



## Design & Technology Curriculum Milestone 2



<b>Continuous Skills</b>				
<b>Design, make, evaluate and improve</b>		<b>Take Inspiration from design throughout history</b>		
<ul style="list-style-type: none"> <li>• Design with purpose by identifying opportunities to design.</li> <li>• Make products by working efficiently (such as by carefully selecting materials).</li> <li>• Refine work and techniques as work progresses, continually evaluating the product design.</li> <li>• Use software to design and represent product designs.</li> </ul>		<ul style="list-style-type: none"> <li>• Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.</li> <li>• Improve upon existing designs, giving reasons for choices.</li> <li>• Disassemble products to understand how they work.</li> </ul>		
<b>Mastering techniques</b>				
<b>Year 3</b>				
		<b>Basic</b>	<b>Advanced</b>	<b>Deep</b>
<p><b>Food</b> <b>Thankfulness</b> <b>Respect,</b> <b>Koinonia,</b></p>	<ul style="list-style-type: none"> <li>• Prepare ingredients hygienically using appropriate utensils.</li> <li>• Measure ingredients to the nearest gram accurately.</li> <li>• Follow a recipe.</li> <li>• Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).</li> </ul> <p style="margin-top: 10px;"><b>Strawberry Smoothies</b> <b>Healthy pasta</b> <b>Tomato Bruschetta</b></p>	<p>Prepare ingredients safely and hygienically using appropriate utensils.</p> <p>Practise ways to weigh and measure with a level of accuracy using utensils e.g measuring cups.</p> <p>With guidance, children can follow a recipe to prepare ingredients.</p> <p>Name and use some kitchen tools/equipment with accuracy.</p>	<p>Apply the rules for food hygiene when preparing ingredients.</p> <p>Weigh and measure a variety of elements independently and accurately (time, ingredients, liquids...) e.g weighing scales</p> <p>Children can follow recipes independently to prepare ingredients to cook.</p> <p>Select and use a wider range of tools and equipment to perform practical tasks accurately.</p>	<p>Understand and apply the rules for food hygiene and use of hazardous materials e.g oven.</p> <p>Weigh, measure and record a variety of elements accurately (time, ingredients, liquids...) e.g weighing scales</p> <p>Children begin to experiment with alternative ingredients and explain benefits of including some ingredients</p>



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<p><b>Computing &amp; Mechanics</b> Respect, Koinonia, Thankfulness Trust</p> <p><b>Materials</b> Respect, Koinonia, Thankfulness Trust</p>	<p>Computing</p> <ul style="list-style-type: none"> <li>Control and monitor models using software designed for this purpose.</li> </ul> <p><b>Turtle Logo/Scratch</b></p> <p>Mechanics</p> <ul style="list-style-type: none"> <li>Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).</li> </ul> <p>Materials</p> <ul style="list-style-type: none"> <li>Cut materials accurately and safely by selecting appropriate tools.</li> <li>Measure and mark out to the nearest millimetre.</li> </ul> <p><b>A moving recycle poster using levers, linkages</b></p>	<p>Create and debug algorithms to illustrate regular polygons using the repeat command/ block (Turtle Logo and Scratch)</p> <p>Name what parts move in a mechanical system</p> <p>Plan and discuss ideas for given design criteria.</p> <p>Select a range of appropriate tools/materials to make a product from instruction.</p> <p>Measure, mark out and cut materials with some level of accuracy..</p>	<p>Draw shapes with spaces between using pen up and pen down (Turtle Logo)</p> <p>Modify and alter the pen settings (Scratch)</p> <p>Explain how a system works using the words input and output.</p> <p>Plan &amp; Develop ideas using sketches to show parts which will move.</p> <p>Children select a range of appropriate materials and tools for making their product, and can explain their choice</p> <p>Measure, mark out and cut materials creating a product with a good quality finish.</p>	<p>Draw regular polygons using Logo to calculate the angle (Turtle Logo)</p> <p>Create and debug algorithms to generate patterns by repeating regular polygons (Scratch)</p> <p>Children can define and explain a range of mechanical systems- levers, pulleys and gears</p> <p>Plan, develop and evaluate ideas to select the most appropriate mechanical system for their product.</p> <p>Children demonstrate some skill in using different tools and materials when making their product and can explain purpose and why using them.</p> <p>Assess the effectiveness of accurate measuring, cutting to produce a high quality product.</p>
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### Mastering techniques Year 4

		<b>Basic</b>	<b>Advanced</b>	<b>Deep</b>
<p><b>Electricals &amp; electronics</b> Respect, Koinonia, Thankfulness Trust</p>	<ul style="list-style-type: none"> <li>Create series and parallel circuits</li> </ul>	<p>Explore simple circuits and electrical systems. Recall functions different components in circuits</p>	<p>Explore simple circuits and electrical systems. Understand the functions of different components in circuits</p>	<p>Construct a range of circuits to demonstrate the different functions</p> <p>Investigate varying components in a circuit</p>



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		Build circuits using a range of components from a diagram	Experiment with varying different components in circuits and assemble accurately  Develop a circuit to be used	and assembly accurately, deciding  Critique own work. Provide suggestions of alternative methods of making if the first attempts fail
<b>Textiles</b> Respect, Koinonia, Thankfulness Trust	<ul style="list-style-type: none"> <li>Understand the need for a seam allowance.</li> <li>Join textiles with appropriate stitching.</li> <li>Select the most appropriate techniques to decorate textiles.</li> </ul>	<p>Select materials to tie dye</p> <p>Accurately apply cross stitch and back stitch and embellishing to create pieces</p> <p>Create pieces from instruction</p>	<p>Select and use materials to tie dye</p> <p>Select from cross stitch and back stitch and embellishing the most suitable to create pieces accurately</p> <p>Design own piece</p>	<p>Select and evaluate a range of materials to tie dye</p> <p>Assess effectiveness of cross stitch and back stitch and embellishing</p> <p>Design and critique own piece</p>
<b>Materials &amp; Construction</b> Respect, Koinonia, Thankfulness Trust	<p>Materials</p> <ul style="list-style-type: none"> <li>Cut materials accurately and safely by selecting appropriate tools.</li> <li>Measure and mark out to the nearest millimetre.</li> <li>Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</li> <li>Select appropriate joining techniques.</li> </ul> <p>Construction</p>	<p>Select a range of appropriate tools and techniques for making their product</p> <p>Measure, mark out, cut and assemble components with accuracy using appropriate tools</p> <p>Construct products or repair using given methods</p>	<p>Select a range of appropriate materials, tools and techniques for making their product, and be able to explain their choice</p> <p>Demonstrate skill in using different tools and techniques to measure, cut and shape, with safety and accuracy</p>	<p>Identify and explore a range of appropriate materials, tools, components and techniques needed to create their product</p> <p>Assemble components accurately to make working models</p>



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	<ul style="list-style-type: none"><li>• Choose suitable techniques to construct products or to repair items.</li><li>• Strengthen materials using suitable techniques.</li></ul>		<p>Construct and repair products using a variety of methods</p> <p>Demonstrate an understanding of how to improve structures by strengthening materials</p>	<p>Construct and repair products using a variety of methods</p> <p>Record improvements made</p> <p>Critically evaluate how to improve structures using a range of materials and techniques</p>
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