

## KS4 Engineering

Year Group		AU1	AU2	SP1	SP2	SU1	SU2
11	<b>Core Theme</b>	Engineering Design- Unit 2		Producing Engineering Products - Unit 2' Making based task in the workshop		Exam Preparation / Practical Portfolio Completion	Exam Preparation- Resits
	<b>Intent</b>	Draw engineering design solutions/Drawing Skills, progressing to create Portfolio at Unit 1 (communicate design ideas) and interpret engineers info in Unit 2		Demonstrate learnt knowledge using hand-tools, machinery , mathematical skills.		Preparation for external exam: Revision and assessment. / Final completion of Practical tasks and written portfolio.	Preparation for external exam: Revision and assessment.
	<b>Unit of Work</b>	<p>Various drawing skills tasks to teach students how to communicate effectively in 3D. Includes 3<sup>rd</sup> Angle Ortho Projection Sectional Views Isometric Drawing Drawing Skills to create Portfolio.</p> <p>Development of onshape and converting sketches into a working CAD drawing.</p> <p>Convert between isometric sketches and 3rd angle orthographic projections Reverse Engineering of product: Reverse engineer a relevant product for analysis. (phone chargers) Demonstration of Engineering Processes, in a practical environment where possible.</p>		<p><b>Workshop Based Assessment Task Unit 2:</b> Machining &amp; Tooling assessment task following teacher/Eduqas set criteria. Resources (Brief, Drawings etc. to be supplied). Current project:</p> <ul style="list-style-type: none"> <li>• <b>Desktop Lamp</b> Approximately 9 processes must be evident in their task. Engineering drawings will be supplied.</li> </ul>		<p>Students will ensure portfolios are completed for submission in May 2023.</p> <p>Students will use learning from the development of practical skills and H&amp;S requirements of a range of engineering processes and revise year 10 theory completed on their knowledge around materials, calculation and processes.</p>	<p>Students will use learning from the development of practical skills and H&amp;S requirements of a range of engineering processes and revise year 10 theory completed on their knowledge around materials, calculation and processes.</p>
	<b>Cultural Capital</b>	Dwg Conventions (british standards) also internationally recognised for working overseas.		Involve local suppliers, material and trades.		Involve local suppliers, material and trades.	