

Year 10 Technology	Subject Intent	We want our students to understand engineering sectors, products and organisations, and how they interrelate. Examine what is engineering, different engineering sectors, and engineering disciplines. Types of engineers. What is engineering, what is the role of engineering in society. To understand materials, components and processes for a given engineering product and to explore engineering skills through the design process.
	KS3 Subject Narrative	Our KS3 Curriculum is project based and covers the key skills needed for the Tech Award in Engineering. Students are taught practical workshop skills and techniques alongside Design, Communication and problem solving. Students also study how products are developed from their initial concept and how to analyse products with a view to making improvements.
	KS4 Subject Narrative	Students will produce an investigation and report (following a visit to Bosch Rexroth St Neots). This is in the form of a word-processed report which covers Engineering disciplines, Engineering sectors and engineering products. Students also prepare for a practical and written formal Examination which is externally assessed.
	Routine Assessment Strategies	Students are assessed in two different ways. Component 1 (below) is delivered in the form of an assignment brief with a deadline for completion. The assignment covers content that is taught and gives students the opportunity to apply their knowledge and skills. Teacher grades are given for this component. Component 3 (below) is an external assessment. This will be a task that is set and marked by Pearson, the exam board.

Year 10 Technology	WHY THIS, WHY NOW?	Term 1 (Component 1- Exploring Engineering Sectors and Design Applications)	Term 2 (Component 1- Exploring Engineering Sectors and Design Applications)	Term 3 (Component 3- Responding to an Engineering Brief- Examination Component)
	Enquiry questions	Examine what is engineering and what is the role of engineering in society.	Explore engineering skills through the design process.	Preparation and completion of the externally set task. How to find solutions to problems in a given Engineering Brief.
	Key Subject Knowledge	the interconnection between types of engineer and different disciplines. Consideration of safe working and the need for safety both in the design and manufacture of engineering products.	The importance of correct interpretation of customer requirements. Interpretation of an engineering brief. methods used to produce engineering drawings. Demonstrating common CAD commands.	Being able to carry out a process using instructions. Understanding how a product is assembled. Displaying data using charts and graphs. Interpretation of data that students have recorded. Identifying anomalous results and sources of error. Manufacturing processes and selection of materials
	Subject Competencies	Use a wide range of research techniques including questionnaires and interviewing Engineers at the Bosh visit Presentation techniques for coursework. Recording and annotating using photographic evidence.	Use of CAD (Computer Aided Design) software. Techniques for collecting evidence for coursework including annotated screenshots and photos. Creative thinking: Rewording the problem, brainstorming, mind maps, thinking in reverse. Use of Laser Cutting Software and Safe operation of the machine.	Recording of Data from a set task. Interpretation of the data using Graphs. Being able to make recommendations for improvement and drawing conclusions. Interpretation of design briefs. Product analysis: Being able to redesign a product and suggest improvements.
	Summative Assessments (high stakes assessments which test <u>cumulative</u> knowledge)	Assessment based on Exam board marking bands given to students in an assignment brief.	Assessment based on Exam board marking bands given to students in an assignment brief. Btec Tech Award Observation Record completed by your Teacher.	Practice Examinations including Practical test 1, Walking Talking Mock. Externally Assessed Component.
How does this pave the way for future study?	There are many options within the field of Engineering which students will gain experience of when they visit Bosch Rexroth. Engineers will talk to the students about these Level 3 courses at HRC/ CRC and Bedford College.	The transferrable skills in this component can be used in many Level 3 Engineering courses where knowledge and hands on experience of CAD and CAM are vital	This component has many skills that transfer into Vocational courses provided locally: Being able to interpret a design brief. Take accurate readings from equipment and then analyse how operations can be done more efficiently and suggest improvements.	

