

Year 4 – Design & Technology Progression Curriculum Documents

Prior Learning	In Year 4	Future learning:	Key Vocabulary
<p>Designing:</p> <ul style="list-style-type: none"> • Children can identify qualities of a range of materials and suggest possible uses. • Children can design a functional, appealing product that is fit for a stated purpose. • Children can use words, labelled sketches and models to communicate realistic design ideas. <p>Making:</p> <ul style="list-style-type: none"> • Children can select appropriate tools and techniques for making my product. • Children can measure, cut, shape and join materials with some accuracy using a range of techniques. • Children understand how to strengthen, stiffen and reinforce to create a stable structure. 	<p>Exploring existing products:</p> <ul style="list-style-type: none"> • Children can generate ideas by researching and using information. <p>Developing ideas:</p> <ul style="list-style-type: none"> • Children can use words, labelled sketches and models to communicate design ideas and step-by-step plans. <p>Making new products</p> <ul style="list-style-type: none"> • Children can construct simple electrical circuits and incorporate into a model • Children can join and combine materials to create mechanisms achieving movement • Children can construct a model incorporating a mechanism to achieve movement • Children can cut, shape and join materials with increasing accuracy using a range of techniques. <p>Evaluating</p> <ul style="list-style-type: none"> • Children can evaluate my finished product, suggesting alternative techniques which could achieve improvements. 	<p>Designing:</p> <ul style="list-style-type: none"> • Investigate, analyse and evaluate a range of existing products. • Create detailed plans when constructing my product. <p>Making:</p> <ul style="list-style-type: none"> • Measure, cut and shape a range of materials with increasing accuracy. I can assemble, join and combine components accurately. • Sew a button onto material, threading a needle independently. • Use pattern pieces and seam allowance to create a 3D product which includes decorative stitching. • Use a range of construction tools (eg hand-drill, hammer, hacksaw, bench-hook) safely and accurately. <p>Evaluating:</p> <p>Evaluate finished products, suggesting alternative techniques which could achieve improvements, showing an awareness of fitness for purpose.</p>	<p>Mechanisms</p> <p>Loose pivot, fixed pivot, system, input, process, output, linear, rotary, reciprocating, innovative, appealing, linkage, oscillating</p> <p>Construction and textiles:</p> <p>Aesthetics, seam allowance, pinning, embroidery, back stitch, blanket stitch, cross stitch</p> <p>Cooking:</p> <p>Texture, taste, appearance, preference, greasy, moist, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested</p> <p>Electrical systems and Digital world:</p> <p>Series circuit, connection, push-to-make switch, push-to-break switch, innovative, appealing, control box, input device, output device, system</p>

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<ul style="list-style-type: none"> Children can use decorative techniques to enhance my product's appearance. <p>Evaluating:</p> <ul style="list-style-type: none"> Children can evaluate their own and others' finished products against design criteria and suggest improvements. 					
<p>Common Misconceptions: Doesn't understand terminology Lack of skills to complete a task Lack of understanding of how to use specific tools</p>		<p>Famous Designers: The Greek Dionysius the elder of Syracuse David Misel</p>			
Pedological Knowledge					
Cooking	Mechanisms	Construction	Textiles	Evaluating processes and products	Working with tools
<p>Develop sensory vocabulary/knowledge using, smell, taste, texture and feel. Analyse the taste, texture, smell and appearance of a range of foods. Join and combine a range of ingredients e.g. snack foods. Measure and weigh ingredients with</p>	<p>Begin to explore how mechanisms such as levers, pivots and cogs can be used to make things move in different ways using a range of equipment. Use and explore complex pop ups. Create nets.</p>	<p>Measure, mark out, cut and shape a range of materials. Assemble, join and combine components and materials with increasing accuracy. Know how electrical circuits, including those with simple switches can be used to achieve results that work.</p>	<p>Join fabrics using running stitch, over sewing, back stitch. Understand seam allowance. Explore fastenings e.g. sew on buttons and make loops. Prototype a product using J cloths. Use appropriate decoration techniques e.g. appliqué(glued or simple stitches).</p>	<p>Identify what does and does not work in the product. Make suggestions as how their design could be improved. Discuss how well the finished product meets the design criteria and how well it meets the needs of the user.</p>	

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<p>increasing accuracy. Understand and follow safe procedures for food safety and hygiene.</p>		<p>Create wood frame structures and strengthen frames with diagonal struts. Understand and follow safe procedures for using a range of tools. Use glue gun with close supervision (one to one).</p>	<p>Create a simple pattern.</p>		
<p>Key Questions How can we make the structure more stable? How do we create movement to allow the catapult to work efficiently? Can you describe a basic circuit? Can you follow a recipe and use tools appropriately?</p>			<ul style="list-style-type: none"> • End of Unit Assessment: • Viking settlement- structure • Mindful timer- digital • Catapult- Mechanism • Egyptian collar- Textiles • Torch- Electrical • Adapting a recipe- Food 		