

GCSE Design and Technology - Learning journey

Year 10

Term 1 – September to December			
Practical		Theory	
Communication through sketching	Sketching technique – lines, circles and shapes Isometric drawing and crating Orthographic drawing	3.1 Core Technical Principles	3.1.1 - New Technologies 3.1.2 - Energy 3.1.3 - Development of new materials 3.1.4 - Systems approach to designing 3.1.5 - Mechanical Devices 3.1.6 - Materials
Laser cut toy project	Use of 2D CAD software Design for accuracy and quality Use of the laser cutter (focussing and power settings)		
Term 2 – January to April			
Mobile phone task	Investigation of potential design opportunities Research existing products Generating design solutions Development of design solutions through modelling	3.2 Specialist Technical Principles	3.2.1 Selection of materials 3.2.2 Forces and stresses 3.2.3 Environmental issues 3.2.4 Sources and origins 3.2.5 Working with materials 3.2.6 Stock forms 3.2.7 Scale of production 3.2.8 Techniques and processes 3.2.9 Surface Treatment
Term 3 – May to July			
Mobile phone task	Manufacturing the final prototype Evaluation of the final prototype against the specification Third party testing and feedback	3.3 Designing and Making Principles	3.3.1 Investigating Primary and Secondary Data 3.3.2 Environmental Social and Economic 3.3.3 The Work of Others 3.3.4 Design Strategies 3.3.5 Communication of Design Ideas
NEA	Section A Introduction to the “Contextual Challenge” Analysis of the contextual challenge Identify design possibilities Investigation work, including client selection and interview	Y10 mock exam	Mock exam preparation Practice exam questions Maths based questions

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Year 11

Term 1 – September to December			
Practical		Theory	
NEA work	Section B Write a design brief and specification Section C Generate a range of design ideas Section D Produce a range of models based on design ideas Evaluate design ideas/models to select the final solution	3.3 Designing and Making Principles	3.3.5 Communication of Design Ideas 3.3.6 Prototype Development
Term 2 – January to April			
NEA work	Section E Development of the final product Selection of materials Produce a manufacturing specification Section F Test and evaluate the final product	3.3 Designing and Making Principles	3.3.7 Selection of Materials and Components 3.3.8 Tolerances 3.3.9 Material Management 3.3.10 Specialist Tools and Equipment
Term 3 – May to June			
No practical work in this term		Exam preparation	Exam preparation Practice exam questions Maths based questions