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.

<table>
<tr><th></th><th>DT</th><th>Subject-specific strands / NC links</th></tr>
<tr><td>EYFS</td><td colspan="2">Early learning goal – technology
Shows an interest in technological toys with knobs or pulleys, or real objects.
Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.
Uses various construction materials.
Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces.
Joins construction pieces together to build and balance.
Realises tools can be used for a purpose.
Understands that different media can be combined to create new effects.
Manipulates materials to achieve a planned effect.
Constructs with a purpose in mind, using a variety of resources.
Uses simple tools and techniques competently and appropriately.
Selects appropriate resources and adapts work where necessary.
Selects tools and techniques needed to shape, assemble and join materials they are using.</td></tr>
<tr><td>Year 1</td><td>Design, construct and evaluate a simple toy
Cooking and nutrition: Design and make a healthy seaside picnic</td><td rowspan="2">Design
□ 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
Make
□ 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
Evaluate
□ explore and evaluate a range of existing products
□ evaluate their ideas and products against design criteria</td></tr>
<tr><td>Year 2</td><td>Design, make and evaluate a flying object
Landmark construction using different textiles
Cooking</td></tr>
</table>

		Technical knowledge □ 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.
Year 3	• Baking scones • Class quilt: what makes Devon special? (Joining fabrics) • Materials – Design an effective moving vehicle: (links to science – forces and magnets.	**Design** □ 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 **Make** □ 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 **Evaluate** □ 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 **Technical knowledge** □ 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]
Year 4	• Cooking (link to outdoor learning – fire) • Construction and use of materials: Create a Viking longboat • Design, build and evaluate something inspired by the pyramids.	
Year 5	• 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)	
Year 6	• Construction using different materials (3D Anderson shelters) • Cooking and nutrition: Prepare a VE day meal. • Still and flexible materials: Aztec masks	

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