

## DESIGN TECHNOLOGY

	AUTUMN TERM 1	AUTUMN TERM 2	SPRING TERM 1	SPRING TERM 2	SUMMER TERM 1	SUMMER TERM 2
	Topics	Topics	Topics	Topics	Topics	Topics
YEAR 7	Taught on an 8-week carousel with Design & Technology, Art: Textiles and Critical Thinking. DT: HOLOGRAM PROJECT Introduction to technical drawing skills, design specification, vacuum forming and paper engineering.					
YEAR 8	Taught on an 8-week carousel with Design & Technology, Art: Textiles and Critical Thinking. DT: DESIGNERS PROJECT Avoiding design fixation, design history (looking at 8 designers), Freehand sketching skills, CAD skills via Google SketchUp, modelling and prototype skills.					
YEAR 9	Introduction to the workshop, Health & Safety, Using basic tools and equipment. Please note due to rooming restrictions classes alternate topics in different orders to facilitate use of the workshop	Introduction to 2D Design CAD. Students to create a custom ruler in 2D Design and laser cut.	Biomimicry, design work, introduction to materials (timbers and polymers) prototyping	Practical workshop skills developing jewellery project. Laser cutting, paper casting, shaping materials. Finishing techniques.	Theory: New & emerging technologies. The work of others. Sustainability and the environment. Packaging project	Systems approach to designing. Introduction to electronics with a focus practical task.
YEAR 10	Designing & Making Principles- design skills, recap of new and emerging technologies	Mechanical Devices- Marble Run, forces and stresses & Practice NEA. CAD Fusion assignment- design and model an idea for a modern artistic storage/display unit.	Materials and properties, Specialist Principles- Papers and Boards & Practical sampling of materials and processes	Materials and properties: Common Core Materials Practice NEA- Lighting Project & Practical sampling of materials and processes	Practice NEA- Lighting Project & specialist technical principles and designing and making principles theory	GCSE NEA- AO1: Identify, investigate and outline design possibilities to address needs and wants.
YEAR 11	GCSE NEA • Generating design ideas AO2: Design and make prototypes that are fit for purpose.	GCSE NEA • Developing design ideas AO2: Design and make prototypes that are fit for purpose.	GCSE NEA Realising design ideas. Analysing & evaluating. AO3: Analyse and evaluate: design decisions and outcomes, including for prototypes made by themselves and others wider issues in design and technology.	Revision of theory: Specialist Principles- Papers and Boards and Designing and Making principles.	Revision of theory. Common Core	

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<b>YEAR 12</b>	Graphical communication. Design History: design styles and movements. Model Chair project. Autodesk Fusion CAD project. Performance characteristics of woods, metals, polymers. Workshop skills and safety: Mobile phone/tablet stand	Autodesk Fusion CAD vehicle design challenge. Major developments in technology, Maths, selecting appropriate tools and equipment, Practical skill development. Performance characteristics of papers and boards, polymers, composites, glass ceramics, textiles. Enhancement and finishes of materials	Phone box repurposed project. Design for manufacture and project management, critical analysis and evaluation, Maths, forming and redistribution processes of all materials.	NEA preparation, responsible design and environmental issues, Maths, smart and modern materials, modern industrial and commercial practice, efficient use of materials.	A-Level NEA: AO1 Section A – Identifying and investigating design possibilities. Theory: design for manufacture, maintenance and repair. Materials and their applications. Enterprise and marketing. Feasibility studies, health and safety, adhesives and fixings and the requirements for Product Design, Development and Improvement.	A-Level NEA: AO1 Section A – Identifying and investigating Section B– Producing a design brief and specification A-Level NEA: A02 Section C Development of design proposal (s).. Design for manufacturing - Manufacture, repair, maintenance and disposal, Digital design and manufacture, Protecting designs and intellectual property.
<b>YEAR 13</b>	A-Level NEA: A02 Section C Development of design proposal (s)..	A-Level NEA: A02 Section D – Development of design prototype(s) Theory: Accuracy in Design and Revision	3-week NEA break to focus on examination. Theory; National and international standards in Product design. Designing and Making Principles. Exam technique and Maths in Product design. A-Level NEA: A02 Section D – Development of design prototype(s) Theory: Designing and Making Principles cont. Theory: Revisiting topics	A-Level NEA: A02 Section D – Development of design prototype(s) Theory: Designing and Making Principles cont. Theory: Revisiting topics A-Level NEA: A03 Section E – Analysing and evaluating and Revision of theory.	Revision of theory. Practice Examinations	