

Design and Technology Curriculum Plan

Curriculum teaching/content (Milestones)

Year A

Construction	Food	Textiles	Control and Electronics
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*2 out of 3 projects to be completed in any one year. Lessons can be planned over a 2-3 day block if preferred.

	EYFS/Reception	Year 1/2 Milestone 1	Year 3/4 Milestone 2	Year 5/6 Milestone 3
Autumn 1	Marvellous Me! Or 'U for Unique!'		Our Wonderful Planet Earth	Climb Every Mountain!
	Large and small construction Loose parts Junk modelling How to make different joins		Design and make bird feeders from recycled materials Dis-assemble a range of feeders, discuss design elements develop to design and make using recycled pots, and containers. • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre.	Design and make a healthy high energy bar for a mountain explorer. • Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including ingredients, methods, cooking times and temperatures.
Autumn 2	Colour my world			Shine a Light!

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	<p>Christmas cooking</p> <p>Junk modelling Houses for the Great Fire of London</p>	<p>Christmas Cooking Use recipes to create Christmas treats using a range of colours or flavours.</p> <p>Cut, peel or grate ingredients safely and hygienically.</p> <ul style="list-style-type: none"> • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients. 	<ul style="list-style-type: none"> • 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. • Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques. 	
Spring 1	Space Invaders! Or To infinity ...		Roman Britain	Electric Energy
	<p>Making soup</p> <p>Junk modelling and construction kits Build a spaceship or rocket</p>	<p>Moon Buggies Use wheels and chassis to create moving moon buggies with wheels.</p> <p>Cut materials safely using tools provided.</p> <ul style="list-style-type: none"> • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as glueing, hinges or combining materials to strengthen). 	<p>Design and make a flavoured core food using limited ingredients e.g Roman inspired bread with</p> <ul style="list-style-type: none"> • cheese • dried fruit • tomatoes • olives <ul style="list-style-type: none"> • Prepare ingredients hygienically using appropriate utensils. 	<p>Design and make a circuit to operate a burglar alarm Study circuits and develop touch pad or circuit breaker circuits. Use the knowledge to create a model with the circuit included to operate a burglar alarm or light. Lighthouse?</p> <ul style="list-style-type: none"> • Create circuits using electronics kits that employ a number of components

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		<ul style="list-style-type: none"> • Use materials to practise drilling, screwing, glueing and nailing materials to make and strengthen products • Create products using levers, wheels and winding mechanisms. 	<ul style="list-style-type: none"> • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). 	(such as LEDs, resistors, transistors and chips).
Spring 2	Every picture tells a story!			Down the River to the Sea
	Bridge Building De constructed play Large construction bricks, blocks and planks Junk modelling Building giants	Daffodil/Flower sewing Use felt and stitching techniques to create felt flowers constructed to look like real ones. <ul style="list-style-type: none"> • 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). 		
Summer 1	Mr McGregor's Garden		Marvellous Machines	The Great U.S. of A.
	Large construction-Quadro Design and make a wheelbarrow	A Kebab from the garden - Design and Make fruit or vegetable kebabs or smoothies <ul style="list-style-type: none"> • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients. 	Design and make a moving fairground ride Use computer control or electronic switches to design and make a moving fairground ride with cams, cogs etc.	Textiles Native American clothing examples <ul style="list-style-type: none"> • Choose from a range of stitching techniques. • 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).

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			<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. 	<ul style="list-style-type: none"> • 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).
		<p>Mini Topic Moving Minibeasts Create moving pictures using levers</p>		
Summer 2	Knights of Penruddock			Forces
	Loose play and construction kits Building castles and a drawbridge			

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Year B

Construction	Food	Textiles	Control
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	EYFS/Reception	Year 1/2 Milestone 1	Year 3/4 Milestone 2	Year 5/6 Milestone 3
Autumn 1	Home Sweet Home		Our Local Area	The Vikings are Coming!
	<p>Large and small construction Loose parts</p> <p>Junk modelling How to make different joins</p>	<p>Junk modelling and paper craft</p> <p>Design and make a house that is stable</p> <p>Structures</p> <p>Joins / hinges</p> <ul style="list-style-type: none"> • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as glueing, hinges or combining materials to strengthen). • Use materials to practise drilling, screwing, glueing and nailing materials to make and strengthen products • Create products using levers, wheels and winding mechanisms. 	<p>Design and make a fabric collage of the local area. Collect pictures and plans/maps. Use them to create collage/drawings of the key building and create into a village collage.</p> <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. 	

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Autumn 2	Time Travellers!			Refugees
	<p>Christmas cooking</p> <p>Junk modelling Houses for the Great Fire of London</p>	<p>Junk modelling and paper craft</p> <p>Structures</p> <p>Joins Hinges Finish -</p> <ul style="list-style-type: none"> • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as glueing, hinges or combining materials to strengthen). • Use materials to practise drilling, screwing, glueing and nailing materials to make and strengthen products • Create products using levers, wheels and winding mechanisms. 		<p>Use limited materials to design and make a shelter for a refugee.</p> <p>Consider a particular refugee crisis and materials available to them. What makes a good shelter?</p> <ul style="list-style-type: none"> • 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). • 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).

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Spring 1	Frozen Planet!		The Theory of Everything	Food, Glorious Food!
	<p>Making soup</p> <p>Junk modelling and construction kits</p> <p>Build an Igloo</p>	<p>Make warm and nourishing food for a cold climate.</p> <p>Soup recipes</p> <p>Healthy eating</p> <ul style="list-style-type: none"> • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients. 	<p>Design and Make a musical instrument</p> <p>Disassemble a range of tuned and percussion instruments. Link with science work on sound to design and make a working musical instrument using construction techniques and tools to make sound boxes etc.</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>Design and make a food influenced by Mexican flavours. Links with Mexican food restaurant in town.</p> <ul style="list-style-type: none"> • Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including ingredients, methods, cooking times and temperatures.
Spring 2	Bright Lights, Big City!			Ancient Greece
	<p>Bridge Building</p> <p>De constructed play</p> <p>Large construction bricks, blocks and planks</p> <p>Junk modelling</p> <p>Building giants</p>		<ul style="list-style-type: none"> • Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques. • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product 	

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			(such as levers, winding mechanisms, pulleys and gears).	
Summer 1	Rumble in the jungle!	Early Civilization	Our Precious Planet	
	<p>Large construction-Quadro Design and make a Safari jeep</p>	<p>Design and make a safari jeep Wood or card construction - electric lights?</p> <ul style="list-style-type: none"> • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as glueing, hinges or combining materials to strengthen). <p>• Use materials to practise drilling, screwing, glueing and nailing materials to make and strengthen products</p> <p>• Create products using levers, wheels and winding mechanisms.</p>	<p>Design a recipe of your own for a food type and a given occasion</p> <p>Use a basic recipe and adapt to create different flavours of a similar product.</p> <p>In the style of ancient civilisation or for a fundraising event such as coffee morning cakes, scones etc.</p> <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). 	<p>Use recycled clothing to design and make a space themed hat or item of fancy dress clothing</p> <ul style="list-style-type: none"> • 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). • 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).

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Summer 2	Beside the seaside			Earth and Space
	Loose play and construction kits Building boats large and small	<p>Healthy frozen fruit lollies</p> <ul style="list-style-type: none"> • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients. 		