

# Wren Park Primary School

## Whole school long term

### Design and Technology curriculum overview



RESPECTFUL



AMBITIOUS



RESILIENT



#### Extra mini projects

Build knowledge about:	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>EYFS</b>		<p><u>Structures: Junk modelling</u> To explore and investigate the tools and materials in the junk modelling area. To investigate cutting different materials. To learn how to plan and select the correct resources needed to make a model. To verbally plan and create a junk model. To share a finished model and talk about the process in its creation. To explore different ways to temporarily join materials together. <b>Clay Diya lamp</b></p>	<p><b>Pancakes (links to Science/Maths weighing)</b></p>	<p><u>Textiles: Bookmarks</u> To develop threading and weaving skills. To practise and apply weaving skills to a specific material e.g. paper. To practise and apply threading skills with specific materials e.g. hessian and wool. To use threading or sewing to design a product (bookmark) To create a textiles product (bookmark) following their own design. To reflect with children on how they have achieved their aims. <b>Spring 2: Making chocolate nests</b></p>		<p><u>Structures: Boats</u> To understand what waterproof means and to test whether materials are waterproof. To test and make predictions for which materials float or sink. To compare the uses of boats. To investigate how the shape and structure of boats affects the way they move. To design a boat. To create a boat based upon their own design.</p>
<b>Year 1</b>	<p><u>Textiles: Puppets</u> To join fabrics together using different methods. To use a template to create my design. To join two fabrics together accurately. To embellish my design using joining methods.</p>		<p><u>Structures: Constructing windmills</u> To include individual preferences and requirements in my design. To make a stable structure. To assemble the components of my structure. To evaluate my project and adapt my design.</p>		<p><u>Cooking and nutrition: Smoothies</u> To identify fruits. To describe where fruits and vegetables grow. To practise food preparation skills. To select ingredients for a recipe. To apply food preparation skills to a recipe. To evaluate against the design brief. <b>Make a slider</b></p>	
<b>Year 2</b>	<p><u>Structures: Constructing a knight's chair</u></p>	<p><b>Sewing a Christmas stocking</b></p>		<p><u>Mechanism: Making a moving monster</u></p>		<p><u>Mechanisms: Fairground wheel</u> To explore wheel mechanisms</p>

	<p>To recognise how multiple shapes (2D and 3D) are combined to form a strong and stable structure.</p> <p>To design a castle.</p> <p>To construct 3D nets.</p> <p>To construct and evaluate my final product.</p>			<p>To look at objects and understand how they move.</p> <p>To look at objects and understand how they move.</p> <p>To explore different design options.</p> <p>To make a moving monster.</p>		<p>and design a Ferris wheel.</p> <p>To select appropriate materials.</p> <p>To build and test a moving wheel.</p> <p>To make and evaluate a structure with a rotating wheel.</p> <p><b>Making a sandwich</b></p>
<b>Year 3</b>		<p><u>Cooking and nutrition: Eating seasonally</u></p> <p>To explain why food comes from different places around the world.</p> <p>To explain the benefits of seasonal foods.</p> <p>To develop cutting and peeling skills.</p> <p>To evaluate seasonal ingredients.</p> <p>To design a mock-up using criteria.</p> <p>To evaluate a dish.</p> <p><b>Make a spitfire</b></p>		<p><u>Mechanical Systems: Pneumatic toys</u></p> <p>To understand how pneumatic systems work.</p> <p>To design a toy that uses a pneumatic system.</p> <p>To create a pneumatic system.</p> <p>To test and finalise ideas against design criteria.</p>		<p><u>Digital world: Wearable technology</u></p> <p>To research and evaluate existing products.</p> <p>To develop design criteria.</p> <p>To use code to program and control a product.</p> <p>To develop and communicate ideas.</p> <p>To develop ideas through computeraided design.</p> <p>To improve a design based on feedback.</p>
<b>Year 4</b>		<p><u>Electrical systems: Torches</u></p> <p>To learn about electrical items and how they work.</p> <p>To analyse and evaluate electrical products.</p> <p>To design a product to fit a set of specific user needs.</p> <p>To make and evaluate a torch.</p>		<p><u>Mechanical systems: Making a slingshot car</u></p> <p>To build a car chassis.</p> <p>To design a shape that reduces air resistance.</p> <p>To make a model based on a chosen design.</p> <p>To assemble and test my completed product.</p>		<p><u>Structure: Pavilions</u></p> <p>To create a range of different shaped frame structures.</p> <p>To design a structure.</p> <p>To build a frame structure.</p> <p>To add cladding to a frame structure.</p>
<b>Year 5</b>	<p><b>Dream catchers</b></p> <p><u>Electrical systems: Doodlers</u></p> <p>To understand how motors are used in electrical products.</p> <p>To investigate an existing product to determine the factors that affect the product's form and function.</p> <p>To apply the findings from research to develop a unique product.</p> <p>To develop a DIY kit for another individual to assemble their product.</p> <p><b>Lego Wedo: Space exploration</b></p> <p>To apply their understanding of computing to program, monitor and control their products.</p>	<p><b>Christmas cakes</b></p>	<p><u>Mechanical systems: Pop-up book.</u></p> <p>To design a pop-up book.</p> <p>To follow my design brief to make my pop up book.</p> <p>To use layers and spacers to cover the working of mechanisms.</p> <p>To create a high-quality product suitable for a target user.</p>		<p><u>Cooking and nutrition: Developing a recipe</u></p> <p>To understand how ingredients are reared and processed.</p> <p>To make adaptations to design a recipe.</p> <p>To evaluate nutritional content.</p> <p>To practise food preparation skills.</p> <p>To design a product label.</p> <p>To follow and make an adapted recipe</p> <p><b>Lego Wedo: Metamorphosis of a frog</b></p> <p>To apply their understanding of computing to program, monitor and control their products.</p>	

<p><b>Year 6</b></p>		<p><u>Textiles: Waistcoats</u>          To design a waistcoat.          To mark and cut fabric according to a design.          To assemble a waistcoat.          To decorate your waistcoat.  <b>Steady hand game (taught through Science)</b></p>		<p><u>Structure: Playgrounds</u>          To design a playground with a variety of structures.          To build a range of structures.          To improve and add detail to structures.          To create a surrounding landscape.  <b>Come dine with me (during Day of the Dead festival)</b></p>		<p><u>Digital world: Navigating the world</u>          To write a design brief and criteria based on a client request.          To write a program to include multiple functions as part of a navigation device.          To develop a sustainable product concept.          To develop 3D CAD skills to produce a virtual model.          To present a pitch to 'sell' the product to a specified client.</p>
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