

## Engineering

<b>Year group</b>	10					
<b>Course</b>	Engineering					
<b>Exam board Specification</b>	Pearson's (EDXCEL) BTEC Level 2 Engineering					
<b>External assessment</b>	1 x On line test based on the Engineering World. (25% of overall grade) Controlled assessment 3 x Units of study (internally assessed and externally moderated).					
• <b>Course content</b>	• <b>Autumn</b>		<b>Spring</b>		<b>Summer</b>	
	• <b>Term 1</b>	<b>Term 2</b>	<b>Term 3</b>	<b>Term 4</b>	<b>Term 5</b>	<b>Term 6</b>
	Unit 2: An Engineered Product.  <ul style="list-style-type: none"> <li>• Engineering Properties and Qualities.</li> <li>• Engineering Specifications</li> <li>• Engineering Materials</li> <li>• Comparing and Contrasting of different Materials</li> </ul> Unit 1: The Engineering World	Unit 2: An Engineered Product.  <ul style="list-style-type: none"> <li>• Engineering Processes, Vacuum Forming and Extrusion Moulding</li> <li>• Advantages of Engineering Processes</li> <li>• Comparing and Contrasting Engineering processes</li> </ul> Unit 1: The Engineering World	Unit 2: An Engineered Product.  <ul style="list-style-type: none"> <li>• Quality Control in Engineering</li> <li>• Quality Assurance in Engineering</li> <li>• Developing a new QA/QC for Dyson</li> </ul> Unit 1: The Engineering World	Unit 2: An Engineered Product  <ul style="list-style-type: none"> <li>• Quality Control in Engineering</li> <li>• Quality Assurance in Engineering</li> <li>• Developing a new QA/QC for Dyson</li> </ul>	Unit 6: Computer Aided Engineering.  <ul style="list-style-type: none"> <li>• Introduction to SolidWorks</li> <li>• CAD Commands and editing.</li> <li>• Production of 3D SolidWorks parts</li> </ul>	Unit 6: Computer Aided Engineering.  <ul style="list-style-type: none"> <li>• Introduction to 2D Design and Crocodile clips</li> <li>• Circuit Diagrams</li> <li>• Laser Cutting from 2D computer drawings.</li> </ul>

	<ul style="list-style-type: none"> <li>• Sectors of Engineering</li> <li>• Machining Processes</li> <li>• Welding</li> </ul>	<ul style="list-style-type: none"> <li>• Casting processes</li> <li>• Forging methods</li> </ul>	<ul style="list-style-type: none"> <li>• Printed Circuit Board manufacture</li> </ul>	Unit 1: The Engineering World <ul style="list-style-type: none"> <li>• Scales of Production</li> <li>• Modern Production Methods</li> </ul>	Unit 1: The Engineering World <ul style="list-style-type: none"> <li>• CNC machinery</li> <li>• Modern and Smart Materials</li> </ul>	Unit 1: The Engineering World <ul style="list-style-type: none"> <li>• Scales of Production</li> </ul>
<b>Useful websites</b>	Specification: Sample Papers: Technology Student.com <a href="http://www.technologystudent.com">www.technologystudent.com</a> Design and technology Association <a href="https://www.data.org.uk/">https://www.data.org.uk/</a> BBC Bitesize Revision <a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">www.bbc.co.uk/schools/gcsebitesize/design/</a>					

<b>Year group</b>	11					
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	<b>Term 1</b>	<b>Term 2</b>	<b>Term 3</b>	<b>Term 4</b>	<b>Term 5</b>	<b>Term 6</b>
	UNIT 5:  Learning Aims A: - Types of engineering materials - Properties of materials - Suitability of materials in engineering applications - Heat Treatment processes -	UNIT 5:  Learning Aims B: - Selection for applications - Sustainable use of materials - Forms of Supply	UNIT 6:  Learning Aims A: - Using a CAD system to produce engineering drawings - Use of a CAD system to produce a circuit diagram	UNIT 6:  Learning Aims B: - Use of a CAD system - Using solidworks - Using 2D Design - Familiarisation with CAM/CNC equipment	UNIT 1:  Revision and exam preparation	UNIT 1:  Revision and exam preparation
<b>Useful websites</b>	<a href="http://www.technologystudent.com">www.technologystudent.com</a> <a href="https://www.data.org.uk/">https://www.data.org.uk/</a> <a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">www.bbc.co.uk/schools/gcsebitesize/design/</a>					