



Year 11 Design & Technology curriculum – 2024-2025

	Autumn Term		Spring Term		Summer Term	
	1	2	1	2	1	2
Key Concepts	<p><u>Controlled Assessment - NEA</u></p> <p>Students will be given a choice of three briefs, they will choose one and complete their non-exam assessment on their chosen brief. They will then use their client to come up with a product suitable for the brief.</p> <p>Throughout their NEA, students complete the following sections:</p> <ul style="list-style-type: none"> Identify, investigate and outline design possibilities Produce a design brief and design specification <p>Students complete an online portfolio and then create a prototype of the final</p>		<p><u>Controlled Assessment - NEA</u></p> <p>Students will be given a choice of three briefs, they will choose one and complete their non-exam assessment on their chosen brief. They will then use their client to come up with a product suitable for the brief.</p> <p>Throughout their NEA students complete the following sections:</p> <ul style="list-style-type: none"> Generate design ideas Develop design ideas Analyse and evaluate their final design <p>Students complete an online portfolio and then create a prototype of the final product.</p>		<p><u>Exam Preparation:</u></p> <p>Students will recap and revise a range of topics with Design and Technology. They will demonstrate a range of revision techniques and complete past papers to prepare them for their final exam.</p>	



	<p>product. They will use specialist tools and machines to manufacture the product.</p> <p>In order to achieve a higher mark students must respond to their clients needs and wants, ensuring the product meets the specification.</p>	<p>They will use specialist tools and machines to manufacture the product.</p> <p>In order to achieve a higher mark, students must respond to their clients needs and wants, ensuring the product meets the specification.</p>		
<p>Knowledge & Understanding (National Curriculum) <i>Skills are across the whole year.</i></p>	<p>Students know and understand how to:</p> <p>3.1 Core technical principles In order to make effective design choices students will need a breadth of core technical knowledge and understanding that consists of:</p> <ul style="list-style-type: none"> • new and emerging technologies • energy generation and storage • developments in new materials • systems approach to designing • mechanical devices • materials and their working properties. <p>3.2 Specialist technical principles In addition to the core technical principles, all students should develop an in-depth knowledge and understanding of the following specialist technical principles:</p> <ul style="list-style-type: none"> • selection of materials or components • forces and stresses • ecological and social footprint • sources and origins • using and working with materials • stock forms, types and sizes 			



	<ul style="list-style-type: none"> • scales of production • specialist techniques and processes • surface treatments and finishes. <p>Each specialist technical principle through timber based materials, metal based materials & polymers</p> <p>3.3 Designing and making principles Students should know and understand that all design and technology activities take place within a wide range of contexts. They should also understand how the prototypes they develop must satisfy wants or needs and be fit for their intended use. For example, the home, school, work or leisure. They will need to demonstrate and apply knowledge and understanding of designing and making principles in relation to the following areas:</p> <ul style="list-style-type: none"> • investigation, primary and secondary data • environmental, social and economic challenge • the work of others • design strategies • communication of design ideas • prototype development • selection of materials and components • tolerances • material management • specialist tools and equipment • specialist techniques and processes.
<p>Skills</p>	<div data-bbox="376 1129 860 1214" data-label="Text"> <p>R <i>Develop</i> RESILIENCE</p> </div> <div data-bbox="1240 1109 2123 1278" data-label="List-Group"> <ul style="list-style-type: none"> ★ <i>Staff emphasise the importance of effort, learning, and improvement rather than just the final outcome.</i> ★ <i>Recognize and celebrate the effort, creativity, and resilience demonstrated during the process, not just the final product.</i> </div>



		<ul style="list-style-type: none"> ★ <i>Students understand that design is an iterative process where failure is a step towards improvement.</i>
	<p>A Possess AMBITION</p>	<ul style="list-style-type: none"> ★ <i>Guide NEA projects that push students to go beyond their comfort zones.</i> ★ <i>NEA's allow students the freedom to explore and create unique solutions.</i> ★ <i>Students set Specific, Measurable, Achievable, Relevant, and Time-bound goals for Nea's,</i>
	<p>I Demonstrate INTEGRITY</p>	<ul style="list-style-type: none"> ★ <i>Students analyse real-world examples where ethical dilemmas were encountered in design and technology fields.</i> ★ <i>Students learn about copyright laws, patents, and the importance of respecting intellectual property.</i> ★ <i>Students develop projects that look at sustainable and socially responsible design.</i>
	<p>S Embed Self-Discovery</p>	<ul style="list-style-type: none"> ★ <i>Students are taught to break down projects into manageable tasks and set realistic timelines.</i> ★ <i>Students keep design & manufacturing diaries where they reflect on their design process, challenges, and successes.</i>



	<p>E Display EMPATHY</p>	<ul style="list-style-type: none"> ★ <i>Students are encouraged to explore cultural heritage, personal identity, or social issues.</i> ★ <i>Students use Use "How might we" questions to focus on user-centred problem solving.</i> ★ <i>Final Products encourages thinking beyond functional requirements to address emotional and social needs</i> 	
<p>Curriculum Links</p>	<p>The NEA uses skills and knowledge developed to design and make a prototype for a real live context. This is a substantial design and make task and takes up a large proportion of year 11. Students work independently on the task alongside a client.</p>	<p>The examination is the end 50% assessment of the course and uses skills and knowledge from the NEA and we as theory taught throughout year 10.</p>	
<p>Assessment</p>	<p>Non-exam assessment NEA Substantial design and task. 50% fo GCSE</p> <p>Assessment criteria:</p> <ul style="list-style-type: none"> • Identifying and investigating design possibilities • Producing a design brief and specification • Generating design ideas • Developing design ideas • Realising design ideas • Analysing & evaluating 	<p>Paper 1 Written exam: 2 hours 50% of GCSE</p> <p>At least 15% of the exam will assess maths At least 10% of the exam will assess science.</p>	



	<p>Students will produce a prototype and a portfolio of evidence Work will be marked by teachers and moderated by AQA</p>		
<p>Aspirations & Careers</p>	<ul style="list-style-type: none"> • NEA design projects simulate real-world D&T challenges and career scenarios. • Students are taught essential soft skills like communication, teamwork, problem-solving, and project management. • Students are encouraged to work professionally and self-promote in their NEA. • NEA's are encouraged to be in the top mark bands to encourage and enable all students to achieve the highest marks. • Students' next steps are supported in faculty with discussion on university courses as well as vocational and apprenticeships routes. 		