Curriculum Overview: Year 10 GCSE Design and Technology Graphics						
Rationale: Throughout year 10 students will complete a design and make project following the key areas of the researching, designing, modelling, making and evaluating. One lesson out of 5 is dedicated to theory knowledge lessons, these lessons are aimed to support the students practical work and deepen their understanding of how products are produced in industry.						
Term / Length of Unit	**Outline**	**Assessment**	**Home Learning**	**Resources**	**Knowledge/Skills End Points**	**Reading**
Autumn term 1 7 weeks	Workshop: Expanding on prior knowledge and skills to create a sketchbook of techniques and processes. Theory: Timbers, Metals and alloys, Design decisions,	Class feedback of progress. FAR assessment of HL tasks.	HL 1: Timbers HL 2: Metals and Alloys HL 3: Design Decisions HL 4: Smart Materials	Computer rooms needed to Mock NEA project. Teacher resources: Staff share: Design and Technology: Graphics: Year 10: Autumn term Cricut, laser cutter, sublimation printer, pyrography, clay Student resources: Worksheets and support sheets to be provided by teacher.	• Knowledge of key pages in the NEA including how to access higher mark band. • Understand how designers use research to influence a new design • Understand how data is used to interpret what the TMG will buy. • Understand why design criteria's are used and how to create a design criteria using research and data (primary source). • Analyse existing products • Understanding of how to answer exam style questions • Gained understanding of how products are designed using different strategies. End point: Completion of section A & B.	• Exam style questions • Key vocabulary used • Core definitions of key words • Guided reading for practical tasks • Research and write tasks. • Recall and write tasks
Autumn term 2 8 weeks	Workshop: To learn about branding and understand how and why it is used. To be able to work collaboratively in a mini group project. Theory: smart materials, modern materials, composite materials, ergonomics and anthropometrics	Assessment of mock NEA folder. FAR assessment	HL 5: Composite Materials HL 6: Collaborative Design	Teacher resources: Staff share: Design and Technology: Graphics: Year 10: Autumn term Student resources: Worksheets and support sheets to be provided by teacher.	• Knowledge of key pages in the NEA including how to access higher mark band. • Design skills developed using a range of mediums • Develop practical skills through sampling different techniques such as using specialist machinery and decorative techniques. • Develop knowledge of fabrics through use and testing • Develop knowledge of construction and decorative techniques through testing ideas • Analyse data from TMG to influence design ideas	• Exam style questions • Key vocabulary used • Core definitions of key words • Guided reading for practical tasks • Research and write tasks. • Recall and write tasks

					• Gained understanding of how Maths is used in designing and manufacturing products. • How to decode the exam questions. End point: Completion of Section C & D	
Spring term 1 6weeks	Workshop: To learn different CAD and CAM techniques by using various materials. To focus on Adobe software using InDesign to learn about presentation and composition. Mini Mock NEA project: Section E: Realising design ideas. Work to include: making of final product. Theory: The 6Rs PPE 1 – paper is from the back of the revision guide.	Assessment of mock NEA folder. Assessment of product. PPE 1	HL 1: Sustainability Exam Question HL 2: Sustainability – The future	Student Support sheets for NEA: Shared area: D&T: Textiles: NEA Computer rooms needed to type up NEA. Teacher resources: Staff share: Design and Technology: Graphics: Year 10: Spring term Student resources: Worksheets and support sheets to be provided by teacher. PPE 1 – paper is from the back of the revision guide.	• Knowledge of key pages in the NEA including how to access higher mark band. • Develop practical skills through sampling different techniques such as using specialist machinery and decorative techniques. • Develop pattern making/adaption skills to create toile and final product • Independent working • Problem solving • Knowledge of how new and emerging technology impact the design industry • Understanding of how and why different manufacturing process are used • Understanding of how to answer exam style questions End point: Completion of Section E	• Exam style questions • Key vocabulary used • Core definitions of key words • Guided reading for practical tasks • Recall and write tasks
Spring term 2 6weeks	Mini Mock NEA project: Section A & B: Research themes, specific research, create mood boards, questionnaires to establish TMG, product analysis, design criteria. Mini Mock NEA project: Section E: Realising design ideas. Work to include: making of final product. Theory:	Assessment of mock NEA folder. Assessment of product.	HL 1: Mindmap – exploration HL 2: Product Disassembly HL 3: Independent research	Student Support sheets for NEA: Shared area: D&T: Textiles: NEA Computer rooms needed to type up NEA. Teacher resources: Staff share: Design and Technology: Graphics: Year 10: Spring term Student resources: Worksheets and support sheets to be provided by teacher.	• Knowledge of key pages in the NEA including how to access higher mark band. • Develop practical skills through sampling different techniques such as using specialist machinery and decorative techniques. • Develop pattern making/adaption skills to create toile and final product • Independent working • Problem solving • Knowledge of how new and emerging technology impact the design industry	• Exam style questions • Key vocabulary used • Core definitions of key words • Guided reading for practical tasks • Recall and write tasks

	Materials and components, making principles – surface treatments and finishes PPE 1 – paper is from the back of the revision guide.			PPE 1 – paper is from the back of the revision guide.	• Understanding of how and why different manufacturing process are used • Understanding of how to answer exam style questions • End point: Completion of Section E	
Summer term 1	Mini Mock NEA project: Section C & D: Work to include: initial design ideas, initial samples. Feedback from TMG, develop design ideas, developed sample, final design idea. Mini Mock NEA: Section F: Evaluation. Work to include: Evaluation against their design specification, evaluation and feedback from TMG (in situ) and Modifications made for mass production (including redesign). Theory: Tolerances, Mechanisms	Assessment of mock NEA.	HL 1: Theory Assessment - Tolerances HL 2: Theory Assessment – Mechanisms	Student Support sheets for NEA: Shared area: D&T: Textiles: NEA Computer rooms needed to type up NEA.	• Analytical skills • Evaluation against different criteria's • Critical reflection • Suggestions of improvements • Classification of sources for each material area • Give examples of products made from each material area • Sustainable sources within each area • Justification of why specific materials are used for specific products. End point: Completion of Section F	• Exam style questions • Key vocabulary used • Core definitions of key words • Guided reading for practical tasks • Recall and write tasks
Summer term 2	All lessons dedicated to NEA in this half term. NEA: Section A Research themes, specific research, create mood boards, questionnaires to establish TMG, design criteria. Theory: Industry, Functionality	Class feedback of progress. PPE 2	HL 4: Task 4: Revision for PPE 2 HL 5: Complete actions from PPE 2 feedback.	Student Support sheets for NEA: Shared area: D&T: Textiles: NEA Computer rooms needed to type up NEA. Each student must have an A3 folder to keep NEA in – Technician to order.	• Knowledge of key pages in the NEA including how to access higher mark band. • Understand how designers use research to influence a new design • Understand how data is used to interpret what the TMG will buy. • Understand why design criteria's are used and how to create a design criteria using research and data (primary source). • Analyse existing products End point: Completion of section A & B.	• Exam style questions • Key vocabulary used • Core definitions of key words • Research and write tasks.