




Unit = Year 12 Mock NEA		Road Map		
In this unit you will understand how to design and make to a given context.	Assessment Grades			
Themes	Learning Goals/Outcomes/Content			
How is A Level NEA structured and what are the possible projects?	L1 Introduction & Areas of interest <u>Knowledge (Component)</u> Understand NEA structure and project selection Able to use a context as a starting point			
What are the potential problems from my chosen context?	L2 Situations and Problem Areas <u>Knowledge (Component)</u> Able to use the context to identify situations Able to use situations to identify design problems			
What products already exist and how can they influence my design work?	L3&4 Product Analysis <u>Knowledge (Component)</u> Understand how to analyse existing products Understand how this information can be used for designing			
What are the strengths and weaknesses of an existing product?	L5&6 Product Disassembly <u>Knowledge (Component)</u> Understand how a product is designed Understand a products construction Able to analyse a product			
How do you render product design concepts?	L7 Drawing Skills <u>Knowledge (Component)</u> How to use markers to render concept drawings How to use crating to generate drawing frameworks			
What is my products specification?	L8 Design Specification <u>Knowledge (Component)</u> Able to use research to inform designing Able to create a relevant, justified specification			
What are my product design concepts?	L9 First Concepts <u>Knowledge (Component)</u> Able to create a range of original concepts Able to communicate concepts clearly using rendered images			
How can I refine my concepts?	L10-13 Initial Ideas <u>Knowledge (Component)</u> Able to produce a range of possible solutions that are creative and take risk Are able to apply rendering techniques Are able to annotate in depth			
How can my concepts be translated into 3D form?	L14-16 Modelling <u>Knowledge (Component)</u> Are able to translate a 2D image into a 3D form Are able to modify concepts			
What further development do I need to undertake?	L17&18 Modelling analysis <u>Knowledge (Component)</u> Are able to justify modifications Are able to evaluate concepts against the specification			
What needs refining to ensure a final concept that meets the specification?	L1-4 Developed Ideas <u>Knowledge (Component)</u> Able to develop a concept into a working concept Able to communicate the design journey including justification			
What is the final concept be?	L5-7 Final CAD Design <u>Knowledge (Component)</u> Able to use CAD software to produce a final concept Abel to communicate the final concept using 3D modelling software			
What dimensions will the final concept be?	L8&9 Orthographic <u>Knowledge (Component)</u> Students able to draw using correct orthographic conventions Students able to produce a working drawing for a third party			
What will the final concept be manufactured from?	L10 Materials <u>Knowledge (Component)</u>			

	Students to select appropriate materials for their project Students able to justify their selections			
How will the final concept be manufactured?	L11-13 Test Pieces <u>Knowledge (Component)</u> Students able to determine final construction of concept Students able to evaluate outcomes to inform design decisions			
What materials and parts are required to make the final concept?	L14&15 Cutting List <u>Knowledge (Component)</u> Students able to calculate materials required Students able to cost project Students able to select appropriate materials and components			
How does the final concept impact upon the specification?	L16&17 Manufacturing Specification <u>Knowledge (Component)</u> Students able to draw finding from development to update Design Specification			
How do you manufacture a prototype to demonstrate a concept?	L1-17 Final Concept making <u>Knowledge (Component)</u> Students able to manufacture a prototype Students able to select appropriate materials and processes Students able to adapt and modify concepts according to making process Students able to work safely			
How do you manufacture a prototype to demonstrate a concept?	L1-11 Final Concept making continued <u>Knowledge (Component)</u> Students able to manufacture a prototype Students able to select appropriate materials and processes Students able to adapt and modify concepts according to making process Students able to work safely			
Does my final concept meet the needs of the design brief and specification?	L12&13 Product Testing <u>Knowledge (Component)</u> Students are able to select appropriate testing methods Students can carry out testing leading to conclusions			
How could my product be further developed?	L14 Modifications <u>Knowledge (Component)</u> Students can identify further areas for development Students can suggest how to improve the concept Students can justify their solutions			
How well does my product achieve the Design Specification criteria and how do I know this?	L15 Specification Evaluation & Conclusions <u>Knowledge (Component)</u> Students are able to evaluate their concept against the specification Students can identify specific evidence to support their evaluation Students can suggest further development opportunities			