Course report 2025

National 5 Design and Manufacture

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.

For information about the assignment — practical, which is internally assessed, please refer to the 2024–25 Qualification Verification Summary Report on the subject page of our website.

We compiled the statistics in this report before we completed the 2025 appeals process.

Grade boundary and statistical information

Statistical information: update on courses

Number of resulted entries in 2024:   4,120

Number of resulted entries in 2025:   3,988

Statistical information: performance of candidates

Distribution of course awards including minimum mark to achieve each grade

Course award	Number of candidates	Percentage	Cumulative percentage	Minimum mark required
A	1,280	32.1	32.1	127
B	943	23.6	55.7	109
C	870	21.8	77.6	91
D	585	14.7	92.2	73
No award	310	7.8	100%	Not applicable

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 or equal to 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

This course component performed slightly better than expected.

Assignment — design

The assignment — design performed as expected. All three tasks allowed candidates to access the full range of marks available. Most candidates chose brief 1 or brief 2, with fewer choosing brief 3. All tasks generated a wide range of responses and marks.

Section 2: comments on candidate performance

Areas that candidates performed well in

Question paper

Question 1(a)(i)

Most candidates answered correctly, showing a good knowledge of manufactured boards.

Question 1(a)(iii)

Most candidates answered correctly, showing a good knowledge of hardwoods.

Question 1(b)

Most candidates answered well, showing a clear understanding of how to mark out and cut a housing joint.

Question 1(d)(i)

Most candidates answered well, showing a good knowledge of corner joints.

Question 1(e)(i)

Most candidates answered well, showing a clear understanding of the benefits of varnish.

Question 1(e)(ii)

Most candidates answered well, showing a clear understanding of how to achieve a high-quality brushed finish when applying varnish.

Question 1(g)(iii)

Most candidates answered well, showing a clear understanding of acrylic edge finishing.

Question 2(a)

Most candidates answered well, showing a clear understanding of the key stages of carrying out a questionnaire.

Question 5(c)

Most candidates answered well, showing a clear understanding of the safety issues considered in the design of the child's activity toy.

Question 6(b)

Most candidates answered well, showing a clear understanding of the benefits of a strong brand image.

Question 7(a)(ii)

Most candidates answered well, showing a clear understanding of the suitability of brass for the traditional rocking horse stirrups.

Question 9

Most candidates answered well, showing a clear understanding of the benefits of laser cutters.

Assignment — design

Research and specification

Many candidates produced good evidence of research, using a range of valid research techniques, relevant to their chosen brief. Most candidates took appropriate information from the brief to feature in their specification, and many drew relevant conclusions from their research to include in their specification.

Idea generation

Many candidates produced good evidence in the 'generating ideas' section of the assignment, producing a range of creative ideas relevant to their task.

Exploration

Many candidates demonstrated an appropriate level of skill in exploration of their design. A range of methods was used, including SCAMPER (Substitute, Combine, Adapt, Modify, Put to another use, Eliminate, and Reverse (or Rearrange)), exploration of individual components, and exploration of the design in its entirety.

Refinement

Many candidates produced good evidence of refinement, with most concentrating on the refinement towards manufacture, for example, dimensions, materials, manufacturing techniques and assembly.

Graphic techniques

Most candidates demonstrated a good level of skill in their use of graphic techniques, using a range of techniques appropriate to the stage of the design process, including annotated sketches, 2D and 3D graphics, detailed graphics in refinement, and dimensioned graphics.

Planning for manufacture

Most candidates produced good evidence across all three areas of the pro forma.

Areas that candidates found demanding

Question paper

Question 1(a)(ii)

Candidates were asked to state 'one other reason why oak is a suitable wood for the main body'. Many candidates referred to 'strong' or 'durable', which were given in the stem of the question and did not gain a mark.

Question 1(f)(iii)

Candidates were asked to name 'the centre lathe processes used to create the features at each step'. Many candidates appeared to be unfamiliar with these processes and struggled to gain marks here.

Question 1(g)(ii)

Candidates were asked to explain 'why countersunk holes were used'. Many candidates appeared to be unfamiliar with this technique and did not gain a mark here.

Question 2(b)

Candidates were asked to name 'an alternative research technique'. Many candidates referred to an idea generation technique rather than a research technique and did not gain a mark.

Question 7(b)

Candidates were asked to outline 'two reasons why rotational moulding is a suitable process for mass manufacturing the modern horse'. Many candidates appeared to be unfamiliar with rotational moulding and struggled to gain marks here.

Question 7(c)

Candidates were asked to state 'two identifying features that would show the stirrup of the traditional horse was sand cast'. Most candidates managed to attract one mark here by referring to a rough texture, but many struggled to gain the second mark.

Question 10

Candidates were asked to describe 'four other methods a designer could use to make products more sustainable'. Many candidates referred to methods that a

manufacturer could use to make products more sustainable rather than methods used by a designer, so struggled to gain marks here.

Assignment — design

Knowledge of design

Many candidates considered design issues in the initial stages of their assignment, for example, when researching and annotating their ideas; however, few continued to explore and refine these areas as they progressed through the assignment.

Knowledge of materials and manufacture

Some candidates showed a limited range of knowledge of materials and manufacture, with many making decisions without reasoning, and instead simply labelling or inferring basic knowledge through graphic techniques.

Modelling

A few candidates failed to produce any models, and some produced simple models without additional detail or annotation to clarify their purpose; these models attracted little to no marks. However, there was an increase in the number of candidates using scale modelling to refine dimension, which increased marks in both modelling and refinement.

Section 3: preparing candidates for future assessment

Question paper

Teachers and lecturers should use the materials on the [subject page](#) of our website when preparing candidates for the exam; for example, the specimen question paper, [past question papers and marking instructions](#).

Centres should note that low-level, unqualified responses such as 'quick', 'easy' and 'cheap' are not awarded marks for most questions. This is to ensure that candidates who show deeper understanding of the topics and can qualify their responses are differentiated from candidates giving a low-level, unqualified response.

It is good practice to ensure candidates respond in sentence format rather than single-word responses. Single-word answers can attract marks where the command word is 'name' or 'state', but where the command words 'outline', 'describe' or 'explain' are used, the answer requires some degree of description or explanation.

Candidates should work through question papers that are similar in style to the National 5 question paper. Teachers could talk through the marking instructions with candidates as they complete each question. Candidates can use exam techniques to ensure their responses gain marks. Candidates can practise these to prepare for the exam.

The course specification contains a section titled 'skills, knowledge and understanding for the course assessment'. This section contains all the available areas of sampling for production of the question paper. Centres should prepare candidates to respond to these areas of questioning.

The 'appendix: course support notes' section of the course specification suggests activities and approaches to develop knowledge and understanding that would help candidates prepare for the exam.

SQA [Understanding Standards](#) materials are available for the question paper. These give real examples of candidate responses with related commentaries, and provide a clear indication on how marks are awarded.

Assignment — design

The assignment must be carried out without interruption by periods of learning and teaching. Teachers and lecturers should ensure that candidates are fully prepared and have the necessary skills before starting the assignment.

Teachers and lecturers should give candidates access to all relevant task documentation, allowing them to clarify any issues or concerns they may have before starting the assessment. It is good practice to share exemplification materials with candidates before they attempt the course assessment task.

Teachers and lecturers should ensure all work submitted is the candidate's own. Teachers and lecturers should work with their centre's support department to ensure they are meeting candidates' additional support needs within the assessment conditions.

This year there was an increase in the number of candidates and centres who had not completed the flyleaves correctly, or in a few cases, there was no flyleaf submitted at all. Centres are reminded that flyleaves should be completed with candidate details on the front, and the check boxes for the teacher should be completed on the back.

Advice on sections of the design component:

- Research should be relevant to the chosen brief and carried out using a range of valid research techniques. Responses that only state the candidate's opinions will not attract marks. Where candidates choose to include images relating to the theme, they must analyse these images and identify specific aesthetic characteristics that will influence their design.
- The specification should contain points drawn from the chosen brief and a range of valid points drawn from the candidate's own research. The specification should be detailed, including information that will allow effective refinement later in the

design process. Specification points based on the candidate's own opinions will not generate marks.

- Ideas should be clearly aimed at the chosen brief. These can be communicated through graphics, models or annotations. Basic shapes with no clear function will not attract marks. Copies of existing products will not attract marks. Candidates should aim to have a range of ideas, with clear differences.

- When carrying out exploration, candidates should clearly communicate the alternatives being considered through graphics, modelling or annotation, as well as communicating the opportunities or drawbacks each option will have on their design.

- When refining their final proposal, candidates should communicate how their final design will meet their specification and areas relating to manufacture, for example, materials, dimensions, manufacturing techniques and assembly. These decisions allow candidates to demonstrate greater knowledge of design and manufacture.

- Candidates should use their specification to help generate evidence of design knowledge. Researching a range of design issues and/or lifting information from the brief will provide a range of areas to consider throughout the design process. Exploration of these design issues will allow candidates to show a wider, more in-depth knowledge of design. Candidates may demonstrate their knowledge of design through annotations, graphics or modelling.

- Candidates should demonstrate their knowledge of materials and manufacturing by exploring alternative materials, processes, assembly methods and finishes. Candidates may demonstrate their knowledge of materials and manufacturing through supporting annotations, graphics or modelling.

- Candidates should use a range of graphic and modelling techniques throughout the design process to generate ideas, explore alternatives, and refine their design to meet the specification and aid manufacture. When modelling, candidates should clearly communicate the purpose and outcome of the model. Modelling used only to communicate the overall look of the proposal is less likely to gain marks in the upper bands.

- Candidates should ensure the information on their planning for manufacture pro forma is clear, links across the three sections and communicates the information required to manufacture their final design.

Appendix: general commentary on grade boundaries

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

For most National Courses, we aim 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, we hold 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 our 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. We 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.

For full details of the approach, please refer to the [Awarding and Grading for National Courses Policy](#).