



Woolton Primary School  
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## WPS Design and Technology Long Term Plan

Aspects of Design and Technology National Curriculum for Key Stage 1 and Key Stage 2, including 'Cooking and Nutrition':

- Design
- Make
- Evaluate
- Technical Knowledge
- Cooking and Nutrition

Key Stage 1			
	Autumn Term	Spring Term	Summer Term
Year 1	<p><b><u>Food - Preparing Fruit &amp; Vegetables</u></b> Fruit Christmas Bark – cutting/knife skills</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Select and use a range of equipment to perform practical tasks</li><li>• Select from and use a wide range of ingredients</li><li>• Explore and evaluate existing products/recipes</li><li>• Use the basic principles of a healthy diet</li><li>• Understand where food comes from</li></ul>	<p><b><u>Structures - Freestanding Structures</u></b> Traditional tales/fairy tales bridge, can you build a bridge to help your character cross the troll's river safely?</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Design purposeful products for themselves and others to use</li><li>• Generate, develop and communicate their ideas through talking and drawing</li><li>• Select and use a range of tools and equipment for cutting, shaping and joining</li><li>• Select and use a wide range of construction materials and components</li><li>• Explore and evaluate a range of existing products</li><li>• Evaluate their ideas and products against their design criteria</li><li>• Build structures, exploring how they can be made stronger, stiffer and more stable</li></ul>	<p><b><u>Mechanisms – Sliders &amp; Levers</u></b> Moving story picture relating to Pirate topic</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Design functional and appealing products for themselves and others to use</li><li>• Generate, develop and communicate their ideas through talking, drawing, templates and mock-ups</li><li>• Select and use a range of tools to perform practical tasks such as cutting and joining</li><li>• Select and use a range of materials and components</li><li>• Explore and evaluate a range of existing products</li><li>• Evaluate their ideas and products against design criteria</li><li>• Explore and use mechanisms [for example, levers and sliders] in their product</li></ul>
Year 2	<p><b><u>Textiles – Templates &amp; Joining Techniques</u></b> Hand puppets, Christmas characters</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Design purposeful, functional and appealing products for themselves and others to use</li><li>• Generate, develop, model and communicate their ideas through talking, drawing, templates and mock ups and, where appropriate, ICT</li><li>• Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li><li>• Select and use a wide range of materials and components, including textiles</li><li>• Explore and evaluate a range of existing products</li><li>• Evaluate their ideas and products against the design criteria</li></ul>	<p><b><u>Food – Preparing Fruit &amp; Vegetables</u></b> Dips and Dippers</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Select and use a range of equipment to perform practical tasks</li><li>• Select and use from a wide range of ingredients</li><li>• Explore and evaluate a range of existing products/recipes</li><li>• Use the basic principles of healthy and varied diet to prepare dishes</li><li>• Understand where food comes from</li></ul>	<p><b><u>Mechanisms - Wheels and axels</u></b> Moving cars using recycled materials, wheels and dowel rods</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Design purposeful, functional and appealing products for themselves and others to use</li><li>• Generate, develop, model and communicate their ideas through talking, drawing and templates and, where appropriate, ICT</li><li>• Select and use a range of tools and equipment to perform practical tasks [for example, cutting and joining]</li><li>• Select and use a wide range of materials for construction</li><li>• Explore and evaluate a range of existing products</li><li>• Evaluate their ideas and products against design criteria</li><li>• Build structures, exploring how they can be made stronger and more stable</li><li>• Explore and use mechanisms [for example, wheels and axles], in their products</li></ul>

Key Stage 2			
	Autumn Term	Spring Term	Summer Term
Year 3	<p><b><u>Structures – Shell Structures</u></b> 3D nets – Desk tidy/Pencil pot</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Generate, develop, model and communicate ideas through discussion and annotated sketches</li><li>• Select and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping and joining], accurately</li><li>• Select and use a wider range of materials and components</li><li>• Investigate and analyse a range of existing products</li><li>• Evaluate their ideas and products against design criteria and consider the views of others to improve their work</li><li>• Apply their understanding of how to strengthen, stiffen and reinforce structures</li></ul>	<p><b><u>Food – Healthy &amp; Varied Diet</u></b> Bread/Pizza – Kneading dough</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Generate, develop and communicate their ideas through discussion and annotated sketches</li><li>• Select and use a wider range of tools and equipment to perform practical tasks</li><li>• Select and use a wider range of materials, including ingredients</li><li>• Investigate and analyse a range of existing products</li><li>• Understand and apply the principles of a healthy and varied diet</li><li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li><li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</li></ul>	<p><b><u>Textiles - 2D shape to 3D shape</u></b> Drawstring Bag for toys, clothes or accessories</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"><li>• Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at particular individuals or groups</li><li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, pattern pieces and computer-aided design</li><li>• Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li><li>• Select and use a wider range of materials and components, including textiles, according to their functional properties and aesthetic qualities</li><li>• Investigate and analyse a range of existing products</li><li>• Evaluate their ideas and products against their own design and consider the views of others to improve their work</li></ul>





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Year 4	<p><b><u>Mechanical Systems – Lever &amp; linkages</u></b> 3D Information Poster relating to Autumn topic Moving Christmas Card</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches and computer-aided design</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting and joining], accurately</li> <li>• Select and use a wider range of materials and components according to their functional properties</li> <li>• Investigate and analyse a range of existing products</li> <li>• Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>• Understand and use mechanical systems in their products [for example, levers and linkages]</li> </ul>	<p><b><u>Food – Healthy &amp; Varied Diet</u></b> Coconut Vegetable Curry – Wider variety of food/seasoning</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• Generate, develop and communicate their ideas through discussion and annotated sketches</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks</li> <li>• Select and use a wider range of ingredients</li> <li>• Investigate and analyse a range of existing products</li> <li>• Understand and apply the principles of a healthy and varied diet</li> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</li> </ul>	<p><b><u>Electrical Systems - Simple Circuits &amp; Switches</u></b> Torch/Reading light</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>• Generate, develop and communicate their ideas through discussion, annotated sketches, exploded diagrams and computer-aided design</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks</li> <li>• Select and use a wider range of materials and components according to their functional properties</li> <li>• Investigate and analyse a range of existing products</li> <li>• Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>• Understand how key events and individuals in design and technology have helped shape the world</li> <li>• Apply their understanding of how to strengthen and reinforce their products</li> <li>• Understand and use electrical systems in their products [for example, series circuits, incorporating switches and bulbs]</li> </ul>
Year 5	<p><b><u>Structures – Frame Structures</u></b> Photo frame</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>• Select and use a wider range of materials and components according to their functional properties and aesthetic qualities</li> <li>• Investigate and analyse a range of existing products</li> <li>• Evaluate their ideas and products against their own design criteria and consider the vies of others to improve their work</li> <li>• Apply their understanding of how to strengthen and reinforce more complex structures</li> </ul>	<p><b><u>Food – Celebrating Culture &amp; Seasonality</u></b> Savoury Muffins – fillings, creating pastry, cutting skills</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• Generate, develop and communicate their ideas through discussion, annotated sketches and cross-sectional</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks accurately</li> <li>• Select and use a wider range of ingredients</li> <li>• Investigate and analyse a range of existing products</li> <li>• Understand and apply the principles of a healthy and varied diet</li> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</li> </ul>	<p><b><u>Mechanical Systems – Pulleys &amp; Gears</u></b> Moving toys for a race CAMS</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams and computer-aided design</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks</li> <li>• Select and use a wider range of materials and components according to their functional properties</li> <li>• Investigate and analyse a range of existing products</li> <li>• Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>• Understand how key events and individuals in design and technology have helped shape the world</li> <li>• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• Understand and use mechanical systems in their products [for example, gears, pulleys and cams]</li> <li>• Apply their understanding of computing to program, monitor and control their products</li> </ul>
Year 6	<p><b><u>Textiles – Combining Different Fabric Shapes</u></b> Make do and mend Repurpose/Recycle – t-shirt into a bag Bring in clothes to fix</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• Use research and develop design criteria to inform the design of functional and appealing products that are fit for purpose</li> <li>• Generate, develop and communicate their ideas through discussion, annotated sketches, pattern pieces and computer-aided design</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>• Select and use wider range of materials and components, including textiles, according to their functional properties and aesthetic qualities</li> <li>• Investigate and analyse a range of existing products</li> <li>• Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>• Understand how key events and individuals in design and technology have helped shape the world</li> </ul>	<p><b><u>Food – Celebrating Culture &amp; Seasonality</u></b> Stew &amp; Bread – seasonality, kneading, savory</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• Generate, develop and communicate their ideas through discussion and annotated sketches</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks</li> <li>• Select and use a wider range of ingredients</li> <li>• Investigate and analyse a range of existing products</li> <li>• Understand and apply the principles of a healthy and varied diet</li> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</li> </ul>	<p><b><u>Electrical Systems</u></b> Fairground topic Link to electrical/mechanical/structures</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and computer-aided design</li> <li>• Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>• Select and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities</li> <li>• Investigate and analyse a range of existing products</li> <li>• Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>• Understand how key events and individuals in design and technology have helped shape the world</li> <li>• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>• Understand and use electrical systems in their products [for example, series circuits, incorporating switches, bulbs, buzzers and motors]</li> <li>• Apply their understanding of computing to program, monitor and control their products</li> </ul>

