



### Learning Aims and Curriculum Intent:

In Year 11, Design and Technology continues to deliver a broad and inclusive curriculum that has been meticulously designed as a continuation of Year 10. This course is split into two; the technical principles, worth 50%, which is covered as part of a set of designated theoretical lessons, and the design and making principles, worth 50%, pupils completing their main Non-Exam Assessment (NEA). Pupils are expected to undergo a design process and ultimately design and manufacture high-quality product solution for a specific client of their choice. The practical outcome is complemented with an electronic design portfolio, showcasing an array of skills from analysis to research iterative design to prototype modelling and conducting a vast number of tests with a detailed evaluation.

Term	Technical Principles	Design and Making Principles	Skills	Assessment
Michaelmas	<p><b>Specialist Technical Principles 3.2:</b></p> <p><b>Timber Based Materials</b></p> <ul style="list-style-type: none"> <li>• Stock forms, types and sizes</li> <li>• Scales of production</li> <li>• Specialist techniques and processes</li> <li>• Surface treatments and finishes.</li> </ul> <p><b>Design and Making Principles</b></p> <ul style="list-style-type: none"> <li>• Investigation, primary and secondary data</li> <li>• Environmental social and economic challenge</li> <li>• The work of others</li> <li>• Design strategies</li> <li>• Communication of design ideas</li> <li>• Prototype development</li> <li>• Selection of materials and components</li> <li>• Material management</li> <li>• Specialist tools and equipment</li> </ul>	<p><b>1) AO1 – Identify, investigate, and outline design possibilities.</b></p> <ul style="list-style-type: none"> <li>• Identify and investigate design possibilities.</li> <li>• Design Brief and Specification.</li> </ul> <p><b>2) AO2 – Design and make prototypes that are fit for purpose.</b></p> <ul style="list-style-type: none"> <li>• Generating design ideas</li> <li>• Developing design ideas</li> <li>• Realising design ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Drawn design, development, and presentation.</li> <li>• Primary research pages</li> <li>• Prototype modelling using different materials, using workshop tools / equipment.</li> <li>• Planning</li> <li>• Initial concepts</li> <li>• Iterative design and development</li> <li>• Scale modelling</li> <li>• Consumer review</li> <li>• CAD drawing and technical data.</li> </ul>	<ul style="list-style-type: none"> <li>• Holistic assessment of the entire design portfolio and final practical solution. feedback and active oracy.</li> </ul>
Lent	<ul style="list-style-type: none"> <li>• Mock Exams</li> <li>• Revision / NEA Completion</li> </ul>	<p><b>3) AO3 – Analyse and evaluate.</b></p> <ul style="list-style-type: none"> <li>• Analysing and evaluating</li> </ul>	<ul style="list-style-type: none"> <li>• CAD drawing and technical data</li> <li>• Scale modelling part 2</li> <li>• Manufacturing using a range of different materials, workshops tools and equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Holistic assessment of the entire design portfolio and final practical solution. feedback and active oracy..</li> </ul>
Trinity	<ul style="list-style-type: none"> <li>• Revision</li> </ul>	<ul style="list-style-type: none"> <li>• NEA Submission to Exam Board</li> </ul>	<ul style="list-style-type: none"> <li>• Revision skills, exam techniques.</li> </ul>	<ul style="list-style-type: none"> <li>○ Past exam questions / papers</li> </ul>

<b>Examples of Homework</b>	Conduct primary research, analysing existing products and their features, materials and manufacturing techniques that make it a commercially viable product. Develop designs in relation to your contextual challenge, design brief and design specification, highlight key parts of the design, noting materials suitable for use, ideal manufacturing techniques both in a school workshop and in industry.
<b>Key terminology</b>	Technical, Specification, Design Brief, Planning, Prototype, Industry, Properties, Materials, Manufacturing, Industry Standard, Quality Assurance, Quality Control, Laser Cutting, 3D Printing, Bespoke, One-Off, Iterative, Scales of Production, Finish, Aesthetics, Ergonomics, Anthropometrics, Client, Safety Features, Evaluation, Analysis.

<b>Super-curricular enrichment and scholarly extension</b>	<b>Read:</b> Guardian Design Long Reads, How Design Makes the World (Berkun, S. 2020), <b>Watch:</b> How its Made, Design in a Nutshell ( <a href="#">The Open University</a> ) <b>Listen:</b> Design Better (The Curiosity Department), 99% Invisible, Monocle on Design <b>Visit:</b> Design Museum; V&A South Kensington; V&A Bethnal Green; Design Shops – Conran Shop, Monocle, twentytwentyone, etc. London Design Festival	
<b>Useful websites</b>	<a href="#">GCSE Design and Technology - AQA - BBC Bitesize</a> <a href="#">Dezeen   architecture and design magazine</a>	
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