

Year 5

Design and Technology Scheme of Work

	Autumn	Spring	Summer
Design and Technology projects through which the skills are taught.	Investigate and deconstruct t-shirts Evaluate material choices and how they are made. Design, sew and evaluate a mini t-shirt and applique to decorate. Make Christmas biscuits.	Design, make and evaluate a machine with moving parts. (Including gears, pulleys, cams and levers.) Investigate the inventor James Watt and his impact on the world.	Design, make and evaluate homes for wildlife out of wood and natural materials. (eg – a mouse house, hedgehog lodge or minibeast manor etc) Prepare and cook a healthy savoury meal. Learn about Great British dishes.
Skills	Design, make and evaluate. I can research and develop design criteria to inform the design of innovative, functional, appealing products aimed at particular groups/individuals.	Design, make and evaluate. I can research and develop design criteria to inform the design of innovative, functional, appealing products aimed at particular groups/individuals.	Design, make and evaluate. I can research and develop design criteria to inform the design of innovative, functional, appealing products aimed at particular groups/individuals.

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	<p>I can generate and develop my ideas through discussion, annotated sketches, cross sectional and exploded diagrams and prototypes. I can select from and use a wider range of tools and equipment to perform tasks accurately. I can select from and use a wider range of materials and components. I can select materials according to their function or aesthetic quality and explain why I have chosen it. I can investigate and analyse a range of existing products. I can evaluate my own idea/product against my design criteria and consider others views in how I can improve my work.</p> <p>Construction</p> <p>I can use a glue gun with close supervision</p>	<p>I can generate and develop my ideas through discussion, annotated sketches, cross sectional and exploded diagrams and prototypes. I can select from and use a wider range of tools and equipment to perform tasks accurately. I can select from and use a wider range of materials and components. I can select materials according to their function or aesthetic quality and explain why I have chosen it. I can investigate and analyse a range of existing products. I can evaluate my own idea/product against my design criteria and consider others views in how I can improve my work. I can begin to understand how key events and individuals in D&T have helped shape the world.</p>	<p>I can generate and develop my ideas through discussion, annotated sketches, cross sectional and exploded diagrams and prototypes. I can select from and use a wider range of tools and equipment to perform tasks accurately. I can select from and use a wider range of materials and components. I can select materials according to their function or aesthetic quality and explain why I have chosen it. I can investigate and analyse a range of existing products. I can evaluate my own idea/product against my design criteria and consider others views in how I can improve my work. I can begin to understand how key events and individuals in D&T have helped shape the world.</p>
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	<p>Materials</p> <p>I can cut internal shapes. I can cut accurately and safely to a marked line. I can use a craft knife, cutting mat and safety ruler under 1:1 supervision (if appropriate).</p> <p>Textiles</p> <p>I can join fabrics using a running stitch, over stitch and back stitch. I can explain and use a seam allowance. I can create a prototype, (using old clothes or cheap material). I can use printing to decorate. I can create a simple pattern.</p> <p>Cooking and Nutrition.</p> <p>I can work safely and hygienically. I can cut and shape ingredients using tools and equipment.</p>	<p>Materials</p> <p>I can make levers and linkages.</p> <p>Technical Knowledge</p> <p>I can apply my understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>I can understand and use mechanical systems in my products (gears, pulleys, cams and levers).</p>	<p>Construction.</p> <p>I can use a glue gun under close supervision. I can cut accurately to 1mm using strip wood, dowelling and square section. I can build frameworks using a range of materials - wood, card and corrugated plastic etc.</p> <p>Materials</p> <p>I can cut internal shapes. I can cut accurately and safely to a marked line. I can use a craft knife, cutting mat and safety ruler under 1:1 supervision (if appropriate).</p> <p>Technical Knowledge</p> <p>I can apply my understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Cooking and Nutrition.</p>
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	<p>I can analyse taste, texture, smell and appearance of a range of foods.</p> <p>I can join and combine a range of ingredients.</p>		<p>I can work safely and hygienically.</p> <p>I can understand and apply the principles of a healthy and varied diet.</p> <p>I can cut and shape ingredients using tools and equipment.</p> <p>I can prepare and cook a range of ingredients to produce predominantly savoury dishes.</p> <p>I can analyse taste, texture, smell and appearance of a range of foods.</p> <p>I can join and combine a range of ingredients.</p> <p>I can understand seasonality and know where and how my food/ingredients are grown, reared, caught and processed.</p>
Outcomes	<p>Children to deconstruct clothing and then design their own using what they've learnt.</p> <p>Children to design, sew and evaluate a mini t shirt and decorate it.</p>	<p>Children to design, make and evaluate a machine with mechanical moving parts.</p> <p>Children to investigate the inventor James Watt and understand his relevance to their machine design.</p>	<p>Children will work together in small groups to design, make and evaluate a wild life house out of wood and natural materials.</p> <p>Children will prepare and make classic British savoury meals.</p>

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	Children to make different biscuits to give to other classes.		Children will know where food ingredients come from and understand seasonality.
Key Knowledge Outcome	Children to investigate inventor James Watt, and understand his impact on the world.		