



St. Mary's Catholic Primary, Blackbrook

Design Technology Overview 2021 - 22



Cooking & Nutrition	Textiles	Mechanisms	Structures	Electrical
	Autumn Term	Spring Term		Summer Term
N	<p style="text-align: center;">Expressive Art and Design</p> <p style="text-align: center;">Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</p> <p style="text-align: center;">Physical</p> <p style="text-align: center;">Choose the right resources to carry out their own plan</p>	<p style="text-align: center;">Expressive Art and Design</p> <p style="text-align: center;">Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them.</p>		<p style="text-align: center;">Food</p> <p style="text-align: center;">I can talk about healthy choice using a variety of fruits/vegetables</p> <p style="text-align: center;">Select and use resources, with help when needed. This helps them to achieve a goal</p>
R	<p style="text-align: center;">Junk Modelling</p> <p style="text-align: center;">Space Rockets using Recyclable Materials</p> <p style="text-align: center;">Design - Generate ideas based on simple design criteria and their own experiences, explaining what they could make.</p> <p style="text-align: center;">Make - Select and use tools, explaining their choices, to cut, shape and join paper and card.</p>	<p style="text-align: center;">Food</p> <p style="text-align: center;">I can talk about the taste and texture of a variety of fruits/vegetables</p> <p style="text-align: center;">Design - Generate initial ideas and design criteria through investigating a variety of fruit and vegetables.</p> <p style="text-align: center;">Make - Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely.</p> <p style="text-align: center;">Evaluate - Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences.</p>		<p style="text-align: center;">Packaging</p> <p style="text-align: center;">Exploring 3D shapes to make a box</p> <p style="text-align: center;">Design - Develop, model and communicate their ideas through talking, mock-ups and drawings.</p> <p style="text-align: center;">Making - Plan by suggesting what to do next. Select and use tools, skills and techniques, explaining their choices.</p> <p style="text-align: center;">Evaluating - Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings.</p>
Year 1	<p style="text-align: center;">Cooking and Nutrition</p> <p style="text-align: center;">Preparing Fruit and Vegetables to make soup</p> <p style="text-align: center;">Design - Generate initial ideas and design criteria through investigating a variety of fruit and vegetables.</p> <p style="text-align: center;">Make - Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely.</p> <p style="text-align: center;">Evaluate - Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences.</p>	<p style="text-align: center;">Structures</p> <p style="text-align: center;">Freestanding Structures</p> <p style="text-align: center;">Design - Develop, model and communicate their ideas through talking, mock-ups and drawings.</p> <p style="text-align: center;">Making - Plan by suggesting what to do next. Select and use tools, skills and techniques, explaining their choices.</p> <p style="text-align: center;">Evaluating - Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings.</p>		<p style="text-align: center;">Mechanisms</p> <p style="text-align: center;">Sliders and Levers</p> <p style="text-align: center;">Design - Generate ideas based on simple design criteria and their own experiences, explaining what they could make.</p> <p style="text-align: center;">Make - Select and use tools, explaining their choices, to cut, shape and join paper and card.</p> <p style="text-align: center;">Evaluate - Evaluate their product by discussing how well it works in relation to the purpose and the user.</p>



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Year 2	<p style="text-align: center;">Cooking and Nutrition Preparing and making bread</p> <p>Design - Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Make - Use simple utensils and equipment to e.g. kneed, roll, mix, weigh, stir sand shape safely. Evaluate - Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences.</p>	<p style="text-align: center;">Textiles Templates and Joining</p> <p>Design - Design a functional and appealing product for a chosen user and purpose based on simple design criteria. Make - Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. Select from and use textiles according to their characteristics. Evaluating - Explore and evaluate a range of existing textile products relevant to the project.</p>	<p style="text-align: center;">Mechanisms Wheels and Axles</p> <p>Design - Develop and communicate ideas through drawings and mock-ups. Make - Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics. Evaluate - Evaluate their ideas throughout and their products against original criteria.</p>
Year 3	<p style="text-align: center;">Structures Shell Structures</p> <p>Design - Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas. Make - Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy. Evaluate - Test and evaluate their own products against design criteria and the intended user and purpose.</p>	<p style="text-align: center;">Textiles 2D shape to 3D product</p> <p>Design - Produce annotated sketches, prototypes, final product sketches and pattern pieces. Make - Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. Select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern. Evaluate - Investigate a range of 3-D textile products relevant to the project. Test their product against the original design criteria and with the intended user.</p>	<p style="text-align: center;">Cooking and Nutrition Healthy and Varied Diet</p> <p>Design - Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. Make - Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. Evaluate - Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs.</p>
Year 4	<p style="text-align: center;">Electrical Simple Switches and Circuits</p> <p>Design - Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional & exploded diagrams Make - Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities. Evaluate - Investigate and analyse a range of existing battery-powered products. Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.</p>	<p style="text-align: center;">Cooking and Nutrition Healthy and Varied Diet</p> <p>Design - Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. Make - Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. Evaluate - Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs.</p>	<p style="text-align: center;">Mechanisms Levers and Linkages</p> <p>Design - Use annotated sketches and prototypes to develop, model and communicate ideas, focusing on the needs of the user Make - Select and use appropriate tools with some accuracy to cut, shape and join paper and card. Evaluate - Evaluate their own products and ideas against criteria and user needs, as they design and make. Look closely at other products with lever and linkage mechanisms.</p>



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<p>Year 5</p>	<p>Textiles Combining Different Fabric Shapes – Embelishment</p> <p>Design - Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification.</p> <p>Make - Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.</p> <p>Evaluate - Compare the final product to the original design specification. Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.</p>	<p>Cooking and Nutrition Celebrating Culture and Seasonality</p> <p>Design - Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.</p> <p>Make - Write a step-by-step recipe, including a list of ingredients, equipment and utensils. Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</p> <p>Evaluate - Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.</p>	<p>Electrical More Complex Switches</p> <p>Design - Use research to develop a design specification for a functional product that responds automatically to changes in the environment.</p> <p>Make - Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product.</p> <p>Evaluate - Continually evaluate and modify the working features of the product to match the initial design specification. Test the system to demonstrate its effectiveness for the intended user and purpose.</p>
<p>Year 6</p>	<p>Structures Frame Structures</p> <p>Design - Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost.</p> <p>Make - Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks.</p> <p>Evaluate - Investigate and evaluate a range of existing frame structures.</p> <ul style="list-style-type: none"> Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. 	<p>Mechanisms Pulleys or Gears</p> <p>Design - Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources.</p> <p>Make - Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost.</p> <p>Evaluate - Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.</p>	<p>Cooking and Nutrition Celebrating Culture and Seasonality</p> <p>Design - Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.</p> <p>Make - Write a step-by-step recipe, including a list of ingredients, equipment and utensils. Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</p> <p>Evaluate - Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.</p>