Year 12 Timetable

	9-11am	11am -1pm	1pm-3pm
Monday	BTEC Engineering BTEC Computing GCSE – Resit English	BTEC Civil Engineering	BTEC Applied Science
Tuesday		A level Maths	BTEC Civil Engineering
Wednesday	BTEC Civil Engineering GCSE Resit Maths	BTEC Applied Science	BTEC Engineering
Thursday	A level Maths		
Friday	BTEC Applied Science BTEC Computing	A Level Maths	

Curriculum Plan

Engineering

W/C	Theme	Tasks	Resources	Assessment
06/01/2020	**Unit 25 Mechanical Behaviour of Metallic Materials Section C & Unit 26 Mechanical Behaviour of Non Metallic Materials Section C**	Unit 25: Explore the in-service failure of metallic components and consider improvements to their design. Unit 26: Explore the in-service failure of non-metallic components and consider improvements to their design	Unit 25: C1 Ductile and brittle fracture C2 Creep failure C3 Fatigue failure C4 Corrosion mechanisms C5 Design considerations to help prevent component failure Unit 26: C1 Ductile and brittle fracture C2 Creep failure C3 Fatigue failure C4 Degradation processes C5 The contribution of design	Unit 25: A report containing investigative research into the failure mode of given engineered products or components and possible design solutions. Observation records are essential. Unit 26: A report containing investigative research into the causes of in-service failure of given engineering components and suggestions as to how these might have been avoided.

			to prevent component failure	
06/08/2020	**Unit 3: Engineering Product Design & Manufacture**	AO1 Demonstrate knowledge and understanding of engineering products and design	A1 Design Triggers A2 Design Challenges A3 Equipment level and system level opportunities and constraints A4 Material Properties A5 Mechanical Power Transmission A6 Manufacturing Processes	Controlled Assessment: Understanding the client brief and being able to interpret the brief in terms of what it is requesting the learner to design

15/6/2020	**Unit 3: Engineering Product Design & Manufacture**	AO2 Apply knowledge and understanding of engineering methodologies, processes, features and procedures to iterative design	B1 Design for a customer B2 Regulatory Constraints and Opportunities B3 Market Analysis B4 Performance Analysis B5 Manufacturing Analysis	Controlled Assessment: Understanding the design requirements from the client brief. Recording in a detailed log book all research findings and suggesting areas for modification and improvement
22/6/2020	**Unit 3: Engineering Product Design & Manufacture**	AO3 Analyse data and information and make connections between engineering concepts, processes, features, procedures, materials, standards and regulatory requirements	C1 Design Proposals C2 Communicating Designs C3 Iterative Development Process	Controlled Assessment: Understanding how to analyse the data from the table provided to assess why the current design has faults. Using findings from the data table the learner should then be able to generate new design ideas and annotate their choice of materials to use, making reference to the client brief design requirements to justify design proposals. Learners should also remember to log all findings in their log book.
29/6/2020	**Unit 3: Engineering Product Design & Manufacture**	AO4 Evaluate engineering product design ideas, manufacturing processes and other design choices	D1 Statistical Methods D2 Validating Designs	Controlled Assessment: Learners should be able to evaluate their design proposals in reference to the requirements from the client brief and data analysis. Learners should refer to the choice of manufacturing processes and materials selected for their final design proposal. Learners should also refer to technology led modifications such as sensors, magnets and so on. As well as considering if manufacturing methods selected are suitable for batch production
07/06/2020	**Unit 3: Engineering Product Design & Manufacture**	AO5 Be able to develop and communicate reasoned design solutions with appropriate justification	C1 Design Proposals C2 Communicating Designs C3 Iterative Development Process	Controlled Assessment: Understanding how to choose the most suitable design idea and develop/optimise the design from the original design in the client brief. Learners are required to record in detail manufacturing processes selected and try to incorporate as many design requirements as possible from the client brief, as well as incorporate technology led materials to improve the design

13/7/2020	**Unit 3: Engineering Product Design & Manufacture**	AO5 Be able to develop and communicate reasoned design solutions with appropriate justification	C1 Design Proposals C2 Communicating Designs C3 Iterative Development Process	Controlled Assessment: Recap of all sections for Unit 3 with most emphasis on development of ideas and communication of ideas via 2d working drawings with dimensions. Referring to the assessment criteria to develop knowledge and understanding whilst also accessing the higher band marks

Civil Engineering

Theme	Tasks	Resources	Assessment
Unit 4	Examine foundation design and construction	Resources on teams: PowerPoint presentations, BTEC Construction Book Chapter on Unit 4, internet to support research, unit specification, design brief and assessment criteria.	Refer to assessment criteria, design brief and unit specification. Remember the difference in grades: Pass (Identify), Merit (Describe), Distinction (Explain)
Unit 4	Examine foundation design and construction	Resources on teams: PowerPoint presentations, BTEC Construction Book Chapter on Unit 4, internet to support research, unit specification, design brief and assessment criteria.	Refer to assessment criteria, design brief and unit specification. Remember the difference in grades: Pass (Identify), Merit (Describe), Distinction (Explain)
Unit 4	Examine superstructure design and construction	Resources on teams: PowerPoint presentations, BTEC Construction Book Chapter on Unit 4, internet to support research, unit specification, design brief and assessment criteria.	Refer to assessment criteria, design brief and unit specification. Remember the difference in grades: Pass (Identify), Merit (Describe), Distinction (Explain)

Unit 4	Examine superstructure design and construction	Resources on teams: PowerPoint presentations, BTEC Construction Book Chapter on Unit 4, internet to support research, unit specification, design brief and assessment criteria.	Refer to assessment criteria, design brief and unit specification. Remember the difference in grades: Pass (Identify), Merit (Describe), Distinction (Explain)
Unit 4	Examine superstructure design and construction	Resources on teams: PowerPoint presentations, BTEC Construction Book Chapter on Unit 4, internet to support research, unit specification, design brief and assessment criteria.	Refer to assessment criteria, design brief and unit specification. Remember the difference in grades: Pass (Identify), Merit (Describe), Distinction (Explain)
Unit 4	Examine external works associated with construction projects	Resources on teams: PowerPoint presentations, BTEC Construction Book Chapter on Unit 4, internet to support research, unit specification, design brief and assessment criteria.	Refer to assessment criteria, design brief and unit specification. Remember the difference in grades: Pass (Identify), Merit (Describe), Distinction (Explain)
Unit 4	Examine external works associated with construction projects	Resources on teams: PowerPoint presentations, BTEC Construction Book Chapter on Unit 4, internet to support research, unit specification, design brief and assessment criteria.	Refer to assessment criteria, design brief and unit specification. Remember the difference in grades: Pass (Identify), Merit (Describe), Distinction (Explain)

Applied Science

Theme	Tasks	Resources	Assessment
Unit 6 Investigative project literature review	Join in the chat on the 'team' and chose a topic to research	Online research (we will work together to find reliable sources)	Submit draft lit review via the assignments tab on teams.
Unit 6 Investigative project literature review	Continue research and start to plan how you will collate this to answer your chosen question	Online research/teacher guidance on how to format and structure your report	Submit draft lit review via the assignments tab on teams.

A Level Maths

W/C	Theme	Tasks	Resources	Assessment
06/01/2020	**Integration**	13.1-13.3	Work to be directed through teams with taught session each Wed at 1130 and meet Friday to discuss work. Pure text	

06/08/2020	**Integration**	13.4-13.7 and the end of unit test	Pure text	End of unit test
15/6/2020	**Forces and Newtons Laws**	10.1-10.3	Mechanics text	
22/6/2020	**Forces and Newtons Laws**	10.4-10.6 and the end of unit test	Mechanics text	End of unit test
29/6/2020	**Kinematics 2**	11.1-11.5 and the end of unit test	Mechanics text	End of unit test
07/06/2020	**Exponentials and Logarithms**	14.1-14.5	Pure text	
13/7/2020	**Exponentials and Logarithms**	14.6-14.8 and the end of unit test	Pure text	End of unit test

Construction

Theme	**Tasks**	**Resources**	**Assessment**

understand the effects of forces and temperature changes on materials used in construction	understand effects of forces on construction materials .....steel concrete brick block glass wood	unit 3 found in btec construction	learning aim look up materials take notes explain importance stress strains density

GCSE English Resit

W/C	Theme	Tasks	Resources	Assessment
06/01/2020	**English Language**	**Key Terms and Language: metaphors, similes, personification, etc. Assessment Objectives 1 and 2.**	**Seneca. AQA English Language**	**Seneca assessments - code: 3w2056brlr**
06/08/2020	**English Language**	**Structure. Tackling questions 1-4 of Paper 1 for English Language. Assessment Objectives 1, 2 and 4.**	**Seneca. AQA English Language**	**Seneca assessments - code: 3w2056brlr**
15/06/2020	**English Language**	**English Language, Paper 1, Section B – narrative writing and writing to describe. Assessment Objectives 5 and 6.**	**Seneca. AQA English Language**	**Seneca assessments - code: 3w2056brlr**
22/06/2020	**English Language**	**Writing Techniques, including: emotive language, hyperbole, triplets, etc. Assessment Objectives 5 and 6.**	**Seneca. AQA English Language**	**Seneca assessments - code: 3w2056brlr**
29/06/2020	**English Language**	**Key Terms for English language, Paper 2. Assessment Objectives 1, 2 and 3.**	**Seneca. AQA English Language**	**Seneca assessments - code: 3w2056brlr**

07/06/2020	**English Language**	**English Language Paper 2, Section B – transactional writing. SPaG Assessment Objectives 5 and 6.**	**Seneca. AQA English Language**	**Seneca assessments - code: 3w2056brlr**
13/07/2020	**English Language**	**English Language Paper 2, Section B – transactional writing. SPaG Assessment Objectives 5 and 6.**	**Seneca. AQA English Language**	**Seneca assessments - code: 3w2056brlr**

GCSE Resit Maths

W/C	Theme	Tasks	Resources	Assessment

1/6/2020	**Number**	1. Error intervals 2. Fractions	The work in this box is with a q or an a at the end of the number. The number is the task followed by a q means questions, followed by an a means these are the answers so that you can check your work. You then need to go onto Seneca learning and type in the code opposite, this will give you your assessment task. Many thanks 1q - https://www.mathsgenie.co.uk/resources/3-error-intervals.pdf 1a - https://www.mathsgenie.co.uk/resources/3-error-intervalsans.pdf 2q - https://www.mathsgenie.co.uk/resources/3-fractions.pdf 2a - https://www.mathsgenie.co.uk/resources/3-fractionsans.pdf	Seneca learning class code is 44j0a7v1p3
8/6/2020	**Ratio and proportion**	1. Writing simplifying ratios 2. Sharing ratios	1q - https://www.mathsgenie.co.uk/resources/3-writing-and-simplifying-ratio.pdf 1a - https://www.mathsgenie.co.uk/resources/3-writing-and-simplifying-ratio.pdf 2q - https://www.mathsgenie.co.uk/resources/3-sharing-ratio.pdf 2a - https://www.mathsgenie.co.uk/resources/3-sharing-ratioans.pdf	Seneca learning class code is 44j0a7v1p3
15/6/2020	**Percentages**	1. Percentages 2. Percentage change	1q - https://www.mathsgenie.co.uk/resources/3-percentages.pdf 1a - https://www.mathsgenie.co.uk/resources/3-percentagesans.pdf 2q - https://www.mathsgenie.co.uk/resources/3-percentage-change.pdf 2a - https://www.mathsgenie.co.uk/resources/3-percentage-changeans.pdf	Seneca learning class code is 44j0a7v1p3
22/6/2020	**Algebra skills**	1. Solving equations 2. Substitution	1q - https://www.mathsgenie.co.uk/resources/3-solving-equations.pdf 1a - https://www.mathsgenie.co.uk/resources/3-solving-equationsans.pdf 2q - https://www.mathsgenie.co.uk/resources/3-substitution.pdf 2a - https://www.mathsgenie.co.uk/resources/3-substitutionans.pdf	Seneca learning class code is 44j0a7v1p3

29/6/2020	**Circles and transformations**	1. Circles 2. Mixed transformations	1q - https://www.mathsgenie.co.uk/resources/3-circles-area-and-circumference.pdf 1a - https://www.mathsgenie.co.uk/resources/3-circles-area-and-circumferenceans.pdf 2q - https://www.mathsgenie.co.uk/resources/3-transformations.pdf 2a - https://www.mathsgenie.co.uk/resources/3-transformationsans.pdf	Seneca learning class code is 44j0a7v1p3
6/7/2020	**Probability**	1. Frequency trees 2. Two way tables	1q - https://www.mathsgenie.co.uk/resources/3-frequency-trees.pdf 1a - https://www.mathsgenie.co.uk/resources/3-frequency-treesans.pdf 2q - https://www.mathsgenie.co.uk/resources/3-two-way-tables.pdf 2a - https://www.mathsgenie.co.uk/resources/3-two-way-tablesans.pdf	Seneca learning class code is 44j0a7v1p3