

Curriculum Overview – Engineering

Year	Overview	KS3 Rotation based on 13 hours of study	Student Resources
7	Students to become familiar with working safely in the workshop. Students need to be able to identify tools and work safely on a range of materials. Students will also develop design pages.	<p>Simple flat shape of my own – CET SOL Identifying SL of a design page and tools in the workshop. Development of design pages. Safe working in the workshop. Development of techniques with tools and materials.</p> <p>Your pattern in relief – CET SOL Identifying SL of a design page and tools in the workshop. Development of design pages. Safe working in the workshop. Development of techniques with tools. Development of machines in the work shop.</p> <p>CET Assessment covering all above topics</p>	www.technologystudent.com
8	Students to gain a deeper knowledge of working within the workshop. Use of CAD CAM is also developed in this year to deepen students understanding of the engineering industry.	<p>A symbol – CET SOL Designing skills 2D Design CAD software Laser cutter CAM software Pewter machine Metal work skills</p> <p>Performance OF CAD/CAM – CET SOL Orthographic drawing on paper 2D Design Orthographic drawing CAD Google sketup skills CAD Tinker cad designing 3Dprinting</p> <p>CET Assessment covering all above topics</p>	www.technologystudent.com
9	Year 9 students will look at processes in an engineering environment. Students will learn to use all the machines in the workshop and begin to undertake larger practical's taking on more of a independent role.	<p>Students will work on – Pillar drills/Bench drills Line bender Hot works area Pewter machine Vacuum former 3 in 1 metal manipulator Ban facer Powder coating</p> <p>CET Assessment covering all above topics</p>	www.technologystudent.com

Key Stage 3 End of rotation testing

Year	Overview	Autumn 1 (Weeks 1 – 7)	Autumn 2 (Weeks 8 – 14)	Spring 1 (Weeks 15 - 20)	Spring 2 (Weeks 21 - 25)	Summer 1 (Weeks 26 - 32)	Summer 2 (Weeks 33 - 38)	Student Resources
10	Year 10 students gain an over all knowledge of engineering. From engineering disciplines and H+S to different materials used in an engineering industry. In the summer term students put this knowledge together and produce a mock controlled assessment in practice for their real one in year 11.	Core content taught <ul style="list-style-type: none"> Engineering disciplines Applied science and mathematics in engineering Reading engineering drawings Hand-drawn engineering drawings Computer-aided design (CAD) engineering drawings 	Key Stage 4 Formal Assessments – Classroom Based	Core content taught <ul style="list-style-type: none"> Properties, characteristics and selection of engineering materials Engineering tools, equipment and machines Applied processing skills and techniques Production planning techniques 	Key Stage 4 Formal Assessments – Classroom Based	Mock controlled assessment in preparation for controlled assessment in year 11. Using skills learnt in term one and two.	Year 10 Mock Examinations	Flash cards www.technologystudet.com
		Summative assessment – End of topic tests based on past exam questions.		Summative assessment – End of topic tests based on past exam questions.		Summative assessment – End of topic tests based on past exam questions.		
11	Students in year complete their mock assessment and identify ways their process could be improved. Student then complete their controlled assessment and revise for the written paper.	Mock controlled assessment in preparation for controlled assessment in next term. Revision for exam unit.	Year 11 Mock Examinations A – Classroom based / Exam room	Intro into coursework Completion of 18H coursework Teaching time splitting up 18H formal to boost coursework outcome.	Year 11 Full Mock Examinations – Examination Rooms	Completion of 18H coursework Teaching time splitting up 18H formal to boost coursework outcome. Exam Revision	GCSE Examination Window	Flash cards www.technologystudet.com
		Summative assessment – End of topic tests based on past exam questions.		Summative assessment – End of topic tests based on past exam questions.		Summative assessment – End of topic tests based on past exam questions.		