CURRICULUM MAP- Year 9 USB Lamp

Resistant Materials: In Year 9 students will develop and continue to enhance their knowledge of technological drawing techniques. They will also complete a design and make project using and developing knowledge and manufacturing techniques acquired in Year 7 and 8 as well as acquire new skills and knowledge surrounding the use of CAD/ CAM within their project.

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							EOR Assessment Point
						Rotation Weeks 9 and 10 19 28 and 29 38 and 39	***Practical Assessment*** **Key Disciplinary Knowledge** Health and safety Cutting techniques Marking out Joining techniques Finishing techniques Hand tools Fixed equipment Use of CAD/CAM Working electronic circuit Soldering ***Key Concepts*** Students will be assessed on their ability to demonstrate the correct health and safety throughout the entirety of their project, demonstrate the correct and confident use of tools and equipment and use a range of techniques and processes to cut, join and finish their lamp, their confidence and ability in the assembly of a working electronic circuit.
				Rotation Weeks: 7 and 8 17 and 18 26 and 27 36 and 37	**Assessment Point: Summative or AFL**	**Overarching unit intent:** **Evaluation** Students will learn information around the key topics of: • Evaluation • Manufacture Students will learn information around the key topics of: • Assembly • Finishing techniques • Evaluation of products and processes **Manufacture:** Students will be completing a range of practical tasks and activities which will develop their skills in working with a range of tools and equipment in a work shop environment. **Evaluation:** Students will evaluate their work throughout the practical process and equally at the end of the manufacture for the product. This requires students to be able to be self-critical as well as suggest methods for improving	
			Rotation Weeks: 5 and 6 15 and 16 24 and 25 34 and 35	**Overarching unit intent:** **Manufacture** Students will learn information around the key topics of: • Manufacture- Electronic circuits **Manufacture:** Students will be completing a range of practical tasks and activities which will develop their skills in working with a range of tools and equipment in a work shop environment. **Students will learn practical information around the key topics of:** **•Electronic components** **•Circuit diagrams** **•Soldering** **Students will:** **• In practical sessions, develop skills, techniques and processes in relation to**	***Design Assessment*** **Key disciplinary knowledge** Isometric Final Design Colour rendering Annotation **Key Concepts** Students will be assessed on the presentation of their work, their creativity and innovation, their use of technical drawing skills (isometric), colour rendering and the quality of their annotation.	
	Rotation Weeks: 3 and 4 13 and 14 22 and 23 32 and 33	**Assessment Point: Summative or AFL**	**Overarching unit intent:** **Manufacture** Students will learn information around the key topics of: • Design and Manufacture (CAD/CAM) **Manufacture:** Students will be completing a range of practical tasks and activities which will develop their skills in working with computer aided design (CAD) and computer aided manufacture (CAM) **Students will learn practical information around the key topics of:** **•Construction methods** **Students will:**				
Rotation Weeks: 1 and 2 11 and 12 20 and 21 30 and 31	**Overarching unit intent:** **Drawing and Design Techniques** Students will learn information around the key topics of: • Generate design ideas • Final Design • Annotation • Drawing: orthographic **Design:** Students will generate ideas for their USB Lamp creating solutions to their written specification. Design techniques will be shown through the use of 3D design as well as	***Literacy Assessment*** **Key disciplinary knowledge** Design Brief Analysis Aesthetics Function Softwood Ferrous Finger Joint Specification Isometric Computer Aided Design (CAD) **Key Concepts** Students will be assessed on the correct spelling and their					
Overarching unit intent: **Research** Students will learn information around the key topics of: • Task analysis • Product analysis • Materials research • Specifications **Research:** Students will develop their skills in writing a list of design requirements (specification) for their							

With God all things are possible Matthew 19:26

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product following a set design brief. This will require students to consider a range of areas including design, function, materials, user etc. **Students will use a range of reading strategies:** **• Breakdown information** **• Visualisation** **• Learning new vocabulary** **• Prediction** **• Infer** **• Form opinions** **Writing skills will be developed in lesson and through home learning and assessment tasks. Students will be given opportunities to complete a range of focused extended writing tasks as well as opportunities to develop oracy via discussions and debate.**	how to annotate and render a design idea. **Students will learn theoretical and practical information around the key topics of:** **•Drawing in isometric.** **Students will:** **• In practical sessions, develop skills, techniques and processes in relation to drawing.** **• In practical sessions, develop their ability to use specialist technical equipment.**	understanding of key vocabulary.	**• In practical sessions, develop their ability to use specialist technical equipment.** **• In practical sessions, develop their understanding of health and safety and specific regulations for working with tools and equipment** **• Through practical sessions, independently build their confidence and resilience levels as they work with specific materials.**	**working with a range of materials.** **• In practical sessions, develop their ability to use specialist technical equipment.** **• In practical sessions, develop their understanding of health and safety and specific regulations for working with tools and equipment** **• Through practical sessions, independently build their confidence and resilience levels as they work with specific materials.**		both application and skills. **Students will:** **• In practical sessions, develop skills, techniques and processes in relation to completing their final product.** **• In practical sessions, develop their ability to use specialist technical equipment.** **• In practical sessions, develop their understanding of health and safety and specific regulations for working with tools and equipment** **• Through practical sessions, independently build their confidence and resilience levels as they work with specific materials.** **Students will use a range of reading strategies:** **• Breakdown information** **• Visualisation** **• Learning new vocabulary** **• Prediction** **• Infer** **• Form opinions** **Writing skills will be developed in lesson and through home**	

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