

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	<p>Theory</p> <ul style="list-style-type: none"> • Properties of materials • Materials: origins, <p>Projects</p> <p>Peeler</p> <ul style="list-style-type: none"> • Product Analysis • 2D sketching • 3D rendering • Modelling • 3D CAD • 3D printing <p>Leather Organiser</p> <ul style="list-style-type: none"> • Modelling and Testing • 2D CAD • Iterative modelling and testing • Joining Materials • Laser Cutting <p>Metal Working</p> <ul style="list-style-type: none"> • Cutting • Annealing and shaping • Finishing 	<p>Theory</p> <ul style="list-style-type: none"> • Methods of manufacture • Distribution • Scales of production • Life Cycle Analysis • Smart and Modern materials <p>Projects</p> <p>Speakers</p> <ul style="list-style-type: none"> • 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 	<p>Theory</p> <ul style="list-style-type: none"> • Contexts • Stakeholders • Ergonomics • Design for disability • Circular Economy • Standards • Maths <ul style="list-style-type: none"> • Area • Volume • Costings <p>NEA</p> <ul style="list-style-type: none"> • Contexts • Stakeholders • Product Analysis • Design Thinking • Sketching • Modelling 	<p>Theory</p> <ul style="list-style-type: none"> • Planned Obsolescence • Trends • Incentives • Designing for repair and maintenance • Product Life Cycle • Costs and availability of materials • Structural Integrity <p>NEA</p> <ul style="list-style-type: none"> • Sketching • Modelling • Iterations • Material Selection • Product testing • Designing for Manufacture • Making Prototypes 	<p>Theory</p> <ul style="list-style-type: none"> • Project Management strategies • Review of Materials and Properties • Jigs, moulds and formers • Manufacturing methods • Tolerances <p>NEA</p> <ul style="list-style-type: none"> • Final Prototypes • Technical Specification • Manufacture • Health and Safety • Testing • Evaluations • Improvements 	<p>Exam Preparation</p>	
	Assessment	<p>Homework: Edulink Tests: Vocabulary and terminology</p> <p>Design Projects will be graded and feedback given</p>	<p>Homework: Edulink Tests: Vocabulary and terminology</p> <p>Design Projects will be graded and feedback given</p> <p>Mock exam: Feb</p>	<p>Homework: Edulink Tests: Vocabulary and terminology</p> <p>NEA will be graded at the end of each unit and feedback given</p> <p>Mock exam: June</p>	<p>Homework: Edulink Tests: Vocabulary and terminology</p> <p>NEA will be graded at the end of each unit and feedback given</p>	<p>Homework: Edulink Tests: Vocabulary and terminology</p> <p>NEA will be graded at the end of each unit and feedback given</p> <p>Mock Exam Jan</p>	<p>Re-sit opportunity for the exam</p> <p>Presentations to Industry</p> <p>Exam May/June</p>