



## Design Technology Progression

<u>Year 1</u>	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
<b><u>Objectives</u></b>	<p><b><u>Structures</u></b></p> <ul style="list-style-type: none"> <li>• Know that freestanding structures can be made stronger, stiffer and more stable</li> <li>• Demonstrate measuring, marking out, cutting, joining and finishing techniques with a range of tools</li> <li>• Build free-standing structures using construction kits</li> <li>• Fold card in different ways to make structures and explore how to make stronger, stiffer and more stable.</li> <li>• Know and use technical vocabulary relevant to the project</li> </ul>	<p><b><u>Food</u></b></p> <ul style="list-style-type: none"> <li>• Name and sort foods into the five groups in the Eatwell Guide</li> <li>• Prepare simple dishes safely and hygienically</li> <li>• Use techniques such as cutting, peeling and grating</li> <li>• Select from a range of fruit and vegetables according to their characteristics</li> <li>• Know and use technical vocabulary relevant to the project</li> </ul>	<p><b><u>Mechanical Systems</u></b></p> <ul style="list-style-type: none"> <li>• Understand the movement of simple mechanisms- levers and sliders</li> <li>• Know some different ways of making things move in a 2-D plane.</li> <li>• Know and use technical vocabulary relevant to the project</li> </ul>
<b><u>Sticky Knowledge</u></b>	<p>Technical vocabulary (see vocabulary document) How to make structures stronger, stiffer and more stable How to measure, mark out and cut</p>	<p>Technical vocabulary (see vocabulary document) Identify food that fit within the 5 groups of the Eatwell Plate Peel, cut and grate and explain the utensils and effects of these techniques</p>	<p>Technical vocabulary (see vocabulary document) Understand and make sliders and levers and explain how they work</p>
<b><u>Cross-Curricular Links</u></b>			
<u>Year 2</u>	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
<b><u>Objectives</u></b>	<p><b><u>Mechanical Systems</u></b></p> <ul style="list-style-type: none"> <li>• Understand the movement of simple mechanisms- wheels and axles</li> <li>• Distinguish between fixed and freely moving axles</li> <li>• Know and use technical vocabulary relevant to the project</li> </ul>	<p><b><u>Food</u></b></p> <ul style="list-style-type: none"> <li>• All food comes from plants or animals</li> <li>• Food has to be farmed, grown elsewhere (e.g. home) or caught</li> <li>• Name and sort foods into the five groups in the Eatwell Guide</li> <li>• Prepare simple dishes safely and hygienically</li> <li>• Use techniques such as cutting, peeling and grating</li> <li>• Select from a range of fruit and vegetables according to their</li> </ul>	<p><b><u>Textiles</u></b></p> <ul style="list-style-type: none"> <li>• Know that 3D textiles products can be assembled from two identical fabric shapes</li> <li>• Cut out shapes which have been created by drawing round a template.</li> <li>• Join fabrics using different techniques- running stitch, stapling, pinning, glue and tape</li> <li>• Explore different finishing techniques- sequins, buttons, ribbon and fabric paints</li> <li>• Know and use technical vocabulary relevant to the project</li> </ul>

		<ul style="list-style-type: none"> <li>characteristics</li> <li>Know and use technical vocabulary relevant to the project</li> </ul>	
<b><u>Sticky Knowledge</u></b>	Technical vocabulary (see vocabulary document) Explain how wheels and axles work Explain free and fixed axles	Technical vocabulary (see vocabulary document) Identify food that fit within the 5 groups of the Eatwell Plate Peel, cut and grate and explain the utensils and effects of these techniques	Technical vocabulary (see vocabulary document) Explain effectiveness of different joining techniques How to use a running stitch How to make a template using two identical fabric pieces
<b><u>Cross-Curricular Links</u></b>		Science: Animals Including Humans	English: Making a puppet of a book character from class story this year
<b><u>Year 3</u></b>	<b><u>Autumn</u></b>	<b><u>Spring</u></b>	<b><u>Summer</u></b>
<b><u>Objectives</u></b>	<b><u>Food</u></b> <ul style="list-style-type: none"> <li>Understand and apply the principles of a healthy and varied diet</li> <li>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> <li>Know and use technical vocabulary relevant to the project</li> </ul>	<b><u>Structures</u></b> <ul style="list-style-type: none"> <li>Make strong, stiff shell structures</li> <li>Strengthen frames with diagonal struts.</li> <li>Use nets of cubes and cuboids</li> <li>Know and use technical vocabulary relevant to the project</li> </ul>	<b><u>Mechanical Systems</u></b> <ul style="list-style-type: none"> <li>Understand how mechanical systems such as levers and linkages create movement</li> <li>Use linkages to make movement larger or more varied.</li> <li>Distinguish between fixed and loose pivots</li> <li>Know and use technical vocabulary relevant to the project</li> </ul>
<b><u>Sticky Knowledge</u></b>	Technical vocabulary (see vocabulary document) Cooking techniques taught Explain where ingredients used are grown, reared, caught and processed	Technical vocabulary (see vocabulary document) Make strong, stiff shell structures Use diagonal struts Use nets of cubes and cuboids	Technical vocabulary (see vocabulary document) Use levers and linkages to create movement Explain the difference between fixed and loose pivots
<b><u>Cross-Curricular Links</u></b>			History- Burscough and Stone Age topics- making moving story books.
<b><u>Year 4</u></b>	<b><u>Autumn</u></b>	<b><u>Spring</u></b>	<b><u>Summer</u></b>
<b><u>Objectives</u></b>	<b><u>Textiles</u></b> <ul style="list-style-type: none"> <li>Know that a single fabric shape can be used to make a 3D textiles product</li> <li>Sew on buttons and make loops.</li> <li>Understand seam allowance.</li> <li>Use different stitches- running stitch, back stitch, backwards running stitch, over sew stitch, blanket stitch</li> <li>Know and use technical vocabulary relevant to the project</li> </ul>	<b><u>Food</u></b> <ul style="list-style-type: none"> <li>Understand and apply the principles of a healthy and varied diet</li> <li>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> <li>Know and use technical vocabulary relevant to the project</li> </ul>	<b><u>Electrical Systems</u></b> <ul style="list-style-type: none"> <li>Simple electrical circuits and components can be used to create functional products</li> <li>Use a computer program to control products.</li> <li>Use electrical systems to create functional products such as switches, bulbs and buzzers.</li> <li>Incorporate a circuit into a model.</li> <li>Know and use technical vocabulary relevant to the project</li> </ul>

<b><u>Sticky Knowledge</u></b>	Technical vocabulary (see vocabulary document) Application of different stitches and evaluate effectiveness of each Use a seam allowance for accuracy How to sew on buttons	Technical vocabulary (see vocabulary document) Cooking techniques taught Explain where ingredients used are grown, reared, caught and processed	Technical vocabulary (see vocabulary document) Use a computer program to control products Make switches, bulbs and buzzers
<b><u>Cross-Curricular Links</u></b>			Science: Electricity- DT project is the application of both DT and Science knowledge
<b><u>Year 5</u></b>	<b><u>Autumn</u></b>	<b><u>Spring</u></b>	<b><u>Summer</u></b>
<b><u>Objectives</u></b>	<b><u>Mechanical Systems</u></b> <ul style="list-style-type: none"> <li>▪ Understand how mechanical systems such as cams or pulleys or gears create movement</li> <li>▪ Understand that mechanical systems have an input, process and output</li> <li>• Know and use technical vocabulary relevant to the project</li> </ul>	<b><u>Food</u></b> <ul style="list-style-type: none"> <li>▪ Seasons may affect the food available how food is processed into ingredients that can be eaten or used in cooking</li> <li>▪ Recipes can be adapted to change the appearance, taste, texture and aroma</li> <li>▪ Different food and drink contain different substances – nutrients, water and fibre – that are needed for health</li> <li>▪ Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>▪ Know and use technical vocabulary relevant to the project</li> </ul>	<b><u>Structures</u></b> <ul style="list-style-type: none"> <li>▪ Reinforce and strengthen a 3D framework</li> <li>▪ Stiffen and reinforce complex structures.</li> <li>▪ Cut strip wood, dowel, square section wood accurately to 1mm.</li> <li>▪ Know and use technical vocabulary relevant to the project</li> </ul>
<b><u>Sticky Knowledge</u></b>	Technical vocabulary (see vocabulary document) Understand and explain the different types of cams	Technical vocabulary (see vocabulary document) Cooking techniques taught Techniques for adapting recipes	Technical vocabulary (see vocabulary document) Reinforcement techniques Cut accurately
<b><u>Cross-Curricular Links</u></b>			
<b><u>Year 6</u></b>	<b><u>Autumn</u></b>	<b><u>Spring</u></b>	<b><u>Summer</u></b>
<b><u>Objectives</u></b>	<b><u>Textiles</u></b> <ul style="list-style-type: none"> <li>▪ 3D textiles products can be assembled from two identical fabric shapes</li> <li>▪ Understand pattern layout with textiles.</li> <li>▪ Fabrics can be strengthened, stiffened and reinforced where appropriate</li> <li>▪ Improve appearance of stitches previously taught</li> <li>▪ Know and use technical vocabulary relevant to the project</li> </ul>	<b><u>Electrical Systems</u></b> <ul style="list-style-type: none"> <li>▪ More complex electrical circuits and components can be used to create functional products</li> <li>▪ Know how to program a computer to monitor changes in the environment and control products</li> <li>▪ Use electrical systems such as motors and switches.</li> <li>▪ Know and use technical vocabulary relevant to the project</li> </ul>	<b><u>Food</u></b> <ul style="list-style-type: none"> <li>▪ Seasons may affect the food available how food is processed into ingredients that can be eaten or used in cooking</li> <li>▪ Recipes can be adapted to change the appearance, taste, texture and aroma</li> <li>▪ Different food and drink contain different substances – nutrients, water and fibre – that are needed for health</li> <li>▪ Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>▪ Know and use technical vocabulary relevant to the project</li> </ul>
<b><u>Sticky Knowledge</u></b>	Technical vocabulary (see vocabulary document)	Technical vocabulary (see vocabulary document)	Technical vocabulary (see vocabulary document) Cooking techniques taught

	Stitching techniques	Use motors and switches in a circuit	Techniques for adapting recipes
<b><u>Cross-Curricular Links</u></b>		Science- Electricity unit. DT project is the application of both DT and Science knowledge	