

# KS4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 10 AQA GCSE D&amp;T</b>	Mini Coursework Project CAD Design Remote Controls		<ul style="list-style-type: none"> <li>• Sketching techniques to design and present ideas.</li> <li>• Annotation and labelling.</li> <li>• The use of ICT software to produce, modify and enrich design proposals techniques.</li> <li>• Engineering drawings</li> <li>• CAD applications to produce and communicate design proposals</li> <li>• Communication of design proposals</li> </ul>	Preparation for Coursework project begins.	Assessment Objective 1 Investigation.	Assessment Objective 2 Design ideas.
	Theory work to be taught alongside other units throughout year 10 and 11			Exam Preparation 3.1 Core technical principles	Exam Preparation 3.2 Specialist Technical Principles.	<ul style="list-style-type: none"> <li>• Design Brief</li> <li>• Research</li> <li>• Specification</li> </ul>
		<ul style="list-style-type: none"> <li>• New &amp; emerging technologies.</li> <li>• Energy generation.</li> <li>• New Materials</li> </ul>	<ul style="list-style-type: none"> <li>• Systems approach to designing.</li> <li>• Mechanical systems</li> <li>• Materials and Properties.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of materials</li> <li>• Forces and stresses</li> <li>• Social footprint</li> <li>• Sources and origins</li> <li>• Working with materials</li> </ul>	<ul style="list-style-type: none"> <li>• Stock Forms</li> <li>• Scales of production</li> <li>• Specialist techniques</li> <li>• Surface finishes.</li> </ul>	
<b>Year 11 OCR National Engineering Design. Discontinued</b>	Unit R106: Product analysis and research <ul style="list-style-type: none"> <li>• Commercial production methods that impact on product /component design,</li> <li>• Impact of manufacturing processes on product design,</li> <li>• Considerations for product end of life,</li> <li>• Importance of conformity to legislation, quality and safety standards,</li> <li>• Research methods used to inform product analysis, • Strengths and weaknesses of existing products</li> <li>• methods used to summarise research</li> </ul>	Unit R105: (Examined unit January exam prep) Design briefs, design specifications and user Requirements. <ul style="list-style-type: none"> <li>• Identification of design needs. Information which may inform the design brief</li> <li>• Requirements of a design specification,</li> <li>• Product requirements</li> <li>• Considerations,</li> </ul>	Unit R108: 3D design realisation <ul style="list-style-type: none"> <li>• Key considerations when making a prototype</li> <li>• Identification and consideration of risks in production plans</li> <li>• Production and use of risk assessments for production activities</li> <li>• How to assess hazards and take precautions when using tools and machines</li> <li>• Safe use of hand tools and machines</li> <li>• Use of personal protective equipment (PPE) during production processes</li> <li>• Safe working procedures when using materials, chemicals, finishes and solvents</li> <li>• Selection and use of appropriate materials to produce a prototype</li> <li>• Use of tools and processes to cut and shape materials</li> <li>• Use of preparation and assembly methods</li> </ul>	Unit R105: Final Exam Prep Design briefs, design specifications and user Requirements. <ul style="list-style-type: none"> <li>• Identification of design needs. Information which may inform the design brief</li> <li>• Requirements of a design specification,</li> <li>• Product requirements</li> <li>• Considerations,</li> </ul>		