



Design & Technology Curriculum Milestone 2



Continuous Skills				
Design, make, evaluate and improve		Take Inspiration from design throughout history		
<ul style="list-style-type: none">• Design with purpose by identifying opportunities to design.• Make products by working efficiently (such as by carefully selecting materials).• Refine work and techniques as work progresses, continually evaluating the product design.• Use software to design and represent product designs.		<ul style="list-style-type: none">• Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.• Improve upon existing designs, giving reasons for choices.• Disassemble products to understand how they work.		
Mastering techniques				
Year 3				
		Basic	Advanced	Deep
Food Thankfulness Respect, Koinonia,	<ul style="list-style-type: none">• Prepare ingredients hygienically using appropriate utensils.• Measure ingredients to the nearest gram accurately.• Follow a recipe.• Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). Strawberry Smoothies Healthy pasta Tomato Bruschetta	<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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Computing & Mechanics Respect, Koinonia, Thankfulness Trust	<p>Computing</p> <ul style="list-style-type: none"> Control and monitor models using software designed for this purpose. <p>Turtle Logo/Scratch</p> <p>Mechanics</p> <ul style="list-style-type: none"> Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). 	<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 & 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>
	<p>Materials</p> <p>Respect, Koinonia, Thankfulness Trust</p> <p>Materials</p> <ul style="list-style-type: none"> Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest millimetre. <p>A moving recycle poster using levers, linkages</p>			
Mastering techniques Year 4				
		Basic	Advanced	Deep
Electricals & electronics Respect, Koinonia, Thankfulness Trust	<ul style="list-style-type: none"> Create series and parallel circuits 	<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
Textiles Respect, Koinonia, Thankfulness Trust	<ul style="list-style-type: none">• Understand the need for a seam allowance.• Join textiles with appropriate stitching.• Select the most appropriate techniques to decorate textiles.	Select materials to tie dye Accurately apply cross stitch and back stitch and embellishing to create pieces Create pieces from instruction	Select and use materials to tie dye Select from cross stitch and back stitch and embellishing the most suitable to create pieces accurately Design own piece	Select and evaluate a range of materials to tie dye Assess effectiveness of cross stitch and back stitch and embellishing Design and critique own piece
Materials & Construction Respect, Koinonia, Thankfulness Trust	<p>Materials</p> <ul style="list-style-type: none">• Cut materials accurately and safely by selecting appropriate tools.• Measure and mark out to the nearest millimetre.• Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).• Select appropriate joining techniques. <p>Construction</p>	Select a range of appropriate tools and techniques for making their product Measure, mark out, cut and assemble components with accuracy using appropriate tools Construct products or repair using given methods	Select a range of appropriate materials, tools and techniques for making their product, and be able to explain their choice Demonstrate skill in using different tools and techniques to measure, cut and shape, with safety and accuracy	Identify and explore a range of appropriate materials, tools, components and techniques needed to create their product Assemble components accurately to make working models



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	<ul style="list-style-type: none">• Choose suitable techniques to construct products or to repair items.• Strengthen materials using suitable techniques.		<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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