
A-LEVEL DESIGN AND TECHNOLOGY: PRODUCT DESIGN

7552/C Non-exam assessment
Report on the Examination

7552/C
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Presentation and administration

This was the first time that the Non-exam Assessment component of the specification has been assessed fully since the restrictions put in place during COVID. Many centres had made excellent use of opportunities afforded by the removal of restrictions, such as direct contact with clients and more opportunities for primary research.

Some students are exceeding the recommended page number of 45. In many cases the number of pages can be decreased by reducing the size of the font (within reason) and managing the space on individual pages better.

Centres are reminded that the only acceptable formats for work submitted electronically are Microsoft PowerPoint and PDF files. When submitting electronic format folders some centres sent in files that were very large. The file size of PowerPoint files can be reduced by compressing the picture size. If submitting work as PDF files, selecting a compressed format when saving helps. Centres need to ensure that pen drives containing electronic folders are clearly labelled and named.

When submitting paper copies the work needs to be securely fastened. Several students' work was damaged during postage as work had only been held together with a treasury tag in the corner; pronged paper fasteners or comb binding are better alternatives.

Most centres provided very detailed annotation, by the students and teachers, on the Student Record Forms. The information on these forms is used by moderators during the moderation process to help support the marks awarded by the centre..

Section A: Identify and investigate design possibilities

Most students are now working with a real client and thoroughly investigating the context. Using the first few pages of the folder to develop a full understanding of the client's needs and wants helped them to set the scene for the remainder of the project. A structured interview with the client and observing, analysing and documenting the issues that they have identified focussed the research and designing aspects of the project. Some students still missed out on valuable marks by focussing on a product that they wanted to make and acting as their own client.

The research elements should appear throughout the project as and when relevant. There are fewer students producing generic materials and process research which bear little relevance to the final outcome. Materials research was best located in the development section once the students had considered their design ideas more fully.

Students are using a variety of primary research methods such as interviews with potential users, focus groups, observation of similar products being used, disassembly of similar products (identify useful features/components), measuring of relevant components (circuit boards, bulbs/fittings, speakers, screws, rivets and any other standard components), site/shop visits eg analysis of where a product might be used.

Secondary research was used to support the primary research material effectively. Mood boards of design movements and designers should be limited to those directly leading from discussions with the client and used effectively during the design process. Anthropometric and ergonomic information was related to the client by including the client's own measurement.

Most students are now producing a range of creative and relevant first concepts using a variety of different techniques such as modelling and sketching.

Section B: Producing a design brief and specification

Design briefs that contained a clear statement that addressed the context and how the product would meet the needs of the client scored well. These included a description of how the product will help resolve the issues discussed during client interviews.

It was good to note that fewer students are using set formats for specification writing and are developing their own criteria. Students used their research work to justify their specification criteria which is generally considered to be good practice. Whenever possible students should use criteria that are measurable such as size, weight and anthropometric data in their criteria.

Many students included Gantt charts in this section to demonstrate project and time management aspects of this section. These are most successful if they are updated throughout the project with explanations as to why certain targets were met or missed.

Section C: Development of design proposals

This section was most successful when approached creatively with an open idea of what the outcome might look like. Higher scoring students considered a range of different designs which were then developed through sketching and modelled in compliant materials. The designs might be constructed using a range of materials and processes which would lead to a variety in form and shape. These materials and processes were then tested to see which would provide the best outcome.

Lower scoring students were too linear in their designing and had a fixed idea of what they were going to design before they started. Models were simply a 3-dimensional version of their sketched work with little development. Students need to show that they have considered a range of designs, materials and processes during the development of their final product and explain clearly why design decisions were made. The client should be heavily involved during the development stages- giving feedback after the initial designs, modelling and after the final design has been produced.

It was good to note that more students included a dimensioned working/orthographic drawing compared to previous years. For complex products containing many parts, individual component drawings were also used to show the finer details. Most students are now using some form of CAD either in the development or the final presentation of their design. Exploded drawings and rendered final designs were widely used which was great to see.

Students are also required to produce a detailed manufacturing plan. This should outline each step of the making process including information on the tools/equipment, materials and components, quality assurance, health and safety and time.

Section D: Development of design prototypes

There was a huge variety of high-quality, demanding prototypes produced this year. From delicate and ornate jewellery to very precise engineered products, all of which scored highly in this section.

Practical skills and processes which were used during the development stage to decide on which were the most suitable can be credited in this section.

If the final prototype is going to be manufactured solely using Computer Aided Manufacturing techniques such as 3D printers and laser cutters, it is vital that the students have experimented with a range of hand and conventional machines and equipment during the modelling phase of the development. Many students relied too heavily on CAM techniques which will limit their scores in this section.

The client can also be involved in this section by asking them to give feedback on how the making of the prototype is progressing and then the students documenting any alterations made in the making.

Section E: Analysis and evaluation

Evaluation should be an ongoing feature of the folder with formal evaluation involving the client occurring after the initial ideas, development, modelling, final design, and final prototype. Informal evaluation can occur at any point of the project and may involve the client, when necessary, in supporting design/prototype development.

Most students are evaluating their final prototype against the specification reasonably successfully. They need to analyse how and why their prototype meets the specification criteria effectively.

Adding detailed photos of the prototype being tested and showing how it could be improved is very useful in this section. Proposing and sketching out how the product could be further modified supports higher level marks in this section.

Describing how the prototype could be commercially produced was often missed out of this section. Simply stating that the prototype would be injection moulded with a cross sectional drawing from the internet is unlikely to score highly. Explaining why injection moulding has been chosen from a range of different commercial processes would be a better approach.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.