



Design Technology Progression Document

This is intended to be a spiral curriculum. Pupils should be taught National Curriculum objectives but should be supported to catch up.

End Points (Threshold Concepts)		Milestones					
		KS 1		Lower KS 2		Upper KS 2	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical Knowledge		<ul style="list-style-type: none"> • Build structures • Use a range of mechanisms 	<ul style="list-style-type: none"> • Build structures, exploring how they can be made stronger, stiffer and more stable (KS1) • Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. (KS1) 	<ul style="list-style-type: none"> • Build more complex structures • Build structures using levers, sliders, wheels and axles • Experience electrical systems • Use computing knowledge 	<ul style="list-style-type: none"> • Experiment in the use of how to strengthen, stiffen and reinforce more complex structures • Experiment with the use of mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • Experiment with the use of electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] • Experiment with computing to 	<ul style="list-style-type: none"> • Develop understanding of how to strengthen, stiffen and reinforce more complex structures • Use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • Use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] • Understand computing to program, monitor and control their products. 	<ul style="list-style-type: none"> • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures(KS2) • Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] (KS2) • Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] (KS2) • Apply their understanding of computing to program, monitor and control their products.(KS2)

					program, monitor and control their products.		
<p>Design, make, evaluate and improve (This concept involves developing the process of design thinking and seeing design as a process)</p>	<p>Food</p> <p>Examples: sandwiches, breakfasts, fast food made healthy, foods from around the world, traditional food, rationing, soup, fruit kebabs, pasta salads, fruit salads, pizzas, dough, bread.</p>	<p>Design</p> <ul style="list-style-type: none"> • food products that have a clear purpose and an intended user. • Choose ingredients. • Understand where food comes from. <p>Make</p> <ul style="list-style-type: none"> • edible products, using kitchen equipment & food materials • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble ingredients. <p>Evaluate</p> <p>Explore and evaluate existing food products.</p>	<p>Design</p> <ul style="list-style-type: none"> • purposeful, functional, appealing products for themselves and other users based on design criteria (KS1) • Understand where food comes from. (KS1) • Use basic principles of a healthy and varied diet to prepare dishes. (KS1) • Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, ICT (KS1) <p>Make</p> <ul style="list-style-type: none"> • Select from and use a range of tools and equipment to perform practical tasks (KS1) • Cut, peel or grate ingredients safely and hygienically 	<p>Design</p> <ul style="list-style-type: none"> • use simple design criteria <p>Make</p> <ul style="list-style-type: none"> • Prepare ingredients hygienically using appropriate utensils. • Follow a pictorial recipe. • Assemble AND cook ingredients <p>Evaluate</p> <ul style="list-style-type: none"> • Understand the principles of a healthy diet. • Discuss positive features of products 	<p>Design</p> <ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Where possible use software to design and represent product designs. • Understand and apply the principles of a healthy & varied diet in designing meals. (KS2) • Understand seasonality and know where and how a variety of ingredients are grown, reared and caught. <p>Make</p> <p>Make products by working efficiently (such as by carefully selecting materials).</p> <ul style="list-style-type: none"> • Measure ingredients to the nearest gram accurately. 	<p>Design</p> <ul style="list-style-type: none"> • Understand the importance of correct storage and handling of ingredients. • Understand seasonality, and know where and how a variety of ingredients are grown, reared and caught and processed. (KS2) • Design for individual/ group • Write own pictorial/text recipes • Make products through stages of prototypes, making continual refinements. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. <p>Make</p> <p>Practise a range of baking and cooking techniques.</p>	<p>Design</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing food products that are fit for purpose, aimed at particular individuals or groups (KS2)</p> <ul style="list-style-type: none"> • Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (KS2) • Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Create and refine recipes, including ingredients, methods, cooking times and temperatures

		<ul style="list-style-type: none"> • Evaluate ideas and food products. 	<ul style="list-style-type: none"> • Measure or weigh using measuring cups or electronic scales. • Cook ingredients. • Understand where food comes from. • Select from and use a wide range of food ingredients and components (KS1) <p>Evaluate Explore and evaluate a range of existing food products (KS1)</p> <ul style="list-style-type: none"> • Evaluate their ideas and food products against design criteria (KS1) 		<ul style="list-style-type: none"> • Follow a text/pictorial recipe. • Prepare, assemble AND cook ingredients (controlling the temperature of the oven or hob, if cooking). <p>Evaluate</p> <ul style="list-style-type: none"> • Products for particular individuals/ groups • Refine work and techniques as work progresses, continually evaluating the product design. 	<ul style="list-style-type: none"> • Ensure products have a high-quality finish • Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. (KS2) <p>Evaluate</p> <ul style="list-style-type: none"> • Refine recipes, including ingredients, methods, cooking times and temperatures. • Annotate recipes 	<ul style="list-style-type: none"> • Consider the affordability of recipes. <p>Make</p> <ul style="list-style-type: none"> • Select from and use a wider range of tools and equipment to perform practical tasks accurately (KS2) • Select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities (KS2) • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Plant, grow or consume produce, e.g herbs, vegetables <p>Evaluate</p> <ul style="list-style-type: none"> • Investigate and analyse a range of existing products (KS2) • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (KS2)
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	<p>Materials</p> <p>moving toys, greenhouse, model of solar system, cars, rockets (different propulsion), catapults, pop up cards, spinners, kites, mobile phone holders, boats, roundabouts, moving hands.</p>	<p>Design</p> <ul style="list-style-type: none"> • products that have a clear purpose and an intended user. <p>Make</p> <ul style="list-style-type: none"> • products, using tools & materials • Cut materials safely using tools provided. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting). <p>Evaluate</p> <ul style="list-style-type: none"> • Explore and evaluate existing products. • Evaluate ideas and products. 	<p>Design</p> <ul style="list-style-type: none"> • purposeful, functional, appealing products for themselves and other users based on design criteria (KS1) • Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, ICT (KS1) <p>Make</p> <ul style="list-style-type: none"> • Select from and use a range of tools and equipment to perform practical tasks (KS1) • Select from and use a wide range of materials and components, (KS1) 	<p>Design</p> <ul style="list-style-type: none"> • use simple design criteria <p>Make</p> <ul style="list-style-type: none"> • Cut materials accurately and safely by selecting appropriate tools. • Apply appropriate cutting techniques that include cuts within the perimeter of the material (such as slots or cut outs). <p>Evaluate</p> <ul style="list-style-type: none"> • Discuss positive features of products 	<p>Design</p> <ul style="list-style-type: none"> • Select appropriate joining techniques. • Design with purpose by identifying opportunities to design. • Where possible use software to design and represent product designs. <p>Make</p> <ul style="list-style-type: none"> • Make products by working efficiently (such as by carefully selecting materials). Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts 	<p>Design</p> <ul style="list-style-type: none"> • Show a developing 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) • Make products through stages of prototypes, making continual refinements. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. <p>Make</p> <ul style="list-style-type: none"> • Cut materials with using appropriate 	<p>Design</p> <ul style="list-style-type: none"> • Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups (KS2) • Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (KS2) • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit).

			<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, <u>folding and curling</u>). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). <p>Evaluate</p> <ul style="list-style-type: none"> • Explore and evaluate a range of existing products (KS1) • Evaluate their ideas and products against design criteria (KS1) 		<p>within the perimeter of the material (such as slots or cut outs).</p> <p>Evaluate</p> <ul style="list-style-type: none"> • Products for particular individuals/ groups or purposes. • Refine work and techniques as work progresses, continually evaluating the product design. 	<p>tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).</p> <ul style="list-style-type: none"> • Cut materials with using appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Ensure products have a high quality finish, using art skills where appropriate. • Make products through stages of prototypes, making continual refinements. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. <p>Evaluate</p> <ul style="list-style-type: none"> • Show a developing understanding of the qualities 	<p>Make</p> <ul style="list-style-type: none"> • Select from and use a wider range of tools and equipment to perform practical tasks accurately (KS2) • Select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities (KS2) <p>Evaluate</p> <ul style="list-style-type: none"> • Investigate and analyse a range of existing products (KS2) • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (KS2) • Understand how key events and individuals in design and technology have helped shape the world (KS2) <p>Material scientists</p>
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						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)	
	<p>Construction</p> <p>marble run, bird houses, bird feeders</p>	<p>Design</p> <ul style="list-style-type: none"> Choose materials for construction tasks <p>Make</p> <ul style="list-style-type: none"> Use materials to practice hammering, gluing and attaching materials to make and strengthen products. <p>Evaluate</p> <ul style="list-style-type: none"> Talk about their constructions – Answer why? 	<ul style="list-style-type: none"> Design purposeful, functional, appealing products for themselves and other users based on design criteria (KS1) Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, ICT (KS1) Make Select from and use a range of tools and equipment to perform practical tasks (KS1) Select from and use a wide range of materials and components, (KS1) 	<p>Design</p> <ul style="list-style-type: none"> use simple design criteria Choose suitable techniques to construct products or to repair items. <p>Make</p> <ul style="list-style-type: none"> Cut materials accurately and safely by selecting appropriate tools. Apply appropriate cutting techniques that include cuts within the perimeter of the material (such as slots or cut outs). Strengthen materials using suitable techniques. <p>Evaluate</p> <ul style="list-style-type: none"> Discuss positive features of 	<p>Design</p> <ul style="list-style-type: none"> with purpose by identifying opportunities to design. Select appropriate joining techniques. Where possible use software to design and represent product designs. <p>Make products by working efficiently (such as by carefully selecting materials).</p> <ul style="list-style-type: none"> Measure and mark out to the nearest millimetre. Apply appropriate cutting and shaping techniques that include cuts within the perimeter of 	<p>Design</p> <ul style="list-style-type: none"> Show a developing 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) Make products through stages of prototypes, making continual refinements. Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. <p>Make</p>	<p>Design</p> <ul style="list-style-type: none"> Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups (KS2) Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (KS2) Make Select from and use a wider range of tools and equipment to perform practical tasks accurately (KS2)

			<p>Use materials, glue and nail materials to make and strengthen products.</p> <p>Evaluate</p> <ul style="list-style-type: none"> • Explore and evaluate a range of existing products (KS1) • Evaluate their ideas and products against design criteria (KS1) 		<p>the material (such as slots or cut outs).</p> <p>Evaluate</p> <ul style="list-style-type: none"> • Products for particular individuals/ groups or purposes. • Refine work and techniques as work progresses, continually evaluating the product design. 	<ul style="list-style-type: none"> • Cut materials with using appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding). • Cut materials with using appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Ensure products have a high quality finish, using art skills where appropriate. <p>Evaluate</p> <ul style="list-style-type: none"> • Show a developing understanding of the qualities of materials to 	<ul style="list-style-type: none"> • Select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities (KS2) • To understand how to use pincer grip to ensure a nail can be hammered correctly into a piece of wood. • To understand how to remove a nail using appropriate tool, e.g. claw hammer or pliers. <p>Evaluate</p> <ul style="list-style-type: none"> • Investigate and analyse a range of existing products (KS2) • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (KS2) • Understand how key events and individuals in design and technology have helped shape the world (KS2)
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						choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper)	
	<p>Mechanics</p> <p>fairground rides, music boxes, running characters, wind-up toys, pulleys</p>	<p>• Design & Evaluate Explore and investigate products using levers, wheels and winding mechanisms</p> <p>• Make Products from kits using levers, wheels and winding mechanisms</p>	<p>• Design purposeful, functional, appealing products for themselves and other users based on design criteria (KS1)</p> <p>• Make Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, ICT (KS1)</p> <p>• Make Select from and use a range of tools and equipment to perform practical tasks (KS1)</p> <p>• Make Select from and use a wide range of materials and components, (KS1)</p>	<p>• Design use simple design criteria</p> <p>• Make Choose suitable techniques to construct products or to repair items.</p> <p>• Design Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).</p> <p>• Make Cut materials accurately and safely by selecting appropriate tools. Apply appropriate cutting techniques that include cuts within the perimeter of the material (such</p>	<p>• Design with purpose by identifying opportunities to design.</p> <p>• Make Select appropriate joining techniques.</p> <p>• Design Where possible use software to design and represent product designs.</p> <p>• Make Make products by working efficiently (such as by carefully selecting materials).</p> <p>• Design Measure and mark out to the nearest millimetre.</p> <p>• Evaluate Products for particular individuals/ groups or purposes.</p>	<p>Design</p> <p>• Design Show a developing understanding of the qualities of materials to choose appropriate tools to cut and shape</p> <p>• Make Use innovative combinations of electronics (or computing) and mechanics in product designs.</p> <p>• Design Make products through stages of prototypes, making continual refinements.</p> <p>• Make Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.</p> <p>• Make</p>	<p>Design</p> <p>• Design Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups (KS2)</p> <p>• Make Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (KS2)</p> <p>• Make Select from and use a wider range of tools and equipment to perform practical tasks accurately (KS2)</p>

			<ul style="list-style-type: none"> • Create products using levers, wheels and winding mechanisms, using pre-cut materials. <p>Evaluate</p> <ul style="list-style-type: none"> • Explore and evaluate a range of existing products (KS1) • Evaluate their ideas and products against design criteria (KS1) 	<p>as slots or cut outs).</p> <ul style="list-style-type: none"> • Strengthen materials using suitable techniques. <p>Evaluate</p> <ul style="list-style-type: none"> • Discuss positive features of 	<ul style="list-style-type: none"> • Refine work and techniques as work progresses, continually evaluating the product design. 	<ul style="list-style-type: none"> • Cut materials with using appropriate tools • Develop a range of practical skills to create products • Convert rotary motion to linear using cams. • Ensure products have a high quality finish, using art skills where appropriate. <p>Evaluate</p> <ul style="list-style-type: none"> • Show a developing 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) 	<ul style="list-style-type: none"> • Select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities (KS2) <p>Evaluate</p> <ul style="list-style-type: none"> • Investigate and analyse a range of existing products (KS2) • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (KS2) • Understand how key events and individuals in design and technology have helped shape the world Famous mechanical engineers
	Electricals and electronics			<ul style="list-style-type: none"> • Design simple series circuit following a model • Make simple series circuit following a model 	<ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. 	<p>Design</p> <ul style="list-style-type: none"> • Show a developing understanding of the qualities of materials to 	<p>Design</p> <ul style="list-style-type: none"> • Use research and develop design criteria to inform the design of innovative, functional, appealing products

	<p>circuits, illuminations, torches, battery operated vehicle.</p>			<ul style="list-style-type: none"> • Evaluate Answer simple why? 	<ul style="list-style-type: none"> • Design simple series and parallel circuits. • Where possible use software to design and represent product designs. <p>Make</p> <ul style="list-style-type: none"> • Make products by working efficiently (such as by carefully selecting materials). <p>simple series and parallel circuits</p> <p>Evaluate</p> <ul style="list-style-type: none"> • Fix problems with circuit using a model • Refine work and techniques as work progresses, continually evaluating the product design. 	<p>choose appropriate components</p> <ul style="list-style-type: none"> • Make products through stages of prototypes, making continual refinements. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. <p>• Make circuits using electronic kits</p> <ul style="list-style-type: none"> • Develop a range of practical skills to create products • Ensure products have a high quality finish, using art skills where appropriate. <p>Evaluate</p> <ul style="list-style-type: none"> • Replace components 	<p>that are fit for purpose, aimed at particular individuals or groups (KS2)</p> <ul style="list-style-type: none"> • Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips). • Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (KS2) <p>Make</p> <ul style="list-style-type: none"> • Select from and use a wider range of tools and equipment to perform practical tasks accurately (KS2) • Select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities (KS2) <p>Evaluate</p>
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							<ul style="list-style-type: none"> • Investigate and analyse a range of existing products (KS2) • Change components using a hand tool to ensure devices are working, e.g. change a battery. • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (KS2) • Understand how key events and individuals in design and technology have helped shape the world
	<p>Computing</p> <p>maths game, keyrings, bedroom plaques, design logos for products</p>			<p>Design</p> <ul style="list-style-type: none"> • Explore simple programmes <p>Make</p> <ul style="list-style-type: none"> • Write simple programme following a model <p>Evaluate</p> <ul style="list-style-type: none"> • Answer simple why? • Monitor models using software designed for this purpose. 	<ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Design simple programmes • Where possible use software to design and represent product designs. • Make products by working efficiently (such as by carefully 	<ul style="list-style-type: none"> • Design control models • Make products through stages of prototypes, making continual refinements. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. • Make circuits using electronic kits 	<p>Design</p> <ul style="list-style-type: none"> • Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups (KS2) • Apply understanding of computing to program, monitor and control models or products

					<p>selecting materials).</p> <ul style="list-style-type: none"> • Write simple programme <p>Evaluate</p> <ul style="list-style-type: none"> • Answer why? • Control and monitor models using software designed for this purpose. • Refine work and techniques as work progresses, continually evaluating the product design. 	<ul style="list-style-type: none"> • Develop a range of practical skills to create products • Ensure products have a high quality finish, using art skills where appropriate. <p>Evaluate</p> <ul style="list-style-type: none"> • Replace components 	<ul style="list-style-type: none"> • Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (KS2) <p>Make</p> <ul style="list-style-type: none"> • Select from and use a wider range of tools and equipment to perform practical tasks accurately (KS2) <ul style="list-style-type: none"> • Select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities (KS2) <p>Evaluate</p> <ul style="list-style-type: none"> • Investigate and analyse a range of existing products (KS2) • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (KS2)
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							<ul style="list-style-type: none"> • Understand how key events and individuals in design and technology have helped shape the world
<p>Take inspiration from design throughout history</p> <p>(This concept involves appreciating the design process that has influenced the products we use in everyday life)</p>		<ul style="list-style-type: none"> • Explore objects and designs 	<ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. 	<ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study <p>Improve upon existing designs.</p> <ul style="list-style-type: none"> • Disassemble products to understand how they work. 	<ul style="list-style-type: none"> • Identify and discuss some of the great designers in all of the areas of study. <ul style="list-style-type: none"> • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work. 	<ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history. • Create innovative designs that improve upon existing products. • Evaluate the design of products, suggesting improvements. • Understand how key events in technology have changed the world. 	<ul style="list-style-type: none"> • Understand how key events and individuals in design and technology have helped shape the world (KS2) • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products, suggesting improvements to aesthetics and ergonomics. • Understand and evaluate how key events in technology have changed the world.

Pupils with a secure understanding of D&T will have:

- Significant levels of originality and the willingness to take creative risks to produce innovative ideas and prototypes.
- An excellent attitude to learning and independent working.
- The ability to use time efficiently and work constructively and productively with others.
- The ability to carry out thorough research, show initiative and ask questions to develop an exceptionally detailed knowledge of users' needs.
- The ability to act as responsible designers and makers, working ethically, sustainably using finite materials carefully and working safely.
- A thorough knowledge of which tools, equipment and materials to use to make their products.
- The ability to apply mathematical, science and computing knowledge.
- The ability to manage risks exceptionally well to manufacture products safely and hygienically.
- A passion for the subject and knowledge of, up-to-date technological innovations in materials, products and systems.
- The ability to have a balanced and healthy diet.
- Understand that products have to meet affordability requirements.

National Curriculum National Curriculum Expectations

Steps to National Curriculum

Above and beyond the national curriculum

Cultural Capital