



ST CATHERINE'S COLLEGE

A CHURCH OF ENGLAND ACADEMY

Learning overview for (subject): DT

Year group: 7

In year 7, the pupils rotate each term.

One term they will undertake a food module.

In another term they will undertake a DT electronics module, and in the other term, they will undertake a DT module that focuses on storage.





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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?
Electronics module	Topic - Electronics	<p>This module explores the basic principles of voltage, resistance and electric switches using a circuit and LEDs.</p> <p>Design process including designing for a third party.</p> <p>Use of soldering irons, hand drills, and wood-work skills to create a product.</p> <p>Isometric drawing skills.</p> <p>CAD drawing using 2D Design.</p> <p>How to evaluate a product.</p> <p>How to analyse a product.</p> <p>Pupils will achieve a basic understanding of automation, and mass production and the consequences for society.</p>	<p>Pupils will learn to research and investigate a problem. They will use initiative and problem solving to create a product that will function.</p> <p>Skills and processes in the workshop will include soldering, use of hand tools and machines such as a pillar drill.</p> <p>Pupils will use the design process including analysis and evaluation.</p> <p>Pupils will gain computer drawing skills including a vectorbased drawing programme called 2D Design.</p> <p>Pupils will learn how upload their CAD designs so that they can be cut on the laser cutter.</p> <p>Pupils will learn isometric drawing techniques if there is time.</p>	<p>Testing of knowledge and understanding is undertaken by ongoing short tests.</p> <p>Homework is assessed using the school marking policy for homework.</p> <p>Feedback on manufacturing and design skills is verbal and ongoing and students are encouraged to take ownership of their progress.</p> <p>Pupils will self-assess using a proforma which helps them consider what they have achieved and what they could do to improve further presentation.</p>





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Topic	Topic - storage box	<p>They will understand how to use workshop tools to cut, shape, join and apply a finish to a wooden product.</p> <p>They will acquire knowledge and understanding of the properties of materials including MDF, pine, hardboard, and hardwoods.</p> <p>Pupils will learn how to use CAD to design products.</p> <p>Students will learn about basic traditional wood joints and frame joints.</p> <p>Understand how to draw in isometric using CAD.</p> <p>Pupils will learn to draw in isometric using pencil and paper.</p> <p>Understand the sustainability issues and ecological impact of producing products.</p>	<p>Pupils will learn to create a product from timber using hand tools and butt joining methods. They will learn about quality control and how to correct and improve their making skills. Pupils will learn how to assemble their product with glue and pressure.</p> <p>Pupils will learn how to create interesting and innovative ideas for their storage top and use hand drawing methods to sketch these out.</p> <p>Pupils will learn about quality control and how to evaluate their own work and correct mistakes to create a high-quality outcome.</p> <p>Pupils will use computers to design products using CAD.</p>	<p>Testing of knowledge and understanding is undertaken by ongoing short tests.</p> <p>Homework is assessed using the school marking policy for homework.</p> <p>Feedback on manufacturing and design skills is verbal and ongoing and students are encouraged to take ownership of their progress.</p> <p>Pupils will self-assess using a proforma which helps them consider what they have achieved and what they could do to improve further.</p>
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Topic	Food	Please see the food scheme of work published on a separate document.		
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