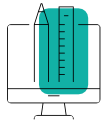
GCE Design & Technology

Unit: 9DT01



Pearson Edexcel

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Topic: Memorabilia Showcase		
General Description: The folder is 73 pages long and accesses all sections of the assessment criteria. Fifteen of the pages are photographic evidence of the manufacturing process. The candidate has designed a storage /display unit for historic military items.		**Mod Mark**
Grid 1: Investigation **Evidence**	In this section the design possibilities must be triggered by the client. In this case a range of design possibilities were introduced, these were 'narrowed down' without justification, the client, the grandfather, was then introduced to comment on them. Slides 4 and 5. This gives the impression that the client was chosen to fit the outcome. More information on the client is introduced in slide 7, with three confirmed design possibilities. These are similar in their intent, with limited justification for the choice over the other possible areas of research, music, or gardening. The overall impression is that the work is of sound quality but is lacking in investigative depth, as essentially the candidate identified possibilities and attached clients. The award is a mid-level 2.	**Level 2**
Grid 2: Investigation / Research **Evidence**	In this section the candidate should use a range of research techniques and sources to find material that can be used to support and justify the development of the chosen design and its specification. This will demonstrate an understanding of related design problems and the needs of the client. The research plan. slide 8, gives relevance and reasoning to the types of research that will be undertaken, the last 3 points on this slide are more suited to a project plan. A variety of research is evidenced in the folder. Anthropometric data is seen in slide 13, however it is not clear how the candidate will use this evidence, or how it relates to the product other than a small statement referencing height and weight. Material slides on slides 14 and 15 are generic, offering little to suggest which material should be used and why. There are other materials slides 17 and 18 that offer some pros and cons, but they have limited connection to the proposal. Further evidence can be seen in slide 39, 40 and 41, and is of a similar standard. Slide 20 gives a flavour of the display but it is difficult to see what was gleaned from this simple mood board.	**Level 2**

	Prime research of the environment in which the product will be placed and a selection of the components to be stored are seen on slides 12 and 16. Dimensions are offered for the components, but not for the parameters of the available space. The candidate should look at limits of the footprint of the product and then have a meaningful dialogue with the client, this narrative can then inform the specification. Overall, several aspects of research are considered, but lack a strong connection to the design situation. The candidate has partially investigated the proposal, but the work is often too generic. This is a mid-level 2.	
Grid 3: Specification **Evidence**	To gain high assessment marks the specification section should contain a refined brief, and the specification points should include technical measurable tests, to confirm the success of the product. A brief is seen at the top of slide 21, the inclusion of the dual purpose and mention of speakers, are not referenced in the research or the following specification. The best fit statement in the assessment criterion for this is level1. A lot of the specification points are valid, slide 21, though the specific tests to measure how these have been achieved are limited. One reference to support the assessment of specific testing is seen in specification point D3 where weighing is mentioned, **which is commendable. However, the point itself is vague with the use of the term 'relatively' without stating what it is relative to.** There is a limited refined brief on slide 21 and some quantifiable elements but limited connection to the research findings. The lack of detail and use of research findings places this as **a Level 2 outcome.**	**Level 2.**
Grid 4: Design ideas **Evidence**	A wide range of ideas that show an in-depth understanding of relevant materials, processes and techniques would support a high assessment in this criterion. The candidate offers 5 distinct ideas, the initial sketches on slide 23, appear to be non-rendered version of the proceeding 5 slides. (22 to 28). Within these slides, evidence of trigger images is seen, though for some the link to the user, or theme of the project is not explained by the candidate. (The Sydney Opera house, slide 28 as an example). Technical information on the benefits and disadvantages of materials and manufacturing processes is limited. General pros and cons are noted, but they are vague and do not offer a measurable or justified statement**. There are some sub assembly details, but they are somewhat limited, with little evidence of the candidate looking at alternatives in the detailing and discussing them with the client.** Some historical references are seen in the designs. **Overall, the lack of detail places this section as a level 2 submission.**	**Level 2**

Grid 5: Development **Evidence**	Using models to inform design decisions is a critical aspect in the assessment of this grid, along with real client engagement. Development is offered from slides 30 to 45. All 5 of the design iterations are modelled in either card or CAD. The selection of the design to be manufactured and further developed is seen after comparison against specification on slides 36 to 38. It could be argued that slides 30 to 45 are more in keeping with the assessment for design ideas, than the development of a refinement of a chosen solution. Progression of an ideation can be seen on these slides, but they lack technical information on manufacturing and materials. However, with the modelling it was more beneficial to the candidate to accredit the work in development than in Grid 4. That said the developments are limited, the work is enhanced a little by the technical developments on slides 42-44 and this was credited. Trialing and testing of materials and processes are seen on slides 43 and 44. The inclusion of a speaker and inside dividers are evidenced on slide 46. This demonstrates a small amount of change from the original design sketch. Reference to colour, style, specific sizes does help justify the decision to accept or reject aspects of the design. Slide 46 matte green finish in keeping with the military theme and rope size for example. Overall, the development is limited and the use of the client to trigger further iterations is also limited, therefore the assessment is a Level 2.	**Level 2**
Grid 6: Final design **Evidence**	To gain a high mark in this grid the candidate should offer a detailed manufacturing specification that includes detail to allow third party manufacture and show calculations to determine material quantities and cost. A dimensioned drawing on slide 47, and the cutting list, slide 50 allows a third party to attempt the construction of the display cabinet. The Gannt chart, slide 49, also acts as a guide, **although** a lot of manufacturing details and preparation **operations** are missing. The joining details and other constructional elements are not clear; indeed, a third party would have to make judgements during the manufacture. Costing and material quantities are basic, slide 54, and offer unit costs. A High-level response would include wastage calculations from stock sizes and highlight possible advantages of buying for batch production. The evidence for the final design is not comprehensive or accomplished and so the submission in this assessment criterion is at Level 2.	**Level 2**

Grid 7: Review **Evidence**	In this assessment grid the candidate should analyse the development of the project and the final design. Meaningful client responses are expected, and pros and cons and balance should be applied moving the design towards the final outcome. Client feedback is seen as blue text in the folder. Many of the comments are an affirmation of the candidate's design, however some are justified as the example on slide 39 illustrates. The client comments not only on the functionality of the rope solution but also justifies this as a design relating to the military theme. A higher-level assessment response would be to take this comment and suggest how the manufacturing process might be altered to accommodate this as a feature. Slides 36 to 38 compare the different design ideas to the specification. The annotation response is low level, however differences in the designs are reflected upon. Pros and cons can be seen on the pages of the initial design ideas. 24 -28. On these pages the candidate identifies aspects that 'miss' the specification. This work can make a small contribution to assessment in this grid, but the review should be focused on the development and the final design. To support a higher assessment, suggesting ways in which the design could be improved to meet the specification point, would be evidenced, along with a meaningful client dialogue. The lack of balanced evaluative commentary and the limited client engagement preclude the candidate from accessing the highest levels in this assessment criterion. The award would be low level 3.	**Level 3**
Grid 8: Communication **Evidence across portfolio**	In this grid the use of traditional and manual graphic techniques will partially meet the high attainment criterion. The design intent in this section is clearly portrayed. The candidate uses sketching and modelling to good effect. The annotation lacks the technical aspect, but evidence of some understanding and justification is seen. This is an example of a low level 3 submission.	**level 3**
Grid 9: Tools & Equipment **Evidence**	In this section the candidates are expected to demonstrate an accomplished and sophisticated selection and use of tools and equipment which shows in depth understanding of the materials being used and a justification for their use. The selection of the processes will ensure that the manufacture of the prototype is sound, and the outcome is dimensionally accurate. The manufacturing diary offers clear photographic evidence of the manufacture. Slides 51 to 65. The photos highlight marking out, and accurate assembly mostly safe working practices. The construction of the artefact is somewhat simplistic for this level; the choice of tools and processes is not considered an accomplished use of tools and equipment. However, the tasks are completed	**Level 3**

	with a level of skill if rather repetitive and of low demand. There is some concern about the lack of a riving knife on the table saw but the photography on slide 57 helps in this regard, and the use of the band facer slide 63. The product does appear to have dimensional accuracy. Overall, this is a level 3 submission.	
Grid 10: Quality & Accuracy **Evidence**	This section should demonstrate high-level making skills that evidences accuracy leading to a quality artefact; that is fully functioning prototype's that meets the end user needs identified in the specification. We should also see the candidate consult with the stakeholders and amend the design during the manufacturing as a result of this consultation or indeed in response to issues during the manufacturing process, if necessary, evidencing an iterative approach during the process of manufacture. The candidate has produced a working well finished prototype. Many of the specification points are met, the illumination and the military theme to the styling supports the candidate's choice. The candidate displays some skillful manufacturing, but the work is not especially accomplished. There is little evidence of the candidate being consulted through the making process, and the manufacture is linear, rather than iterative. The fundamental issue here is the lack of realistic client involvement that may have enhanced or confirmed the final outcome, the work is limited to level 3. This is a low level 3 submission.	**Level 3**
Grid 11: Testing and evaluation **Evidence**	A high-level assessment piece would evidence testing against measurable criteria, and have a balanced evaluative analysis backed up with realistic client narrative. This was lacking in the initial specification, and equally so for the evaluation against the specification. Slide 67. An example can be seen in point G 'all pieces worked successfully.' This needs to be quantifiable to measure further improvements. We do see some testing on slide 68 and some evaluation against the specification on slide 70-71, with some iterative developments. This is further enhanced by the improvements on slide 73. Slide 72, shows the client's feedback on the design. The clients' comments are mostly affirmative, and where issues arise the candidate does not offer a response. The addition of a response would	**Level 2**

	have been more fitting with a higher-level assessment. Overall, the work is best described by the descriptors for a high-level 2	
Total	**This submission represents a low/mid C grade award.**	**Grade C**