



# ST. CATHERINE'S COLLEGE

A CHURCH OF ENGLAND ACADEMY

## Learning overview for Design & Technology

Year Group: 8

Term	Key topics / scheme of work	What most pupils will learn  (Prior assessment may alter starting point & content)	Key skills learned.	How will this learning be assessed?
Clock module.	<i>Clock module.</i>	<p>Pupils will learn to respond to a design brief. They will build on their design capabilities acquired in Yr. 7 to create a high-quality outcome using 2D Design and a laser cutter. Pupils will also learn prototyping methods include card modelling, and Styrofoam modelling.</p> <p>Pupils will learn about the properties of</p>	<p>Pupils will learn how to research and gather inspiration to create unique and innovative designs.</p> <p>They will learn how to cut and shaping products from various forms of card.</p> <p>They will develop their isometric drawing skills both using computer and hand drawing.</p> <p>Pupils will also learn to create prototypes using modelling materials such as Styrofoam.</p> <p>They will understand the difference between cartridge, bleed proof, layout and tracing paper and know when to select those materials to create design outcomes.</p> <p>They will use acrylic and line benders to create a product.</p>	<p>Ongoing teacher assessment of skills and made outcomes using Fine Grading.</p> <p>Homeworks will be assessment using the school assessment policy.</p> <p>Testing of knowledge and understanding by several short tests.</p> <p>Feedback on manufacturing skills is verbal and ongoing.</p>





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		<p>polymers and how to manipulate these.</p>	<p>Pupils will understand the properties of polymers such as acrylic and polystyrene and the environmental implications of choosing these products for manufacture. They will understand the difference between thermo and thermo-set polymers.</p> <p>They will design and make a prototype that is fit for purpose. Pupils will be introduced to three-dimensional CAD skills using Trimble SketchUp.</p>	
<p>Trophy module.</p>	<p><i>Design and make a trophy.</i></p>	<p>Pupils will respond to a design brief to create a trophy to celebrate achievement. Laser cut acrylic, low carbon steel, and a softwood will be combined using mechanical fixings to create a high-quality outcome.</p>	<p>Pupils will learn the use of workshop tools, a laser cutter and the brazing hearth to create a trophy. Pupils will be taught how to look at the work of others to create innovative and imaginative designs. They will learn how to create pencil sketches in 2D and 3D to bring their designs to life.</p> <p>Pupils will learn about the properties of hardwoods, softwoods and manufactured boards and how to cut shape and manipulate these to create a product. They will learn about the properties of ferrous and non-ferrous metals including low carbon steel and brass.</p> <p>Using hand tools to shape and manipulate acrylic, timber, low carbon steel and aluminium.</p> <p>They will learn the use of sketching techniques and formal orthographic drawing to design a trophy.</p>	<p>Ongoing teacher assessment of skills and made outcomes using Fine Grading.</p> <p>Homeworks will be assessment using the school assessment policy.</p> <p>Testing of knowledge and understanding by several short tests.</p> <p>Feedback on manufacturing skills is verbal and ongoing.</p>





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			Pupils will further develop their Trimble SketchUp skills.	
Topic / Term 4	Food	Please see the food scheme of work published on a separate document.		

