

Moderators' report

GCSE

DESIGN AND TECHNOLOGY

**OCR Level 1/Level 2 GCSE (9-1) in
Design and Technology**

J310

For first teaching in 2017

J310/02/03 Summer 2025 series

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Introduction

Our Moderators' reports are produced to offer constructive feedback on centres' assessment of moderated work, based on what has been observed by the moderation team. These reports include a general commentary of accuracy of internal assessment judgements, identify good practice in relation to evidence collation and presentation, and comment on the quality of centre assessment decisions against individual Learning Objectives. The report also highlights areas where requirements have been misinterpreted and provides guidance to centre assessors on requirements for accessing higher mark bands. Where appropriate, the report will also signpost other sources of information that centre assessors will find helpful.

OCR completes moderation of centre-assessed work in order to quality assure the internal assessment judgements made by assessors within a centre. Where OCR cannot confirm the centre's marks, we may adjust them in order to align them to the national standard. Any adjustments to centre marks are detailed on the Moderation Adjustments report, which can be downloaded from Interchange when results are issued. Centres should also refer to their individual centre report provided after moderation has been completed. In combination, these centre-specific documents and this overall report should help to support centres' internal assessment and moderation practice for future series.

Online courses

We have created online courses to build your confidence in delivering, marking and administering internal assessment for our qualifications. Courses are available for Cambridge Nationals, GCSE, A Level and Cambridge Technicals (2016).

Cambridge Nationals

All teachers delivering our Cambridge Nationals suite are asked to complete the Essentials for the NEA course, which describes how to guide and support your students. You'll receive a certificate which you should retain.

Following this you can also complete a subject-specific Focus on Internal Assessment course for your individual Cambridge Nationals qualification, covering marking and delivery.

GCSE, A Level and Cambridge Technicals (2016)

We recommend all teachers complete the module on Online courses – NEA for their subject. These courses provide subject-specific information about course content; how to prepare for planning, marking and submitting; and support with understanding the marking criteria.

Accessing our online courses

You can access all our online courses from our teacher support website [Teach Cambridge](#).

These free online courses currently cover the end-to-end NEA process for teachers. You'll find the link to the **Online courses** under the **Assessment** or **Training** tab – hover over **Assessment** or **Training** on the horizontal menu and select **Online courses** from the dropdown.

These self-paced online courses are intended for any teachers. During the course, you will engage with interactive content on subjects such as guidance on unit content, structure and administrative processes.

If you have any queries, please contact our Customer Support Centre on 01223 553998 or email support@ocr.org.uk.

General overview

This was the fifth series of the newly reformed GCSE 9–1 Design & Technology Iterative Design Challenge. We were pleased to receive and moderate a broad range of interesting folders that covered all material areas.

We saw a range of Iterative Design projects that responded to all three of the contexts published by OCR last June with no clear favourite this year.

The majority of projects once again focused on general Product Design outcomes using timber, polymers and metals with higher scoring candidates often combining them in interesting and creative ways. Entries that focused on textiles and design engineering solutions were encouraging, but there were very limited responses that focused on papers and boards.

Candidates identified a broad variety of suitable opportunities for innovative and creative outcomes. As with previous years, candidates who maintained regular contact with genuine users and stakeholders throughout the project were able to effectively test, iterate and move their projects for award successfully.

It was clear to see where successful centres had made use of the guidance and exemplar folders provided by OCR at training events. This has helped them to structure their folders clearly and concisely and mark them accurately.

Forms and Administration

Most centres continue to submit work digitally and the number of centres using OCR's Submit for Assessment increased this year.

There was a rise in clerical errors this year. Centres should make sure they use OCR's official form and double check when entering their marks before uploading. A small number of centres submitted work late and some centres needed chasing for CRF and CDFs; this should be avoided as it can delay moderation and risk the publication of results for the candidates of those centres involved.

Misconception



The comments section on the candidate CRFs should only be used if the work is not clear in the portfolio. Generic comments that replicate the mark scheme are not helpful.

The location of evidence is the most useful aspect of the [CRF](#), and we recommend that this is passed on to candidates using the resource that has been created to support this on Teach Cambridge. Very few candidates included this slide/page at the start of their folders again this year and it is recommended that centres allow sufficient time at the end of the project for this important administration task before marking.

Key Points

The purpose of the moderation process is to make sure that centre assessments are in line with a common national standard. This is achieved by adjusting any centre assessment where the moderation process indicates that this is necessary based on the sample of work viewed. Centres receive a detailed report following moderation which identifies specific areas of the assessment criteria which need attention, where applicable.

In internally assessed units such as this one, where the assessment contains many sections, it is worth noting that erring on the side of generosity in the assessment of several areas can have a significant cumulative effect.

OCR support



Several free online training resources have been developed to support the moderation processes for internally assessed qualifications including Design & Technology on [Teach Cambridge](#) - [Assessment support](#) - [Online course GCSE Design and Technology](#)

It is important to recognise when candidates are producing excessive work and when that work can become irrelevant, particularly during initial investigation. If their portfolio is not concise this can impact on areas of assessment that relate to the relevant and concise nature of the portfolios. A high-quality portfolio is achievable in less than 30 slides (the recommendation is around 25 slides).

Strand by strand guidance on J310/02 and 03 requirements

This is not an exhaustive list, and these comments relate directly to the GCSE Specification which can be found on the [OCR website](#) and [Teach Cambridge](#). Chapter 11 of the OCR [GCSE \(9–1\) Design & Technology textbook](#) is also particularly informative and is extremely detailed.

Strand 1 – Explore

On the whole, this strand was marked **accurately** by the majority of centres. However, there is still a trend for some candidates to present too much generic investigation, especially into materials at too early a stage in their development.

To attain high marks in this section candidates are required to **fully** consider the user, stakeholders and the context **throughout** their project. The chosen brief must be **relevant** to the context and suitably **challenging**. **Comprehensive** and **relevant** investigations must be carried out **throughout** the project as they will lead to a **clearly defined** set of user/stakeholder requirements before initial ideas are generated.

A highly **accurate** technical specification must be produced at the **end of development** that communicates all technical requirements to make the final design commercially, such as **dimensions**, **manufacturing methods** and **materials**, to a third party.

Candidates who did well generally:	Candidates who did less well generally:
- used a variety of approaches to investigate the contexts - selected a suitably challenging design brief that focused on a problem (not a product) - used several types of 'hands on' investigation throughout their project - used CAD to present their technical specification at the end of their development.	- only used mind maps to explore a context - focused on a product to make rather than a problem to solve - relied too much on web based information - produced too much generic material investigation too early - confused the technical specification (a set of working drawings) with their list of requirements.

Misconception



The technical specification should be series of working drawings at the end of development (before planning). Suitably accurate and dimensioned well enough for a third party to manufacture their prototype.

It is not a list of what the design must do – that is the 'List of Requirements' that comes after the initial investigation.

Strand 2 – Create: Design Thinking

The marking of this strand was marked **accurately** this year but still generously by a number of centres.

To attain high marks in this section candidates are required to demonstrate high levels of design thinking with **clearly progressive** iterations when developing solutions. They must demonstrate **different** approaches to design that **avoid** fixation. There must be **systematic** evidence of responding to **problems** and **requirements** and **clear** evidence of **innovation** throughout the design process.

Candidates who did well generally:	Candidates who did less well generally:
- used a variety of approaches to generate initial ideas such as sketch modelling and collaboration - adopted a clear strategy of iteration 'build-test-improve-repeat' - made excellent use of user/stakeholder feedback to inform the next steps of their iteration - showed a clear path from initial idea to final design.	- generated a small number of initial ideas - fixated on a solution - did not iterate – focused on explaining and justifying the chosen design rather than improving it - did not include genuine user feedback - did not check their development against their requirements.

Strand 3 – Create: Design Communication

On the whole, this strand was marked **quite accurately** by centres this year.

To attain high marks in this strand candidates are required to demonstrate excellent quality of chronological progression in their development. It must be clear and obvious **how** their design is developing. A range of **different** approaches that can **effectively** communicate will need to be used that demonstrate **high levels** of skill in both the generation of **initial ideas** and **development**. This will need to be shown both **graphically** and via effective **modelling**.

A key requirement at the end of development is a **formal presentation** of a final design that will provide impact and clarity to stakeholders. This was absent in a worrying number of portfolios again this year.

Candidates who did well generally:	Candidates who did less well generally:
- used a range of techniques to communicate their design thinking throughout their development - recorded their development in real time as and when it happened often combining sketching with modelling - modelled effectively using a range of appropriate media - formally presented their final design as a presentation to stakeholders.	- used low level sketching with very little annotation - tended to use a single modelling material repeatedly whether it was suitable or not - did not include useful headings - did not present their final design in a way that would provide impact to stakeholders - in some cases, did not present a final design at all.

Assessment For Learning



CAD can be an effective tool to both develop ideas and can be used to create the final design presentation.

Strand 4 – Create: Final Prototype

Centres' assessments in this section were **fairly accurate** this year.

To attain high marks in this strand candidates are required to have a **comprehensive** plan of how they would make their final prototype(s) in the centres' workshops, along with **clear evidence** of them using the tools, techniques and machinery they required. This must include evidence of appropriate Digital Design and Manufacture.

Clear photographs are an essential requirement to help moderators understand how marks have been given for the quality of the final prototype. A brief **video** to help demonstrate any specific aspects of functionality is useful in some cases.

Misconception



Evidence that the candidate has considered the **viability** of their final prototype(s) is a crucial component in the final assessment statement. This can be done with a comparison against the final design and an exploration of suitable marketing considerations.

Candidates who did well generally:	Candidates who did less well generally:
- organised their making plan to account for the components required - added an extra level of detail with regards to quality control or safety - clearly and concisely documented their actual use of tools and machinery throughout - presented a series of clear photos that showed both the whole prototype as well as close-up details - compared their prototype to the intended final design - explored marketing considerations relevant to their design.	- produced a retrospective making plan and, in some cases, did not produce a plan of making at all - tended to include photos of the prototype being built rather than them using the tools and machinery to build it - provided too few or low-quality images of the final prototype - did not consider the viability of their prototype in a meaningful way.

Strand 5 – Evaluation

Centres' assessments in this section tended to be **generous** when compared with the nationally agreed standard.

To attain high marks in this strand candidates are required to demonstrate excellent levels of analysis and evaluation **throughout** their folder that is both **critical** and **reflective**. This will include information from stakeholders, existing products and wider issues. It must be clear how this information **supports** and **informs** the design process. Ongoing evaluation must demonstrate clearly how the development is **meeting** the requirements and informing the **next steps** for future iterations. **Fully appropriate** methods of testing must be used to test whether the **design solution** is fit for purpose and then followed by a **full evaluation** of the strengths and weaknesses of the final prototype(s). Comprehensive suggestions for modification must also consider **design optimisation**.

Candidates who did well generally:	Candidates who did less well generally:
- evaluated at every opportunity - drew conclusions regularly and used these to plan their next steps - analysed their investigation by considering HOW each piece of information could influence their design - conducted frequent checks of their development against the requirements	- assumed their design had few, if any, faults - did not engage with relevant users and stakeholders throughout their project - did not check the progress of their development against the requirements - tended to rush testing and evaluation often relying solely on a comparison against the requirements

Candidates who did well generally:	Candidates who did less well generally:
- made excellent use of appropriate users/stakeholders during development and feasibility testing - presented a range of meaningful modifications at the end of their project.	presented low level modifications that focused on minor alterations.

Most common causes of low scoring folders

Early fixation on a product rather than focusing on a problem to solve.

Lack of genuine user/stakeholder involvement.

A reliance on too much internet based (secondary) investigation.

Fixation on an early design.

Poor quality sketching and modelling.

Lack of iteration.

Rushed/inadequate testing.

Fear of failure – an unwillingness to accept that their idea/design has flaws.

Common misconceptions

Covered in the main text.

But of particular note is the confusion surrounding the 'technical specification'. Too many centres still list the requirements under this title as it is marked at the end of Strand 1 - Explore.

Avoiding potential malpractice

Acknowledging sources of information is a requirement of the qualification and should be acknowledged when candidates sign the Declaration. Referencing can be done on a per page basis or with a bibliography at the end. Getting candidates in the habit of copying URLs as they find images or information on the internet for instance and pasting them under the relevant image/information will make referencing more manageable.

Any work not done by the candidate must also be highlighted in the folder. This could include work done collaboratively or ideas/suggestions presented by users and stakeholders. More recently this could also include ideas inspired by AI image generators.

Helpful resources

All useful resources can be found on [Teach Cambridge](#). These include:

[Teacher guide: Internal Marking Guidance \(J310\)](#)

[Candidate Exemplars](#) and [CPD events material](#) including benchmarking folders

[OCR Train](#) online e-learning marking course

Additional comments

Key influences on marks in all categories depend on the level of thinking, complexity, sophistication and difficulty involved.

The level of innovation, creativity and the depth of approach and the appropriateness of the skills involved is also an important factor.

Candidates should think about the structure of their folders in advance in order to make sure the presentation offers clear communication. Project management and organisation are key skills.

Centre and candidate name and number must be on all work that is presented. This was not the case this year.

Slides need to be numbered to aid navigation for centre and moderation process.

Centres should encourage candidates to try to keep portfolio sizes down to under 30 slides.

The overall ethos for this specification is based on 'real time recording' of events as they actually happen.

Using staff and/or peers acting in the role of user/stakeholder in persona is a useful tactic but this must be clearly articulated and referenced within the portfolio. All work undertaken must be by the candidate.

Supporting you

Teach Cambridge

Make sure you visit our secure website [Teach Cambridge](#) to find the full range of resources and support for the subjects you teach. This includes secure materials such as set assignments and exemplars, online and on-demand training.

Don't have access? If your school or college teaches any OCR qualifications, please contact your exams officer. You can [forward them this link](#) to help get you started.

Reviews of marking

If any of your students' results are not as expected, you may wish to consider one of our post-results services. For full information about the options available visit the [OCR website](#).

Access to Scripts

We've made it easier for Exams Officers to download copies of your candidates' completed papers or 'scripts'. Your centre can use these scripts to decide whether to request a review of marking and to support teaching and learning.

Our free, on-demand service, Access to Scripts is available via our single sign-on service, My Cambridge. Step-by-step instructions are on our [website](#).

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Please find details for all our courses for your subject on **Teach Cambridge**. You'll also find links to our online courses on NEA marking and support.

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If you do not have an Interchange account, please contact your centre administrator (usually the Exams Officer) to request a username.

Once you have an Interchange username, use the form on [this page](#) to sign up for ExamBuilder, or ask an existing user at your centre to create an ExamBuilder account for you.

Active Results

Review students' exam performance with our free online results analysis tool. It is available for all GCSEs, AS and A Levels and Cambridge Nationals (examined units only).

[Find out more](#).

Online courses

Enhance your skills and confidence in internal assessment

What are our online courses?

Our online courses are self-paced eLearning courses designed to help you deliver, mark and administer internal assessment for our qualifications. They are suitable for both new and experienced teachers who want to refresh their knowledge and practice.

Why should you use our online courses?

With these online courses you will:

- learn about the key principles and processes of internal assessment and standardisation
- gain a deeper understanding of the marking criteria and how to apply them consistently and accurately
- see examples of student work with commentary and feedback from OCR moderators
- have the opportunity to practise marking and compare your judgements with those of OCR moderators
- receive instant feedback and guidance on your marking and standardisation skills
- be able to track your progress and achievements through the courses.

How can you access our online courses?

Access courses from [Teach Cambridge](#). Teach Cambridge is our secure teacher website, where you'll find all teacher support for your subject.

If you already have a Teach Cambridge account, you'll find the link to the **Online courses** under the **Assessment** or **Training** tab – hover over **Assessment** or **Training** on the horizontal menu and select **Online courses** from the dropdown.

If you don't have a Teach Cambridge account yet, ask your exams officer to set you up – just send them this [link](#) and ask them to add you as a Teacher.

Access the courses **anytime, anywhere and at your own pace**. You can also revisit the courses as many times as you need.

Which courses are available?

We recommend all teachers complete the module on Online courses – NEA for their subject. These courses provide subject-specific information about course content; how to prepare for planning, marking and submitting; and support with understanding the marking criteria.

The subject-specific courses are tailored for each qualification that has non-exam assessment (NEA) units, except for AS Level and Entry Level. They cover the following topics:

- the structure and content of the NEA units
- the assessment objectives and marking criteria for the NEA units
- examples of student work with commentary and feedback for the NEA units
- interactive marking practice and feedback for the NEA units.

We are also developing courses for some of the examined units, which will be available soon.

How can you get support and feedback?

If you have any queries, please contact our Customer Support Centre on 01223 553998 or email support@ocr.org.uk.

We welcome your feedback and suggestions on how to improve the online courses and make them more useful and relevant for you. You can share your views by completing the evaluation form at the end of each course.

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