

Year Group and Class	Autumn Term	Spring Term	Summer Term
<b>Year 5 / 6 Chestnut</b>	<b>3.9 BREAD</b> To design and make loaf/rolls/shaped bread	<b>3.4 ARCH STRUCTURES</b> To design and build an arched shelter/building	<b>3.6 PULLEYS AND GEARS</b> To design and use pulleys/gears in a system – cable car/gondola
Breadth	Take inspiration from existing products to design and make a bread.  Explore different varieties of bread	To design and build an arched structure product (building or shelter)  To consider strength of true arches and modern arches and weight transference.  Create annotated diagrams using software -	To design and make a pulley system cable car/gondola  Experiment with a variety of gear trains and pulleys – use simple pulley systems, assemble gears
Threshold Concepts	Master practical techniques – weighing, sieving, measuring, kneading  Take inspiration from design – <b>basic rolls, fruit bread, pizza, shaped breads</b>  Design, make, evaluate and improve.	Master practical techniques – Measuring, cutting, estimating, joining, assembling.  Take inspiration from design – <b>curved houses and buildings e.g.office in China that was designed by Zaha Hadid Architects, a British firm that is based in London (see Chris Quigley folder for images)</b>  Design, make, evaluate and improve.	Pulleys and gears as mechanisms used in combination to change speed and direction for mechanical advantage  Master practical techniques – Measuring, cutting, estimating, assembling, joining  Take inspiration from design - <b>Sugarloaf mountain gondola (aerial tramway)</b>  Design, make, evaluate and improve.
Milestones	Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms).	Show an understanding of the qualities of materials in order to choose appropriate tools to cut and shape  Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding.	Show an understanding of the qualities of materials in order to choose appropriate tools to cut and shape  Develop a range of practical skills to create products (such as cutting,

	<p>Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.</p> <p>Demonstrate a range of baking and cooking techniques.</p> <p>Create and refine recipes, including ingredients, methods, cooking times and temperatures.</p> <p>Design with a user in mind, motivated by the service a product will offer.</p> <p>Ensure products have a high-quality finish.</p> <p>Create innovative designs that improve upon existing products.</p> <p>Evaluate the design of products so as to suggest improvements to the user experience.</p>	<p>Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.</p> <p>Create innovative designs that improve upon existing products.</p> <p>Evaluate the design of products so as to suggest improvements to the user experience.</p> <p>Design with the user in mind, motivated by the service a product will offer (rather than simply for profit).</p> <p>Make products through stages of prototypes, making continual refinements.</p> <p>Use prototypes, cross-sectional diagrams and computer-aided designs to represent designs.</p> <p>Use software to design -</p>	<p>drilling and screwing, nailing, gluing, filing and sanding.</p> <p>Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.</p> <p>Create innovative designs that improve upon existing products.</p> <p>Evaluate the design of products so as to suggest improvements to the user experience.</p> <p>Design with the user in mind, motivated by the service a product will offer (rather than simply for profit).</p> <p>Make products through stages of prototypes, making continual refinements.</p> <p>Use prototypes, cross-sectional diagrams and computer-aided designs to represent designs -</p>
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