

Design Technology - The Aims of Our Curriculum

1. Enable children to retain and apply this essential knowledge. 2. Inspire children to become life-long learners. 3. Create a culture of high aspiration through challenging content and therefore pride in achievement. 4. Promote the spiritual, moral, social and cultural development of children, including fundamental British values of democracy, the rule of law, individual liberty, mutual respect and tolerance for those with different faiths and beliefs and for those without faith. 5. Provide opportunities for developing self-confidence, self-awareness, independence, creativity, respect and resilience in children. 6. Promote knowledge and understanding of how children can keep themselves safe and healthy. 7. Develop children’s numeracy, literacy and oracy, including the sustained expansion of their vocabulary. 8. Promote reading as a life skill and enable our children to become life-long readers.

Year 5	Areas	Term 1	Term 2	Term 3
	Content	<p><u>Food and Nutrition: Farm to Fork</u></p> <ul style="list-style-type: none"> • Demonstrate knowledge of the different categories of food and how they can help create balance diet • Recall the main food groups from the ‘Eatwell’ guide and give examples of foods from each group • Demonstrate the ability to discuss the different ways food is transported from farm to fork and issues that can arise • Demonstrate knowledge of food standards e.g. Red Tractor, British Lion • Demonstrate food preparations skills safely and hygienically and creating links to the ‘Eatwell guide’ • Demonstrate the ability to explain what seasonality is and why we have it in Britain and offer some examples of food • Confidently discuss different foods using the 5 senses, outlining why some may like or may not like a particular food and creating clear links to the Eatwell guide 	<p><u>Product Design: Pop up card</u></p> <ul style="list-style-type: none"> • Demonstrate the ability to conduct research to inspire pop-up card design and present findings • Demonstrate the ability to work to a brief and create a specification • Demonstrate the ability to explore ideas and create two designs which show development • Demonstrate the ability to create a 3D pop up card that adheres to the design brief • Demonstrate the ability to select and use different equipment and materials to create a successful pop up card (functional, appealing, well made) • Test and evaluate product (suggesting improvements while using assessment criteria) 	<p><u>Product Design: Pneumatic toy Moving Monster</u></p> <ul style="list-style-type: none"> • Demonstrate the ability to create a detailed design with annotations • Demonstrate the ability to develop IT skills when developing ideas using CAD software (tinkerCAD) • Demonstrate how to select and use a range of tools, equipment and materials • Develop analytical skills to research a range of existing products • Explore how to strengthen and reinforce structures with different materials • Explore how air pressure is use to control movement (pneumatic systems) • Demonstrate skill when use materials, equipment and tools • Articulate using subject specific vocabulary when talking about your design and model

		<ul style="list-style-type: none"> • Create a thorough explanation of how animals should be looked after are how and why this important to the food chain. 		
Literacy link	Discussion skills, note taking, reading text	Discussion skills, note taking, reading text	Discussion skills, note taking, reading text, presenting skills	
Assessment	<p>Assessment booklets: Teacher feedback and self-assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children while cooking</p>	<p>Assessment booklets: Teacher feedback and self-assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children during practical tasks</p>	<p>Assessment booklets: Teacher feedback and self-assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children during practical tasks</p>	
Cross curricular links	<p>Life skills: Safety within the food room, knowledge of a balance diet, seasonality</p> <p>Science: Balanced diet, food groups, healthy active lifestyle</p> <p>Maths: Portions size</p>	<p>Maths: Research and presenting data, measurements, construction, technical drawing</p> <p>Literacy links: Visual literacy, discussion, analysis skills, note taking, annotation.</p> <p>SMSC links: Discuss social skills</p>	<p>Science: Exploring air pressure</p> <p>Literacy links: Visual literacy, discussion, analysis skills, note taking, annotation.</p> <p>Maths: measuring, construction, technical drawing,</p> <p>IT: use the computer and CAD software</p> <p>SMSC links: Discuss social issues that impact and change the history of design</p>	

Year	Areas	Autumn Term 1	Autumn Term 2 and Spring Term 1	Spring Term 2 and Summer Term
6	Content	<p><u>Food and Nutrition: Design and making a Pizza</u></p> <ul style="list-style-type: none"> • Understand cultural origins and impact of pizza on our culture • Demonstrate knowledge of health and safety when preparing and making a pizza slice and garlic slice • Demonstrate knowledge and understanding of the Eatwell Guide, food categories and how to eat a well-balanced diet • Create links between your pizza design and the Eat- well guide and food packaging information • Skilfully use a wide range of equipment and ingredients will in the cookery room 	<p><u>Product Design: Bridge Project:</u></p> <ul style="list-style-type: none"> • Demonstrate knowledge of structures by discussing designs in history using key words such as shapes, force, tension • Demonstrate the ability to work effectively as part of a team • Demonstrate design skills; detailed designs with annotation demonstrating understanding • Demonstrate the ability to design a functional product showing knowledge of structures • Create a well-designed bridge which meets the design criteria • Select and use different materials and equipment skilfully • Test, reflect and evaluate product to check quality and functionality 	<p><u>Product Design: Clock Project</u></p> <ul style="list-style-type: none"> • Develop an understanding of how design technology is used to create purposeful and functional products • Develop knowledge of clog and gears and how they work together to make a functional clock • Develop an understanding of market research and how it is used to influence designs • Develop accurate drawing skills when drawing in one point perspective • Develop IT skills when using digital software to draw 3d designs on CAD • Design a functional product when working to a design brief and specification • Demonstrate the ability to select and use a range of tools, equipment, materials and machinery to make a functional clock • Make, test and evaluate your product to demonstrate quality control
	Literacy link	Discussion skills, note taking	Discussion skills, note taking	Discussion skills, note taking
	Assessment	<p>Assessment booklets: Teacher feedback and self-assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children during practical tasks</p>	<p>Assessment booklets: Teacher feedback and self-assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children during practical tasks</p>	<p>Assessment booklets: Teacher feedback and self-assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children during practical tasks</p>
	Cross curricular links	<p>Life skills - safety within the food room</p> <p>Science – balanced diet</p> <p>Maths – portions size</p>	<p>Science: Exploring strength, force, tension</p> <p>Literacy links: Visual literacy, discussion, analysis skills, note taking, annotation.</p>	<p>Literacy links: Visual literacy, discussion, analysis skills, note taking, annotation.</p> <p>Maths: measuring, construction, technical drawing</p>

			Maths: measuring, construction, technical drawing SMSC links: Discuss social issues that impact and change the history of design	IT: use the computer and CAD software SMSC links: Discuss social issues that impact and change the history of design
--	--	--	---	---

Year 7	Areas	<i>In KS3, the children are split in to two groups so they can access the specialist rooms and equipment at different times, therefore the sequencing of the projects will be different. Children taught by Mrs Mc Dine- Autumn 1 and 2 and Spring 1 Food and Nutrition, Spring 2 Summer 1 and 2 Woodwork Children taught by-- Autumn 1 and 2 and Spring 1 Woodwork, Spring 2 Summer 1 and 2 Food and Nutrition</i>	
	Content	<p style="text-align: center;"><u>Food and Nutrition</u></p> <ul style="list-style-type: none"> • Pupils follow a practical, hands-on, broad curriculum aimed at developing their food and nutrition knowledge and their cooking and food preparation skills • Learning how to safely uses the hob, oven and grill to bake, boil, fry, grill • Developing knife skills to safely chop and slice • Demonstrate knowledge of health and safety procedures and know why they are so important in the food room • Demonstrate knowledge of equipment and ingredients to independently select, use and cook • Exploring different cooking techniques; rubbing in, folding, mixing • Develop knowledge of how to store and label foods correctly to ensure safe consumption (cupboard, fridge and freezer) • Demonstrate your knowledge and understanding of the importance of eating quality ingredients to lead a healthy life style 	<p style="text-align: center;"><u>Woodwork: Accessories Hook</u></p> <ul style="list-style-type: none"> • Conduct market research through a focus group: demonstrate your knowledge of the importance of meeting the needs of your user and meeting the design brief and specification • Research and collect inspiration for ideas of different accessories hooks which meet the needs of your design brief and specification • Communicated a good range of ideas using tinkercad with annotation; which demonstrates skill when using editing CAD software and printing using the 3D printer • Follow health and safety rules and understand the importance of them • Reflect and evaluated the hook in detail to demonstrate your understanding of 'User centred design' • Independently selecting and using correct tools and equipment to produce a functional hook of good quality • Use a range of equipment, tools and machinery with minimal support (disc sander, pillar drill, fret saw, 3D printer, coping saw) • Generated a detailed and well-presented range of appropriate digital design ideas showing a clear understanding of its function and the needs of the intended user

	<ul style="list-style-type: none"> • Demonstrate understanding of the risks of being overweight, obese, underweight or having an eating disorder and how these can affect the body • Understand and can explain in detail the role of physical activity and diet (energy balance) • Knowledge of food labels and allergies (Natasha's law) • Identify signs of dehydration and hydration to ensure our whole body functions correctly • Demonstrate knowledge of how food poisoning is caused and what preventative safety procedures are in place to protect society • Discuss in-depth and calculate BMI and energy balance in foods 	<ul style="list-style-type: none"> • Test and evaluate ideas through the development of a prototype in card • In-depth annotation – risk assessment, tools, measurements, design; demonstrating understanding for the project • Working independently, accurately and showing evidence of confidence using tools and equipment and are able to adapt and modify ideas where necessary (modelling/ supporting peers) • Produced an accessories hook of high quality with fantastic presentation throughout your ppt demonstrating your knowledge and understanding • Tested, reflect and evaluate the hook in-depth; suggested some improvements and reference to function in relation to needs of intended user
Literacy link	Discussion skills, note taking, reading recipes, reading text	Discussion skills, note taking, reading design brief
Assessment	<p>Assessment booklets: Teacher feedback and self and peer assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children while cooking</p>	<p>Assessment booklets: Teacher feedback and self and peer assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children during practical lessons</p>
Cross curricular links	<p>Life skills – Cooking safety within the food room</p> <p>Science – balanced diet</p> <p>Maths – portions size, weighing, mixing, calculating BMI and energy balance</p>	<p>Maths – Scale, size, materials, measurements</p> <p>History of technology and design</p> <p>IT skills – use of computer and CAD software and technology – 3D printer</p>

Year 8	Areas	<p><i>In KS3, the children are split in to two groups so they can access the specialist rooms and equipment at different times, therefore the sequencing of the projects will be different. Children taught by Mrs Mc Dine- Autumn 1 and 2 and Spring 1 Food and Nutrition, Spring 2 Summer 1 and 2 Woodwork</i></p> <p><i>Children taught by-- Autumn 1 and 2 and Spring 1 Woodwork, Spring 2 Summer 1 and 2 Food and Nutrition</i></p>	
	Content	<p style="text-align: center;"><u>Food and Nutrition</u></p> <ul style="list-style-type: none"> • Pupils follow a practical, hands-on, broad curriculum aimed at developing their food and nutrition knowledge and their cooking and food preparation skills • Learning how to safely uses the hob, oven and grill to bake, boil, fry, grill • Exploring different cooking techniques; rubbing in, whisking, folding, mixing • Developing knife skills to safely chop, slice and dice • Demonstrate knowledge of health and safety procedures and know why they are so important in the food room • Demonstrate knowledge of equipment and ingredients to independently select, use and cook • Demonstrate knowledge and understanding of quality ingredients and healthy eating • Demonstrate knowledge and understanding of macronutrients & micronutrients; which foods supply them, in what quantities and how they support the body to live, grow and repair • Understand and discuss the different factors which could affect people’s diet choices (religious beliefs, intolerances to foods, illnesses, social and life style choices) • Understand of how different foods are needed at different stages of life and know how they help our bodies to develop and grow • Demonstrate knowledge of packaging and how branding can often be misleading 	<p style="text-align: center;"><u>Woodwork: Device Holder Project</u></p> <ul style="list-style-type: none"> • Pupils will develop their understanding of key vocabulary and knowledge of equipment, tools and machinery within the workshop • Conduct market research: engage in a focus group to demonstrate an understanding of the importance of carefully planned discussion questions, when thinking about the demographic, function and the design specification of the product to help generate ideas of a project that appeals to a consumer • Research and collect inspiration for ideas of different device stands which meet the needs of your design brief and specification • Communicated a good range of 3D CAD drawings with annotation which demonstrates the ability to consider a design brief and specification when using editing CAD software and printing using the 3D printer • Followed the health and safety rules and understand the importance of them by demonstrating the ability to move safely around the woodwork room to use machinery and tools • Independently selecting and using correct tools and equipment to produce a device holder of good quality • Select and use a range of materials, equipment, tools and machinery (disc sander, pillar drill, fret saw, heat strip, 3D printer, Tenon saw, coping saw, files) • Demonstrate knowledge through in-depth annotation; risk assessment, tools, measurements, design developments, testing and evaluating prototypes

			<ul style="list-style-type: none"> Produced a completed device holder of high quality with fantastic presentation throughout your PowerPoint demonstrating your knowledge and understanding Tested, reflect and evaluate the device stand in-depth; suggested some improvements and reference to function in relation to needs of intended use
Literacy link	Discussion skills, note taking, reading recipes, reading text		Discussion skills, note taking, reading design brief
Assessment	<p>Assessment booklets: Teacher feedback and self and peer assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children while cooking</p>		<p>Assessment booklets: Teacher feedback and self and peer assessment</p> <p>Frog end of term quiz to test knowledge and understanding</p> <p>Plickers – quiz</p> <p>Effective questioning throughout the lesson</p> <p>Observe children during practical lessons</p>
Cross curricular links	<p>Life skills – cooking safety within the food room</p> <p>Science – balanced diet</p> <p>Maths – portions size, weighing, mixing, calculating BMI & energy balance</p>		<p>Maths – Scale, size, materials, measurements</p> <p>History of technology and design</p> <p>IT skills – use of computer and CAD software and technology – 3D printer</p>