

Design and Technology Curriculum for KS4 stage 2024-25

Following the AQA GCSE DESIGN AND TECHNOLOGY (8552)

Year	Autumn Term		Spring Term		Summer Term	
	First half	Second half	First half	Second half	First half	Second half
Year 10 Theory	<p><u>Designing and making principles</u> <u>Designing principles</u> -Investigation, primary and secondary data. -Environmental, social and economic challenge.</p>	<p><u>Designing principles Continued.</u> -The work of others. -Design strategies. -Communication of design ideas. -Prototype development.</p>	<p><u>Making principles</u> -Selection of materials and components. -Tolerances. -Material management. -Specialist tools and equipment. -Specialist techniques and processes.</p>	<p><u>Core technical principles</u> <u>New and emerging technologies</u> -New and emerging technologies. <u>Energy, materials, systems and devices</u> -Energy storage and generation. -Developments in new materials. -Systems approach to designing. -Mechanical devices. <u>Materials and their working properties</u> -Materials and their working properties.</p>	<p><u>Specialist technical principles</u> <u>Common specialist technical principles</u> -Forces and stresses. Ecological and social footprint. -Scales of production. <u>Specialist material areas</u> <u>Timber based materials</u> -Selection of materials or components Materials covered. -Sources and origins. -Using and working with materials. -Stock forms, types and sizes. -Specialist techniques and processes. -Surface treatments and finishes.</p>	<p>See NEA tasks</p>
Year 10 Practical	<p><u>Practice NEA Tasks</u> <u>Identifying design possibilities</u> -Exploring the design context. -The role of the designer.</p>	<p><u>Practice NEA Tasks</u> <u>Generating design ideas</u> -Scruffiti and Jackstraws. -Draw an existing product. -Inspiration from nature.</p>	<p><u>Practice NEA Tasks</u> <u>Developing design ideas</u> -Develop multiple ideas and iterations. -The iterative design process. -Methods of development.</p>	<p><u>Practice NEA Tasks</u> <u>Realising design ideas</u> -Planning for manufacture. -Working Drawing. -Cutting List. -Planning your time. -Quality assurance and Quality Control.</p>	<p><u>Practice NEA Tasks</u> <u>Analysing and Evaluating</u> -Testing. -Evaluation. -SWOT Analysis. -Modifications. -Evidences. <u>Communication</u> -Presentation. -Wrapping it all up.</p>	<p><u>NEA tasks</u> <u>Identifying design possibilities.</u> <u>Generating design ideas.</u></p>

	<ul style="list-style-type: none"> -Choosing a client or user. -Consider your target market. -Inclusive and exclusive markets. -Writing your design brief. -Analysing the brief. -Methods and purpose of research. -Analysing the research. -Writing a design specification. 	<ul style="list-style-type: none"> -Try something abstract or surreal. -Limit the time you spend on one idea. -Freehand Sketching. -CAD models. 	<ul style="list-style-type: none"> -Good old -fashioned drawing. -Modelling. -Material considerations. -Model, One -Off or Prototype. -Model. -One Off. -Prototype. -Completing the design phase. -Hand drawn. -CAD. -Rendered model. -Animation. 	<ul style="list-style-type: none"> -Record of manufacture. -Rapid prototyping. 	<ul style="list-style-type: none"> -Formatting your digital folder. -Candidate Record Forms (CRF) 	
Year 11 Theory	See NEA tasks	See NEA tasks	See NEA tasks	<u>Revision and exam practice</u>	<u>Revision and exam practice</u>	Study leave
Year 11 Practical	<u>NEA tasks</u> Developing design ideas.	<u>NEA tasks</u> Realising design ideas.	<u>NEA tasks</u> Realising design ideas. Analysing and Evaluating.	<u>NEA Tasks</u> Analysing and Evaluating. Communication.	N/A	N/A