



KNOWLEDGE PROGRESSION

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	KEY STAGE 1		LOWER KEY STAGE 2		UPPER KEY STAGE 2	
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Mechanisms		<p><u>Wheels and axles</u></p> <ul style="list-style-type: none"> Explore and use wheels, axles and axle holders. Distinguish between fixed and freely moving axles 		<p><u>Levers and linkages</u></p> <ul style="list-style-type: none"> Understand and use lever and linkage mechanisms. Distinguish between fixed and loose pivots. 	<p><u>Pulleys or Gears</u></p> <ul style="list-style-type: none"> Understand that mechanical and electrical systems have an input, process and an output. Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. 	
Structures	<p><u>Free-standing structures</u></p> <ul style="list-style-type: none"> Know how to make freestanding structures stronger, stiffer and more stable. 		<p><u>Shell Structures</u></p> <ul style="list-style-type: none"> Develop and use knowledge of how to construct strong, stiff shell structures. Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. 		<p><u>Frame Structures</u></p> <ul style="list-style-type: none"> Understand how to strengthen, stiffen and reinforce 3-D frameworks. 	
Textiles		<p><u>Templates and joining</u></p> <ul style="list-style-type: none"> Understand how simple 3-D textile products are made, using a template to create two identical shapes. Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. Explore different finishing techniques e.g. painting, fabric crayons, stitching, sequins, buttons and ribbons. 	<p><u>2D shape to 3D product</u></p> <ul style="list-style-type: none"> Know how to strengthen, stiffen and reinforce existing fabrics. Understand how to securely join two pieces of fabric together. Understand the need for patterns and seam allowances. 			<p><u>Combining different fabric shapes</u></p> <ul style="list-style-type: none"> A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. Fabrics can be strengthened, stiffened and reinforced where appropriate.
Food		<p><u>Preparing fruit and vegetables</u></p> <ul style="list-style-type: none"> Understand where a range of fruit and vegetables come from Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The 'Eatwell plate' 	<p><u>Healthy and varied diet</u></p> <ul style="list-style-type: none"> Know how to use appropriate equipment and utensils to prepare and combine food. Know about a range of fresh and processed ingredients appropriate for my product, and whether they are grown, reared or caught. 		<p><u>Celebrating culture and seasonality</u></p> <ul style="list-style-type: none"> Know how to use utensils and equipment including heat sources to prepare and cook food. Understand about seasonality in relation to food products and the source of different food products. 	
Electrical systems				<p><u>Simple circuits and switches</u></p> <ul style="list-style-type: none"> Understand and use electrical systems in products, such as series circuits incorporating switches, bulbs and buzzers. Apply understanding of computing to program and control products. 		<p><u>More complex switches and circuits</u></p> <ul style="list-style-type: none"> Understand and use electrical systems in products. Apply understanding of computing to program, monitor and control products.