienic food preparation and storage. Begin to weigh and measure more accurately (time, dry ingredients, liquids).	Understand and apply the principles of a healthy and varied diet. Know how to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Use seasonal ingredients in their own recipes. Confidently use a range of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens. Weigh and measure accurately (time, dry ingredients, liquids). Suggest alternative ingredients and slightly modify recipes to alter results.
Electrical Systems			Understand and use electrical systems in their products (for example: series circuits incorporating switches, bulbs, buzzers and motors). Use a number of components of a circuit in their product. Begin to use computing skills to program, monitor and control a product.	Incorporate switch into product and confidently use number of components in circuit. Use different types of circuit in product and think of ways in which adding a circuit would improve products. Know how to apply their understanding of computing to program, monitor and control their products.