

	Term 1	Term 2	Term 3
Unit of work	Mechanisms – pulleys and gears Project – fairground attraction	Textiles – templates, joining and embellishing Project – making a stuffed toy	Food – provenance, seasonality Project – making a seasonal salad
Link to Programme of study	Design - Design purposeful, functional, appealing products for a range of users - Use given design criteria - Generate, develop and communicate ideas through talking, drawing, templates, mock-ups and ICT (when appropriate) Make - Select and use a range of tools and equipment - Use skills such as cutting, shaping, joining and finishing - Select and use a wide range of materials and components according to characteristics (functional and aesthetic) Evaluate - Explore and evaluate a range of existing products - Evaluate ideas and products against given design criteria Technical knowledge - Build structures - Explore how structures can be made stronger, stiffer and more stable - Explore and use mechanisms (levers, sliders, wheels, axles) Cooking and nutrition - Use the basic principles of a healthy and varied diet to prepare dishes - Understand where food comes from.		
Composite knowledge (questions to be answered)	How do gears help to change the speed or direction of movement of an object? What are the inputs, processes, and outputs for a particular object? What materials and joining methods will be useful here?	How can we combine different fabric shapes? What impact have different designers had on fabrics and products? How can we strengthen/stiffen a product?	Where do different types of food come from? What are culture and seasonality? What techniques can we use to prepare food? How do we understand the nutritional value of a product? What functions do different utensils have? How can we prepare food hygienically? How can we prepare food safely?
Component knowledge (Intentional knowledge they need to understand)	Explain and demonstrate how gears help to change the speed and direction of movement of an object Demonstrate the inputs, processes and outputs for an object	Demonstrate a variety of stitches used to join fabrics Observe and describe the impact different designers have had on fabrics and products	Describe what culture and seasonality are Describe what provenance is and where a range of different foods come from.

	Demonstrate knowledge and use of appropriate materials and joining methods.	Demonstrate different techniques we can use to strengthen/stiffen a product Demonstrate the use of different shapes joined together to create the desired final shape.	Identify different techniques we can use to make food Recognise the different nutritional values in food products and understand what is healthy Explain and demonstrate the functions different utensils have
Key knowledge and skills for assessment	Children can describe and identify what gears and pulleys are. Children can use appropriate methods of joining to create a structure. Children can use appropriate materials to create a frame structure. Children can use a design brief to create an appropriate design. Children can evaluate final products and discuss them.	Children can use a template to cut shapes from fabric. Children can use scissors to cut fabric to a certain shape. Children can use a range of materials to decorate and embellish. Children can use different methods of joining fabric. Children can consider methods of strengthening and stiffening fabric. Children can combine fabric shapes to make the desired final shape. Children can evaluate final products and discuss them.	Children can understand that a balanced diet is important to stay healthy. Children can discuss and apply how to prepare food safely. Children can understand where a range of foods come from. Children can use scales to weigh ingredients with some accuracy. Children can consider ingredients and preferences when designing. Children can evaluate final products and discuss them.
Vocabulary	pulley, gear, rotation, spindle, driver, follower, mechanical system, authentic	Durable, joining, fasten, material, seam allowance, stitches, card wallet	texture, taste, appearance, knead, prove, smell, savoury, hygienic, bake, yeast, ingredients, seasonality,
Links to prior knowledge	Experience of axles, axle holders and wheels that are fixed or free moving. Basic understanding of electrical circuits, simple switches and components. Experience of cutting and joining techniques with a range of materials including card, plastic and wood. An understanding of how to strengthen and stiffen structure.	Experience of stitching, joining and finishing techniques in textiles. Experience of making and using textiles pattern pieces. Experience of simple computer-aided design applications.	Have knowledge and understanding about food hygiene, nutrition, healthy eating and a varied diet. Be able to use appropriate equipment and utensils, and apply a range of techniques for measuring out, preparing and combining ingredients. Exploring seasonality and provenance

Cross-curricular links	Computing—use search technologies for research purposes and be discerning when evaluating digital content. Art and design—use and apply drawing skills. Use techniques with colour, pattern, texture, line and shape. Science—apply knowledge and understanding of circuits, switches, conductors and insulators in the design of the final product. Mathematics—understand ratios. Apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm Spoken language—consider and evaluate others' viewpoints. Give a well-structured oral evaluation to include relevant technical vocabulary.	Computing—children express themselves and develop ideas using a range of information and communication technology resources. Art and design—use and apply drawing skills including art programmes on the computer. Spoken language—consider and evaluate others' viewpoints. Give a well-structured oral evaluation to include relevant technical vocabulary. How can we combine different fabric shapes? What impact have different designers had on fabrics and products? How can we strengthen/stiffen a product?	Mathematics –measurement of mass kg/g; understand and use approximate equivalence of metric and imperial units. Art and design—using and developing drawing skills. Writing –purpose of writing e.g. for planning and evaluation. Mathematics –measurement of mass kg/g. Science –recognise the impact of diet on the way the body develops Spoken language –articulate and justify answers and opinions. Listen and respond to adults and peers.
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