



Design Technology

St Philip's Catholic Primary School		
Intent	Implementation	Impact
<p>The D&T curriculum at St Philip's will allow students to become self-motivated and confident learners, who can work independently and as part of a team. The main aim is to ensure that learners develop technical and practical competencies as well as understanding the importance of careful planning. Our priority within the evaluation progression of skills is for students to be problem solvers who understand the importance of testing and making changes to their products to ensure efficiency. We intend for our children to develop their skills within these areas to develop as responsible citizens who make a positive contribution to their world.</p>	<p>Our DT curriculum places a strong importance on the children '<i>doing</i>' and by allowing them to experiment and take risks, in a safe and positive learning environment. This is achieved through an imaginative DT Curriculum that will embrace and engage new technologies and link to the children's world. In addition to this, within the planning and sequencing of our DT curriculum at St Philip's, is the desire to deliver a curriculum in which students' express creativity through their designs and produce high quality outcomes. Students will learn about designers/architects and their work, especially British designers, and will develop their skills over time in the 3 main processes of successful design; design, make and evaluate.</p>	<p>Students are able to efficiently plan, adapt and overcome problems. . The children are able to combine their designing and making skills with knowledge and understanding, in order to design, make, analyse and evaluate products of high quality. The children will enjoy working in DT and expressing their own creativity through their designs and giving their opinions. In this subject, collaborative skills are honed so they can work successfully with a group, as well as on their own. Children develop their skills of working to a plan, selecting appropriate materials and equipment, following through their design and making necessary changes along the way to reach a conclusion to a design that is made for a purpose to the child.</p>

<p>Our curriculum drivers</p> <p>To be evidenced throughout the DT curriculum</p>	<p>An understanding of how to develop into global citizens in the modern world</p> <p>Develop effective learning relationships by working collaboratively with others and presenting ideas clearly</p> <p>Strong communication within and beyond our school community towards a common goal</p> <p>Demonstrate creativity within our work</p> <p>Making connections with prior learning develop new knowledge in the long term memory</p> <p>Thinking critically to question information, seek answers to questions and to ask 'why' in our learning</p>
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Main strands of learning- National Curriculum

	Design	Make	Evaluate	Technical knowledge	Cooking and nutrition	
Key Stage 1	-design purposeful, functional, appealing products for themselves and other users based on design criteria -generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology	-select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] -select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	-explore and evaluate a range of existing products -evaluate their ideas and products against design criteria	-build structures, exploring how they can be made stronger, stiffer and more stable -explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	-use the basic principles of a healthy and varied diet to prepare dishes -understand where food comes from.	
Key Stage 2	-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 -generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	-select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately -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	-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 -understand how key events and individuals in design and technology have helped shape the world	-apply their understanding of how to strengthen, stiffen and reinforce more complex structures -understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] -understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] -apply their understanding of computing to program, monitor and control their products.	-understand and apply the principles of a healthy and varied diet -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	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas.	<ul style="list-style-type: none"> • Draw on their own experience to help generate ideas • Suggest ideas and explain what they are going to do 	<ul style="list-style-type: none"> • Generate ideas by drawing on their own and other people's experiences • Develop their design ideas through 	<ul style="list-style-type: none"> • Generate ideas for an item, considering its purpose and the user/s • Identify a purpose and establish criteria 	<ul style="list-style-type: none"> • Generate ideas, considering the purposes for which they are designing • Make labelled drawings from 	<ul style="list-style-type: none"> • Generate ideas through brainstorming and identify a purpose for their product 	<ul style="list-style-type: none"> • Communicate their ideas through detailed labelled drawings • Develop a design specification

	<ul style="list-style-type: none"> • 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>discussion, observation, drawing and modelling</p> <ul style="list-style-type: none"> • Identify a purpose for what they intend to design and make • Identify simple design criteria • Make simple drawings and label parts 	<p>for a successful product.</p> <ul style="list-style-type: none"> • Plan the order of their work before starting • Explore, develop and communicate design proposals by modelling ideas • Make drawings with labels when designing 	<p>different views showing specific features</p> <ul style="list-style-type: none"> • 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 	<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 	<ul style="list-style-type: none"> • 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 (including food)</p>	<ul style="list-style-type: none"> • Make their design using appropriate techniques • 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 variety of temporary methods e.g. glues or masking tape • Select and use appropriate fruit and 	<ul style="list-style-type: none"> • Begin to select tools and materials; use vocab' to name and describe them • Measure, cut and score with some accuracy • Use hand tools safely and appropriately • Assemble, join and combine materials in order to make a product • Cut, shape and join fabric to make a simple garment. Use basic sewing techniques • Follow safe procedures for food safety and hygiene 	<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 ideas as they make progress and be willing change things if this helps them improve their work • Measure, tape or pin, cut and join 	<ul style="list-style-type: none"> • Select appropriate tools and techniques for making their product • Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques • Join and combine materials and components accurately in temporary and permanent ways • Sew using a range of different stitches, weave and knit 	<ul style="list-style-type: none"> • Select appropriate materials, tools and techniques • 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 relating to the use of ovens • Cut and join with accuracy to ensure a 	<ul style="list-style-type: none"> • Select appropriate tools, materials, components and techniques • Assemble components 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>vegetables, processes and tools</p> <ul style="list-style-type: none"> • Use basic food handling, hygienic practices and personal hygiene • Use simple finishing techniques to improve the appearance of their product 	<p>Choose and use appropriate finishing techniques</p>	<p>fabric with some accuracy</p> <ul style="list-style-type: none"> • Demonstrate hygienic food preparation and storage • Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT 	<ul style="list-style-type: none"> • Measure, tape or pin, cut and join fabric with some accuracy • Use simple graphical communication techniques 	<p>good-quality finish to the product</p>	
<p>Evaluating processes and products</p>	<ul style="list-style-type: none"> • Evaluate their product by discussing how well it works in relation to the purpose • 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 	<ul style="list-style-type: none"> • Evaluate against their design criteria • 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 	<ul style="list-style-type: none"> • Evaluate their product against original design criteria e.g. how well it meets its intended purpose • 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 	<ul style="list-style-type: none"> • Evaluate a product against the original design specification • Evaluate it personally and seek evaluation from others 	<ul style="list-style-type: none"> • Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests • Record their evaluations using drawings with labels • Evaluate against their original criteria and suggest ways that their product could be improved