



The Grey Coat Hospital

Key Stage Five Curriculum Plan - *Subject: Design & Technology: Product Design*

Year 12

Half Term (HT)	Topic Area / Focus
HT1	Egg Cup Skills Project: Students will learn how to use a Third Angle Orthographic Projection to accurately produce 4-5 different egg cups using a range of materials and pieces of equipment. Paper 1 (30%) • Materials and their applications • Performance characteristics of materials: metals, metals, woods, composites, paper, boards, smart and modern materials. • Performance characteristics of materials: paper & boards • Performance characteristics of materials: polymers • Performance characteristics of materials: woods
HT2	Compact lighting project. The focus of this project is for students to develop their understanding of the design process. Skills: research, hand drawing skills, CAD and card modelling skills to realise their designs using the correct tools and equipment. Paper 1 • Performance characteristics of materials: metals • Performance characteristics of materials: polymers, elastomers, biopolymers. • Performance characteristics of materials: composites, smart and modern materials.
HT3	Compact lighting project. The focus of this project is for students to develop their understanding of the design process. Skills: research, hand drawing skills, CAD and card modelling skills and to realise their designs using the correct tools and equipment. Paper 1 (30%) • Enhancement of materials • Forming, redistribution and addition processes • The use of adhesives and fixings
HT4	Non-Exam Assessment (50%) Section A: Identifying and investigating design possibilities. Paper 1 (30%) • The use of finishes • Modern industrial and commercial practice • Efficient use of materials • Digital design and manufacture



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HT5	Non-Exam Assessment (50%) Section A: Identifying and investigating design possibilities. Section B: Producing a design brief and specification. Section C: Development of design proposals. Initial Ideas. Paper 1 (30%) • Digital design and manufacture • The requirements for product design and development • Health and safety • Protecting designs and intellectual property • Design for manufacturing, maintenance, repair and disposal • Feasibility studies • Enterprise and marketing in the development of products • Design communication
HT6	Non-Exam Assessment (50%) Section C: Development of design proposals: Initial Ideas & development of the final idea. Paper 1 (30%) • Preparation for Summer Assessments.
Year 13	
Half Term (HT)	Topic Area / Focus
HT1	Non-Exam Assessment (50%) Section C: Development of design proposals: Development of the final idea & manufacturing specification. Paper 2 (20%) • Design methods and processes • Design theory • How technology and cultural changes can impact on the work of designers • Product life cycle • Design processes
HT2	Non-Exam Assessment (50%) Section D: Development of design prototypes.



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	Paper 2 (20%) • Critical analysis and evaluation • Selecting appropriate tools, equipment and processes • Accuracy in design and manufacture
HT3	Non-Exam Assessment (50%) Section D: Development of design prototypes. Paper 2 (20%) • Responsible design • Design for manufacture and project management • National and international standards in product design
HT4	Non-Exam Assessment (50%) Section D: Development of design prototypes. Section E: Analysing and evaluating. Targeted revision covering Paper 1 and 2 content.
HT5	Targeted revision covering Paper 1 and 2 content.
HT6	No further lessons take place