

Year 6

Design and Technology Scheme of Work

	Autumn	Spring	Summer
Design and Technology projects through which the skills are taught.	Deconstruct cushions and covers to investigate designs and use these to influence own design ideas. Design, sew and evaluate a cushion cover and applique to decorate.	Design, make and evaluate an electrical burglar alarm (incorporating a series circuit.) Learn about seasonality and sustainability in food production. Find recipes which can reduce our carbon footprint. Cook and make some of these recipes.	Design, make and evaluate a robot. Program, monitor and control the machine using an app.
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, prototypes, pattern pieces and computer aided design.</p> <p>I can select from and use a wider range of tools and equipment to perform tasks accurately.</p> <p>I can select from and use a wider range of materials and components.</p> <p>I can select materials according to their function or aesthetic quality and explain why I have chosen it.</p> <p>I can investigate and analyse a range of existing products.</p> <p>I can evaluate my own idea/product against my design criteria and consider others views in how I can improve my work.</p>	<p>I can generate and develop my ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.</p> <p>I can select from and use a wider range of tools and equipment to perform tasks accurately.</p> <p>I can select from and use a wider range of materials and components.</p> <p>I can select materials according to their function or aesthetic quality and explain why I have chosen it.</p> <p>I can investigate and analyse a range of existing products.</p> <p>I can evaluate my own idea/product against my design criteria and consider others views in how I can improve my work.</p> <p>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, prototypes, pattern pieces and computer aided design.</p> <p>I can select from and use a wider range of tools and equipment to perform tasks accurately.</p> <p>I can select from and use a wider range of materials and components.</p> <p>I can select materials according to their function or aesthetic quality and explain why I have chosen it.</p> <p>I can investigate and analyse a range of existing products.</p> <p>I can evaluate my own idea/product against my design criteria and consider others views in how I can improve my work.</p>
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	<p>Materials</p> <p>I can cut internal shapes. I can cut accurately and safely to a marked line.</p> <p>Textiles</p> <p>I can join fabrics using a running stitch, over stitch and back stitch. I can use cross stitch to add detail. I can explain and use a seam allowance. I can create a prototype, (using old clothes or cheap material). I can use applique to decorate by gluing/stitching. I can create a simple pattern.</p>	<p>Construction.</p> <p>I can use a glue gun under close supervision. I can build frameworks using a range of materials - wood, card and corrugated plastic</p> <p>Materials</p> <p>I can cut accurately and safely to a marked line.</p> <p>Technical Knowledge</p> <p>I can understand and use electrical systems in my products (series circuits incorporating switches, bulbs buzzers and motors).</p> <p>I can apply my understanding of computing to program, monitor and control my product.</p> <p>Cooking and Nutrition.</p> <p>I can work safely and hygienically.</p>	<p>Construction.</p> <p>I can plan and create structures, following detailed plans and diagrams.</p> <p>Technical Knowledge</p> <p>I can apply my understanding of computing to program, monitor and control my product. I can debug and problem solve as necessary, identifying way to improve the functionality of a robot.</p>
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		<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 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 prepare and cook a range of ingredients to produce predominantly savoury dishes</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 cushions and then design their own using what they've learnt.</p> <p>Children to design, sew and evaluate a cushion cover and decorate it.</p>	<p>Children to design, make and evaluate an electrical burglar alarm.</p> <p>Children will prepare and make meals using seasonal, locally sourced ingredients.</p>	<p>Children will build a robot and then program it respond to instructions by using an app.</p>

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Key Knowledge Outcome	Children to investigate Lucienne Day, learning about her impact on post-war textiles. Children to learn about key computing and coding pioneers, including Ada Lovelace and Alan Turing.
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