Review of Achievement Standards Level 1, Phase 2

Public Engagement Survey Report: Science

Feedback provided on draft, Phase 2 subject content 26 August 2021

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## Purpose

This report outlines the feedback received from a Public Engagement Survey by the Ministry of Education (the Ministry) on the Phase 2 development of Level 1 products for Science. This report will present the quantitative data collected from the survey as well as summarising the common themes and trends appearing in the qualitative data. This report will be used to inform any necessary changes to the products before they go forward for piloting as part of the Review of Achievement Standards (RAS).

## Background

1. As at 23 August 2021, the Ministry received **83** responses to the Ministry’s online survey about the subject content developed so far for Science. These included both multiple choice answer questions and long form, written response questions.
2. This report is organised into sections based on the questions in the survey. Each section was optional so not every respondent answered every section. The sections are:
   1. Summary of feedback as a whole
   2. General impressions of the subject content
   3. Course Outlines
   4. Individual Achievement Standards
      1. AS 1.1 and Assessment Activities
      2. AS 1.2 and Assessment Activities
      3. AS 1.3
      4. AS 1.4
   5. Impressions of the Achievement Standards as a suite
   6. Consultation on change to subject title
3. Please note that the content in this report does not reflect the opinions of the authors. The report aims to thoroughly and accurately reflect the views presented by those who fed back on the draft subject content.
4. Respondents had the option of submitting feedback as individuals or on behalf of groups, such as school departments. Except where pertinent, responses have not been identified as originating from an individual or a group.
5. **Summary of Science**

There were **83** responses to Science products. Responses about the Achievement Standards were generally critical with only **6 / 42** responses in favour of no amendments to Science products before piloting.

The main themes appearing throughout the responses included:

* More PLD required, particular for mātauranga Māori
* More detail needed in regards to how the Achievement Standards to prepare ākonga for Level 2 and Level 3
* Concerns for ākonga who have low literacy skills
* More clarity needed in regards to assessments

1. **General impressions of the subject content**

**Questions**

Chart B: ***Do you think the draft materials for this subject are ready for testing with students in pilot schools/kura?***

***Do you have any further feedback on the draft materials? If there was one thing you think would help make these materials easier to test in the pilot, what would it be?***

42 respondents provided commentary.

* A large number of respondents indicated that exemplars were needed.
* Several respondents felt that it would be useful to provide information regarding how the subject will progress from Level 1 through to Level 3, as they were concerned with the lack of foundational content for higher levels of science.
* Some respondents indicated that more attention needed to be given to kupu Māori as they lacked clarity.
* Several respondents indicated that PLD was needed for kaiako, particularly in regards to mātauranga Māori concepts. Furthermore, they suggested more resources, example lessons, and access to experts would be necessary. Their concern is expressed in the following quote:

*“How can I judge student work on whether they "Link the microorganism to the mauri of the taiao" if I do not understand it completely?”*

* Many respondents indicated that the Explanatory Notes were not explicit enough for kaiako to gain a clear understanding of what is going to be assessed.
* Several respondents were concerned that the Achievement Standards were overly literacy-based, as they feared ākonga with low literacy skills would be disadvantaged.

1. **Course Outlines**

Chart C.1: ***Do the sample Course Outline(s) exemplify how the Significant Learning can form a coherent years’ programme with opportunities to assess the 4 Standards?***

Chart C.2: ***Do the Course Outline(s) demonstrate how teaching and learning could be grounded in mātauranga Māori?***

***Do you have any further feedback on the Course Outline(s)?***

14 respondents provided commentary.

* Respondents indicated the need for timelines of assessment, exemplars, assessment schedules, and guidance around teaching mātauranga Māori.
* Respondents felt that it was unclear whether or not kaiako could mix and match Achievement Standards across different subjects.
* Feedback regarding the Course Outlines was mixed. Some respondents believed they were too abstract, and suggested more concrete parameters of design and structure were needed, while others were pleased with the amount of detail.
* Several respondents were eager to see how the subject area progresses through to Level 2 and 3, as they were unsure whether the Level 1 content provides enough foundational knowledge for more complex concepts.

1. **Individual Achievement Standards**
   1. **AS 1.1 and Assessment Activities**

Chart D1.1: ***Is this Achievement Standard ready for piloting?***

Chart D1.2: ***Are the Achieved, Merit and Excellence criteria clear enough to support consistent assessment judgments?***

Chart D1.3: ***Does the unpacking of the Standard and the Conditions of Assessment provide sufficient and clear guidance on the use of the standard?***

***Internal Assessment Activities***

Chart D1.4: ***Could the activities for AS1.1 be used or adapted in your local context?***

Chart D1.5: ***Do the Internal Assessment Activities exemplify how mātauranga Māori can be recognised and valued in assessment?***

Chart D1.5: ***Do the activities for AS1.1 support the engagement, access, understanding and participation of all learners?***

***Do you have any further feedback on this standard and its activities?***

26 respondents provided commentary.

* Several respondents indicated that more sample activities and exemplars were needed, particularly those related to mātauranga Māori.
* Feedback surrounding the investigation component of AS 1.1 was mixed. One respondent was pleased with the inclusion of investigations, however, one respondent was more critical and felt that AS 1.1 was not suitable to allow for a valid physics investigation. Furthermore, one respondent indicated that there needed to be criteria for quality assurance in regards to investigations.
* Respondents were concerned that AS 1.1 implied a heavy workload for kaiako in regards to marking.  
  1. **AS 1.2 and Assessment Activities**

Chart D2.1: ***Is this Achievement Standard ready for piloting?***

Chart D2.2: ***Are the Achieved, Merit and Excellence criteria clear enough to support consistent assessment judgments?***

Chart D2.3: ***Does the unpacking of the Standard and the Conditions of Assessment provide sufficient and clear guidance on the use of the standard?***

***Internal Assessment Activities***

Chart D2.4: ***Could the activities for AS1.2 be used or adapted in your local context?***

Chart D2.5: ***Do the Internal Assessment Activities exemplify how mātauranga Māori can be recognised and valued in assessment?***

Chart D2.6: ***Do the activities for AS1.2 support the engagement, access, understanding and participation of all learners?***

***Do you have any further feedback on this standard and its activities?***

14 respondents provided commentary.

* + Respondents felt that the Achievement Criteria needed examples and more clarity to better understand what would be required from ākonga to gain Achieved, Merit, or Excellence.
* Several respondents were concerned that the content in AS 1.2 did not match well to the Curriculum level.
  + Respondents noted that kupu Māori and concepts related to mātauranga Māori needed further clarification.
  + Respondents indicated that guidance was needed in regards to marking work completed by ākonga who do not agree with particular scientific concepts.
  + Several respondents were concerned that AS 1.2 appeared to be overly literacy-focussed. They fear this may disadvantage those ākonga with low literacy skills.
  1. **AS 1.3**

Chart D3.1: ***Is this Achievement Standard ready for piloting?***

Chart D3.2: ***Are the Achieved, Merit and Excellence criteria clear enough to support consistent assessment judgments?***

Chart D3.3: ***Does the unpacking of the Standard and the External Assessment Specifications provide sufficient and clear guidance on the use of the standard?***

***Do you have any further feedback on this standard?***

17 respondents provided commentary.

* + Respondents felt that exemplars were necessary to provide kaiako with a broader understanding of what is required.
  + Some respondents found this Achievement Standard confusing, and noted that more information surrounding assessments and teaching time frames was needed.
  + Several respondents were concerned that this Achievement Standard was overly literacy-based, as expressed in the following quote:

*“I think that this will profoundly affect students who have literacy struggles. Reading and writing in a novel context, this will be a very difficult standard”*

* 1. **AS 1.4**

Chart D4.1: ***Is this Achievement Standard ready for piloting?***

Chart D4.2: ***Are the Achieved, Merit and Excellence criteria clear enough to support consistent assessment judgments?***

Chart D4.3: ***Does the unpacking of the Standard and the External Assessment Specifications provide sufficient and clear guidance on the use of the standard?***

***Do you have any further feedback on this standard?***

21 respondents provided commentary.

* + Several respondents felt that there was uncertainty around what would be assessed and what those assessments would look like.
  + Respondents suggested that PLD and support would be required for kaiako who are unfamiliar with mātauranga Māori concepts, and indicated the Achievement Standards need to be well-resourced.
  + Similar to feedback for AS 1.3, several respondents were concerned that this Achievement Standard appeared overly focussed on literacy skills rather than scientific skills.
* Many respondents indicated that exemplars were needed.
* Several respondents were disappointed with an American-based context (USFDA resource) being used in AS 1.4.

1. **Impressions of the Achievement Standards as a suite**

Chart E.1: ***Do the four Achievement Standards as a group credential the most important knowledge and/or skills for this subject as illustrated by the Learning Matrix?***

Chart E.2: ***Do the Achievement Standards support ākonga Māori to succeed as Māori? (select all that apply)***

Chart E.3: ***Are the Achievement Standards appropriate to Level 6 of the curriculum? (Approximately Year 11)***

***Do you have any further feedback on the Achievement Standards?***

24 respondents provided commentary.

* + A large number of respondents reiterated that it was important to ensure the Achievement Standards catered to ākonga with varying literacy levels.
  + Many respondents were concerned with the lack of exemplars, and indicated that it was difficult to give feedback without being able to review these.
  + Several respondents were concerned that the expected workload would be too great, as expressed in the following quote:

*“The investigations will require around 16 teaching weeks per standards. All these standards require a lot of work. The mandated assessment time frame will impact on course design and will cause a difficult work load for students. Students should be able to be tested when they are ready.”*

* A number of respondents were eager to understand how the content taught in these Achievement Standards would prepare ākonga for Level 2 and 3.

1. **Consultation on change to subject title**

The sector has indicated that some titles for **NZC NCEA Level 1 subjects** may be appropriate for change. The following criteria will be considered when suggesting new subject titles:

* Subject titles are consistent within a Learning Area
* Subject titles are future proofed to remain current and engaging to ākonga.

Subject descriptions will be developed to support all subject titles to avoid any ambiguity.

What do you think of **the proposal** to change the title of **Science?**

Other option(s):

2 respondents provided commentary:

* *“To be honest, the group has ignored 2/3 of the science curriculum so it is NOS but its a terrible thing.”*
* *“Science and mātauranga pūtaiao”*