BTEC ENGINEERING: LEVEL 1/2

Curriculum Intent: To build on year 10 curriculum and prepare for external practical exam and theory exam.

- Pupils will consider suitable manufacturing methods to redesign and justifying a design solution.
- Pupils will use dismantling techniques to examine relevant features of components.
- Pupils will understand tolerance data and inspecting dimensions. Presenting this engineering based data in visual form as practice for practical exam.

Year 11	HT1	HT2	HT3	HT4	HT5	HT6
Content, Knowledge & Skills	**MULTI TOOL INVESTIGATION** Unit 2B: Investigating an engineered product using disassembly techniques.	**MULTI TOOL INVESTIGATION** Unit 2B: Investigating an engineered product using disassembly techniques.	**PRACTICAL: SPANNER** Unit 2C: Exploring Engineering Sectors and Design Applications	**PRACTICAL REVISION** Unit 3: Part A Analysing engineering data.	**THEORY REVISION**	**RESIT**
Purpose / potential links to KS4 & future steps	Students learn to Identify materials used in engineering. Students look at function and requirement of parts. Examination skills to identify mass, surface features, degradation, standard ID marks.	Students learn to Identify materials used in engineering. Students look at function and requirement of parts. Examination skills to identify mass, surface features, degradation, standard ID marks.	Students reproduce a component of a larger engineered product. The spanner of the multi tool allows students to work with aluminium using the skills of scribing, sawing, filing, chiselling, deburring, and drilling.	Students complete practical activities similar to the exam practical to familiarise with the task of the production of graphs to communicate collated data. This data is then analysed for patterns and anomalies.	Theory Revision of Design Element of paper to evaluate an existing product for development. Redesign of product considering manufacturing methods and materials.	
Key Vocabulary	Mass Surface features	Mass Surface features	Health and Safety Reverse Engineering	Velocity Dimensions	Tolerance	
Assessment	Labelled and sequence recorded and used to reverse engineer the Multi Tool. Parts list produced to identify and explain the criteria for each component.	Labelled and sequence recorded and used to reverse engineer the Multi Tool. Parts list produced to identify and explain the criteria for each component.	Step by Step production plan. QC and Risk assessment. Evaluation with reference to the design proposal and success of model. Peer assessment of product.	Practical Past Papers.	Theory Past papers.	