

2025 NCEA Assessment Report

Subject:	Science
Level:	1
Achievement standard(s):	91922, 91923

General commentary

These achievement standards focus on the nature of science rather than subject-specific content. Both standards were assessed within the same examination period for the first time since they were introduced.

Report on individual achievement standard(s)

Achievement standard 91922: Describe features of science that have contributed to the development of a science idea in a local context

Assessment

The assessment was an online digital examination at the end of the year consisting of a single question with several parts, and a resource booklet.

Commentary

Candidates who performed at higher levels made explicit connections between the features of science and the resource material.

In this standard, candidates identified examples of features of science by quoting the resource material, but for grades beyond Achievement, candidates described how the features of science contributed to the development of the science idea.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- identified the feature of science they were talking about and gave an example from the science idea or chosen context
- recognised that safety for astronauts and reducing greenhouse gas emissions created a need to develop science ideas and provided an example from the resource material
- outlined the impact of social and cultural features of science on the science idea, although some candidates incorrectly focused on the impact of the science idea on social and cultural issues rather than the other way around
- identified that working with different countries provided perspectives as a social and cultural feature of science

- described how new evidence about space dust could change models and ideas, or how new evidence about seaweed could improve existing ideas about the effects of bromoform on methane-producing gut microbes.

Candidates who were awarded **Achievement with Merit** commonly:

- explained the significance of two or more features of science to their chosen science idea
- clearly identified examples of the features of science from the resource material and explained how they contributed to the development of the science idea
- recognised the social importance of agriculture in New Zealand and explained how this contributed to developing methods to reduce methane emissions
- explained how working with scientists from diverse backgrounds could contribute to a greater variety of perspectives in solving problems in science
- explained how a need created demand for science to solve problems (e.g. astronaut safety and reducing climate emissions)
- explained how new evidence from visits to the Moon could contribute to the development of space suits (e.g. in response to sharp, rapidly travelling dust particles)
- explained how existing ideas could be developed with new evidence (e.g. ideas around bromoform reducing methane production in gut microbes could be developed with evidence about the effectiveness of seaweed).

Candidates who were awarded **Achievement with Excellence** commonly:

- identified clear examples of the features of science from the resource material and discussed how they contributed to the development of the chosen science idea
- discussed how two features of science contributed to a science idea and how they interacted to develop the science idea
- discussed examples of relevant features of science and how the social and cultural factors led to the identification of specific needs and opportunities by giving the scientists a goal or problem to try to solve
- discussed examples from the relevant features of science and how technology was developed in response to identified needs and opportunities, which enabled the development of the science idea.

Candidates who were awarded **Not Achieved** commonly:

- referred to examples of the same feature of science for each section
- identified why science was important, but not how social or cultural factors influenced the science idea
- did not describe how social and cultural factors related to the resource material
- recognised relevant features of science, but did not describe how the feature of science contributed to the development of the science idea
- described how a feature of science contributed to a science idea but did not give an example from the resource
- focused on the benefit to New Zealand of sending people to NASA, rather than the science idea.

Achievement standard 91923: Demonstrate understanding of science-related claims in communicated information

Assessment

The assessment was an online digital examination at the end of the year. It consisted of a single question with several parts where candidates identified two claims from the resource booklet then applied the skills from the standard.

Commentary

The most successful responses were:

- clearly structured
- remained focused on science language or specified conventions
- supported by relevant examples drawn directly from the resource material.

However, many candidates wrote very brief responses or rewrote the resource material, which limited their ability to gain higher grades.

This standard requires candidates to identify the science language or conventions used within the communicated information and show evidence of understanding how the science language or conventions did or did not support the claim. However, many candidates focused their analysis on the product or test within the information rather than how the science language or conventions impacted the validity of the claim.

Numerous candidates stated the claim and then used information from the resource material rather than the science language or conventions to say the claim was supported. For example, they used evidence from the graphs and stated that because the graph matches what was said in the claim the claim was supported. However, they needed to focus on what having these graphs present in the communicated information meant about the credibility of the claim. This could have been done by explaining that if the graphs had been set up correctly and why that mattered, if they contained anything misleading or why the publishers may have put graphs in the articles in the first place.

Many candidates focused on identifying the science language – those who identified conventions tended to use a binary approach, stating that the convention was either present or absent. This limited the candidate's grade, as this usually meant that the presence or absence of the convention was not linked back to how it supports (or does not support) the claim.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- clearly stated the claims, sources, and purposes, and described the science language or conventions they identified in the claims in their own words
- identified that graphs / images were used to allow the reader to visualise aspects of the claim
- analysed the evidence rather than the use of science language and conventions
- prioritised explaining the impact of words such “allegedly”, “believe”, “usually”, and “somewhere” rather than the impact of the science language on the claim
- focused on the presence of science language or conventions and did not note when science language or conventions were minimal or absent in the resource
- identified conventions used such as peer review, sample size, units, conflicts of interest, bias, and currency and credibility of the source, but made no attempt to describe the impact they had on the validity of the claim
- wrote a list of science words but did not attempt to describe the impact they had on the validity of the claim.

Candidates who were awarded **Achievement with Merit** commonly:

- identified weaknesses in science language and / or conventions and explained what needed to be added to provide support for the claim
- explained why a large sample size was important (or needed) when completing research and the impact this had on the claim
- explained how peer review contributed to the support of a claim
- explained how a singular convention or use of language supported each claim and made the claim seem more valid or less valid, but did not link conventions to each other
- gave examples and reasons why the conventions or language impacted on the validity of the claim
- explained how the science language can make a claim sound more scientific or credible and that readers were more likely to believe the claim due to this specific language.

Candidates who were awarded **Achievement with Excellence** commonly:

- considered a range of different conventions and / or language in each claim
- demonstrated critical thinking and good awareness of good experimental design when analysing the resources
- compared and contrasted the effects of the language or conventions used in each claim
- evaluated the use of language and / or conventions and provided suggestions on ways the use of them could be improved.

Candidates who were awarded **Not Achieved** commonly:

- wrote very brief responses or rewrote the resource material with minimal changes
- explained the source, rather than the science language or conventions within the resource (e.g. how the study was conducted, but not why aspects of the method such as sample size increased or decreased the validity of the evidence gathered)
- stated that the language or conventions were reliable / accurate / valid but did not identify any language or conventions
- rewrote whole sentences from the resource that contained science language, but did not identify which words were science language
- used logic or their own knowledge of the topic to refute claims, rather than the material provided.