CAISTER ACADEMY
Creative Education Trust

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.	**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. **Your pattern in relief – CET SOL** Identifying SL of a design page and tools in the workshop. Safe working in the workshop. Development of techniques with tools. Development of machines in the workshop. CET Assessment covering all above topics	Key Stage 3 End of rotation testing	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.	**A symbol – CET SOL** Designing skills 2D Design CAD software Isometric drawing skills Laser cutter CAM software Heat press **Performance OF CAD/CAM – CET SOL** Orthographic drawing on paper 2D Design Orthographic drawing CAD Google sketup skills CAD Tinker cad designing 3Dprinting CET Assessment covering all above topics		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 work shop and begin to undertake larger practical's taking on more of a independent role.	**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 CET Assessment covering all above topics		www.technologystudent.com

<table>
<tr><th>Year</th><th>Overview</th><th colspan="2">Autumn 1
(Weeks 1 – 7)</th><th>Autumn 2
(Weeks 8 – 14)</th><th colspan="2">Spring 1 (Weeks 15
- 20)</th><th>Spring 2
(Weeks 21 - 25)</th><th colspan="2">Summer 1
(Weeks 26 - 32)</th><th>Summer 2
(Weeks 33 - 38)</th><th>Student Resources</th></tr>
<tr><td rowspan="2">10</td><td rowspan="2">Year 10 students gain an overall 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.</td><td colspan="2">Core content taught.

• Engineering disciplines
• in engineering
• Reading engineering drawings
• Hand-drawn engineering drawings
• Computer-aided design (CAD) engineering drawings
• Properties, characteristics and selection of engineering materials</td><td rowspan="2">Key Stage 4 Formal Assessments – Classroom Based</td><td colspan="2">Core content taught.

• Properties, characteristics and selection of engineering materials
• Engineering tools, equipment and machines
• Applied processing skills and techniques</td><td rowspan="2">Key Stage 4 Formal Assessments – Classroom Based</td><td colspan="2">Core content taught.

• Sustainable engineering
• Production planning techniques
• Properties, characteristics and selection of engineering</td><td rowspan="2">Year 10 Mock Examinations</td><td rowspan="2">Flash cards
www.technologystudet.com</td></tr>
<tr><td colspan="2">Summative assessment – End of topic tests based on past exam questions.</td><td colspan="2">Summative assessment – End of topic tests based on past exam questions.</td><td colspan="2">Summative assessment – End of topic tests based on past exam questions.</td></tr>
<tr><td rowspan="2">11</td><td rowspan="2">Students in year complete their mock assessment and identify ways their process could be improved.

Student them complete their controlled assessment and revise for the written paper.</td><td colspan="2">Intro into coursework

Completion of 18H coursework

Teaching time splitting up 18H formal to boost coursework outcome.</td><td rowspan="2">Year 11 Mock Examinations A – Classroom based / Exam room</td><td>Completion of 18H coursework

Applied science and mathematics.

Exam Revision</td><td rowspan="2">Year 11 Full Mock Examinations – Examination Rooms</td><td>Exam Revision</td><td rowspan="2">Year 11 Mock Examinations A – Classroom based / Exam room</td><td>Exam Revision</td><td colspan="2" rowspan="2">GCSE Examination Window</td><td rowspan="2">Flash cards
www.technologystudet.com</td></tr>
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