

DT Vertical Subject Progression

Subject intent:

By the time a Willowbrook pupil leaves our school they will have the creative, technical and practical expertise needed to perform everyday tasks confidently in our increasingly technological world. They will gain a repertoire of knowledge, understanding and skills to be able to make quality prototypes and products as well as critique, evaluate and tests these products. Each unit will use technical knowledge to take the children through the three key areas of design and technology; design, make and evaluate. They will also leave knowing the principles of nutrition and hygiene and how to cook some basic savoury and sweet dishes.

	<u>DT</u>	<u>Subject-specific strands / NC links</u>
<u>EYFS</u>	<p>Expressive Arts and Design ELG: Creating with Materials</p> <ul style="list-style-type: none"> • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function • Share their creations, explaining the process they have used • Make use of props and materials when role playing characters in narratives and stories. <p>Physical Development ELG: Fine Motor Skills</p> <ul style="list-style-type: none"> • Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases • Use a range of small tools, including scissors, paint brushes and cutlery • Begin to show accuracy and care when drawing. 	
<u>Year 1</u>	<ul style="list-style-type: none"> • Design, construct and evaluate a simple toy • Cooking and nutrition: Design and make a healthy seaside picnic 	<p>Design</p> <ul style="list-style-type: none"> ☑ design purposeful, functional, appealing products for themselves and other users based on design criteria ☑ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> ☑ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] ☑ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> ☑ explore and evaluate a range of existing products ☑ evaluate their ideas and products against design criteria <p>Technical knowledge</p>
<u>Year 2</u>	<ul style="list-style-type: none"> • Design, make and evaluate a flying object • Landmark construction using different textiles • Cooking 	

		<ul style="list-style-type: none"> ☐ build structures, exploring how they can be made stronger, stiffer and more stable ☐ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
<u>Year 3</u>	<ul style="list-style-type: none"> • Baking scones • Sewing: Christmas Tree Decoration • Materials – Design an effective moving vehicle: (links to science – forces and magnets). 	<p>Design</p> <ul style="list-style-type: none"> ☐ 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 ☐ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> ☐ select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately ☐ select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> ☐ investigate and analyse a range of existing products ☐ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work ☐ understand how key events and individuals in design and technology have helped shape the world <p>Technical knowledge</p> <ul style="list-style-type: none"> ☐ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ☐ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ☐ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
<u>Year 4</u>	<ul style="list-style-type: none"> • Cooking (link to outdoor learning – fire) • Construction and use of materials: Create a Viking longboat • Make and evaluate a range of torches using set design specifications. 	
<u>Year 5</u>	<ul style="list-style-type: none"> • Cooking: Japanese food. • Packaging: Design, build and evaluate packaging for your own Japanese food item. • Design, build and evaluate a useful tool involving levers/pulleys to act against a force such as gravity (links to science – forces) 	
<u>Year 6</u>	<ul style="list-style-type: none"> • Construction using different materials (3D Anderson shelters) • Cooking and nutrition: Prepare a VE day meal. • Sewing: Design and made a quilt, bunting or something purposeful for the year 6 production. 	

		☑ apply their understanding of computing to program, monitor and control their products.
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