

## NCFE Level ½ Technical Award in Engineering Curriculum Intent Y10

	Autumn Term		Spring Term		Summer Term	
	1 September- October	2 November- December	1 January- February	2 February- March	1 April- May	2 June-July
<b>Key Concepts</b>	1 Engineering disciplines through projects and products  5. Engineering tools, equipment and machines	2 Application of SI units of measurement  5. Engineering tools, equipment and machines	3. Reading engineering drawings  5. Engineering tools, equipment and machines	4. Properties, characteristics and selection of engineering materials  5. Engineering tools, equipment and machines	6. Hand-drawn engineering drawings  5. Engineering tools, equipment and machines	7. Computer-aided design (CAD) engineering drawings  5. Engineering tools, equipment and machines
<b>Knowledge &amp; Understanding</b>	1.1 The learner will understand different engineering disciplines and how their application has solved problems and shaped the modern world through projects and products.  1.2 The learner will understand the health and safety legislation governing the engineering	2.1 The learner will understand how SI units of measurement are used in engineering products and projects.  2.2 The learner will understand how mathematical and scientific equations are used in engineering disciplines to calculate energy, force, motion,	3.1 The learner will understand the British Standard (BS) 8888 for 2D and 3D engineering drawings.  5.1 The learner will understand health and safety, control measures, and safe and correct use of common tools, equipment and machines used in the engineering industry for manufacturing,	4.1 The learner will understand how materials exhibit properties and characteristics in engineering products and projects.  5.1 The learner will understand health and safety, control measures, and safe and correct use of common tools, equipment and machines used in the engineering industry for	6.1 The learner will understand how to produce hand-drawn engineering drawings, apply specific drawing conventions and use layouts recognised within the engineering industry, following British Standard (BS) 8888 (education version).  5.1 The learner will understand health and safety, control measures, and safe	7.1 he learner will understand CAD software to produce engineering drawings. The learner will understand the specific drawing conventions and layouts recognised within the engineering industry, following British Standard (BS) 8888 (education version).

	<p>industry and its purpose.</p> <p>5.1 The learner will understand health and safety, control measures, and safe and correct use of common tools, equipment and machines used in the engineering industry for manufacturing, including those used for marking out, cutting, modifying, joining and finishing.</p> <p>5.2 The learner will understand the safe and correct use of common tools, equipment and machines used in the engineering industry.</p>	<p>electrical and geometric shapes.</p> <p>5.1 The learner will understand health and safety, control measures, and safe and correct use of common tools, equipment and machines used in the engineering industry for manufacturing, including those used for marking out, cutting, modifying, joining and finishing.</p> <p>5.2 The learner will understand the safe and correct use of common tools, equipment and machines used in the engineering industry.</p>	<p>including those used for marking out, cutting, modifying, joining and finishing.</p> <p>5.2 The learner will understand the safe and correct use of common tools, equipment and machines used in the engineering industry.</p>	<p>manufacturing, including those used for marking out, cutting, modifying, joining and finishing.</p> <p>5.2 The learner will understand the safe and correct use of common tools, equipment and machines used in the engineering industry.</p>	<p>and correct use of common tools, equipment and machines used in the engineering industry for manufacturing, including those used for marking out, cutting, modifying, joining and finishing.</p> <p>5.2 The learner will understand the safe and correct use of common tools, equipment and machines used in the engineering industry.</p>	<p>5.1 The learner will understand health and safety, control measures, and safe and correct use of common tools, equipment and machines used in the engineering industry for manufacturing, including those used for marking out, cutting, modifying, joining and finishing.</p> <p>5.2 The learner will understand the safe and correct use of common tools, equipment and machines used in the engineering industry.</p>
<b>Assessment</b>	End of topic assessment	End of topic assessment	End of topic assessment	End of topic assessment	End of topic assessment	Mock Exam

<b>Why this? Why now?</b>	<p>This unit provides learners with a broad and indepth knowledge base providing the opportunity to explore the engineering sector. The learner will be required to apply knowledge and understanding through a mandatory assessment which will be sat at the end of Year 11. Students will also have a mock in Year 10.</p>
<b>Skills &amp; Characteristic</b>	<p>Commitment, effective communication and interpersonal skills, observation skills, professionalism, problem-solving skills, teamwork, reflective practitioner, marking, measuring., Independence, Retention, Application, Knowledge, Understanding, Evaluation</p>
<b>Aspirations &amp; Careers</b>	<p>Tradesman: Electrician, Plumer, Joiner, Builder. Engineer: Materials, Civil, Automotive, Design, Chemical, Clinical, Games Designer, Graphic Designer, Product Designer, Construction Manager CAD Technician, Secondary School Teacher, Data Analysis</p>