Learning overview for Design & Technology

Year Group: 7

Topic	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*	This module explores the basic principles of voltage, resistance and switches using a circuit and LEDs. Design process including designing for a third party. Use of soldering irons, hand drills, and wood-work skills to create a product. Isometric drawing skills. CAD drawing using 2D Design. How to evaluate a product. How to analyse a product.	Pupils will learn to research and investigate a problem. They will use initiative and problem solving to create a product that will function. Skills and processes in the workshop will be learnt. This includes soldering, use of hand tools and some machines such as a pillar drill. Pupils will use the design process including analysis and evaluation. Pupils will gain computer drawing skills including a vector-based drawing programme called 2D Design. Pupils will learn how to cut out their designs on a laser cutter. Pupils will learn isometric drawing techniques.	Testing of knowledge and understanding is undertaken by several short tests. Homework is assessed using the school marking policy for homework. Class work is assessed using Fine Grading and is ongoing as the project progresses. Feedback on manufacturing skills is verbal and ongoing.

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		Pupils will achieve a basic understanding of automation and the consequences for society.		
Topic	Topic- Jewellery box.	They will understand how to use workshop tools to cut, shape, join and apply a finish to a wooden product. They will acquire knowledge and understanding of the properties of materials including MDF, pine, hardboard and hardwoods. Pupils will understand flat packing production. Understand how to design using 2D Design and how to transfer this design to a laser cutter.	Pupils will learn to create a product from timber. They will use hand tools, adhesives and apply a finish to the product. Pupils will learn how to cut with accuracy using hand tools and assemble their product with glue and pressure. Pupils will learn about quality control and applying a finish to timber to create a high-quality outcome. Pupils will be able to use laser cut designs to give their product a shop quality appearance.	Homework is assessed using the school marking policy for homework. Class work is assessed using Fine Grading and is ongoing as the project progresses. Testing of knowledge and understanding by several short tests. Feedback on manufacturing skills is verbal and ongoing.

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		Understand how to draw in isometric and how to revolve a profile in CAM Understand the sustainability issues and ecological impact of producing products.		
Topic /Term 4	Food	Please see the food scheme of work published on a separate document.		