

<p style="text-align: center;"><b>Design Technology</b>  Materials Mechanics Computing Construction Food Textiles Electricity</p>							
KS1		LKS2		UKS2			
Can we improve castles with our modern materials? Materials		How can we honour the WW2 veterans? Materials		How can we use mechanics to simplify manual labour? Mechanics Gears/ levers /pulleys Materials/ Mechanics			
C O N F L I C T	Children Know : Technical Knowledge How to cut materials safely using tools. How to measure and mark out to the nearest centimetre. How to use a range of cutting and folding techniques such as tearing, cutting, folding and curling.	Children learn to: Design a product that has a clear purpose and an intended user. Make a product, refining the design as work progresses. Evaluate their design against a success criteria.	Children Know : Technical Knowledge How we honour war veterans. How to use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. How to use a wider range of materials and components, including construction materials, textiles , according to their functional properties and aesthetic qualities.	Children learn to: Evaluate, investigate and analyse a range of existing products. Design, using research a product for a purpose and audience. Make a product by carefully selecting materials, including construction materials and techniques as work progresses, continually evaluating the product design.	Children Know : Technical Knowledge How to convert rotary motion to linear using cams. How to use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. How to use a wider range of materials and components, including construction materials, textiles , according to their functional properties and aesthetic qualities.	Children learn to: Research and evaluate elements of design from history, giving reasons for choices. Design with the user in mind, a functional product that is fit for purpose (a device to simplify manual labour) Make a product through stages of prototypes, making continual refinements.	
	What would it look like if all the animals lived in the same place ? Computing		Can your design withstand a natural disaster? Construction		How does sustainability impact a human diet? Food		
	P L A N E T E A R T H	Children Know : Technical Knowledge What software can be used to design products. How to draw using software. How to save and open files. How to undo and redo.	Children learn to: Design a product using computer software. Make a product, refining the design as work progresses. Evaluate their design against a design criteria.	Children Know : Technical Knowledge Suitable techniques to construct products Suitable techniques to repair items. How to strengthen materials using suitable techniques.	Children learn to: Design and make a prototype using research to create a design criteria. Make a product by carefully selecting materials. Evaluate their own and their peers' designs against a design criteria.	Children Know : Technical Knowledge What sustainability means in relation to food. Where and how a variety of ingredients are grown, reared, caught and processed. 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.	Children learn to: Design a savoury dish with sustainable ingredients, methods, cooking times and temperatures. Make and refine a recipe for a sustainable savoury dish. Evaluate the savoury dish so as to suggest improvements to taste and aesthetic qualities.
		What meal would be fit for the queen? Food	What clothes would be fit for the Queen? Textiles	How would you commemorate the life of Edward VI? Textiles		How would you commemorate the impact of the suffragettes in a sash today? Textiles	
B R I T A I N		Children Know : Technical Knowledge How to cut, peel or grate ingredients safely and hygienically. How to use the basic principles of a healthy and varied diet to prepare dishes. Where food comes from. How to measure or weigh using measuring cups or electronic scales. How to shape textiles using templates. How to thread a needle. How to join textiles using running stitch. How to colour and decorate textiles using a number of techniques.	Children learn to: Design and plan a meal for a purpose and specific user. Design clothing for a purpose and specific user. Make a meal by assembling or cooking ingredients. Make a product, refining the design as work progresses. Evaluate their meal against a design criteria. Evaluate their product against a design criteria.	Children Know : Technical Knowledge How to thread a needle. How to use a range of basic stitches. How to over-stitch to produce a finished cross-stitch.	Children learn to: Evaluate, investigate and analyse a range of existing products. Design, using research a product for a purpose and audience. Make a cross stitch. Refine work and techniques as work progresses, continually evaluating the product design.	Children Know : Technical Knowledge How to employ a seam allowance. Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). How to use different materials and techniques to create suitable visual and tactile effects in the decoration of textiles.	Children learn to: Research and evaluate elements of design from history, giving reasons for choices. Design a sash to be worn by a user, influenced by historical examples. Make a product as a prototype, making continual refinements before then making a final product.
		How can you change the volume in an instrument? Construction		How can we use textiles to represent the changes to Dunwich? Textiles		How will people of the future know how we live today? Computing	
	H U M A N K I N D	Children Know : Technical Knowledge How to drill, screw, glue and nail materials to make and strengthen products. How to cut materials safely using tools.	Children learn to: Evaluate and explore existing designs, saying what they like and dislike before designing their own. Design a product that has a clear purpose and an intended user. Make a product, refining the design as work progresses.	Children Know : Technical Knowledge How to join textiles with appropriate stitching including a running stitch. Why to leave a seam allowance. To select the most appropriate techniques to decorate textiles.	Children learn to: Develop design criteria to inform the design of a functional, appealing product aimed at a particular individual or group. Make a product by carefully selecting materials. Evaluate their own and their peers' designs against a design criteria.	Children Know : Technical Knowledge How Exhibitions and World Fairs have been used throughout history. How to build models using a range of materials that can be manipulated. How to animate/record video using software. How to edit video using software.	Children learn to: Research and evaluate elements of design from history. (World Fairs/Exhibitions) Design with the user in mind, a functional product that is fit for purpose (a stop animation/video of life today) Make a product (video) with the audience and purpose in mind.

	How can we adjust the speed that a wheel turns? <b>Mechanics</b>		How could new inventions improve fire safety? (warning /alarm system) <b>Electricity</b>		What can you design that makes the light in a bulb even brighter? <b>Electricity</b>	
I N V E N T I O N S	Children Know :	Children learn to:	Children Know :	Children learn to:	Children Know :	Children learn to:
	<b>Technical Knowledge</b> How to create products using mechanisms, such as levers, sliders, wheels axles.	<u>Design</u> a product that has a clear purpose and an intended user.	<b>Technical Knowledge</b> The difference between a series and parallel circuit.	<u>Evaluate</u> existing products with circuits by disassembling and investigating how they work.	<b>Technical Knowledge</b> How series and parallel circuits work.	<u>Design</u> with the user in mind, a functional product that is fit for purpose (making a light bulb brighter).
		<u>Make</u> a product, refining the design as work progresses.	How to use electrical systems in their products [such as switches, bulbs, buzzers and motors]	<u>Design</u> their own product and circuit.	How to draw circuits in designs using the correct symbols.	<u>Make</u> a product through stages of prototypes, making continual refinements.
		<u>Evaluate</u> their product against a design criteria.	How to test if a circuit will work or not.	<u>Make</u> a product including a circuit. Refine work and techniques as work progresses, continually evaluating the product design.	How to draw an exploded diagram.	<u>Evaluate</u> the design of products so as to suggest improvements to the user experience.
	How can electricity be used to help us? <b>Electricity</b>		How do the seasons impact the food we eat? <b>Food</b>		What uses do cams and cranks have? <b>Materials/ Mechanics</b>	
C I V I L I S A T I O N S	Children Know :	Children learn to:	Children Know :	Children learn to:	Children Know :	Children learn to:
	<b>Technical Knowledge</b> What a series circuit is. Where electricity comes from. How to find faults in battery operated devices.	<u>Design</u> a functional product based on a design criteria	<b>Technical Knowledge</b> Where and how a variety of ingredients are grown, reared, caught and processed and understand seasonality.	Identify and <u>evaluate</u> existing seasonal recipes from around the world.	<b>Technical Knowledge</b> How to convert rotary motion to linear using cams.	<u>Design</u> using innovative combinations of electronics (or computing) and mechanics.
		<u>Make</u> a product, selecting and using a range of materials and components.	How to prepare ingredients hygienically using appropriate utensils.	Design a recipe using seasonal ingredients.	How to use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.	<u>Make</u> a product using innovative designs that improve upon existing products. Refine upon the design as work progresses.
		<u>Evaluate</u> their product against a design criteria.	How to measure ingredients to the nearest gram accurately. How to assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).	Make a recipe using seasonal ingredients.	How to use a wider range of materials and components, including construction materials, textiles , according to their functional properties and aesthetic qualities.	<u>Evaluate</u> the design of the product so as to suggest improvements to the user experience.