

Subject	Year	Term
<b>WJEC Vocational Engineering Level 2</b>	<b>10</b>	<b>2</b>
Topic		
<b>Manufacturing processes</b>		
Content (Intent)		
<b>Prior Learning – Manufacturing Skills, Material properties and engineering drawings</b>		
<p>During the term, students will apply the skills developed in term 1 to a practical project. They will begin by gaining knowledge on a range of manufacturing processes commonly used in industry. Building on their prior learning, students will develop a clear understanding of the expectations and outcomes for their assessed work. They will learn to read, interpret and extract key engineering information from the drawings. Using the information, students will plan the manufacture of the individual components, selecting appropriate materials and suitable, manufacturing processes. They will then follow their plans to produce the components and assemble the final engineering product. The topic will conclude with students carrying out quality checks, testing their products and evaluating their workshop practices to identify strengths and areas for improvement.</p>		
<b>Future Learning (Topic) – Mock NEA 2</b>		
What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)	
<p>Students will complete Section 1 and 2 of a Mock NEA. This will include: -</p> <ul style="list-style-type: none"> <li>• Interpreting an engineering drawing,</li> <li>• Responding to brief</li> <li>• Selecting materials appropriately</li> <li>• Selecting appropriate manufacturing processes</li> </ul>	<p><b>Assessment</b></p> <p>End of topic assessment for the theory covered.</p> <p>Students will be assessed formally against the assessment criteria and feedback given for students to act upon in dedicated lessons time.</p> <p>This is a composite assessment and will contribute to the Summative assessment report sent home.</p>	
<p>Students will complete sections 4&amp;3 of a mock NEA. This will include: -</p> <ul style="list-style-type: none"> <li>• Accurately manufacturing a product</li> <li>• Using Quality Control to evaluate the success of the product.</li> <li>• Completing a SWOT analysis</li> </ul>		
How can parents help at home?		
<p>You can support your child by discussing the Mock NEA with them, allowing them to develop their portfolios at home and encouraging the students to have an aspirational attitude to their work.</p>		
Helpful further reading/discussion (including Reading and Vocabulary Lists)		
<p><b>Reading</b></p> <p>Level 1/2 Vocational Award in Engineering WJEC – ISBN 1860857515</p> <p>Technologystudent.com / equipment and processes</p> <p>Engineer to Win — Carroll Smith</p> <p>The Thing Explainer — Randall Munroe</p>	<p><b>Vocabulary Lists</b></p> <p>Engineering Tools &amp; Equipment: Vertical Milling Machine, Centre Lathe, Drilling Machine, Vacuum Forming, 3D Printing, Laser cutter. Engineering drawings: orthographic projection, section view, exploded diagrams, scale drawings. Job sheet, cutting list, bill of materials. SWOT evaluation.</p>	