

Year 7 DT Curriculum

To be covered on a rotation throughout the year

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Topic:	<p><u>Food</u></p> <p>Develop experience using a range of ingredients, cooking methods and recipes following set instructions. Introduction to nutrition and healthy eating.</p>	<p><u>Timbers</u></p> <p>Develop experience using a range of timber-based tools and equipment to produce a working product. Introduction to health and safety in the workshop.</p>	<p><u>Paper & board</u></p> <p>Develop experience using a range of paper and board materials. Introduction to aesthetics, colour and layout.</p>	<p>Optional Specialist Areas – All schools to cover at least 4 of the following areas:</p> <ul style="list-style-type: none"> - Metals - Textiles - Plastics - CAD/CAM - New and emerging technologies - Mechanisms - Sustainability and the environment - Typography and print - Industrial design and production methods
Knowledge covered:	<p><u>Designing principles</u> Ability to adapt and refine a simple dish to make it healthier and/or more appealing</p> <p><u>Making principles</u> Use a variety of ingredients. Learn claw grip and bridge grip cutting methods. Use an oven and a hob to cook food.</p> <p><u>Technical Knowledge</u> Understand key cooking methods such as frying, baking, beating, creaming.</p>	<p><u>Designing principles</u> Technical drawing of either isometric or orthographic drawing used to make a working drawing.</p> <p><u>Making principles</u> Use and understand appropriate use of a coping saw and a tenon saw. Skills using a pillar drill and screwdriver.</p> <p>Understanding of different finishes include use of sand paper, the sanding machine and stain/paint/dye etc.</p>	<p><u>Designing principles</u> Design a range of ideas based on a brief and develop ideas using feedback from others</p> <p><u>Making principles</u> Working with paper and board. Understanding of different adhesives for paper and board. Appropriate application of colour and design.</p> <p><u>Technical Knowledge</u> Types of paper and board, nets, 2D to 3D structures, cutting methods using paper and board. Colour theory.</p>	<p><u>Metals</u> Metal ore, casting and forging. Industrial forms. Ferrous and non ferrous metals. Welding. Pewter casting. Protective finishes i.e. galvanising.</p> <p><u>Textiles</u> Weft and warp. Woven and non-woven fabrics. Natural and man made synthetics. Hand and machine stitching. Use of premade components. E-Textiles.</p> <p><u>Plastics</u> Thermosetting and thermo plastics. Plastic forming processes i.e. vacuum forming, line bending.</p> <p><u>CAD/CAM</u> Design and manufacturing programmes such as 2D Design, Adobe Photoshop, AutoCAD and CAM processes such as CNC machines, laser cutters, plotters etc. Input and output processes. New and emerging technologies</p> <p><u>Mechanisms</u></p>

	<p>The eatwell plate and a balanced diet</p> <p><u>Analysis and evaluate</u></p> <p>-The use of sensory analysis to explore key terms of flavour and consistency</p> <p>- Able to evaluate the effectiveness of a series of practical outcomes using a sensory analysis</p>	<p><u>Technical Knowledge</u> Knowledge of wood joints and appropriate use. The origins of Timber and difference between hardwoods and softwoods.</p> <p><u>Analysis and evaluate</u> Product analysis of an existing product. Able to evaluate focussed on functional testing.</p>	<p><u>Analysis and evaluate</u></p> <p>Analysis of existing design work or the work of others</p>	<p>Input and Output. Forms of movement. Levers and linkages. Mechanisms. Forces.</p> <p><u>Sustainability and the environment</u> The 6 R's. Primary, secondary and tertiary recycling. The product lifecycle. Upcycling. Renewable energy sources.</p> <p><u>Typography and print</u> Serif and sans serif fonts, layout and grid. Registration marks. Lithography printing. CMYK.</p> <p><u>Industrial design and production methods</u> One-off, batch, mass and continuous production. JIT production methods. Quality control methods.</p>
<p>Online Resources:</p>	<p>Follow Creative Educational Trust Instagram</p> <p>http://wiki.dtonline.org/index.php/Main_Page - A range of DT related information and resources</p> <p>https://www.stem.org.uk/home-learning/secondary-design-technology - A range of STEM and DT related information and resources</p> <p>www.technologystudent.com – Under heading of 'New D&T GCSE' there is an area based on Timbers and wood joints which is particularly useful. Also under 'Mathematics in Design Technology' there are a range of maths activities linked directly to DT.</p> <p>'Focus on Software' and 'Focus on Design' are computer based software programmes which involves different computer based animations to show elements such as movements but most appropriate for this course is a series of animations linked to wood joints</p>			