

Subject	Year	Term
<b>WJEC Vocational Engineering Level 2</b>	<b>10</b>	<b>1</b>
Topic		
<b>Joining Methods and Manufacturing Skills</b>		
Content (Intent)		
<b>Prior Learning – KS3 D&amp;T practical and theory.</b>		
<p>During this term students will have to develop a range of practical skills and develop their knowledge and understanding of joining methods, manufacturing processes material properties. Students will learn how to accurately produce a product by manufacturing a jeweller’s hammer from an engineering drawing. This term is a step up to practical skills from KS3 as students learn how to use a range of metal working tools and metal working machines such as a centre lathe and milling machine.</p>		
<b>Future Learning (Topic) Material properties and Engineering drawings</b>		
What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)	
<p><b>Students will learn about:-</b></p> <ul style="list-style-type: none"> <li>• The use of a range different mechanical and chemical joining methods that are temporary or permanent</li> <li>• Manufacturing processes including lathing milling and threading</li> <li>• Understanding material properties, characteristics and their uses</li> <li>• Physical material testing and understanding material finishes to enhance their properties</li> <li>• How to read and create different engineering drawings in accordance with BS 8888:2017</li> </ul>	<p><b>Assessment</b></p> <p>Students will be assessed using a range of low stakes formative assessments. These assessments include: -</p> <ol style="list-style-type: none"> <li>1. A practical assessment</li> <li>2. Topic quiz</li> <li>3. An end of topic formative assessment.</li> <li>4. Practical investigation.</li> <li>5. Formal formative assessment</li> </ol>	
How can parents help at home?		
<p>You can support your child by discussing the work with them, allowing them to develop their portfolios at home and encouraging the students to have an aspirational attitude to their work. Please discuss different engineering careers with your child.</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>Model Engineer Magazine</p> <p>How stuffs made – YouTube and Discovery channel</p> <p>Real Engineering – Youtube channel</p>	<p><b>Vocabulary Lists</b></p> <p>Understanding Engineering Drawings: Scale, Finishes, Detail Views, Title Blocks, Orthographic Views, Sectional Views, Isometric Views.</p> <p>Engineering Tools &amp; Equipment: Files, Scribes, Centre Punch, Tap and Die set, Hacksaws, Rivet Gun, Engineer’s Square, Callipers, Vernier Callipers, Micrometres, Tin Snips, Gauges, Knurling Tool, Facing Tools, Parting Tool, End Mill, brazing, welding, riveting, machine screws and bolts.</p>	