

DT Unit Overview Year 8

Product Design lessons are taught once per week, usually in a dedicated workshop. However, in light of the ongoing situation caused by the Coronavirus pandemic, practical elements of the project will unfortunately be delayed until it is safe to do so. Students will focus on all other stages of the design process up to the practical element. We will investigate the properties of different materials and manufacturing techniques. We will explore different design strategies in order to generate design ideas with an emphasis on the iterative design process; an essential approach to developing a product. In order to check understanding we will be creating quizzes, using plenaries as well as obtaining feedback from students to ensure effective learning is taking place. For our Year 8 students who have missed out on the bulk of their electronics project at the end of last year, we will still begin with our Y8 jewellery project. We will spend additional time with students at each of the stages of the design process reviewing material from last year. **Due to electronics being practical led in delivery, this will be deferred until Year 9 when we will ensure sufficient time is then spent addressing the gaps in their subject knowledge and practical soldering skills.**

Product Design – Unit 1 Pewter Project				
What are we learning?	What knowledge, understanding and skills will we gain?	What does mastery look like?	How does this build on prior learning?	What additional resources are available?
Design Development	Knowledge – Know how to generate ideas with a range of techniques. Conduct research Glossary will be created to define key words Understanding - analyse research and existing products to inform design choices Review on how to analyse products. Skills - Use of design strategies to generate design ideas using multiple methods. Iterative design. Review on design strategies and introduction to new strategies to generate ideas.	Students develop a specification, consider alternative, suitable ideas, and present aesthetic detail fully in their design sketches using a different design strategy. Use iterative designs to change and modify	Creating ideas from year 7. draws on drawing and sketching skills	Teacher demo. Existing examples of sketches Existing products
Modelling and CAD/CAM	Knowledge - modelling methods. Use of ICT. Size and measurements. Understanding - use models. Introduction to CAD and 2D Design. Skills - Modelling and developing idea through plasticine and paper modelling. Using dimension tools to create accurate moulds using 2D Design. Review on testing ideas using a new material area.	Accurate model used to generate 2D design representation to cut on laser cutter.	Maths – use of proportion and sizes.	CAD how to guides.

<p>Pewter Casting</p>	<p>Knowledge - Metals and their properties. Why pewter a suitable metal. Casting process. Understand the classification of metals into ferrous, non ferrous and alloys. Understanding - Understand the pewter casting process. the properties of metals and the stock forms. Skills - Cast own design. Filing and finishing of metals using a range of abrasive papers and polish.</p>	<p>Successful cast on first go. Smooth and shiny finish on piece Completed- formed into jewellery.</p>	<p>Use of tools from year 7 Recall of H&S throughout all projects.</p>	<p>Teacher demo. step by step guide Existing moulds & products</p>
<p>Packaging</p>	<p>Knowledge - Identifying what information is included on gift packaged items. Understanding - Developing nets and graphics for gift boxes to package pewter. Pros and cons of methods. Skills - generate own packaging. Evaluation. Review on packaging and what information should be included.</p>	<p>Correctly constructed net and graphics. Highlighting pewter product. Basic evaluation of products – WWW/EBI</p>	<p>Packaging for pen project year 7. Independent work based on prior learning.</p>	<p>Existing products.</p>