



St Paul's Design Technology Long Term Plan

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	Model making using different resources in Reception.	Mixing media and materials to create different models.	Making our own playdough. Baking/cooking	Attaching materials using different sticking resources.	creating our own models for purpose- floating, flying etc.	Planning, creating and making adaptations to creations.
Year 1		<p>Textiles: Puppets</p> <p>Explore methods of joining fabric. Design and make a character-based hand puppet using a preferred joining technique, before decorating.</p> <p>Example theme: Storybook character.</p>		<p>Cooking and nutrition: Fruit and vegetables</p> <p>Learn to distinguish between fruit and vegetables and where they grow. Design a fruit and vegetable smoothie and accompanying packaging.</p>		<p>Mechanisms: Wheels and axles</p> <p>Learn about the key parts of a wheeled vehicle, to develop an understanding of how wheels, axles and axle holders work. Design and make a moving vehicle.</p>
Year 2	<p>Structures: Baby Bear's chair</p> <p>Explore stability and methods to strengthen structures, to understand Baby Bear's chair weaknesses and develop an improved solution for him to use.</p>			<p>Mechanisms: Making a moving monster</p> <p>Explore levers, linkages and pivots through existing products and experimentation, use this research to construct and assemble a moving monster.</p>		<p>Cooking and nutrition: A balanced diet</p> <p>Learn about the food groups (carbohydrates, proteins, fruits and vegetables, dairy, oils and spreads) to understand a balanced diet to</p>



				Example theme: Moving monster. Alternative theme		develop a healthy wrap.
Year 3		<p>Textiles: Cross-stitch and appliqué</p> <p>Learn and apply two new sewing techniques - cross-stitch and appliqué. Utilise these new skills to design and make a cushion</p>		<p>Cooking and nutrition: Eating seasonally</p> <p>Learn about various fruits and vegetables, and when, where and why they are grown in different seasons. Discover the relationship between colour and health benefits.</p>	<p>Mechanical systems: Pneumatic toys</p> <p>Explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams.</p>	
Year 4		<p>Cooking and nutrition: Adapting a recipe</p> <p>Work in groups to adapt an existing biscuit recipe, whilst taking into account the cost of the ingredients and other expenses against a set budget.</p>		<p>Structure: Pavilions</p> <p>Investigate and model frame structures to improve their stability, then apply this research to design and create a stable, decorated pavilion.</p>		<p>Electrical systems: Torches</p> <p>Identify the difference between electrical and electronic products. Evaluate a range of existing torches and their features, then develop a new functional torch design.</p>



Year 5		<p><i>Mechanical systems: Pop-up book</i></p> <p>Create a functional four-page pop-up storybook design, using lever, sliders, layers and spacers to create paper-based mechanisms.</p>		<p><i>Cooking and nutrition: What could be healthier?</i></p> <p>Discover the farm to fork process, understand the key welfare issues for rearing cattle. Compare the nutritional value of existing sauces and develop a healthier recipe.</p>		<p><i>Structure: Playgrounds</i></p> <p>Research existing playground equipment and their different forms, before designing and developing a range of apparatus to meet a list of specified design criteria.</p>
Year 6	<p><i>Textiles: Waistcoats</i></p> <p>Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, children design, assemble and decorate a waistcoat for a chosen purpose.</p>				<p><i>Cooking and nutrition: Come dine with me</i></p> <p>Develop a three-course menu focused on three key ingredients, as part of a paired challenge to develop the best class recipes. Explore each key ingredient's farm to fork process.</p>	<p><i>Electrical systems: Steady hand game</i></p> <p>Understand what is meant by fit for purpose design and form follows function. Design and develop a steady hand game using a series circuit, including housing and backboard.</p>