

Design and Technology
Knowledge and Skills Progression Cycle B
Hemington Primary School

Class 1			
Projects: Design and make a model castle incorporating a pneumatic drawbridge system. Design, prepare, cook and serve a 'stew' for a pirate. Design, prepare and serve a fresh salad using produce from a local farm shop.			
Design	Make	Evaluate	Technical Knowledge/Skill
<p>I can describe what products.</p> <p>I am design and making.</p> <p>I can use knowledge of existing products to help come up with ideas.</p>	<p>I can measure, mark out, cut and shape materials and components.</p> <p>I can assemble, join and combine materials and components.</p> <p>I can use finishing techniques, including those from art and design.</p>	<p>I can make simple judgements about my products and ideas against design criteria.</p>	<p>I know how freestanding structures can be made stronger, stiffer and more stable (structures).</p> <p>I know some technical vocabulary to use when describing my projects.</p> <p>I know how mechanical systems such as pneumatics work.</p> <p>I know how to use a range of tools and techniques such as peeling, chopping, slicing, grating, mixing, spreading and melting (food).</p> <p>I know how to prepare and cook safely and hygienically, including the use of a heat source (food).</p>

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Class 2

Projects: Design and make a model of a Mayan hut. Design and make a model recycle bin. Design and make a model bridge to span across the local canal.

Design	Make	Evaluate	Technical Knowledge/ Skill
<p>I can explain how parts of my products work.</p> <p>I can use annotated sketches, cross-sectional drawings and enlarged diagrams to develop and communicate my ideas.</p> <p>I can generate realistic ideas focusing on the needs of the user.</p>	<p>I can select tools and materials suitable for the task.</p> <p>I can order the main stages of making.</p> <p>I can measure, mark out, cut and shape materials and components with some accuracy.</p> <p>I can assemble, join and combine materials and components with some accuracy.</p> <p>I can apply a range of finishing techniques with some accuracy</p>	<p>I can identify strengths and areas. to develop in my ideas and product.</p> <p>I consider the views of others to improve my work.</p> <p>I can use the design criteria as I design and make and to evaluate my finished product.</p> <p>I can investigate and analyse a range of factors prior to, during and after making my product.</p>	<p>I can cut wood using a dowel and bench hook.</p> <p>I can use different methods for joining e.g. butt/mitre joint.</p> <p>I know how mechanical systems such as levers, pulleys and gears work.</p> <p>I can build frameworks using a range of materials.</p> <p>I can use triangular shapes to create stronger structures.</p>

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Class 3

Projects: Design, prepare, cook and serve a 'typical' Chinese breakfast. Make do and mend' – recycle an old t-shirt by adding an applique design to it.
 Design and make a model of a lighthouse.

Design	Make	Evaluate	Technical Knowledge/Skill
<p>I can indicate which features of my products will appeal to users.</p> <p>I can carry out research, including surveys, questionnaires and web-based resources.</p> <p>I can identify the needs, wants and preferences of individuals and groups.</p>	<p>I can explain my choice of materials and components according to their properties and qualities.</p> <p>I can produce a list of the tools and materials I will need.</p> <p>I can create step-by-step plans as a guide to making.</p> <p>I can accurately measure, mark out, cut, and shape materials and components.</p> <p>I can accurately assemble, join, and combine materials and components.</p> <p>I can accurately apply a range of finishing techniques.</p>	<p>I can identify strengths and areas to develop in my ideas and product.</p> <p>I consider the views of others to improve my work.</p> <p>I can critically evaluate the quality of my product during design and make stages.</p> <p>I can investigate and analyse a wide range of factors prior to, during and after making my product.</p>	<p>I can use a range of tools safely and effectively e.g. bradawl and hand drill.</p> <p>I can join materials using appropriate methods.</p> <p>I know how to reinforce and strengthen a 3d framework.</p> <p>I can build frameworks using a range of materials.</p> <p>I can join materials using appropriate methods e.g. cool glue gun.</p> <p>I know how simple electrical circuits can be used to create functional products e.g. bulb.</p> <p>I know that mechanical and electrical systems have an input, process and output.</p>

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			<p>I can create 3d items using pattern pieces and seam allowance.</p> <p>I can understand pattern layout.</p> <p>I can combine different types of fabric using a range of stitching techniques.</p>
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