



The following report gives feedback to assist assessors with general issues and trends that have been identified during external moderation of the internally assessed standards in 2023. It also provides further insights from moderation material viewed throughout the year and outlines the Assessor Support available for Technology.

Insights

91620: Implement complex procedures to integrate parts using resistant materials to make a specified product

Performance overview:

This standard requires students to implement complex procedures to integrate two or more assembled parts using resistant materials to make a specified product. Students are to use trialling and feedback to inform the selection of techniques or procedures.

The standard was able to be met when evidence included measurable specifications agreed prior to the product being made. Trialling and feedback to inform the selection of the most suitable complex techniques to use to integrate two or more assembled parts is crucial evidence.

A schedule of ongoing tests, reviewed at key reference points during development to reduce the chance of error, is needed. These reference points must be used to check the integration is precise. The implementation of the complex procedures to ensure the product meets specifications must comply with relevant health and safety regulations when undertaking preparation, integration and testing. Evidence of the final outcome to show the function of the integrated parts is also required.

Evidence of the skilful and efficient implementation of complex procedures to integrate parts is required to attain Merit and Excellence. Successful students provided evidence of the manner in which techniques were implemented, whether the specified product met specifications, and the quality of the finished product.

Where assessors provided evidence from observations and attested the student's grade at Merit or Excellence, assessment decisions were generally reliable.

Large volumes of evidence are not required for this standard. Students should be encouraged to integrate visual and audio/video evidence, rather than providing written work only.

Practices that need strengthening:

Where grades were changed in moderation, assessors need to ensure that the procedures used were comparable to those listed in the standard in terms of complexity of techniques required. The degree of accuracy and precision required is what makes the procedure complex.

A lengthy work log is not required for this standard, but the evidence must demonstrate scheduling of techniques and tests for precise preparation and integration. The schedule should show the student has planned the order in which the item is to be made, and identified when testing for precise preparation and integration is to occur. These schedules should be established before construction begins.

Evidence of class projects where students are all producing similar products are more likely not to reach the standard. Students using teacher-led briefs and specifications may be disadvantaged in their ability to make an informed selection from the trialling of techniques.

Evidence of the integration environment is often insufficient, and therefore the student cannot achieve the standard. Photographic or written evidence of the preparation of the parts for integration and of the selection and set up of tools, equipment and assembly aids in the workshop is required, along with sufficient evidence of students' undertaking preparation, integration and testing to comply with relevant health and safety. Lists of workshop rules or a tick on an assessment schedule by the assessor does not attest compliance. Where photographs of the individual student applying correct practices are used, the work is more likely to achieve the standard.

Some assessors are still using Version 3 of the standard. Since 2020, the standard has clarified the requirement for trialling of techniques and scheduling. The clarifications have been updated to reflect these changes. Assessors must also ensure that evidence clearly indicates how each student has executed complex procedures independently and accurately (Merit) and in a manner that economised time, effort and materials (Excellence). A tick in a box on the assessment schedule is not sufficient attestation for higher grades.

91621: Implement complex procedures using textile materials to make a specified product

Performance overview:

This standard requires students to implement at least two complex procedures using textile materials to make a specified product. Students are to use trialling and feedback to inform the selection of techniques or procedures.

The standard was able to be met when evidence included measurable specifications, including material specifications, that were agreed prior to the product being made. Students must explore alternative ways for implementing at least two complex procedures and the result of these trials and feedback will inform the selection of appropriate techniques for the materials, product size and style.

A construction plan (either fully developed by the student, or commercial instructions amended to reveal an appropriate order of construction) is needed. The student will then apply the order of construction and implement the complex procedures in a manner that complies with relevant health and safety regulations. During construction, appropriate tests are required to demonstrate the final product meets specifications. Photographs of the fit and style of the final outcome are needed.

Where assessors provided evidence from observations and attested the student grade at Merit or Excellence, assessment decisions were generally reliable.

Large volumes of evidence are not required for this standard. Students should be encouraged to integrate visual and audio/video evidence, rather than providing written work only.

Practices that need strengthening:

Where grades were changed in moderation, assessors need to ensure that the procedures used are comparable to those listed in the standard in terms of complexity of techniques required. At Level 3, evidence should focus on techniques for joining textile materials with different properties, changing the characteristics of the textile materials, managing special fabrics, or the inclusion of complex structural or style features.

Students who did not trial more than one way to implement a technique were less likely to reach the standard. Comparing the results of a series of trials and gathering relevant feedback allowed for more robust evidence of informed decision-making.

A lengthy work log is not required for this standard, but the evidence must demonstrate a construction plan has been developed and followed. Where students have used a commercial plan, annotations are required to reveal how the student confirmed or altered the order of procedures.

Achievement also requires sufficient evidence of students' applying techniques to comply with relevant health and safety. Lists of textile workshop rules or a tick on an assessment schedule by the assessor do not attest compliance. Where photographs of the individual student applying correct practices are used, the work is more likely to achieve the standard.

Assessors need to ensure that evidence clearly indicates how each student has executed complex procedures independently and accurately (Merit) and in a manner that economised time, effort and materials (Excellence). A tick in a box on the assessment schedule is not sufficient attestation for higher grades.

91643: Implement complex procedures to process a specified product

Performance overview:

This standard requires students to implement complex procedures that require a diverse range of processing operations to be performed in a particular order. This order is based on knowledge of techniques and operations, and feedback on the testing must inform the selection of those techniques or procedures.

The standard was able to be met when evidence included measurable specifications, including material specifications, that were agreed prior to the product being made. Students must show they have used the flow diagram to execute the processing operations and tests.

The flow chart must also show how the student has modified the processing operations after reflecting on the feedback. A flow diagram developed by the student should include feedback loops, interactions between processing operations and testing to ensure the quality of the final outcome is controlled and consistent. Evidence of testing beyond a single sample is required. Students should randomly select samples, test them for desired properties and then repeat the process, exactly replicating the measurements in an identical production run. This allows for students to gather evidence of how the quality of the end product is assured in further production runs.

Yield and financial costs, including the cost of energy and labour, must be calculated. For Merit, the student must predict these factors and compare them to actual per unit costs. All testing and implementation of the complex procedures must be undertaken in a manner that complies with relevant health and safety regulations. Photographs of the final outcome are needed.

Where assessors provided evidence from observations and attested the student grade at Merit or Excellence, assessment decisions were generally reliable.

Large volumes of evidence are not required for this standard. Students should be encouraged to integrate visual and audio/video evidence rather than written work only.

Practices that need strengthening:

Where grades were changed in moderation, assessors need to ensure that the processing procedures used are comparable to those listed in the standard in terms of complexity of

techniques required. At Level 3, evidence should focus on techniques that require a diverse range of processing operations to be performed in a particular order based on knowledge of techniques, operations and testing feedback.

Evidence of replicant testing is required to reach the standard. This does not involve trialling different recipes, substituting ingredients or changing quantities. Replicant testing is trialling exactly the same procedures and measurements, more than once, to test a sample across two batches. This practice checks for consistency in quality assurance.

A lengthy work log is not required for this standard, but the evidence must demonstrate a flow chart has been developed and followed. A well-structured flow diagram should incorporate multi-tasking of operations and quality control. The students who annotated/modified their flow diagram in response to feedback and test results to show corrective action where needed were more likely to achieve the standard.

The standard also requires sufficient evidence of students' applying techniques to comply with relevant health and safety. Lists of kitchen rules or a tick on an assessment schedule by the assessor do not attest compliance. Where photographs of the individual student applying correct practices are used, the work is more likely to achieve the standard.

Assessors need to ensure that evidence clearly indicates how each student has executed complex procedures independently and accurately (Merit) and in a manner that economised time, effort and materials (Excellence). A tick in a box on the assessment schedule is not sufficient attestation for higher grades.

Assessor Support:

Online

NZQA's learning management system (Pūtake) offers 150+ easy to access courses, materials and products. These are designed to support teachers, as assessors, to improve their assessment of NCEA standards.

Online, subject-specific or generic, bite-sized learning modules and short courses are now available to complement the traditional face-to-face workshops that NZQA offers. These online courses can be accessed using your Education Sector Logon.

Subject-specific course/workshops available for Technology include:

- Brief Development
- Modelling in Technology Practice
- Planning for Practice
- The Final Brief

Online Making Assessor Judgements workshops are also available throughout the year. These workshops are structured to guide teachers to improve their understanding of each grade level by examining several full samples of student work. The following standards are available for enrolment in 2024:

- Making Assessor Judgements – Generic (91608, 91610)
- Making Assessor Judgements – CMT (91621, 91623)

Feedback from teachers for these workshops indicates that more than 74% of participants agreed or strongly agreed that the content in the module was beneficial:

“Although I was a bit skeptical that this was going to provide me with better understanding of the standard (and marking it), I found I've picked up more certainty about making

judgements about the work my students might produce. I'm also more secure about guiding them through the selection of their topic and setting it up so that they are able to complete a successful investigation."

Exemplars of student evidence for all standards at each level of achievement are available on the NZQA subject page for Technology.

NZQA will continue to provide generic modules and workshops designed to improve general assessment practice. The following modules and workshops will be available in 2024:

- Assessment Approaches, an online workshop exploring different methods of assessment
- Culturally Responsive Assessment
- Assessment Guidance – Reviewing Your Practice
- Tāku Reo, Tāku Mahi – My voice, My work, a guide to managing authenticity
- Why Less is More, a guide to reducing volumes of student evidence
- Integrated Assessment
- Modes of Assessment
- Alternative Assessment
- Acknowledging Sources

"This was great! I liked that I could choose from different scenarios, see how sources are used and the way the student answered the question."

"Reassuring and very thorough. Easy to use/follow."

We will also continue to offer the Transforming Assessment Praxis programme, an online workshop relevant to all subjects which helps assessors learn about re-contextualising assessment resources and collecting evidence in different ways, in order to better meet the needs of students.

Check the NCEA subject pages on the NZQA website regularly, as more online modules, workshops and courses will be added throughout 2024.

Assessor Practice Tool

The Assessor Practice Tool (APT) will be used to support assessors with the new NCEA standards from 2024 onwards. The purpose of the APT is to allow assessors to practice making assessment judgements and immediately receive feedback on their judgements from a moderation panel. The APT will initially have material for some existing Level 3 standards, with moderated samples for the new Level 1 NCEA standard subjects being added as material becomes available. Material for the new Level 2 and Level 3 standards will be added over time, and all material for the old NCEA standards will be archived.

Material is currently available for:

- 91610: Develop a conceptual design considering fitness for purpose in the broadest sense
- 91611: Develop a prototype considering fitness for purpose in the broadest sense

Workshops and Presentations

The Best Practice Workshops offered by Assessment and Moderation continue to be viewed by the sector as significantly contributing to improved assessor practice:

"I thought the workshop was very clear and helpful, there were a lot of varied examples of ākonga work discussed and opportunity for participants to discuss and ask questions."

We offer several options of online workshops and presentations for events to support assessors with the assessment of internally assessed standards. These can be subject-specific, or general assessment support, and tailored to the audience. Virtual presentation slots, online workshops or webinars can be requested to provide targeted support to local, regional or national audiences.

To give feedback on this report click on [this link](#).