



# Design & Technology Learning Ladders



<p><b>Making and Technological Knowledge</b> <b>Construction Materials</b></p>	<ul style="list-style-type: none"> <li>Strengthen frames with diagonal struts.</li> <li>Choose tools to complete a variety of tasks eg. cutting, finishing, shaping and joining.</li> <li>Begin to select materials and components according to how they meet the need of the design.</li> </ul>
<p><b>Progression of Skills and Understanding:</b> <b>Making and Technological Knowledge</b> <b>Textiles</b></p>	<ul style="list-style-type: none"> <li>Join textiles using a range of stitches, eg. running stitch, <del>overstitching</del> back stitch.</li> <li>Extend the range of textile embellishment used, eg. using appliqué, adding trim or embroidery.</li> <li>Explore ready-made fastenings that are used on a variety of products.</li> <li>Use ready-made fastenings, eg. buttons on their product.</li> <li>Create test designs (prototypes) using simple materials such as J cloth or material scraps.</li> </ul>
<p><b>Progression of Skills and Understanding:</b> <b>Evaluating</b></p>	<ul style="list-style-type: none"> <li>Investigate and analyse a range of existing products.</li> <li>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li> <li>Understand how key events and individuals in design and technology have helped shape the world.</li> <li>Investigate and analyse a range of existing products against the intended design criteria.</li> <li>Evaluate their ideas and products against the design criteria.</li> </ul>
<p><b>Progression of Skills and Understanding:</b> <b>Cooking and Nutrition</b></p>	<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>Explore the need for a healthy diet and which types of food and drink this includes.</li> <li>Understand different cooking techniques and how this impacts on the healthiness of the food, eg. frying, grilling, boiling, etc.</li> <li>Suggest a menu which involves healthy foods and healthy cooking techniques, eg. boiled or baked potatoes rather than chips, grilled sausages rather than fried, etc.</li> <li>Understand where food comes from and how some foods travel, for example bananas and tea.</li> </ul>

Year 3	
<p><u>Progression of Skills and Understanding:</u> <u>Designing:</u></p>	<ul style="list-style-type: none"> <li>- 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</li> <li>- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li> <li>- Begin to use research and given design criteria to design useful, practical and appealing products for a particular audience.</li> <li>- Begin to generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes.</li> <li>- Be introduced to computer-aided design.</li> </ul>
<p><u>Progression of Skills and Understanding:</u> <u>Making and Technological Knowledge</u></p>	<p><u>Making</u></p> <ul style="list-style-type: none"> <li>- 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</li> </ul> <p><u>Technical Knowledge</u></p> <ul style="list-style-type: none"> <li>- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</li> <li>- Understand, and use, mechanical systems in their products for example; gears, pulleys, cams, levers and linkages.</li> <li>- Understand, and use, electrical systems in their products for example; series circuits incorporating switches, bulbs, buzzers and motors.</li> </ul>
<p><u>Progression of Skills and Understanding:</u> <u>Making and Technological Knowledge</u> <u>Materials and Components</u></p>	<ul style="list-style-type: none"> <li>- Cut slots.</li> <li>- Use other types of linkages such as reverse or parallel.</li> <li>- Explore, deconstruct and recreate more complex pop-ups.</li> <li>- Explore nets of products.</li> <li>- Measure and mark out accurately.</li> </ul>
<p><u>Progression of Skills and Understanding:</u></p>	<ul style="list-style-type: none"> <li>- Drill, screw, cut and nail safely.</li> <li>- Use a glue gun with close supervision.</li> <li>- Create simple, stable structures.</li> </ul>