

	Term 1	Term 2	Term 3
Unit of work	Textiles – 2D shapes to 3D shapes	Food – Healthy and Varied diet	Structures – Shell structures
Link to Programme of study	<p><b>Design</b> 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> <p><b>Make</b> 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> <p><b>Evaluate</b> 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> <p><b>Technical knowledge</b> 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] apply their understanding of computing to program, monitor and control their products.</p>		
Composite knowledge	<p>Which joining techniques make the strongest seams?</p> <p>What is the purpose of a fastening?</p> <p>How can you stiffen a fabric?</p>	<p>What equipment and resources do we need to use to combine and prepare food?</p> <p>How can we prepare food hygienically?</p> <p>Why do we follow instructions when cooking?</p> <p>How can we prepare food safely?</p>	<p>How can we construct strong, stiff shell structures?</p> <p>How can we use a net to effectively make a 3D shape?</p>
Intentional knowledge they need to understand (Component knowledge)	<p>Identify different types of joining techniques and explain which one makes the strongest seam</p> <p>Describe what a fastening does</p> <p>Explain how to stiffen a fabric</p>	<p>Demonstrate an understanding of the different equipment needed to prepare food</p> <p>Demonstrate and recognise hygienic methods of food preparation</p> <p>Describe the importance of following instructions when cooking</p>	<p>Demonstrate how to use a net to make a 3D shape</p> <p>Demonstrate techniques we can use to strengthen and stiffen the shell structure</p>

Vocabulary	Fastening, finishing technique, stiffening, templates, stitch, seam,	texture, taste, appearance, smell, cook, savoury, hygienic,	shell structure, three-dimensional (3-D), net, adhesives, joining, innovative, prototype
Links to prior knowledge	Have joined fabric in simple ways by gluing and stitching. Have used simple patterns and templates for marking out. Have evaluated a range of textile products	Know some ways to prepare ingredients safely and hygienically. Have some basic knowledge and understanding about healthy eating and The eatwell plate. Have used some equipment and utensils and prepared and combined ingredients to make a product.	Experience of using different joining, cutting and finishing techniques with paper and card. A basic understanding of 2-D and 3-D shapes in mathematics and the physical properties and everyday uses of materials in science.
Cross-curricular links	Science—physical properties of fabrics Art and design—investigating visual and tactile qualities of fabrics and using colour and pattern appropriately. Mathematics—accurate measurements mm/cm.	Science—using and developing skills of observing and questioning. Humans get nutrition from what they eat. Discuss changes of state if heat is used. Mathematics—mass kg/g. Art and Design—using and developing drawing skills.	Mathematics—compare and sort common 2-D and 3-D shapes in everyday objects. Recognise 3-D shapes in different orient Art and design—use and develop drawing skills. ations and describe them.
Oracy & Outdoor Learning Links	Spoken language—develop technical vocabulary. Give well-structured descriptions of e.g. finishing techniques.	Spoken language—developing relevant vocabulary e.g. sensory descriptors. Ask relevant questions to extend their knowledge.	Spoken language—ask relevant questions to extend knowledge and understanding. Build their technical vocabulary.