

Course report 2024

Design and Manufacture Advanced Higher

This report provides information on candidates' performance. Teachers, lecturers and assessors may find it useful when preparing candidates for future assessment. The report is intended to be constructive and informative, and to promote better understanding. You should read the report with the published assessment documents and marking instructions.

We compiled the statistics in this report before we completed the 2024 appeals process.

Grade boundary and statistical information

Statistical information: update on courses

Number of resulted entries in 2023: 112

Number of resulted entries in 2024: 52

Statistical information: performance of candidates

Distribution of course awards including minimum mark to achieve each grade

Α	Number of candidates	5	Percentage	9.6	Cumulative percentage	9.6	Minimum mark required	138
В	Number of candidates	11	Percentage	21.2	Cumulative percentage	30.8	Minimum mark required	117
С	Number of candidates	15	Percentage	28.8	Cumulative percentage	59.6	Minimum mark required	96
D	Number of candidates	12	Percentage	23.1	Cumulative percentage	82.7	Minimum mark required	75
No award	Number of candidates	9	Percentage	17.3	Cumulative percentage	100	Minimum mark required	N/A

We have not applied rounding to these statistics.

You can read the general commentary on grade boundaries in the appendix.

In this report:

- 'most' means greater than 70%
- 'many' means 50% to 69%
- 'some' means 25% to 49%
- 'a few' means less than 25%

You can find statistical reports on the statistics and information page of our website.

Section 1: comments on the assessment

Question paper

The optionality in section 1 was removed, and candidates were required to answer both question 1 and question 2. Most questions performed as expected. However, question 2 was slightly more demanding than anticipated for some candidates, and the grade boundaries were adjusted to take account of this.

Assignment

The requirement to manufacture a presentation model was re-introduced to the assignment. Some candidates did not attempt this section.

Section 2: comments on candidate performance

Question paper

Some candidates demonstrated appropriate knowledge to answer questions across the whole paper. However, many did not answer the range of questions to the depth required at Advanced Higher.

Assignment

Many candidates were able to demonstrate the required level of skills across the assignment. However, some candidates did not demonstrate enough evidence to access the full range of marks for this component.

Areas that candidates performed well in

Question paper

Question 4(b)

Many candidates outlined at least two valid points about the benefits of a strong brand image to companies and their customers.

Question 5(b)

Many candidates gave at least two valid descriptions about the potential risks of diversification to a company.

Question 7(a)

Most candidates demonstrated sound knowledge in their explanations of why the named materials were suitable for the lead, and were able to access the full range of marks in the top band or at the top of the middle band.

Assignment

Generating initial ideas

Most candidates generated appropriate initial ideas. Most candidates achieved marks in the top two bands for this section. A few candidates achieved marks in lower bands as they had not clearly defined the problem, leading to poor generation of initial ideas.

Applying graphic techniques

Many candidates demonstrated effective application of graphic techniques. Many candidates achieved marks in the top two bands for this section.

Producing a plan for commercial manufacture

Candidates generally did well in this section, with many candidates achieving marks in the top two bands.

Refining ideas

Many candidates demonstrated the ability to refine ideas towards a design proposal effectively. Many candidates demonstrated effective or highly effective refinement of ideas and had effective or highly effective detail to inform the plan for manufacture, which allowed them to access marks in the top two bands.

Manufacture a presentation model

Many of the candidates who manufactured a presentation model demonstrated the skills to gain marks in the top two bands, with many gaining marks in the top band. It should be noted, however, that some candidates did not provide evidence of manufacture of a presentation model and were unable to access marks in this section.

Areas that candidates found demanding

Question paper

Question 1(d)

Most candidates made one or no valid points in their descriptions about the assembly methods used in products they analysed, and the impact they may have on the environment. Some described the assembly methods but did not relate them to the impact on the environment and could not access the full range of marks.

Question 2(a)

Many candidates demonstrated a limited knowledge and understanding of the evolution of products they researched and the reasons for changes in them.

Question 2(b)

Many candidates made one or no valid points in their explanations about why changes to the products they researched were a success or a failure.

Question 2(c)

Some candidates did not make a valid point in their description about the impact the products they researched had on society, the economy and the environment, and could not access the full range of marks available.

Question 2(d)

Many candidates did not make a valid point in their description about how future developments in materials and technologies may influence the design of products they researched, and could not access the full range of marks available.

Question 7(b)

Some candidates did not make a valid point in their explanation to the depth required at Advanced Higher, and were unable to access the full range of marks available.

Question 7(c)

Some candidates did not make a valid point in their outlines to the depth required at Advanced Higher, and were unable to access the full range of marks available.

Assignment

Applying knowledge and understanding of design

A few candidates applied knowledge and understanding of design at the level required at Advanced Higher to attract marks in the top band.

Applying knowledge and understanding of materials, manufacture and assembly methods

A few candidates applied knowledge and understanding of materials, manufacture and assembly at the level required at Advanced Higher to attract marks in the top band.

Section 3: preparing candidates for future assessment

Question paper

The optionality in section 1 was removed this year, and candidates were required to respond to both question 1 and question 2. The evidence showed that some candidates did not carry out research on the evolution of commercial products and this impacted the marks gained in question 2. To effectively access the full range of marks available for section 1, it is important that candidates carry out a product analysis and research the evolution of a product. Centres can refer to the SCQF level 7 freestanding units for support when delivering these areas of the course.

Many candidates did not display the depth of knowledge required at Advanced Higher level across several areas of the course content, and relied instead on their general knowledge. Teachers and lecturers should provide candidates with the table from the course specification that details the knowledge and understanding that can be sampled in the question paper.

Assignment

Some candidates had difficulty generating appropriate evidence for the assignment as they chose a problem that was limited. Centres should discuss ways of identifying suitable design opportunities with candidates and encourage them to consider how the problem they identify will allow them to produce suitable assessment evidence.

A few candidates attempted to develop proposals for more than one product. This led to superficial depth in exploration and refinement with much of the evidence being repetitive. Centres should discourage candidates from adopting this approach.

Some candidates produced limited evidence in the exploring section of the assignments. We encourage centres to give candidates skill-building tasks in these areas before they carry out the assignment.

The 'Manufacture a presentation model' section will continue to be assessed and candidates must be prepared for it. It should also be noted that CAD modelling will not attract marks in this section. Candidates must produce a physical model as the skills being assessed are in the manufacture of a presentation model.

Appendix: general commentary on grade boundaries

SQA's main aim when setting grade boundaries is to be fair to candidates across all subjects and levels and maintain comparable standards across the years, even as arrangements evolve and change.

For most National Courses, SQA aims to set examinations and other external assessments and create marking instructions that allow:

- a competent candidate to score a minimum of 50% of the available marks (the notional grade C boundary)
- ♦ a well-prepared, very competent candidate to score at least 70% of the available marks (the notional grade A boundary)

It is very challenging to get the standard on target every year, in every subject, at every level. Therefore, SQA holds a grade boundary meeting for each course to bring together all the information available (statistical and qualitative) and to make final decisions on grade boundaries based on this information. Members of SQA's Executive Management Team normally chair these meetings.

Principal assessors utilise their subject expertise to evaluate the performance of the assessment and propose suitable grade boundaries based on the full range of evidence. SQA can adjust the grade boundaries as a result of the discussion at these meetings. This allows the pass rate to be unaffected in circumstances where there is evidence that the question paper or other assessment has been more, or less, difficult than usual.

- ♦ The grade boundaries can be adjusted downwards if there is evidence that the question paper or other assessment has been more difficult than usual.
- ♦ The grade boundaries can be adjusted upwards if there is evidence that the question paper or other assessment has been less difficult than usual.
- Where levels of difficulty are comparable to previous years, similar grade boundaries are maintained.

Every year, we evaluate the performance of our assessments in a fair way, while ensuring standards are maintained so that our qualifications remain credible. To do this, we measure evidence of candidates' knowledge and skills against the national standard.

During the pandemic, we modified National Qualifications course assessments, for example we removed elements of coursework. We kept these modifications in place until the 2022–23 session. The education community agreed that retaining the modifications for longer than this could have a detrimental impact on learning and progression to the next stage of education, employment or training. After discussions with candidates, teachers, lecturers, parents, carers and others, we returned to full course assessment for the 2023–24 session.

SQA's approach to awarding was announced in <u>March 2024</u> and explained that any impact on candidates completing coursework for the first time, as part of their SQA assessments, would be considered in our grading decisions and incorporated into our well-established

grading processes. This provides fairness and safeguards for candidates and helps to provide assurances across the wider education community as we return to established awarding.

Our approach to awarding is broadly aligned to other nations of the UK that have returned to normal grading arrangements.

For full details of the approach, please refer to the <u>National Qualifications 2024 Awarding — Methodology Report</u>.