

KEVICC KS3 Curriculum: Design & Technology	Subject: Product Design	Key terms and vocabulary.
Year: 7 Term: Various	Topic: Candle Stick Project	Which words will be explicitly taught & how frequently will understanding be checked? How will assimilation of new vocab be checked?  Vocabulary regularly tested verbally in class and also tested at end of module unit test.  Key Words. Aesthetics Customer Cost Environmental Safety Scale/Size Function Materials Ergonomics Social and Moral Issues CAD CAM Ferrous metals Non-Ferrous metals, Alloys Smart Metals Metal Foams Oxidization Patina Dip Coat Primer Polymer paints Stock forms Malleability Conductivity Ductility Plasma Extraction Ore Smelting Filing Braising Welding Spinning Jig Dies for Press Moulding
<b>What is the essential knowledge from this unit? What do students need to remember and understand?</b> <ul style="list-style-type: none"><li>• A knowledge of 2D CAD and its integration with the CNC Plasma Cutter.</li><li>• Develop an understanding of tin soldering steel components of a design together.</li><li>• An understanding and ability to measure, cut, file and construct light structure made from mild steel.</li><li>• Knowledge of cutting, wasting and finishing techniques related to working with metals.</li><li>• Knowledge of safe working practices in metal workshop in relation to a range of machine, hand tools and processes including drilling, spinning, grit blasting and braising.</li><li>• A deep understanding of categorisation of ferrous, non-ferrous, alloys, smart metal types, their uses, how they are created and standard stock forms.</li><li>• Understanding of design techniques that allow the development of creative concepts through sketching modelling and reflection in an iterative manner.</li><li>• Understanding of the use of jigs and press moulding.</li></ul>		
<b>What prior learning supports understanding of this content?</b> <p>Feeder primary school outreach work will have covered a range of techniques and experiences that help students to understand material properties and some techniques of making.</p>	<b>How does this content link to future learning?</b> <p>All research, analysis, design and making skills are directly transferrable to other D&amp;T areas and curriculums. Content is linked to both the Year 8/9, GCSE and 'A' Level provision.</p>	
<b>Reading:</b> <p>Students are asked to investigate a range of sources their candle design. They may be asked to evaluate existing product and look at the materials relevance, the designers thinking and to apply the ACCESS FM analysis and notation system.</p> <p>Home learning will require them to develop an understanding of metals and wider design issues.</p>	<b>Writing:</b> <p>Students are helped to evaluate and notate designs using help sheets based on the ACCESS FM system following discussions and questioning. Notes are made during the research, designing, development and evaluation stages of the project.</p> <p>Research assignments for homework will require students to investigate, record and present technical information.</p>	
<b>Key assessments:</b> <p>How will students review the information learned? How will feedback be seen?</p> <p>Students will peer assess and self-evaluate ideas, skills and knowledge formally midway through the project.</p> <p>Staff will assess work on design research &amp; design sheets, the practical itself and evaluation and sketched improvements. Peer assessment will also occur at design stages as part of the selection process.</p>		

