

	to support learning						* Knowledge organiser
Year 11	Topic/ Key ideas	<p>* <u>Product Design skills – NEA Project</u></p> <p>1.1 Investigation of Needs and Research</p> <ul style="list-style-type: none"> • Task Analysis • Target Market Profile • Existing Product Analysis <p>1.2 Specification</p> <ul style="list-style-type: none"> • Design Brief • Specification <p>2.1 Design Ideas</p> <p>2.2 Review of Initial Ideas</p>	<p>* <u>Product Design skills – NEA Project</u></p> <p>2.3 Development of Design ideas into Chosen Design</p> <ul style="list-style-type: none"> • Aesthetics • Construction • Materials • Finishes • Function <p>2.4 Communication of Design Ideas</p> <p>2.5 Review of Chosen Design</p>	<p>* Product Design Skills</p> <p>3.1a Manufacture – Selection of Materials</p> <p>3.1b Manufacture – Skills and Processes</p> <p>3.2 Quality and Accuracy</p> <p>4.1 Testing and Evaluation</p> <p>Theory revision and exam preparation. NEA completion</p>	* Theory exam revision	* Theory exam revision	* Exam
	Learning objectives	<p>* <u>Production plans</u> Produce and follow a production plan taking into account: materials, processes, time and safety.</p> <p><u>Selecting materials, parts, components etc</u> Select and safely use a range of appropriate:</p> <ul style="list-style-type: none"> • materials • parts • components • tools • equipment. <p>In order to manufacture a working solution.</p> <p><u>Predicting performance</u> Using calculations and modelling. Through systems modelling and data analysis.</p>	<p>*<u>Testing/QC</u> Apply quality control methods and techniques during the manufacture of a product. Methods and techniques will include:</p> <ul style="list-style-type: none"> • working to necessary tolerances • demonstrating the ability to check tolerances through the use of tools (Vernier calipers, micrometers and depth gauges) • using software (CNC/CAM) to ensure that all parts/ components fit together allowing the solution to function. <p>Design a range of tests to assess the fitness for purpose and performance of a completed product, taking into account how areas for improvement/ modification could be identified and suggest alternative solutions.</p> <p><u>Selecting processes.</u> Select and use appropriate processes in order to manufacture a working solution. Examples include: measuring, marking, turning, milling, drilling, forming, bending, casting, joining, fastening, folding,</p>	<p>* Revise key topics for the exam.</p> <p>* Completion of NEA coursework.</p>	* Revise key topics for the exam.	* Revise key topics for the exam.	* Exam

			shaping, finishing.				
Key Assessment and when?	<ul style="list-style-type: none"> * Theory tested through lesson and Homework. * Controlled assessment through deadlines and review sessions 	<ul style="list-style-type: none"> * Theory tested through lesson and Homework. * Controlled assessment through deadlines and review sessions Mock Exams 	<ul style="list-style-type: none"> * Theory tested through lesson and Homework. * Controlled assessment through deadlines and review sessions 	<ul style="list-style-type: none"> * Theory tested through lesson and Homework. * Controlled assessment through deadlines and review sessions 	<ul style="list-style-type: none"> * Theory tested through lesson and Homework. * Practice Papers and questions 	<ul style="list-style-type: none"> * Practice Papers and questions 	
Key homework and resources to support learning	<ul style="list-style-type: none"> * Student resources located in Teams. * Homework to reinforce theory * Homework related to Controlled Assessment 	<ul style="list-style-type: none"> * Student resources located in Teams. * Homework to reinforce theory * Homework related to Controlled Assessment 	<ul style="list-style-type: none"> * Student resources located in Teams. * Homework to reinforce theory * Homework related to Controlled Assessment 	<ul style="list-style-type: none"> * Student resources located in Teams. * Homework to reinforce theory * Homework related to Controlled Assessment 	<ul style="list-style-type: none"> * Student resources located in Teams. * Homework to reinforce theory * Homework related to Controlled Assessment 	<ul style="list-style-type: none"> * Student resources located in Teams. * Homework to reinforce theory * Practice Papers 	