



Consideration, Care and Courtesy

St Edmund's Catholic Primary School

Design Technology Curriculum Document

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| <p>Aims</p> | <p>The national curriculum for design and technology aims to ensure that all pupils:</p> <ul style="list-style-type: none"> • develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world • build and apply a repertoire of knowledge, understanding and skills in order to design and make high quality prototypes and products for a wide range of users • critique, evaluate and test their ideas and products and the work of others • understand and apply the principles of nutrition and learn how to cook | | | | |
| | <p>Design</p> | <p>Make</p> | <p>Evaluate</p> | <p>Technical Knowledge</p> | <p>Cooking and Nutrition</p> |
| <p>Year 1</p> | <p>Use pictures and words to convey what they want to design / make.</p> <p>Explore ideas by rearranging materials.</p> <p>Select pictures to help develop ideas.</p> <p>Use mock-ups e.g. recycled material trial</p> | <p>Select materials from a limited range.</p> <p>Explain what they are making.</p> <p>Name the tools they are using.</p> | <p>Explore existing products and investigate how they have been made (including teacher-made examples).</p> <p>Talk about their design as they develop and identify good and bad points.</p> <p>Say what they like and do not like about items they</p> | <p>Start to use technical vocabulary.</p> <p>Cut out shapes which have been created by drawing round a template.</p> <p>Join materials in a variety of ways.</p> | <p>Group familiar food products e.g. fruit and vegetables.</p> <p>Cut and chop a range of ingredients.</p> <p>Work safely and hygienically.</p> |

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| | models to try out their ideas. | | have made and attempt to say why. | Decorate using a variety of techniques. | Know about the need for a variety of foods in a diet. |
| Year 2 | <p>Propose more than one idea for their product.</p> <p>Use ICT to communicate ideas. Use drawings to record ideas as they are developed.</p> <p>Add notes to drawings to help explanations.</p> | <p>Discuss their work as it progresses.</p> <p>Select and name the tools needed to work the materials.</p> <p>Explain which materials they are using and why.</p> | <p>Decide how existing products do / do not achieve their purpose. Discuss how closely their finished product meets their own design criteria.</p> | <p>Know some ways of making structures stronger.</p> <p>Show how to stiffen some materials.</p> <p>Know how to make a simple structure more stable.</p> <p>Attach wheels to a chassis using an axle.</p> <p>Know some different ways of making things move in a 2-D plane.</p> | <p>Cut, peel, grate, chop a range of ingredients.</p> <p>Work safely and hygienically. Know about the <i>Eatwell Plate</i>.</p> <p>Understand where food comes from.</p> |
| Year 3 | <p>Develop more than one design or adaptation of an initial design.</p> <p>Plan a sequence of actions to make a product.</p> <p>Think ahead about the order of their work and decide upon tools and materials.</p> <p>Propose realistic suggestions as to how they can achieve their design ideas.</p> | <p>Select from a range of tools for cutting, shaping, joining and finishing.</p> <p>Use tools with accuracy.</p> <p>Select from materials according to their functional properties.</p> <p>Use appropriate finishing techniques.</p> | <p>Investigate similar products to the one to be made to give starting points for a design.</p> <p>Research needs of user.</p> <p>Decide which design idea to develop.</p> <p>Consider and explain how the finished product could be improved.</p> <p>Discuss how well the finished product meets the user's design criteria.</p> <p>Investigate key events and individuals in design and technology.</p> | <p>Use an increasingly appropriate technical vocabulary for tools materials and their properties.</p> <p>Understand seam allowance.</p> <p>Prototype a product.</p> <p>Sew on buttons and make loops.</p> <p>Strengthen frames with diagonal struts.</p> <p>Measure and mark square section, strip and dowel accurately to 1cm.</p> | <p>Follow instructions / recipes.</p> <p>Join and combine a range of ingredients.</p> <p>Begin to understand the food groups on the <i>Eatwell Plate</i>.</p> |

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| <p>Year 4</p> | <p>Record the plan by drawing using annotated sketches. Use prototypes to develop and share ideas.</p> <p>Consider aesthetic qualities of materials chosen.</p> <p>Use CAD where appropriate.</p> | <p>Prepare pattern pieces as templates for their design.</p> <p>Select from techniques for different parts of the process.</p> | <p>Draw / sketch existing products in order to analyse and understand how products are made. Identify the strengths and weaknesses of their design ideas in relation to purpose / user.</p> <p>Consider and explain how the finished product could be improved.</p> <p>Investigate key events and individuals in design and technology.</p> | <p>Incorporate a circuit into a model.</p> <p>Use electrical systems such as switches bulbs and buzzers. Use ICT to control products.</p> <p>Use linkages to make movement larger or more varied.</p> | <p>Make healthy eating choices - use the <i>Eatwell plate</i>.</p> <p>Understand seasonality. Know where and how ingredients are reared and caught.</p> <p>Prepare and cook using different cooking techniques.</p> |
| <p>Year 5</p> | <p>Record ideas using annotated diagrams.</p> <p>Use models, kits and drawings to help formulate design ideas.</p> <p>Sketch and model alternative ideas.</p> <p>Decide which design idea to develop.</p> | <p>Develop one idea in depth.</p> <p>Select from and use a wide range of tools.</p> <p>Cut accurately and safely to a marked line.</p> <p>Select from and use a wide range of materials.</p> | <p>Research and evaluate existing products.</p> <p>Consider user and purpose.</p> <p>Consider and explain how the finished product could be improved related to design criteria.</p> <p>Investigate key events and individuals in design and technology.</p> | <p>Use the correct vocabulary appropriate to the project.</p> <p>Join materials using appropriate methods.</p> <p>Create 3=-D textile products using pattern pieces.</p> <p>Understand pattern layout with textiles.</p> <p>Cut strip wood, dowel, square section wood accurately to 1mm.</p> | <p>Join and combine a widening range of ingredients.</p> <p>Select and prepare foods for a particular purpose.</p> <p>Know where and how ingredients are grown and processed.</p> |
| <p>Year 6</p> | <p>Plan the sequence of work.</p> <p>Devise step by step plans which can be read / followed by someone else.</p> <p>Use exploded diagrams and cross-sectional diagrams to communicate ideas.</p> | <p>Make prototypes.</p> <p>Use researched information to inform decisions.</p> <p>Produce detailed lists of ingredients / components / materials and tools.</p> | <p>Identify the strengths and weaknesses of their design ideas.</p> <p>Report using correct technical vocabulary.</p> <p>Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user.</p> | <p>Build frameworks to support mechanisms.</p> <p>Stiffen and reinforce complex structures.</p> <p>Use mechanical systems such as cams, pulleys and gears.</p> | <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Choose ingredients to support healthy eating choices when designing their food products.</p> <p>Prepare and cook a variety of mostly savoury</p> |

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| | | Refine their product - review and rework / improve. | Understand how key people have influenced design in a variety of contexts. Investigate key events and individuals in design and technology. | Use electrical systems such as motors and switches. Program, monitor and control using ICT. | dishes using a range of cooking techniques. |
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