



**General Certificate of Secondary Education
June 2011**

**Design and Technology: 45552
Product Design**

(Specification 4555)

Unit 2: Design and Making Practice

Report on Moderation

Further copies of this Report on **the Examination** are available from: aqa.org.uk

Copyright © 2011 AQA and its licensors. All rights reserved.

Copyright

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

The Assessment and Qualifications Alliance (AQA) is a company limited by guarantee registered in England and Wales (company number 3644723) and a registered charity (registered charity number 1073334).
Registered address: AQA, Devas Street, Manchester M15 6EX.

Principal Moderator's Report 2011

This year was the first controlled assessment task entry for this specification and we experienced considerable growth in entries from the legacy specification. In the majority of cases centres had changed the approach very little from the previous specification. A minority of centres had embraced the opportunities offered by the new assessment criteria and this change of emphasis was most commonly seen where centres had submitted the work electronically. It is concerning that a large proportion of work seen still appears to reflect far more than the 45 hour expectation for this task. Centres still appear to be encouraging candidates to complete work which does not match the assessment criteria.

The full range of tasks were seen by moderators but tasks 4, 6, 7, 8, 9, 10, 17 and 20 were by far the least popular. Where centres had restricted the choice, moderators generally felt that the tasks had been more successful. However, moderators also commented upon the number of centres where a completely teacher led approach had been followed with little to differentiate the work of individual candidates. This approach had a serious effect on candidates being able to access the higher mark bands. Tasks such as 1 and 11 often resulted on outcomes which were more appropriate for KS3 and centres do need to be aware of the expected levels of demand to secure the higher marks. Tasks 5 and 14 were often highlighted by moderators as ones where candidates simply recreated what was already commercially available and the levels of creativity was very low. Moderators also reported that in many cases it was impossible to see what actual task had been undertaken and it is recommended that this be clearly indicated on the front cover of the design folder in the future.

Administration

Unfortunately a considerable number of centres failed to meet the deadline date for submission of work, with work arriving to moderators very late into the moderation period. It was also noted that arithmetical errors were common and many candidates were awarded the incorrect mark either on the Candidate Record Form or the Centre Mark Form. Failure to include the Centre Declaration Form was also relatively common.

Candidate record forms are a very important part of the moderation process and many centres failed to complete these correctly. Missing candidate numbers and staff signatures were a common problem. Teacher annotation often did not support the assessments and many centres simply re-wrote the assessment criteria rather than indicating why a particular mark had been given or where the specific evidence could be found. Internal standardisation is still an issue in many centres where there is a team of teachers delivering this specification. It is strongly recommended that centres provide moderators with a list of teaching groups to ensure that a balanced sample is taken.

It was noticeable that many centres were sending work to the moderators which was not securely bound, where work was disorganised, sometimes a mixture of portrait and landscape formats were used and, surprisingly, work which was upside down. All of these make the task of moderation more difficult and centres are urged to check that the sample of work is as easy to handle as possible so that moderators can quickly make a judgement to support the centre assessments. Centres who used flip-folders often made this task easier although many moderators commented about folded sheets or additional sheets which needed to be removed in order to view the work.

Some electronic submissions were found to be problematic with CDs not opening and/or links to video or sound clips not activated and these should be checked by the centre prior to posting to avoid delays.

It was clear that a significant minority of centres were not following the guidance for undertaking the controlled assessment tasks as laid out at the back of the task booklet. Too much teacher assistance was often the case but in some cases teachers had clearly provided no structure or support with sometimes unfortunate consequences for candidates.

Investigations

Many candidates are still producing too much material within this section. It must be stressed that little credit is given to material copied from books or websites and genuine primary investigations are expected for the higher marks. Few candidates are simply summarising the investigation work undertaken and explaining the benefits to the designing process. Many investigation sections still contain material which is not linked to the task. Too few candidates conclude this section with a good, solid set of design criteria: most still call this their specification. There is often not a strong enough link between investigating and designing. Moderators did report better evidence of primary investigations but most work in this section is dominated by 'desk research'.

Product analysis was generally better with more use being made of group discussions of actual products they could handle. However, many candidates are still being encouraged to analyse photographs on a website rather than analysing commercial products. Although this activity did aid a large number of candidates with their own designing it was still the case that many did not extract useful data to aid their own work.

Whilst many candidates are now explaining who their target user would be, few centres appeared to have been directing candidates to profile these target users in any depth. Where this information was better it was usually the case that the centre had arranged for candidates to work with real clients or had arranged for focus groups such as local primary schools to be involved in the tasks.

Development

This is a considerable difference in emphasis from the legacy specification and one where the largest differences often occurred between centre assessments and the moderators. It was common to see a wide range of different concepts superficially explored followed by a neat drawing of a design solution with little or no actual development taking place. Few candidates appeared to have followed an appropriate planned design strategy in order that they could generate innovative or creative responses. Variations on existing products were generally common and centre led formulaic designs were seen in abundance. Photo diaries were reasonably common to see in this section, however, their value was dependent upon being able to see actual development taking place. Far too often it was simply a story of posed shots showing different tools being used rather than explaining the decision making which had taken place.

Centres generally encouraged modelling at this stage; although the results of this varied considerably. The best examples included testing out laser cutting files in card prior to making in the correct materials, or making calico toiles. Few candidates tested alternative constructions, proportions or materials. It is an expectation for the higher marks that candidates provide enough information for third party manufacturing to commence.

All details should be documented either as part of the design solution and/or manufacturing specification section of the design folder. This was clearly not the case with many centres. CAD was often used to good effect but too few candidates provided evidence of the development of the CAD drawing itself. Screen dumps were surprisingly uncommon as a method of showing development.

Few candidates had taken account of the wider issues associated with their work although it was fairly common to see a sheet dealing with sustainability almost in an essay style in an attempt to satisfy this criterion. Few explained the reasons for choosing materials or components based upon their physical properties or as the result of any real investigations. Surprisingly few candidates produced a manufacturing specification and it was felt that this was an area where centres might need to do additional work to support candidates prior to undertaking the tasks in the future.

Making

Some candidates undertook ambitious projects that made it difficult to access the higher mark range, as they could not complete the product to a high enough standard in the time available. When assessing making skills, centres should also consider more carefully the complexity and range of skills demonstrated by the candidate in addition to the quality of the finished outcome.

Many candidates were given credit for a high level of skill and accuracy for a product that was not demanding to construct.

The better projects enabled candidates to display a skilful use of materials and equipment. This enabled the production of a high quality outcome with a high level of accuracy and finish appropriate to the specification.

Products using the full range of materials were seen from electronics to ceramics, and from food to metalworking. Moderators often commented on the quality of work undertaken by candidates working with textiles as being both creative and commercially viable. The Product Design expectation is that candidates design and develop small scale products to the point where they could appear in a shop. Prototypes are expected to be developed to the point that all aspects can be thoroughly evaluated.

Commercial viability is a key part of the assessment for the making element and centres should encourage candidates to produce packaging and other related graphical outcomes which are indistinguishable from the commercial products. The use of ready-made cartons is acceptable and some centres made good use of these, indeed, making this a design criterion at an early stage of the process. Many candidates overlooked the need to make a product which was suitable to a specific group of users and was of a saleable quality.

Evaluation and testing

This section was very often over-marked because candidates failed to actually test their products and then suggest improvements. Too many evaluation sections contained personal comments about the process and what they could have been done better. Some centres made very good use of clients in this section but this was not the norm and moderators questioned the value of gaining comments from classmates as the only third party evaluations. Many candidates rightly tested their final product against their design criteria, but this was often as a 'tick box' in a table with little analysis. Poor evaluations involved candidates 'answering' a set of questions prepared by the teacher, with superficial, and often meaningless, answers.

There is still a tendency to leave this aspect of the project until the end and produce a short summative report. The expectation for the higher marks is to involve the target user throughout the process. As such, this section became a major differentiator between candidates. Good examples involved candidates carrying out tests on the product throughout the development, which involved clear feedback from the client on the effectiveness.

One major omission which was common was that candidates did not specify the volume of products needed or indicate any manufacturing aids required for quality assurance purposes. They also did not explain the changes needed for commercial production to take place and this was a major omission within the evaluation section of the work seen.

Although greatly reduced, generic material on industrial processes and quality assurance was still seen in a significant minority of folders

Communication

The best paper-based folders had excellent examples of sketching with appropriate rendering skills and/or modelling. Ideas were well annotated. Candidates who were able to access the higher mark ranges were able to display a wide range of these kinds of skills. They also displayed an ability to use technical graphics like Isometric and Perspective. Poor folders often did not utilise the use of IT effectively and displayed poor basic sketching modelling and drawing skills. Most folders were generally concise, and the best were clearly focused. Some electronic folders suffered from poor scanning and often illegible writing.

The use of photographic evidence in both paper and electronic folders has greatly increased but quality rather than quantity should be seen as the expectation. Some candidates produced photo diaries which clearly detailed the work undertaken but this was not the norm.

The use of sound files to annotate electronic portfolios was welcome and clearly aided many candidates.

The use of video was less common and generally found in the original investigation section of the work. A significant proportion of centres are now submitting their candidates' work using PowerPoint and this is certainly helping to create a more concise presentation of the work done.

Conclusions

Any radical change of emphasis in assessment criteria is bound to bring an evolutionary response from centres and that has certainly been the case this year. As AQA now has a good volume of candidate work completed for the new specification, which can be used to guide centres, it is hoped that teachers will take full advantage of the material that is made available in the autumn term. In addition, AQA is planning a series of chargeable workshops which will offer centres the opportunity to share good practice.

Mark Ranges and Award of Grades

Please see the following link:

<http://www.aqa.org.uk/over/stat.html>

UMS Conversion Calculator

Please see the following link:

www.aqa.org.uk/umsconversion