Version 1

**General Certificate of Education (A-level)**
**June 2011**

# Design and Technology: Product Design PROD4

# (Specification 2550)

# Unit 4: Design and Making Practice

# *Report on Moderation*

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**Coursework Administration –**

A small number of centres failed to supply the moderators with important documentation, such as signed Candidate Record Forms or Centre Mark Sheets. This causes unfortunate delays in the moderation process, other than this the majority of centres completed the coursework administration correctly and presented their coursework samples according to the AQA instructions. There was also some evidence of errors in both the addition of marks and the transfer of totals from CRF's to Centre Marks Sheets.

**Candidate Record Forms:** ***(please refer to section 6.5 & 6.9 of the specification)***

Candidate annotation of the CRF has improved with more candidates providing good page referencing and statements indicating the specific location of work in the folder, whilst others were simply signed on the front and left the remainder blank.
Staff annotation on the final mark page continues to be varied, this section is important as it directs the moderator to where work can be seen and so justifies the marks given. Candidate annotation of the CRF varied widely with some candidates completing them effectively. The context and design focus had been stated and a plan of action, including a summary of research, a detailed specification and a photograph of the completed product.

Where CRFs had been used from the start of the year and completed in detail, they contributed to the overall success of the coursework unit, providing a checklist of the work to be done and helping to keep students on track.

Teachers' annotation was varied, in the best examples the CRF featured appropriate supporting statements which were helpful in directing the moderator to where the work for specific assessment criteria was to be found.

A number of both paper based design folders or those in the form of PowerPoint presentations could have been condensed considerably with better use of each A3 sheet or slide and the omission of repetitive work which addressed the same assessment criteria. With the increase in electronic folders the presentation of the work is getting much better. The disadvantage of e-portfolio is that a page in the development section now often includes a couple of scanned A3 pages reduced in size which makes understanding the pencil created design work difficult. Centres should be aware marks are gained from these initial design pages. The end result is a very glossy folder, however the design work is becoming marginalised.
Please check that electronic submissions can be easily read using standard format files and that discs are tested to ensure all folders can be opened before sending to the moderator

***The report that follows constitutes the first review of the 2011 June series and will be supported by exemplar material which will be provided later in the Autumn term.***

**Criteria for the award of mark:**

1. **Context and Objectives (5 marks)**

A number of candidates wrote design briefs based on weak, thinly worded contexts that were often over rewarded. The better candidates set out a clear context and set targets, goals, parameters and objectives to be met as the work progressed.

The section has an allocation of 5 marks and it is an important one that centres should give some attention to as it is a way of preparing candidates for potential research and a plan of action for all work to follow.

### 2. Plan of action and clarification of problem (8 marks)

In this second year of the A2 specification centres are becoming familiar with what is required in this section and there appears to be less "padding out" with copied secondary research which, although necessary can be simply analysed and used to inform basic decisions in early design development. It is important that the CRF contains a summary of what source material was used and how this had a bearing on the specification details. Some candidates do still include copious amounts of secondary research downloaded from the internet or copied from books, whereas the best examples include only primary investigations which they have carried out and reference and summarise other work in this section of the CRF.

### 3. Development of the Design Proposal (26 marks)

As expected this is generally better than at AS with the majority of candidates producing a varied range of appropriate ideas. Development is generally good with many candidates using modelling, both CAD / virtual modelling or actually manufactured, 3D models, using appropriate materials, to test out ideas. Where candidates tackled more creative projects and were able to demonstrate original thinking they frequently gained high marks in this section. Annotation by the candidate to show their design thinking is critical to show that they meet the assessment criteria for exploring different proportions, materials and methods of production and to fully explain the decisions as they are made. The best folders include a working drawing, manufacturing specification and detailed plans for manufacture. It should be noted that a photo diary of manufacture as it progresses is not a substitute for actual pre-planned manufacture e.g. in the form of a flow chart with suggestions for time allowance, quality control and risk assessments included.

Modelling is considered to be a part of the evolution of the design solution and an opportunity for an award of marks for the evaluation of the idea to meet the needs of the specification as set out in the CRF. The manufacture of models in the development section can also be considered for reward within the next criteria as they may introduce the use of different materials and production methods.

### 4. Making and modelling (26 marks)

Making and modelling was often very good with candidates tackling quite ambitious products. Best practice was evident where they had used a range of materials and making processes to complete their outcomes. The making process was normally well documented with good thumb-nail photos and notes. It is here that candidates would be advised to show how quality control etc has been applied. However, the quality of photos showing the final outcome was often poor, making it difficult to gauge the level of finish and accuracy. A few centres gave high marks for work which is not of a suitable level of complexity or demand for Advanced level or which has been manufactured almost exclusively using CNC technology. The use of technology such as laser cutters, rapid prototyping etc should be seen as part of the manufacture and not to be solely representative of candidates' manufactured outcome. Candidates are required to submit evidence of writing software programmes, setting parameters via print screens, screen dumps etc.

### 5. Conclusions, evaluations and recommendations (12 marks)

There is generally good evidence of on-going evaluation in the folder with comparisons of ideas to the specification and investigation of suitable materials, processes etc. Some candidates involve a client or a potential user in this process, even if this is hypothetical or employs role play by fellow students / teachers.
Some centres getting clients to "sign off" work at specific stages throughout the folder.

Summative evaluations have been varied with the best involving a user or clients to test the product in its chosen environment. Weaker candidates failed to review the project itself against the specification, preferring to reflect on how they had completed each stage of the process and how they enjoy designing. It is far more productive to recognise weakness and suggest improvements than to suggest that everything is good. Many projects have never left the workshop and yet receive high praise as being perfect solutions.

**6. Communication and presentation (8 marks)**

*Please refer to the opening statement at the top of this report – Coursework Administration*

It is to be expected that this section is well rewarded at A2 as students have honed and developed their skills in the AS year. The quality of graphical communication is often good, with candidates using a range of media to develop ideas. Many candidates made very good use of a variety of CAD and computer graphics packages. Spelling punctuation and grammar could be given more attention as this was sometimes disappointing as was freehand sketching which was very varied in quality.

**Mark Ranges and Award of Grades**

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