

TAC – Engineering Manufacture Level 1/2				
OCR National Award	Year 7/8 Module 1		Year 7/8 Module 2	
	Knowledge	Skills	Knowledge	Skills
<b>Engineering materials, processes and production</b>	<p>Students will learn there are differences in Material properties and why certain materials are used for certain applications.</p> <p>They will learn where the materials they use originate from and consider the SMSC implications of their use.</p> <p><b><i>This statement is assessed at: The end of Unit 1</i></b></p>	<p>Investigation into basic material properties through inspection and practical tasks using a range of production techniques in wood and wood products.</p> <p>Develop tool and equipment skills through a practical project.</p> <p><b><i>Assessment is ongoing in all practical lessons.</i></b></p>	<p>Students will develop understanding of thermoplastics and how these are manufactured into everyday products. They will develop knowledge of specific materials and the methods that are used to manufacture products from them. They will investigate the implications of using plastics and their effects on the environment.</p> <p><b><i>This statement is assessed at: The end of Unit 2</i></b></p>	<p>Develop skills in assembling multiple components to achieve a working outcome.</p> <p>Develop soldering skills to assemble their electronic circuit.</p> <p><b><i>Assessment is ongoing in all practical lessons.</i></b></p>
<b>Preparing and planning for manufacture</b>	<p>Students will learn about H&amp;S in relation to production methods and equipment.</p> <p>Students will learn about dimensions, scale and tolerances in relation to designing and manufacture.</p> <p><b><i>This statement is assessed at: The end of Unit 1</i></b></p>	<p>Develop skills using the workshop equipment safely and accurately to achieve an accurate practical outcome within the specified tolerances.</p> <p><b><i>Assessment is ongoing in all practical lessons.</i></b></p>	<p>Develop their knowledge of CAD further through a design and make task.</p> <p>Learn about suitable methods for combing and assembling a variety of materials effectively.</p> <p><b><i>This statement is assessed at: The end of Unit 2</i></b></p>	<p>Learn to use the Laser Cutter, Vacuum Forming machine and Strip heater to cut, shape and mould thermoplastic for their product.</p> <p><b><i>Assessment is ongoing in all practical lessons.</i></b></p>
<b>Computer aided manufacturing</b>	<p>Students will learn about CAD and its uses and how it is utilised in most areas of product development and manufacture.</p> <p><b><i>This statement is assessed at: The end of Unit 1</i></b></p>	<p>They will use 2D Design CAD and the laser cutter to produce components for their product.</p> <p><b><i>Assessment is ongoing in all practical lessons.</i></b></p>	<p>Students will develop their knowledge from module 1 to incorporate and edit images imported from the internet in their design work.</p> <p><b><i>This statement is assessed at: The end of Unit 2</i></b></p>	<p>Setup and operate the Laser cutter on a variety of different materials using appropriate settings.</p> <p><b><i>Assessment is ongoing in all practical lessons.</i></b></p>