

## YEAR GROUP OVERVIEW- To be taught as rotation due to classrooms

	13 WEEK BLOCK A	13 WEEK BLOCK B	13 WEEK BLOCK C
7	DT CAD Clock Design	DT – Engineering Sweet Dispenser	Food and Nutrition
	<ul style="list-style-type: none"> <li>• Research Clock Designs</li> <li>• Design Brief</li> <li>• Identify and solve learner problems</li> <li>• Reformulate problems given to them</li> <li>• Identify User needs</li> <li>• Develop specification to create an appealing product</li> <li>• Generate &amp; Develop clock design ideas</li> <li>• 2D &amp; 3D Design and modelling of clock design</li> <li>• Use ICT to undertake creative power points of work using print screens and photographs.</li> </ul> <p>Mini Project Key ring, Phone Stand •Use of specialist tools &amp; Processes Pillar Drill, File, Coping Saw, Sandpaper, Wax</p>	<ul style="list-style-type: none"> <li>• Research existing products &amp; Mechanisms/Motion</li> <li>• Select from wide range of materials               <ul style="list-style-type: none"> <li>◦ Softwood vs hard wood</li> <li>◦ Manufactured board</li> <li>◦ 6R's of Sustainability</li> </ul> </li> <li>• Use of templates and Jigs for accurate, high quality product manufacture.</li> <li>• Use of specialist tools &amp; Processes               <ul style="list-style-type: none"> <li>◦ Pillar Drill</li> <li>◦ Files</li> <li>◦ Finishing (sanding, painting)</li> <li>◦ Joining (adhesives, screws, nails)</li> </ul> </li> <li>• Assembly of parts</li> <li>• Use of Design Movements to enhance design and reflect work of past professionals (De Stijl, Piet Mondrian)</li> </ul> <p><b>Computing- create flow charts showing process for manufacturing sweet dispenser with inputs, process, outputs to show manufacturing stages.</b></p>	<p>Techniques used in the preparation of commodities</p> <ul style="list-style-type: none"> <li>• Weighing and Measuring Ingredients</li> <li>• Knife skills</li> <li>• Rubbing in method (for crumble, scones)</li> <li>• Sieving</li> <li>• Shaping</li> </ul> <p>Cooking Methods</p> <ul style="list-style-type: none"> <li>• Oven</li> <li>• Moisture to cook</li> </ul> <p>Nutrients</p> <ul style="list-style-type: none"> <li>• Functions of nutrients in the body</li> </ul> <p>Food Provenance understanding where food comes from, free range farming and seasonal foods.</p> <p><b>Computing- Collect and analyse data; related to nutrients in food dishes.</b></p>

8	DT USB MOOD LIGHT	ENGINEERING COAT HOOK	FOOD AND NUTRITION
	<p>Understanding a design brief and client needs.</p> <ul style="list-style-type: none"> <li>- Mind mapping</li> </ul> <p>Develop and communicate design ideas using annotated isometric sketches.</p> <p>Research using inspiration from different cultures to create their design ideas.</p> <p>Develop specifications to inform their designs,</p> <p>Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture:</p> <ul style="list-style-type: none"> <li>- 2d Design V2</li> <li>- Laser Cutter</li> <li>- Line Bender</li> <li>- Vinyl Cutter</li> <li>- Soldering</li> <li>- Screws / semi-permanent fixing</li> <li>- Marking</li> <li>- Measuring</li> <li>- Cutting</li> <li>- Filing</li> <li>- Sanding</li> <li>- Gluing / permanent fixing</li> <li>-</li> </ul> <p>Select plastics taking into account their properties:</p> <ul style="list-style-type: none"> <li>- Hard woods</li> <li>- Soft woods (pine)</li> <li>- Manufactured Boards</li> </ul> <p>Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups</p> <ul style="list-style-type: none"> <li>• Use ICT to undertake creative power points of work using print screens and photographs.</li> </ul>	<ul style="list-style-type: none"> <li>• Research</li> <li>• Materials (Wood/Metal)</li> <li>• Alternative materials (composites/polymers/manufactured boards)</li> <li>• Use of CAD software to mathematically model a scaled dimensional engineering drawing.</li> <li>• Methods of Measuring and Marking out or wood and metal.</li> <li>• Cutting of materials using appropriate specialist tools and processes.</li> <li>• Shaping of materials using appropriate specialist tools and processes.</li> <li>• Finishing of materials using appropriate specialist tools and processes.</li> <li>• Joining of materials using appropriate specialist tools and processes.</li> <li>• Use of Design Movements to enhance design and reflect work of past professionals (Memphis etc)</li> <li>• Evaluate and Refine ideas</li> <li>• Investigate modifications to further improve and develop.</li> </ul> <p>Computing- create flow charts showing input, output and processes when making a product.</p>	<p>Techniques used in the preparation of commodities</p> <ul style="list-style-type: none"> <li>• Weighing and Measuring Ingredients</li> <li>• Knife skills</li> <li>• Rubbing in method (to create pastry)</li> <li>• Sieving</li> <li>• Shaping (quality control)</li> </ul> <p>Cooking Methods</p> <ul style="list-style-type: none"> <li>• Dry Heat to cook</li> <li>• Moisture to cook</li> </ul> <p>Nutrients</p> <ul style="list-style-type: none"> <li>• Functions of nutrients in the body</li> </ul> <p>Food Related causes of ill health</p> <p>Health and Safety</p> <p>Recipes</p> <ul style="list-style-type: none"> <li>• Recipes for different commodities, specifically a range of healthy savoury dishes.</li> </ul> <p>Food Miles</p> <p>The effects on the environment, CO2.</p> <p>Computing- Collect and analyse data; related to food miles.</p>

9	DT Solar Light, Mini Project Desk Tidy	Engineering Pewter Cast Jewellery	Food and Nutrition
	<p>Research using inspiration from nature biomimicry, art deco, Art Nouveau to create their design ideas.</p> <p>Develop specifications to inform their designs,</p> <p>Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture:</p> <ul style="list-style-type: none"> <li>-2d Design V2</li> <li>-Laser Cutter</li> <li>-Line Bender</li> <li>-Vinyl Cutter</li> <li>-Soldering</li> <li>-Screws / semi-permanent fixing</li> <li>-Marking</li> <li>-Measuring</li> <li>-Cutting</li> <li>-Filing</li> <li>Sanding</li> </ul> <p>Computing- Create a flowchart showing how a solar light functions, using inputs/outputs. Use computational abstractions that model the state of real world problems through the use of solar lighting.</p> <p>Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups</p>	<ul style="list-style-type: none"> <li>• Research existing products Art Deco, Art Nouveau for style of pewter.</li> <li>• Select from wide range of materials, MDF for mould and pewter.               <ul style="list-style-type: none"> <li>o 6R's of Sustainability</li> <li>o Use of templates and Jigs for accurate, high quality product manufacture.</li> <li>o Use of specialist tools &amp; Processes</li> </ul> </li> <li>• Pillar Drill</li> <li>• Hot Air Gun               <ul style="list-style-type: none"> <li>o Files</li> <li>o Finishing (sanding, painting)</li> <li>o Joining (adhesives, screws, nails)</li> </ul> </li> <li>• Assembly of parts</li> <li>• Use of Design Movements to enhance design and reflect work of past professionals (Art Nouveau Art Deco etc)</li> </ul> <p>Use ICT to undertake creative power points of work using print screens and photographs.</p> <p>Packaging- Use CAD to create packaging for pewter casting.</p>	<p>Nutrients</p> <ul style="list-style-type: none"> <li>• The functions of nutrients in the body</li> </ul> <p>Nutritional needs of specific groups of people</p> <ul style="list-style-type: none"> <li>• Dietary Guidelines</li> <li>• The Eat well Guide</li> <li>• Nutritional needs of specific groups</li> <li>• Nutritional needs for different activity levels</li> <li>• Special diets and food choices</li> </ul> <p>Commodities</p> <ul style="list-style-type: none"> <li>• Poultry</li> <li>• Cereals</li> <li>• Vegetables</li> <li>• Fruits</li> </ul> <p>The production of dishes for a menu including pastry dishes and more complex desserts and savoury dishes.</p> <p>The impact of cooking methods on nutritional value</p> <p>Computing- Collect and analyse data; related to food nutrients.</p>