

Curriculum Sequencing Grid: **Design & Technology**

| Year 8 | Term 1 | Term 2 | Term 3 |
|---|--|---|---|
| Unit (Tablet in 39 week plan) | Isometric drawing and CAD module Pewter casting module | Packaging module USB Lighting module | USB Lighting module |
| Key Retainable Knowledge (Required for Y11/13) <ul style="list-style-type: none"> • What... How.... Why.... | <p>Isometric drawing 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>Pewter casting 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>Packaging 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>USB Lighting 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>USB Lighting 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> |
| Key Technical Vocabulary (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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| Opportunities for Reading | 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. |
| Developing Cultural Capital (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). |
| Cross Curricular Links (Authentic Connections) | | | |
| Key Assessment | 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 |