



## Year 12 Design & Technology AS Yearly Plan



Term	Areas to be Covered
<b>AUTU MN TERM 1</b>	<p><b>Core Skills Training</b> - Students undertake a series of lessons focusing on drawing and making skills. Drawing skills include creating 2D and 3D forms using a variety of techniques to develop quality outcomes. Students will have the opportunity to design and make a small product using Adobe Illustrator.</p> <p><b>NEA* Skills Training - Mini Project</b> - Students are given a design brief and specification. They then research and create design ideas for a product and are encouraged to produce innovative ideas. Students then develop their product design using model-making and make a prototype.</p>
	<p><b>Subject Knowledge and Understanding</b> - Students undertake a series of lessons and homework tasks in learning about the performance qualities of boards, timbers, metals, polymers and smart materials. Students are provided with regular opportunities for assessment and teacher feedback.</p>
<b>HALF-TERM</b>	
<b>AUTU MN TERM 2</b>	<p><b>NEA Skills Training - Mini Project</b> - Students further refine their product designs using computer-aided software and technical drawings are produced. Students then go on to manufacture a prototype of their product design using a variety of materials and processes. Students design and make packaging for their product using Adobe Illustrator and laser-cutting software.</p>
	<p><b>Core Skills Training</b> - Students undertake a series of lessons focusing on creating technical drawings and using computer-aided software for designing and manufacture. Core skills are developed in Adobe Illustrator.</p> <p><b>Subject Knowledge and Understanding</b> - Students undertake a series of lessons and homework tasks in learning about manufacturing and enhancement processes of woods, metals and polymers. Students are provided with regular opportunities for assessment and teacher feedback.</p>
<b>END OF TERM CHRISTMAS HOLIDAYS</b>	
<b>SPRING TERM 1</b>	<p><b>NEA Skills Training</b> - A substantial design and make project enables students to develop core skills leading to a quality product outcome. The project is directly linked to a contextual challenge and students undertake a comprehensive investigation of the needs and wants of an end user. Students produce innovative designs that demonstrate originality, creativity and a willingness to take design risks. Students use a variety of drawing and modelling techniques to show design thinking and problem-solving skills.</p> <p><b>Core Skills Training</b> - Students undertake design and making challenges using a variety of different resistant materials. They learn about forming processes in metals, plastics and woods. Students gain skills in using computer aided design and manufacture processes.</p>
	<p><b>Subject Knowledge and Understanding</b> - Students gain knowledge and skills in using design strategies and design movements. They develop understanding in designing for different target markets and designing with moral, ethical and sustainability considerations. Students analyse and evaluate products in detail, while understanding the iterative design process.</p>
<b>HALF TERM</b>	

<b>SPRING TERM 2</b>	<p><b>NEA Mock Project</b> - Students undertake a NEA style project that provides an excellent opportunity to design and make an electronic product. Students investigate parallel products through detailed research. They start to produce a substantial design folder for each stage of the project. Each section of the folder is assessed and teacher feedback is provided. Students use the iterative design process and are encouraged to continually develop and test their designs while considering the needs of their end-user.</p>
	<p><b>Subject Knowledge and Understanding</b> - Students gain knowledge in wood fabrication and forming processes, electronics and modern materials. Students revise and prepare for the theory exam.</p>

**END OF TERM  
EASTER HOLIDAYS**

<b>SUMMER TERM 1</b>	<p><b>NEA Mock Project</b> - Students continue with the NEA style project. They make their product using woods and assemble the circuit. Students test and evaluate the function of the product and respond to user feedback. They produce a substantial design folder for each stage of the project. Each section of the project is assessed using criteria from the AQA exam board.</p>
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	<p><b>Subject Knowledge and Understanding</b> - Students gain knowledge in analysing and evaluating a wide range of products. They understand the requirements of the AQA theory exam and prepare for the mock exam.</p>
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**HALF TERM**

<b>SUMMER TERM 2</b>	<p><b>Mock Exam</b> - Students take a 2 hour mock exam in test conditions. They are assessed with the criteria set by the AQA exam board.</p> <p><b>NEA - Final Project</b> - Students begin the final practical project that will count towards up to 50% of their final grade. They choose a contextual challenge and begin researching the project requirements.</p>
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