

	<u>Topic</u>	<u>Key concept – what do I want the students to learn from this unit?</u>	<u>What knowledge will they acquire?</u>
YEAR 10 Engineering OVERVIEW			
10 - half term 1	Engineering R105 – Design process examination (25% of qualification)	Design briefs, specifications and user requirements (and wider influences impact design process)	<ul style="list-style-type: none"> • Design cycle • Needs and wants • Development of new products • Impact of wider influences on the design of new products
10 – half term 2	Engineering R105 – Design process examination (25% of qualification)	Design briefs, specifications and user requirements (and wider influences impact design process)	<ul style="list-style-type: none"> • Design cycle • Needs and wants • Development of new products • Impact of wider influences on the design of new products
FORMAL ASSESSMENT – external examination for R105			
10 – half term 3	Engineering	Evaluate existing products to see how they are made and why	<p>Commercial production methods impact of products (one off, batch, mass, automation, moulding, pressing, shaping, machining, finishing and assembly methods, end of product life considerations, conformity to regulations and standards)</p> <p>Research existing products (primary and secondary research, strengths and weakness of existing products, summarise research)</p> <p>Disassemble and analyse and existing product (procedures for disassembly, using tools and equipment safely, analyse components, materials, production and maintenance issues)</p>
10 – half term 4	R106 – Product analysis and research coursework (25% of qualification)	What has influence the products design and manufacture	
10 – half term 5		<i>These concepts are taught holistically over a term and a half through a variety of activities</i>	
10 – half term 6	Engineering R107 – Developing and presenting design ideas coursework (25% of qualification)	Develop techniques for generation development and communication of design ideas <i>These concepts are taught holistically over two and a half terms alongside teaching R108 (3D</i>	<ul style="list-style-type: none"> • Generate design proposals using a range of techniques

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	** this work will be continued in year 11.	<i>design realisation) as the skills complementary and deepen understanding</i>	
FORMAL ASSESSMENT			