

Creative Technology - Year 7 Overview

To be taught in 12 week rotations

	Rotation 1	Rotation 2	Rotation 3	
Year 7	Electronic Night Light	Mechanical Sweet Dispenser	Food and Nutrition	Careers
	<ul style="list-style-type: none"> • Analysis existing products using ACCESSFM. • Design Brief. • Create a Mood Board. • Identify and solve learner problems. • Reformulate problems given to them. • Identify User needs. • Develop specification to create an appealing product. • Generate & Develop clock design ideas. • CAD/CAM Design and modelling of Night Light. • Use of specialist tools & processes: Soldiering Irons, Strip Heater, Pillar Drill. <p>Computing - Use ICT to undertake creative PowerPoints of work using print screens and photographs.</p>	<ul style="list-style-type: none"> • Research existing products & Mechanisms/Motion. • Select from wide range of materials: <ul style="list-style-type: none"> ○ Softwood vs hard wood. ○ Manufactured board. ○ 6R's of Sustainability. • Use of templates and Jigs for accurate, high quality product manufacture. • Use of specialist tools & processes: <ul style="list-style-type: none"> ○ Pillar Drill. ○ Files. ○ Finishing (sanding, painting). ○ Joining (adhesives, screws, nails). • Assembly of parts. • Use of Design Movements to enhance design and reflect work of past professionals (De Stijl, Piet Mondrian). <p>Computing - Create flow charts showing process for manufacturing sweet dispenser with inputs, process, outputs to show manufacturing stages.</p>	<p>Techniques used in the preparation of commodities:</p> <ul style="list-style-type: none"> • Weighing and Measuring. • Ingredients. • Knife skills. • Rubbing in method (for crumble, scones). • Sieving. • Shaping. <p>Cooking Methods:</p> <ul style="list-style-type: none"> • Oven. • Moisture to cook. <p>Nutrients:</p> <ul style="list-style-type: none"> • Functions of nutrients in the body and nutrients using the eat well guide. • Food Provenance understanding where food comes from, free range farming and seasonal foods. <p>Computing - Collect and analyse data; related to nutrients in food dishes.</p>	<p>Food and Nutrition While studying Food and Nutrition in Year 7, students will develop a greater understanding into Farming.</p> <p>Students will learn the preparation of soil, sowing, adding manure and fertilisers, irrigation, harvesting and storage.</p> <p>Mechanical Sweet Dispenser While studying Resistant Materials in Year 7, students will develop a greater understanding into Mechanical Engineering.</p> <p>Mechanical Engineering is the branch of engineering that involves the design, production and operation of machinery, from the scale of individual components to vehicles and large plant facilities.</p> <p>Electronic Night Light While studying Electronics in Year 7, students will develop a greater understanding into Electrical Drafting. Students will learn how Electrical Drafters prepare wiring diagrams that construction workers use to install and repair electrical equipment and wiring in power plants, electrical distribution systems, and residential and commercial buildings.</p>

Creative Technology - Year 8 Overview

To be taught in 12 week rotations

	Rotation 1	Rotation 2	Rotation 3	
Year 8	Passive Amplifier	Personalised Coat Hook	Food and Nutrition	Careers
	<p>Understanding a design brief and the client needs:</p> <ul style="list-style-type: none"> • Mind mapping. • Mood boards. • Prototypes. <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"> • 2D Design. • Laser Cutter. • Line Bender. • Vinyl Cutter. • Soldering. • Screws / semi-permanent fixing. • Marking. • Measuring. 	<p>Understanding a design brief and the client needs:</p> <ul style="list-style-type: none"> • Mind mapping. • Mood boards. • Prototypes. <ul style="list-style-type: none"> • Research existing products. • Materials (Wood/Metal). • Alternative materials (composites/polymers/manufactured boards). • Use of CAD software to mathematically model a scaled dimensional engineering drawing. • Methods of Measuring and Marking out or wood and metal. • Cutting of materials using appropriate specialist tools and processes. • Shaping of materials using appropriate specialist tools and processes. • Finishing of materials using appropriate specialist tools and processes. • Joining of materials using appropriate specialist tools and processes. • Use of Design Movements to enhance design and reflect work of past professionals (Memphis etc.). • Evaluate and Refine ideas. • Investigate modifications to further improve and develop. <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"> • Weighing and Measuring Ingredients. • Knife skills. • Rubbing in method (to create pastry). • Sieving. • Shaping (quality control). <p>Cooking Methods:</p> <ul style="list-style-type: none"> • Dry Heat to cook. • Moisture to cook. <p>Nutrients - Functions of nutrients in the body.</p> <p>Food Related causes of ill health.</p> <p>Health and Safety.</p> <p>Recipes - Recipes for different commodities, specifically a range of healthy savoury dishes.</p> <p>Food Miles - The effects on the environment, CO2.</p> <p>Computing - Collect and analyse data; related to food miles.</p>	<p>Food and Nutrition</p> <p>While studying Food and Nutrition in Year 8, students will develop a greater understanding of an Environmental Health Officer.</p> <p>Students will learn that Environmental Health Officers are responsible for carrying out measures for protecting public health, including administering and enforcing legislation related to environmental health and providing support to minimize health and safety hazards.</p> <p>Personalised Coat Hook</p> <p>While studying Metalworking in Year 8, students will develop a greater understanding of Blacksmithing.</p> <p>Students will learn that a blacksmith is a metalsmith who creates objects primarily from wrought iron or steel by forging the metal, using tools to hammer, bend, and cut.</p> <p>Passive Amplifier</p> <p>While studying Resistant Materials in Year 8, students will develop a greater understanding of Carpentry.</p>

	<ul style="list-style-type: none"> • Cutting. • Filing. • Sanding. • Gluing / permanent fixing. • <p>Select plastics and identify their properties:</p> <ul style="list-style-type: none"> • Hard woods. • Soft woods (pine). • Manufactured boards. <p>Test, evaluate and refine their ideas and products against a specification, using the views of intended users and other interested groups.</p> <p>Use ICT to undertake creative power points of work using print screens and photographs.</p>			<p>Student will learn that Carpentry, the art and trade of cutting, working, and joining timber. The term includes both structural timberwork in framing and items such as doors, windows, and staircases.</p>
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Creative Technology - Year 9 Overview

To be taught in 12 week rotations.

	Rotation 1	Rotation 2	Rotation 3	
Year 9	Recycled USB Lamp	Pewter Keyring	Food and Nutrition	Careers
	<p>Research using inspiration from nature with Organic Design Movement 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"> • 2D Design. • Laser Cutter. • Line Bender. • Vinyl Cutter. • Soldering. • Screws / semi-permanent fixing. • Marking. • Measuring. • Cutting. • Filing. • Sanding. <p>Test, evaluate and refine their ideas and products against a specification, including the views of intended users and other interested groups.</p> <p>Computing - Create a flowchart showing how a solar light function, using inputs/outputs. Use computational abstractions that model the state of real-world problems through the use of solar lighting.</p>	<p>Research existing products and function of a Keyring:</p> <ul style="list-style-type: none"> • Select from wide range of materials, MDF for the mould and Pewter. • 6R's of Sustainability. • Use of templates and Jigs for accurate, high quality product manufacture. • Initial and refined final ideas. • 2D Design and CAD/CAM. <p>Use of specialist tools & processes:</p> <ul style="list-style-type: none"> • Pillar Drill. • Hot Air Gun. • Files. • Finishing (sanding, painting). • Assembly of parts. • Use of Design Movements to enhance design and reflect work of past professionals. <p>Packaging - Use CAD to create packaging for pewter casting.</p> <p>Computing - Use ICT to undertake creative power points of work using print screens and photographs.</p>	<ul style="list-style-type: none"> • Nutrients - The functions of nutrients in the body. • Nutritional needs of specific groups of people. • Dietary Guidelines. • The Eat Well Guide. • Nutritional needs of specific groups. • Nutritional needs for different activity levels. • Special diets and food choices. <p>Commodities:</p> <ul style="list-style-type: none"> • Poultry. • Cereals. • Vegetables. • Fruits. <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>	<p>Food and Nutrition While studying Food and Nutrition in Year 9, students will develop a greater understanding of the role of a Chef.</p> <p>Students will learn the many roles that a chef has to contend within the day to day running of a kitchen.</p> <p>Pewter Keyring While studying Graphics and Metalwork in Year 9, students will develop a greater understanding of the role of a Packaging Designer.</p> <p>Students will learn that Packaging designers are responsible for designing cost-effective, attractive, and safe packaging for commercial products.</p> <p>Recycled USB Lamp While studying Resistant Materials in Year 9, students will develop a greater understanding of the role of a Upcycling Designer.</p> <p>Students will learn that a how Upcycling Designers reuse products from textiles to household furniture, creating a new lease of life.</p>