



Year 10 Product Design Course outline

Students have 4 lessons per cycle/fortnight Homework is set once a week			
Term	Topic and approximate duration	Key learning areas	Homework Options Students will be guided by the class teacher as to which level to complete (according to target level)
Autumn Term	Skills Project Desk Tidy (7 weeks)	Students should be able to: begin to identify features of a realistic products through analysis, design and make of a desk tidy; learn and practise skills working with a range of tools and equipment including: mallet, chisels, marking gauges, try square, laser cutter, vacuum form and line bending; learn about a range of materials and their industrial and commercial use including: woods, metals, and plastic; Learn how to write a cutting list and calculate the costings of a product; produce a workshop manufacture diary of the desk tidy with appropriate safety and quality control checks.	Task 1 – Assessed homework: Cutting list material part and properties (worksheet). Task 2 – Workshop diary (worksheet) Task 3 –Paper, card, board Areas and volume (worksheet). Task 4 – Landmark Revision: material properties
	Nature of landmark assessment	Teacher assessment of completion of product using assessment criteria.	
	Skills Project Desk Tidy (2 weeks)	Students should be able to: understand the process of testing and evaluating their final outcome; learn what effect their product may have on the environment through a Life Cycle Assessment.	Task 5. LCA, testing and evaluation.
	Nature of landmark assessment	Teacher assessment of completion of Desk Tidy using assessment criteria.	
	GCSE MOCK NEA Coursework Design & Model (Desk Lamp) (6 weeks)	Students should be able to: understand the process involved in researching, designing and modelling a product; identify a potential product, conduct relevant and appropriate research methods with the aim of designing their own; research and analyse existing products to identify characteristics and the specification of each; use research, write a design specification for their own desk lamp; understand a wide range of appropriate manufacturing processes involved in making the components of a desk lamp; understand the properties of relevant materials and the advantages and disadvantages of using them for a functional product.	Task 1. Investigation of needs Task 2. Manufacturing techniques. Tasks 3. Research Product analysis existing product. Task 4 – Landmark Revision: Core theory
	Nature of landmark assessment	Core Theory Knowledge – Exam style questions	

Spring Term	GCSE MOCK NEA Coursework Design & Model (Desk Lamp) (6 weeks)	Students should be able to: create a range of initial ideas, covering desk lamp heads, arms and base; link their initial ideas to their specification; design development proposals include technical details of all component parts, processes and techniques; develop a deeper understanding of workshops processes and CAD/CAM through the modelling of their desk lamp and produce a final design proposal in a 3 rd Angle orthographic drawing.	Task 1. Initial Ideas Task 2. Review of Initial Ideas. Task 3. Landmark Revision: Core theory
	Nature of landmark assessment	Core Theory Knowledge – Exam style questions	
	GCSE MOCK NEA Coursework Design & Model (Desk Lamp) (6 Weeks)	Students should be able to: understand a wide range of workshop and industrial practises for the manufacture of the desk lamp; produce a workshop manufacture diary of the desk lamp with appropriate health and safety and quality control checks.	Task 1. Quality control and quality assurance Tasks 2. Revision: Core theory Tasks 3. Mock Exam Revision: Core theory Task 4. Revision: Core theory.
	Nature of landmark assessment	Core Theory Knowledge – Exam style questions	
Summer Term	GCSE MOCK NEA Coursework Design & Model (Desk Lamp) (5 weeks)	Students should be able to: understand a wide range of workshop and industrial practises for the manufacture of the desk lamp; produce a workshop manufacture diary of the desk lamp with appropriate health and safety and quality control checks.	Task 1. Mock Exam Revision: Core theory Task 2. Polymer manufacturing techniques Task 3. Mock Exam Revision: Core theory
	Nature of landmark assessment	End of Year 10 Mock Examination	
	GCSE MOCK NEA Coursework Design & Model (Desk Lamp) (2 weeks)	Students should be able to: test and evaluate their practical outcome; produce a Life Cycle Assessment (LCA) of their outcome, detailing what effect the product may have on the environment.	Task 1. LCA, testing and evaluation.
	GCSE NEA Coursework Contextual challenge (5 weeks)	Students should be able to: establish the requirements of each contextual challenge by considering a range of potential user and product ideas. Students need to find a client or potential user group and conduct an interview to identify the design and make requirement/needs. Students will create a research plan with the aim to conduct relevant and appropriate primary and secondary to investigate. Students will analysis a range of existing products to identify characteristics and the specification of each.	Task 1. Mock Exam Revision: Core theory Task 2. Client, user group profile Task 3. Client interview
	Nature of landmark assessment	Teacher assessment of coursework page - Investigation of needs	

