

Curriculum Sequencing Grid: **Design & Technology**

Year 8	Term 1	Term 2	Term 3
<b>Unit</b> (Tablet in 39 week plan)	Isometric drawing and CAD module Pewter casting module	Packaging module USB Lighting module	USB Lighting module Resin Jewellery module Flowol - computer control module
<b>Key Retainable Knowledge</b> (Required for Y11/13) <ul style="list-style-type: none"> <li>What... How.... Why....</li> </ul>	<p><b>Isometric drawing</b>            What? - Understand the process of Isometric drawings and CAD.            How? – By producing a range of hand drawings and developing knowledge of computer software.            Why? – This is a key element in Engineering drawings and in industrial practice.</p> <p><b>Pewter casting</b>            What? – Understanding how imagery can be used as a starting point for design development.            How? – Using prior knowledge of creating a mood board and the use of images to develop design, to then be used in a commercial product.            Why? – To understand the process from research, design to manufacturing.</p>	<p><b>Packaging</b>            What? – Using imagery as a starting point for design development for a ‘point of sale’ packaging.            How? – By looking at existing products and their layout to create a range of packaging ideas. Understanding how images can promote a product in a commercial environment.            Why? – To understand the process from research, design to manufacturing.</p> <p><b>USB Lighting</b>            What? – Using prior knowledge and understanding of materials and how they can be shaped to be fit for purpose.            How? – Introduction to electronics and developing knowledge of using a variety of materials (woods and acrylics)            Why? – To reinforce prior knowledge of using the correct tools and equipment.</p>	<p><b>USB Lighting</b>            What? – Showing knowledge and understanding of materials, tools and equipment.            How? – Using prior knowledge from previous projects on woods and acrylics, matching key terms to visual images.            Why? – These basic skills are essential in the development within the Engineering world.</p> <p><b>Resin jewellery</b>            What? – Design and create a piece of resin jewellery to reflect someone’s likes, hobbies or interests            How? – Exploring new materials and how they can be developed using texture            Why? – To understand the different finishes of materials and how they can be manipulated</p>
<b>Key Technical Vocabulary</b> (To be modelled and deliberately practiced in context.)	Isometric Drawing, CAD Casting, mould, cavity, sprue, fettling	QR codes, Blister packaging, Euro slot Branding, Packaging legislation Circuit, component, soldering iron, solder, flying wire, current. Thermoforming	Cross filing, draw filing, wet and dry sanding Vacuum forming, polyester resin, hardener Systems control

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<b>Opportunities for Reading</b>	You-tube videos which demonstrate practical skills in an industrial context. Hyperlinked in PowerPoints.	You-tube videos which demonstrate practical skills in an industrial context. Hyperlinked in PowerPoints.	Articles on existing artists-exploring their style/techniques and application of additional materials. You-tube videos which demonstrate practical skills in an industrial context. Hyperlinked in PowerPoints.
<b>Developing Cultural Capital</b> (exposure to very best- essential knowledge and skills of educated citizens – appreciation of human creativity and achievement.)	Research international tourist destinations.	Consider point of sale – who will use/buy the product and what market research is required.	Local galleries, design council and artists who work in resin jewellery (based in St. Ives).
<b>Cross Curricular Links</b> (Authentic Connections)			
<b>Key Assessment</b>	Google Sketch-up iPhone drawing Hand drawn isometric iPhone Pewter casting practical outcome	Packaging end of module test (including graphics questions) Packaging outcome Electronics module test	USB Light practical outcome