



# Design & Technology Long-Term Overview at Woodstock CE Primary School

Phase	Cycle	Autumn		Spring		Summer	
EYFS		OUR COMMUNITY	FOLLOW THE STAR	ONCE UPON A RHYME	SPLISH SPLASH SPLOSH	AT THE BOTTOM OF THE GARDEN	WHEELS, WINGS AND OTHER THINGS
		<ul style="list-style-type: none"> <li>Fruit kebabs for pattern making in Maths</li> <li>Design a habitat for a pet – Dear Zoo link</li> <li>Making soup with Autumnal fruits (chopping, stirring, blending, and tasting) Willow sculpting star or wreath decoration</li> <li>Diwali diva lamps clay thumb pot/collage CD with geometric patterns</li> <li>Design a space rocket with the Podley</li> <li>Making mincemeat (weighing, pouring, stirring and following instructions)</li> </ul>		<ul style="list-style-type: none"> <li>Building a structure to make an A-frame bridge for the Billy Goats Gruff. Open-ended investigation with choice of materials from the classroom</li> <li>Baking – gingerbread man, shortbread shoes and flapjacks</li> <li>Design and make a boat that will float. Test boats at school.</li> <li>Design an easter bonnet</li> </ul>		<ul style="list-style-type: none"> <li>Design a bug hotel for the outside area</li> <li>Bird feeders with cheerios and seeds</li> <li>Design a car with the Podley</li> <li>Lego/ junk modelling vehicles of choice</li> </ul>	

KEY STAGE 1: Years 1 & 2							
KS1	A	INTO THE WOODS		PASSPORT TO BRITAIN		MEMORY BOX	
		<ul style="list-style-type: none"> <li>Design a garden that promotes mental wellbeing, is kind to the environment and has an element of self-sufficiency – researching garden design.</li> <li>Learning outcome:</li> <li>A completed garden design including labelling</li> <li></li> <li>Food Technology – look at foods that we can grow in our gardens. Explore the use of ginger in our food – health benefits and what it can be used for.</li> <li>Learning outcomes:</li> <li>Develop food handling skills and discuss food hygiene</li> <li>Bake gingerbread</li> <li></li> </ul>		<ul style="list-style-type: none"> <li>Design purposeful and functional products- a boat. Children use their knowledge of materials and components to design a boat. Eg. Will it float? Is it waterproof?</li> <li>Learning outcomes:</li> <li>Children make a model prototype to see if they design in 3D and make sure they are using the correct measurements before using the correct materials to make the real thing.</li> <li>Children make their boats then test them for floatation, durability, speed</li> <li></li> <li>Food Technology – Exploring a range of traditional foods from around the UK</li> <li>Learning outcomes:</li> <li>Combining ingredients</li> <li>Following recipe</li> <li>Developing chopping skills/ measuring/mixing/presentation</li> </ul>		<ul style="list-style-type: none"> <li>Explore and use mechanisms- Victorian toys.</li> <li>Learning outcomes:</li> <li>Research the development of toys through time using ICT</li> <li>They evaluate a range of existing products</li> <li>Children will then use and apply their learning by designing and building their own toy from the past. Children’s toys should involve mechanisms which move.</li> <li></li> <li>Food Technology - A Victorian Supper</li> <li>Learning outcomes:</li> <li>Following a traditional wartime recipe to make a delicious wartime treat.</li> <li>Talk about food preparation food safely and hygienically</li> </ul>	

	B		<ul style="list-style-type: none"> <li>Tasting and evaluating dishes</li> </ul>	
		<p><b>AROUND OUR WORLD</b></p> <ul style="list-style-type: none"> <li>Design and make a famous landmark from around the world</li> <li>Learning outcomes:</li> <li>Explore designs of famous landmarks</li> <li>Use a range of joins to build with chosen materials linking to strength</li> <li></li> <li>Food Technology - explore foods from around the world. Make a dish to share with the class.</li> <li>Learning outcomes:</li> <li>Develop skills of understanding and following a recipe.</li> <li>Chopping skills/ kneading/ mixing.</li> <li>Tasting and evaluating dishes</li> <li></li> </ul>	<p><b>CASTLES &amp; DRAGONS</b></p> <ul style="list-style-type: none"> <li>Design and make a trebuchet. Research this medieval weapon and how it works. Unpick the design and create a design of their own.</li> <li>Learning outcomes:</li> <li>Follow their design to construct a working trebuchet.</li> <li>Evaluate their design and the construction process.</li> <li></li> <li>Food Technology - A medieval banquet. Research and gather information on the dishes that were created in these times and the foods that were available in this country during this period of history.</li> <li>Learning outcomes:</li> <li>understand how food had to be cooked/served and was eaten.</li> <li>Bake bread for the banquet and make a simple broth.</li> </ul>	<p><b>FIGHTING FIT</b></p> <ul style="list-style-type: none"> <li>Design a Sport kit logo. Children design purposeful, functional and appealing products for themselves and other users based on a design criterion to design a logo to go on a sports kit of their choice. Evaluate a range of existing products.</li> <li>Learning outcomes:</li> <li>They present their designs using words, pictures and diagrams Describe what they have done well</li> <li>Suggest things they could do in the future to improve their design.</li> <li></li> <li></li> </ul>

## KEY STAGE 2: Years 3 & 4

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		FIELD TO FORK	TOMB RAIDERS	EUROPE EXPLORED
KS2 Y3&4	A	Dairy & Organic Farm, Blenheim Kitchen Garden Tour Health Professionals (dietician). <b><i>Designing a healthy and balanced Meal</i></b>	Oxfordshire Museum Outreach Workshop <b><i>Make and Design a Shaduf/Egyptian Feast</i></b>	Country Celebration Day Religious Building Visit – Synagogue/Church <b><i>3D Landmark Models</i></b>
		<ul style="list-style-type: none"> <li>Food Technology: Children will learn about the importance of having a balanced diet, research different food groups and how they keep us healthy; they will design meals based on what they find out.</li> <li>Building on prior knowledge from KS1, children should use the basic principles of a healthy and varied diet to prepare savoury dishes and understand where food comes from.</li> <li>Use a range of cooking techniques and understand seasonality, know where and how a variety of ingredients are grown, reared, caught and processed (linked to farm visit).</li> </ul>	<ul style="list-style-type: none"> <li>In technology, children will design and make a working Shaduf; using research to develop design criteria and create prototypes to test them for improvement.</li> <li>Use research and develop design criteria to inform the design of innovative, functional Shadufs that are fit for purpose.</li> <li>Generate, develop, model and communicate their ideas through discussion with peers and discuss any potential design issues, use annotated sketches, cross-sectional and prototypes to predict and discuss how viable their model will be.</li> <li>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</li> <li>Food Technology: The topic will culminate with an Egyptian Feast making flat bread, and sampling fruits and vegetables traditional to the country during ancient and modern times.</li> </ul>	<ul style="list-style-type: none"> <li>As Design Technologists children will use a range of engineering techniques, tools and materials to design and construct 3D landmarks.</li> <li><b>Models</b> are a way of communicating an idea in 3D, and often make use of nets. They can either be digital or physical.</li> <li>Physical models can be made from a variety of materials, including paper, card and recycled materials, or they can even be 3D printed.</li> <li>Sketches can be produced quickly, just using a pencil and some paper.</li> <li>Children to draw in 3D, showing more than one face of their design. However, models really help to see what a product might look like when finished.</li> <li>Models can be made full sized or scaled down.</li> <li>Children to use models so that they can give an idea of how product might be made and can identify and resolve manufacturing mistakes early on, saving time and money in term of real life!</li> </ul>

				<ul style="list-style-type: none"> <li>As Designers children will start work on a new project, working to a design specification.</li> <li>Also called a 'design spec', it is like a set of rules that the designer must follow to ensure that products are suitable for the person they are being made for.</li> </ul>
		<b>EARTH MATTERS</b>	<b>CITY OF SPIRES</b>	<b>INVADERS &amp; RAIDERS</b>
<b>B</b>		<p>Volcanologist: <i>Design and make Iron Man/Giant with a moving part.</i></p> <ul style="list-style-type: none"> <li>As Design Technologists, children will use foil and junk modelling to create 3D robot sculptures with mechanisms to make them move, which links with our English unit on The Iron Man.</li> <li><b>Food Technology:</b> children will use leftovers to make a healthy and economic meal that reduces our food miles.</li> <li>Select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing, accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> <li>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> </ul>	<p>Oxford City Visit: Christchurch College <i>Design and make a textile building</i></p> <ul style="list-style-type: none"> <li>Children will use sewing techniques to make a collage of the Dreaming Spires Scene of Oxford.</li> <li><b>Food Technology:</b> Children will also explore fantasy and unusual recipes to recreate our own Alice in Wonderland Tea Party.</li> <li>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> <li>Children will learn a variety of sewing techniques and explore different fabrics and textiles, whilst selecting the best stitch and most suitable material for purpose.</li> <li>Apply their understanding of how to strengthen, stiffen and reinforce a class tapestry of Oxford.</li> </ul>	<p>White-Horse Hill Fort <i>Electric Time Travelling Machine linked to Science</i></p> <ul style="list-style-type: none"> <li>As Design Technologists, children will link our work on electricity in science to create our very own time travelling machine.</li> <li><b>Food Technology:</b> We will also research, plan and prepare a Roman banquet.</li> <li>Children to research time machine ideas.</li> <li>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.</li> <li>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li> <li>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li> <li>Understand how key events and individuals in design and technology have helped shape the world.</li> <li>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</li> </ul>

## KEY STAGE 2: Years 5 & 6

		MEET THE GREEKS	AMAZON ADVENTURE	WAR & PEACE
<b>KS2 Y5&amp;6</b>	<b>A</b>	<p>Aspect: Structures/ CAMS Focus: Powered Structures and Celebrating Culture. Outcome: Design and build own Greek Water Clocks</p> <ul style="list-style-type: none"> <li>Children research Ancient Greek water clocks. What was its purpose? How did it work? What was it made from etc.</li> <li>They design a modern version of the product to sell</li> <li>Children take the views of users' into account when designing their clock.</li> <li>They produce clear step-by-step plans and present their ideas using exploded diagrams</li> <li>They select from a wide range of tools and equipment measuring accurately from a range of scales</li> <li>They test their design using models and improve design after testing.</li> <li>Their methods of working are precise so that their clocks have a high-quality finish.</li> <li>They evaluate their designs based on their original design criteria.</li> </ul> <p>Design a labyrinth – linked with English work</p> <p>Food Technology Make and taste traditional Greek foods.</p> <ul style="list-style-type: none"> <li>Children research, design and create traditional Greek dishes.</li> <li>They use a range of cooking techniques to prepare and cook.</li> </ul>	<p>Aspect: Textiles Focus: Combining Fabrics and Celebrating Culture Outcome: Design and make a fabric version of Rousseau's Tiger in a Tropical Storm - link with artist study</p> <ul style="list-style-type: none"> <li>Children will study Rousseau's Tiger in a Tropical Storm and design their own version.</li> <li>Children present their ideas using annotated sketches</li> <li>Select from a wide range of tools and equipment</li> <li>Children select materials according to their aesthetic qualities.</li> <li>They measure accurately using a range of scales.</li> <li>Children learn appropriate stitches to help them combine their different materials together.</li> <li>Children make sure their product has a good finish so that a user will find it both useful and attractive.</li> <li>They evaluate their designs based on their original design criteria.</li> </ul> <p>Food Technology Make and taste Mayan brownies.</p> <ul style="list-style-type: none"> <li>Children to complete research on the Mayans and the history of chocolate.</li> <li>They then make their brownies and consider additional traditional flavours which could be incorporated.</li> <li>They research food packaging and create the packaging for their brownies.</li> </ul>	<p>Aspect: Electronics Focus: Electronic Systems Outcome: Design and built an alarm system to protect Blenheim Palace from intruders</p> <ul style="list-style-type: none"> <li>Children draw on research and my own knowledge to design an alarm system to protect Blenheim from intruders</li> <li>They present their ideas with prototypes and cross-sectional diagrams</li> <li>They make precise measurements so that joins, holes and openings are in exactly the right place.</li> <li>When choosing materials, they consider a number of factors, such as cost, appeal and suitability</li> <li>They use their science skills to alter the way their electrical product behaves</li> <li>They use precise electrical connections.</li> <li>Their final alarm has a high degree of precision and can do the intended job well</li> <li>They test and evaluate their products in the context of their intended use</li> </ul> <p>Food Technology Make and taste a dish made using rationed items.</p> <ul style="list-style-type: none"> <li>Children are given ration cards and have to buy ingredients to cook with.</li> <li>They then design and create a dish using the ingredients they've bought (a bit like a war time version of Ready, Steady, Cook).</li> </ul>
	<b>B</b>	<b>• RULE BRITANNIA</b>	<b>• IN THE BEGINNING</b>	<b>• GOING GLOBAL</b>
	<p>Aspect: Structures Focus: Bridge Structures and Preparing Traditional Foods Outcome: Design and make a Brunel inspired bridge</p> <ul style="list-style-type: none"> <li>Children research different engineering achievements by Brunel</li> <li>They design new Brunel inspired bridge for their chosen purpose</li> <li>They produce clear step-by-step plans</li> <li>They select from a wide range of tools and equipment to produce their model designs</li> </ul>	<p>Aspect: Mechanisms Focus: CAMS Outcome: Design and make a moving model to explore the harsh terrain and surface of Mars.</p> <ul style="list-style-type: none"> <li>Children research the terrain of Mars and moving models as well as considering the following questions. What is its purpose? How will it work? What will it be made from? How will it overcome the harsh terrain?</li> <li>Children take the views of users' into account when designing their Mars moving model.</li> <li>They produce clear step-by-step plans and present their ideas using exploded diagrams</li> </ul>	<p>Aspect: Mechanisms and Food and Nutrition Focus: Frame structure/ axels and wheels and Celebrating Culture Outcome: Design and make an energy efficient vehicle</p> <ul style="list-style-type: none"> <li>Children design and make a wind propelled vehicle.</li> <li>They research different energy efficient methods to make their design purposeful, functional and appealing</li> <li>They produce a flow chart and power point presentation to explain how it is energy efficient</li> <li>They select from a wide range of tools and equipment and measure accurately from a range of scales</li> </ul>	

		<ul style="list-style-type: none"> <li>• Children measure accurately from a range of scales and select materials according to their aesthetic qualities</li> <li>• Their methods of working are precise so that their products have a high quality finish.</li> <li>• They evaluate their designs based on the original design criteria</li> </ul> <p>Food Technology Make and taste traditional afternoon tea.</p> <ul style="list-style-type: none"> <li>• Children research, design and create a traditional afternoon tea.</li> <li>• They use a range of cooking techniques to prepare, cook and then display their afternoon tea.</li> </ul>	<ul style="list-style-type: none"> <li>• They select from a wide range of tools and equipment measuring accurately from a range of scales</li> <li>• They test their design using models and improve design after testing.</li> <li>• Their methods of working are precise so that their model will work on the harsh terrain.</li> <li>• They evaluate their designs based on their original design criteria.</li> </ul> <p>Food Technology Plan a nutritional balanced meal for an astronaut to consume in space.</p> <ul style="list-style-type: none"> <li>• Children research and design a balanced meal for an astronaut to consume in space.</li> <li>• They design suitable packaging to store their meal.</li> </ul>	<ul style="list-style-type: none"> <li>• Their designs include the use of complex mechanisms (pulleys, cams, gears)</li> <li>• They chose components that can be controlled by switches or by ICT equipment.</li> <li>• They improve their designs after testing.</li> <li>• Children evaluate their designs based on the original design criteria.</li> </ul> <p>Food Technology Make and taste traditional a range of foods from around the world.</p> <ul style="list-style-type: none"> <li>• Children research, design and create their global dish.</li> <li>• They use a range of cooking techniques to prepare, cook their dishes.</li> </ul>
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