



ST CATHERINE'S COLLEGE

A CHURCH OF ENGLAND ACADEMY

Learning overview for Design & Technology

Year Group: 10

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Term	Key topics / scheme of work	What most pupils will learn (Prior assessment may alter starting point & content)	Key skills used	How will this learning be assessed?
Term 1 and 2	<i>Picture frame – traditional as well as laser cut.</i>	Pupils will create a picture frame using traditional tools as well as the laser cutter.	Pupils will understand the technical principles of timber. This includes the sources, origins, and properties of timber. They will understand how to work with timber-based materials. Pupils will understand the commercial manufacture, the surface treatments and finishes of timber. Also, pupils will learn about issues regarding the sustainability of timber.	Ongoing teacher assessment. Short tests. Assessment of homework.
	<i>Energy generation, energy storage.</i>	Pupils will learn how science principles combine with technology and understand the impact of this science in technology.		
Term 3	<i>Metals project</i>	Pupils will use a range of metal work processes to create various products in metal. This could well be the creation of a brass finger ring. The project will also consider making storage for the product.	Cutting shaping and forming with metal. Pupils will understand how metals are extracted from the earth, how they are process and the sustainability issues involved in using metals for products.	Ongoing teacher assessment. Short tests. Assessment of homework.





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Term 3.	<i>Materials</i>	Pupils will understand paper and board and know how and why these products are used. They will also understand the uses of textile materials and the choices designers have based on the properties of these materials.	Pupils will be able to make informed choices about these materials when industrially manufacturing products. They will understand how these can have social and environmental consequences.	Ongoing teacher assessment. Short tests. Assessment of homework.
Term 4	<i>Game project</i>	Pupils will create a game. This will reinforce the skills and knowledge developed with the picture frame project.	Pupils will have to select the correct tools and materials and combine these to create a product with good aesthetics and function.	Ongoing teacher assessment. Short tests. Assessment of homework.
Term 5	<i>Various short tasks that integrate with theory lessons.</i> <i>Book end and joints.</i>	For example, the analysis of different adhesives. Use and analysis of adhesives.	Pupils will combine practical skills with theoretical knowledge so they can make informed choices when working independently on their NEA. Pupils will use quality control and consider tolerances and allowances. They will need to	Ongoing teacher assessment. Short tests. Assessment of homework.





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Term 5	Mock exam	<p>To prepare pupils for the NEA project, pupils will use traditional tools to create wood joints.</p> <p>Pupils will learn exam skills and revision techniques to undertake a mock exam.</p>	consider material management and marking out.	Teacher assessment.
Term 6	<p><i>NEA (course work).</i></p> <p><i>Revision of key words</i></p>	<p>Pupils will start creating their NEA (non- exam assessment) design folder. The exam board publish the design context on June 1st each year.</p>	<p>Pupils will investigate and uncover a real-life problem and start to investigate this ready for continuation in September of Yr. 11.</p>	<p>Ongoing teacher assessment of the NEA. (Controlled assessment)</p>
All terms	<i>Theory</i>	<p>A considerable amount of theory work is integrated with the projects.</p>		<p>An end of year mock exam.</p> <p>Ongoing tests and teacher assessment.</p> <p>Some questions are set for homework.</p>

