

GCE Design and Technology Graphics Product (A2)

Exemplar Commentary 2

Title: 6th Form Block Design

Unit: 6GR04

3D Architectural Model

2D Presentational board of final proposal for client

**Criteria A:**

**Research and Analysis**

A client is involved in the initial stage and there is evidence of real investigation. The research is full, but it appears to be relevant and focused, there is no problem with this accessing the highest assessment category. (Mark Range 3-4)

**Product Specification**

The specification clear, realistic and connected to the research. Some measurable points are offered, but many will need to be assessed via seeking third party opinions. There is no 2d specification, even though this may only be a presentation for the client at the end. However sustainability issues are considered throughout and all points are justified. (Mark Range 4-6)

**Design**

Alternative designs are offered that are realistic, workable, but are perhaps lacking in some detail. The specification points are addressed and the client is involved. There's good use of card modelling but is there enough use of the research undertaken, or a range of designing. The work is considered just enough for top assessment criteria access. Credit is also given for the design work given to the presentational 2d element. (Mark Range 7-10)

**Review**

The client point of view is sought and the designer's personal evaluation is evident too. The specification is fully addressed. Nothing more would be expected for maximum marks. (Mark Range 3-4)

**Development**

The design develops and quite obviously moves on from the initial design ideas. Research is added as necessary and there is good use of technical information and information already gathered. CAD is used to explore the overall layout designs and the work is constantly justified and evaluated as the design decisions

are made. Sub-systems are dealt with individually and the key components explored. Good 3d modelling of the key stair case central to the design. A sound section of development for the 2d element too. The client input at this stage is unrealistic however hence the reduction. (Mark Range 7-10)

### Communicate

The presentation techniques used are well applied; the overall effect is of a neat well presented portfolio. CAD is used expertly and in conjunction with making design decisions, not just as a presentational tool. Annotation is full and detailed there is also enough information for third party manufacture. It is possible to find the odd measurement left to the imagination of the model maker but there is enough information to build a pretty accurate representation of this proposal. (Mark Range 4-6)

### Planning

A detailed plan is offered with health and safety considerations and quality control (not justified though), it is a little lacking in detail for some of the statements, 'make edges of solar panels' here it needs to be listed in more detailed processes. However this is balanced with some clear sketches and graphic representations of the construction methods (exploded views etc) so it would be unfair to take this from the top assessment criteria. (Mark Range 4-6)

### Use of Tools/Equipment

The tools and processes used are clearly listed and justified, with a cutting list being offered too. This is a very complex model that requires the precision and accuracy in planning the jig sawing together of a great many components, hence the necessity for very careful individual component manufacture. Health and safety considerations are made at all key stages. There is a lot of laser cutting, but it has to be made to assemble in way that takes the laser manipulation into an advanced level. This said there is also more traditional modelling techniques, sheet metal work and traditional wood joining using a router. The manufacture and construction of the presentation board is simple but neatly done by hand. (Mark Range 7-9)

### Quality.

The product has obviously been well made, but the possible over use of laser cutting has to be reflected on the production of this model. Whilst jigsaw, band saw, router, hand card cutting, Styrofoam modelling have all been used, it's difficult to see a 50/50 split with the CAM output, so this needs to be taken into consideration when assessing the quality, despite this the model has enough work to access the top assessment criteria. (Mark Range 11-16)

### Complexity/Level of demand

The task has a high degree of demand and needs to be recognised as such. The use of the laser cutter for this model is preventing it from accessing the maximum level and would need to be taken into account but the skills are higher than the usual over use of the laser seen at this level and some consideration has been taken

into account in assessing the quality already. Overall this is a demanding and testing model with precision and accuracy written all over it so a **mark range of 7-9** is allocated.

### **Testing/Evaluating**

The tests conducted are justified. Evaluation is based on test results, designer and client opinions. Modifications are offered and sustainability issues are considered. However it has no life cycle analysis.  
**(Mark Range 7-10)**