**Section A: Identify and investigate design possibilities**

Central to the success of the NEA is the selection, by the student, of a context that will provide them with the opportunity to challenge themselves as a designer. Care should be taken, and guidance sought, to ensure that the context chosen offers the student the scope and complexity for a piece of work that is worthy of consideration for the award of an A-level.

Having chosen their context and potential user(s) they then need to plan and carry out an extensive investigation into all aspects of the context in order that they might operate from a position of knowledge when making subsequent decisions. The student will be expected to employ a variety of both primary and secondary methods of investigation. These might include visits organised by themselves or others, surveys and questionnaires could be used to inform. Useful and relevant material can be gained from others via the internet, books, magazines or interviews.

Students should also be encouraged to undertake, where relevant, practical experimentation and disassembly as methods for further understanding and exploring the context and its related issues.

At this stage it is expected that the student will begin to explore their thinking on possible solutions by producing concept ideas that take into account the information collected. At this stage of the process these first concept ideas will merely demonstrate the student's initial thinking and should serve to stimulate later more considered thoughts regarding their design proposal(s) and design prototype(s).

It should be noted that it is not expected that the assessment criteria be seen as a linear process and that aspects from this, and other assessment criteria, might be present throughout the student’s portfolio. Wherever it takes place, it is expected that this work will be rewarded.

**Section B: Producing a design brief and specification**

The student is required to produce a clearly stated and challenging design brief that addresses the context and meets the needs of the intended user(s). The student should formulate a fully detailed design specification that is informed by their investigations and makes full use of the material collated. Statements in the specification need to be clear and unambiguous. There should be specific references to measurable outcomes as well as qualitative statements. Whatever format is chosen to present the specification it is expected that this will be a live and working document that will be constantly referenced throughout the process. The specification should also include details on how the student intends to organise their time and activities in order to ensure a successful completion of the process.

It should be noted that it is not expected that the assessment criteria be seen as a linear process and aspects from this, and other assessment criteria, might be present throughout the student’s portfolio. Wherever it takes place, it is expected that this work will be rewarded.

**Section C: Development of design proposals**

Design proposals should reflect on first concepts and take full account of the design brief and design specification.

The aim should be that the development of their design proposal(s) leads to a prototype that can be manufactured by the student given their skills and experience. In developing their proposals the student will be expected to make constant reference to their design brief and design specification, to identify if further investigations are required and to carry these out.

Design proposals can be demonstrated through a variety of different media, but whatever methods are chosen, they should be of a high quality befitting this level of qualification and show evidence of analysis and annotation (although these elements are not assessed in this assessment criteria). Modelling is seen as a key element of this assessment criteria, whether this be part modelling, practicing of manufacturing and finishing techniques, the production of scale models or material experimentation.

There is also the expectation that students will produce working drawings, plans and patterns to enable successful prototype manufacturing to take place. The use of CAD is encouraged, but this should not be the only form of design communication that is used.

It should be noted that it is not expected that the assessment criteria be seen as a linear process and aspects from this, and other assessment criteria, might be present throughout the student’s portfolio. Wherever it takes place, it is expected that this work will be rewarded.

**Section D: Development of design prototypes**

Design prototypes are just that, they need to be directly related to the design proposals and show consideration, at all stages, of how the design thinking continues to be developed and the prototype(s) refined. Given the level of this qualification it is expected that the student will demonstrate their practical skills to a high level using all of the potential resources, tools, machines and equipment at their disposal.

During the development of their design prototype(s) the student should be encouraged to continue to experiment and adapt their design proposals as they progress. Constant testing and evaluation is expected to form part of this process. The use of CAM is encouraged, but this should not be the only form of manufacturing that is used.

It should be noted that it is not expected that the assessment criteria be seen as a linear process and that aspects from this, and other assessment criteria, might be present throughout the student’s portfolio. Wherever it takes place, it is expected that this work will be rewarded.

**Section E: Analysing and evaluating**

In awarding marks for this section it is vital to remember that evidence for analysing and evaluating can take place in any part of the NEA. Students should be encouraged to be constantly analyzing their work and recording their thoughts in order to explain their thinking. Ongoing evaluation should be seen to be informing the decision making process, particularly being used to bring about modifications to design proposals and prototype development. Central to this is the close and regular involvement of the proposed client/user(s) making sure that the prototype is both fit for purpose and meets the requirements of the client/user(s) rather than just meeting those of the student.