

Keevil CofE Academy Design Technology Curriculum Overview

NATIONAL CURRICULUM	
EYFS	<p>Creating with Materials</p> <ul style="list-style-type: none"> Safely use and explore a variety of materials tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used.
Key Stage 1	<p>Design</p> <ul style="list-style-type: none"> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> explore and evaluate a range of existing products evaluate their ideas and products against design criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> build structures, exploring how they can be made stronger, stiffer and more stable explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. <p>Cooking and Nutrition</p> <ul style="list-style-type: none"> use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from. <p><i>Technical Knowledge specified in units of work below.</i></p>
Key Stage 2	<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 generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> 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 <p>Evaluate</p> <ul style="list-style-type: none"> investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world <p>Technical knowledge</p> <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] apply their understanding of computing to program, monitor and control their products. <p>Cooking and Nutrition</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. <p><i>Technical Knowledge specified in units of work below.</i></p>

	EYFS/KS1	Lower KS2	Upper KS2
Year 1	<p>Wheeled Vehicles</p> <p>How far will it go?</p> <ul style="list-style-type: none"> about the movement of simple mechanisms such as levers, sliders, wheels and axles 	<p>Torch/Light</p> <p><i>through Science (Electricity)</i></p> <p>How can we link science and design?</p> <ul style="list-style-type: none"> how simple electrical circuits and components can be used to create functional products how to make strong, stiff shell structures how to use learning from science to help design and make products that work that materials can be combined and mixed to create more useful characteristics that mechanical and electrical systems have an input, process and output 	<p>Shelters</p> <p><i>Linked to work in History studying World War 2</i></p> <p>How did Anderson shelters keep people safe during the Battle of Britain?</p> <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures
	<p>Soup</p> <p>What meals can we make using vegetables?</p> <ul style="list-style-type: none"> that food ingredients should be combined according to their sensory characteristics use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from. 	<p>Pizza</p> <p>What flavours create the perfect pizza topping?</p> <ul style="list-style-type: none"> that food ingredients can be fresh, pre-cooked and processed understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques 	<p>Marionette Puppets</p> <p><i>Linked to end of year production</i></p> <p>How can I make my puppet move in different ways?</p> <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] that a 3D textiles product can be made from a combination of fabric shapes that materials have both functional properties and aesthetic qualities
		<p>Roman Food</p> <p><i>Linked to work in History – Invaders and Settlers (Roman Britain)</i></p> <p>How did the Romans dine?</p> <ul style="list-style-type: none"> that food ingredients can be fresh, pre-cooked and processed prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques 	
		<p>Control</p> <p><i>through Computing (Programming)</i></p> <p>How do we instruct computers?</p> <ul style="list-style-type: none"> how to program a computer to control their products apply their understanding of computing to program, monitor and control their products 	<p>Control</p> <p><i>through Computing (Programming)</i></p> <p>How can I use programming to solve problems?</p> <ul style="list-style-type: none"> how to program a computer to control their products apply their understanding of computing to program, monitor and control their products

Year 2	<p>Models including moving parts</p> <p>How can I be an architect?</p> <ul style="list-style-type: none"> ▪ build structures, exploring how they can be made stronger, stiffer and more stable ▪ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 	<p>Pop-Up Books</p> <p>Why are pop-up books so popular?</p> <ul style="list-style-type: none"> • how mechanical systems such as levers and linkages create movement • that materials have both functional properties and aesthetic qualities 	<p>Moving Vehicles</p> <p><i>(including Lego Robotics)</i></p> <p>How will your buggy move?</p> <ul style="list-style-type: none"> • how mechanical systems such as cams or pulleys or gears create movement • how more complex electrical circuits and components can be used to create functional products • how to reinforce and strengthen a 3D framework • how to use learning from science to help design and make products that work • that materials can be combined and mixed to create more useful characteristics • how to use learning from mathematics to help design and make products that work • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output
	<p>Puppets</p> <p><i>Linked to work in English study of Fantastic Mr Fox by Roald Dahl</i></p> <p>What could we make to help us tell the story of Mr Fox?</p> <ul style="list-style-type: none"> • select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] • select from and use a wide range of materials and components, including construction materials and textiles, according to their characteristics 	<p>Moving Monsters</p> <p><i>through English ('How To Train Your Dragon')</i></p> <p>How will your mythical creature move?</p> <ul style="list-style-type: none"> • how mechanical systems such as pneumatic systems create movement • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output 	<p>Biscuits</p> <p><i>Linked to work in Science on Changing Materials</i></p> <p>How will you flavour your biscuits?</p> <ul style="list-style-type: none"> • that a recipe can be adapted by adding or substituting one or more ingredients • understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.
		<p>Textiles</p> <p><i>through Art and Design – Artist Study of David Hockney</i></p> <p>What mediums can we use to create a landscape?</p> <ul style="list-style-type: none"> • that a single fabric shape can be used to make a 3D textiles product • that materials have both functional properties and aesthetic qualities 	
		<p>Control</p> <p><i>through Computing (Programming)</i></p> <p>What key skills do I need to program successfully?</p> <ul style="list-style-type: none"> • how to program a computer to control their products • apply their understanding of computing to program, monitor and control their products 	<p>Control</p> <p><i>through Computing (Programming)</i></p> <p>How is programming useful?</p> <ul style="list-style-type: none"> • how to program a computer to monitor changes in the environment and control their products