

YEAR 5	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Key Question	<u>Should people be able to choose where they live?</u>		<u>Creation or science - conflicting or complimentary?</u>		<u>Ancient Islam - a light in the darkness?</u>	
Areas of Study:	Food Technology		Mechanisms/Construction		Textiles	
<b>KNOWLEDGE:</b>						
<u>Designing</u>	<ul style="list-style-type: none"> <li>Competently research products similar to the one they are intending to design and evaluate strengths and weakness to be incorporated into their own design.</li> <li>Research and use ICT where appropriate</li> <li>Design, with a range of initial ideas, after collecting information from investigating existing products</li> <li>Produce a detailed, step-by-step plan</li> <li>Explain how a product will appeal to a specific audience and how it meets the purpose</li> <li>Create annotated 3D designs of their design on isometric or squared paper from a range of viewpoints.</li> <li>With growing confidence, apply a range of finishing techniques including those from art and design.</li> <li>Start to appreciate how make products cost to make</li> </ul>					
<u>Making</u>	<ul style="list-style-type: none"> <li>Name and use a range of tools and equipment competently</li> <li>Select appropriate materials, tools and technique (e.g. cutting, shaping, joining and finishing) accurately.</li> <li>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>Incorporate mechanical systems (such as pulleys or gears) to create movement in their products.</li> <li>Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products.</li> <li>Use finishing techniques to strengthen and improve the appearance of their products using a range of equipment including ICT.</li> <li>Make a prototype before making a final version</li> <li>Carry out finishing techniques to enhance the appearance and function of their product</li> </ul>					
<u>Evaluating</u>	<ul style="list-style-type: none"> <li>Suggest alternative plans; outlining the positive features and drawbacks</li> </ul>					

	<ul style="list-style-type: none"> <li>• Evaluate appearance and function against original criteria</li> <li>• Begin to evaluate their product personally and seek evaluation from others.</li> <li>• Evaluate a product against original design specifications and by carrying out tests</li> </ul>
<u>Technical Knowledge</u>	<ul style="list-style-type: none"> <li>• Suggest alternative plans; outlining the positive features and drawbacks</li> <li>• Evaluate appearance and function against original criteria</li> <li>• Create a product that incorporates gears</li> </ul>
<u>Food Technology</u>	<ul style="list-style-type: none"> <li>• Be both hygienic and safe in the kitchen</li> <li>• Know how to prepare a meal by collecting the ingredients in the first place</li> <li>• Weigh and measure accurately (timings, dry ingredients and liquids)</li> <li>• Begin to understand that seasons may affect the food available.</li> <li>• Understand how food is processed into ingredients that can be eaten or used in cooking.</li> <li>• Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including where appropriate, the use of a heat source.</li> <li>• Begin to understand that different food and drink contain different substances - nutrients, water and fibre - that are needed for health</li> </ul>
<u>KEY VOCABULARY</u>	Ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality, pour, mix, kneed, whisk, beat, combine, fold, rubbing in
<b>SKILLS:</b>	
Developing, planning and communicating Ideas	<ul style="list-style-type: none"> <li>• Can they survey their target audience and use this to generate ideas?</li> <li>• Can they take a user's view into account when designing?</li> <li>• Can they produce a detailed step-by-step plan for their design method?</li> <li>• Can they suggest some alternative designs and compare the benefits and drawbacks to inform the design process and outcome?</li> </ul>

Working with tools, equipment, materials and components to make quality products	<ul style="list-style-type: none"> <li>• Can they choose appropriate tools and materials to ensure that the final product will appeal to the audience?</li> <li>• Can they use a range of tools and equipment with good accuracy and effectiveness, within established safety parameters?</li> </ul>
Evaluating processes and products	<ul style="list-style-type: none"> <li>• Can they continuously check that their design is effective and fit for purpose?</li> <li>• Can they assess how well their product works in relation to the design criteria and intended purpose and suggest improvements?</li> <li>• Can they evaluate appearance and function against the original design criteria?</li> </ul>
Areas of Study: Textiles	<ul style="list-style-type: none"> <li>• Can they consider the audience when choosing textiles?</li> <li>• Can they make up a prototype first?</li> <li>• Can they use a range of joining techniques?</li> <li>• Can they devise a template or pattern for their product?</li> <li>• Can they explore a range of textures using textiles?</li> <li>• Can they transfer a drawing into a textile design?</li> <li>• Can they experiment with different ways of exploring textiles?</li> <li>• Can they use artists to influence their textile designs?</li> </ul>
KEY VOCABULARY	Specification, tacking, working drawing, clasp, pinking shears, design criteria, hem, reinforce, stem stitch, satin stitch, tie dye
Mechanical Components	<ul style="list-style-type: none"> <li>• Can they refine their product after testing it?</li> <li>• Can they incorporate hydraulics and pneumatics?</li> </ul>
KEY VOCABULARY	Pulley, gear, driver, follower, rotation, motor, belt, spindle, motor, circuit, switch, ratio, transmit, annotated drawings, exploded diagrams, functionality ( <b>Mechanisms</b> )
Construction	<ul style="list-style-type: none"> <li>• Are their measurements accurate enough to ensure precision?</li> <li>• Can they demonstrate that their product is strong and fit for purpose?</li> <li>• Are they motivated to refine and further improve their product?</li> </ul>
KEY VOCABULARY:	Reinforce, triangulation, stability, temporary, permanent, prototype, innovation, functional, design brief ( <b>Structure</b> )

<b>Electrical Systems:</b> <b>KEY VOCABULARY</b>	Parallel circuit, light emitting diode, monitor, flowchart, design specification, reed switch, tilt switch
<b><u>GREATER DEPTH</u></b>	<ul style="list-style-type: none"><li>• Can they follow a well thought out design brief and have accurately researched the end user's needs and preferences throughout the process?</li><li>• Can they evaluate critically other products and use this information to amend their own?</li><li>• Do they use a high quality and variety of presentation and precision in their design and make?</li></ul>