OCR A Level Design and Technology: Product Design

	Year 12			Year 13		
	Autumn Term	**Spring Term**	**Summer Term**	**Autumn Term**	**Spring Term**	**Summer Term**

Content	**Theory**
	• Properties of materials
	• Materials: origins,
	
	Projects
	
	Peeler
	• Product Analysis
	• 2D sketching
	• 3D rendering
	• Modelling
	• 3D CAD
	• 3D printing
	
	Leather Organiser
	• Modelling and Testing
	• 2D CAD
	• Iterative modelling and testing
	• Joining Materials
	• Laser Cutting
	
	Metal Working
	• Cutting
	• Annealing and shaping
	• Finishing
		Theory
		• Methods of manufacture
		• Distribution
		• Scales of production
		• Life Cycle Analysis
		• Smart and Modern materials
		
		Projects
		
		Speakers
		• Product Evolution
		• Design History
		• Electronic Systems and schematic diagrams
		• Reverse Engineering
		• Design Specification
		• 3D sketching
		• 3D CAD
		• Technical Specification
		• Material Selection
		• Manufacture
		• Testing and Evaluating
			Theory
			• Contexts
			• Stakeholders
			• Ergonomics
			• Design for disability
			• Circular Economy
			• Standards
			• Maths
			  • Area
			  • Volume
			  • Costings
			
			NEA
			• Contexts
			• Stakeholders
			• Product Analysis
			• Design Thinking
			• Sketching
			• Modelling
				Theory
				• Planned Obsolescence
				• Trends
				• Incentives
				• Designing for repair and maintenance
				• Product Life Cycle
				• Costs and availability of materials
				• Structural Integrity
				
				NEA
				• Sketching
				• Modelling
				• Iterations
				• Material Selection
				• Product testing
				• Designing for Manufacture
				• Making Protypes
					Theory
					• Project Management strategies
					• Review of Materials and Properties
					• Jigs, moulds and formers
					• Manufacturing methods
					• Tolerances
					
					NEA
					• Final Protypes
					• Technical Specification
					• Manufacture
					• Health and Safety
					• Testing
					• Evaluations
					• Improvements
						Exam Preparation

Assessment	Homework: MS Teams and Bromcom Tests: Vocabulary and terminology Design Projects will be graded and feedback given	Homework: MS Teams and Bromcom Tests: Vocabulary and terminology Design Projects will be graded and feedback given Mock exam: Feb	Homework: MS Teams and Bromcom Tests: Vocabulary and terminology NEA will be graded at the end of each unit and feedback given Mock exam: June	Homework: MS Teams and Bromcom Tests: Vocabulary and terminology NEA will be graded at the end of each unit and feedback given	Homework: MS Teams and Bromcom Tests: Vocabulary and terminology NEA will be graded at the end of each unit and feedback given Mock Exam Jan	Re-sit opportunity for the exam Presentations to Industry Exam May/June

A copy of the specification can be found at: https://www.ocr.org.uk/Images/304609-specification-accredited-a-level-gce-design-and-technology-h404-h406.pdf