



Design Technology Milestones MTP



		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To master practical skills	Food	<p>Measure or weigh using measuring cups or electronic scales</p> <p>Cut, peel or grate ingredients safely and hygienically.</p>	Assemble or cook ingredients.	<p>Measure ingredients to the nearest gram accurately.</p> <p>Follow a recipe.</p>	<p>Prepare ingredients hygienically using appropriate utensils.</p> <p>Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).</p>	<p>Demonstrate a range of baking and cooking techniques.</p> <p>Create and refine recipes, including ingredients, methods, cooking times and temperatures.</p>	<p>Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms).</p> <p>Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.</p>
	Materials	Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).	<p>Cut materials safely using tools provided.</p> <p>Measure and mark out to the nearest centimetre.</p> <p>Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).</p>	<p>Cut materials accurately and safely by selecting appropriate tools.</p> <p>Select appropriate joining techniques.</p>	<p>Measure and mark out to the nearest millimetre.</p> <p>Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p>	Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).	Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).



## Design Technology Milestones MTP



	Textiles	Shape textiles using templates.	Join textiles using running stitch.  Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).	Join textiles with appropriate stitching.	Understand the need for a seam allowance.  Select the most appropriate techniques to decorate textiles.	Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).	Create objects (such as a cushion) that employ a seam allowance.  Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration).
	Electricals and electronics	Begin to diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).	Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).	Begin to create series and parallel circuits	Create series and parallel circuits	Begin to create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).	Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).
	Computing	Begin to model designs using software.	Model designs using software.	Begin to control and monitor models using software designed for this purpose.	Control and monitor models using software designed for this purpose.	Begin to write code to control and monitor models or products.	Write code to control and monitor models or products.



Design Technology Milestones MTP



	Construction	Begin to use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	Choose suitable techniques to construct products or to repair items.	Strengthen materials using suitable techniques.	Begin to develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).	Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).
	Mechanics	Work towards creating products using levers, wheels and winding mechanisms	Create products using levers, wheels and winding mechanisms	Begin to use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	Convert rotary motion to linear using cams.	Use innovative combinations of electronics (or computing) and mechanics in product designs.
To design, make, evaluate and improve		Design products that have a clear purpose and an intended user.	Make products, refining the design as work progresses.  Use software to design.	Design with purpose by identifying opportunities to design.	Make products by working efficiently (such as by carefully selecting materials).  Refine work and techniques as	Design with the user in mind, motivated by the service a product will offer (rather than simply for profit).  Ensure products have a high	Make products through stages of prototypes, making continual refinements.  Use prototypes, cross-sectional



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					<p>work progresses, continually evaluating the product design.</p> <p>Use software to design and represent product designs.</p>	<p>quality finish, using art skills where appropriate.</p>	<p>diagrams and computer aided designs to represent designs.</p>
<p>To take inspiration from design throughout history</p>		<p>Explore how products have been created.</p>	<p>Explore objects and designs to identify likes and dislikes of the designs.</p> <p>Suggest improvements to existing designs.</p>	<p>Improve upon existing designs, giving reasons for choices.</p> <p>Disassemble products to understand how they work</p>	<p>Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.</p>	<p>Create innovative designs that improve upon existing products.</p>	<p>Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.</p> <p>Evaluate the design of products so as to suggest improvements to the user experience.</p>