NCEA Review and Maintenance Programme – 2026 updates

Review and maintenance work has been undertaken for all three levels of NZC NCEA for 2026. This pdf document contains the updated assessment materials for **Physics, Earth and Space Science Level 1**. In January 2026 the NCEA website will be updated with these changes for Level 1, and the pdf version will be removed as it will no longer be necessary. For Levels 2 and 3, assessment materials will be updated on TKI in January. For external assessment specifications, refer to the NZQA website.

Subject: Physics, Earth and Space Science
Level 1

Product	What's changed?
Conditions of Assessment across all internal standards	Updated to provide clearer guidance around authenticity.
AS1.1 92044 Unpacking	Changes made to strengthen understanding of 'science ideas' as pertinent to this Achievement Standard.
AS1.2 92045 Unpacking	Change made to clarify role of the assessor in providing guidance during the assessment.
AS1.2 92045 Conditions of Assessment	Changes made to clarify the intent of the assessment and the role of the assessor in providing guidance during the assessment.

Contents

NCEA Conditions of Assessment

across all internally assessed standards

Subject:	All NZC subjects
Achievement Standard:	All NZC internal Achievement Standards

The Conditions of Assessment across all Level 1 internally assessed standards have been updated to include clearer guidance about authenticity. Any changes to Standard Specific Conditions of Assessment will be shown separately within this document.

Conditions of Assessment

for internally assessed standards

These Conditions provide guidelines for assessment against internally assessed Achievement Standards. Guidance is provided on:

- specific requirements for all assessments against this Standard
- appropriate ways of, and conditions for, gathering evidence
- ensuring that evidence is authentic.

Assessors must be familiar with guidance on assessment practice in learning centres, including enforcing timeframes and deadlines. The NZQA website offers resources that would be useful to read in conjunction with these Conditions of Assessment.

The learning centre's Assessment Policy and Conditions of Assessment must be consistent with NZQA's Assessment Rules for Schools with Consent to Assess. This link includes guidance for managing internal moderation and the collection of evidence.

Gathering Evidence

Internal assessment provides considerable flexibility in the collection of evidence. Evidence can be collected in different ways to suit a range of teaching and learning styles, and a range of contexts of teaching and learning. Care needs to be taken to allow students opportunities to present their best evidence against the Standard(s) that are free from unnecessary constraints.

It is recommended that the design of assessment reflects and reinforces the ways students have been learning. Collection of evidence for the internally assessed Standards could include, but is not restricted to, an extended task, an investigation, digital evidence (such as recorded interviews, blogs, photographs, or film), or a portfolio of evidence.

Effective assessment should suit the nature of the learning being assessed, provide opportunities to meet the diverse needs of all students, and be valid and fair.

Ensuring Authenticity of Evidence

Authenticity of student evidence needs to be assured regardless of the method of collecting evidence. This must be in line with the learning centre's policy and NZQA's Assessment Rules for Schools with Consent to Assess.

Ensure that the student's evidence is individually identifiable and represents the student's own work. The evidence must be an accurate reflection of what the student independently knows and can do, according to the Standard being assessed. This includes evidence submitted as part of a group assessment, evidence produced outside of class time or without assessor supervision, and evidence produced with any use of generative artificial intelligence tools (GenAI). GenAI use should be carefully considered in the context of the Standard being assessed and its Conditions of Assessment, discussed with students before the assessment, and its use must be acknowledged. For example, an investigation carried out over several sessions could include:

- teacher guidance on the nature and extent of acceptable GenAI use, if any
- assessor observations and conversations
- meeting with the student at set milestones or checkpoints
- the student's record of progress, such as photographic entries or any GenAI prompts used.

NCEA Unpacking the Standard

Subject:	Physics, Earth and Space Science
Achievement Standard:	1.1 Demonstrate understanding of human-induced change within the Earth system
Credits:	5

The intent of the Standard

The purpose of the Standard is for ākonga to be able to demonstrate understanding of the significance of change occurring within the Earth system as a result of a human activity.

To achieve this Standard, ākonga must describe change within the Earth system as a result of a human activity, and use science ideas to describe the effects of that change.

Ākonga will build an awareness of responsibility for the health of our planet, by understanding the complex ways in which human-induced change within the Earth system happens. They will gain skills in the literacy practices of science by communicating science ideas that explain our Earth using disciplinary specific vocabulary and conventions. They will be able to understand how human-induced change can affect different spheres (hydrosphere, atmosphere, biosphere, and geosphere) within the Earth system, building an appreciation for how they are interconnected.

Ākonga can explore human-induced change from any worldview or cultural position. This could include viewing change through an ao Māori lens, a Pacific lens, or from the perspective of another Indigenous knowledge system.

This Achievement Standard aligns with the following items of Significant Learning:

- understand that the hydrosphere, biosphere, atmosphere, and geosphere interact in the Earth system
- explore how Earth processes interact and influence the surface, climate, and life on Earth
- explore the effects of natural and human-induced changes on Earth's systems and consider the implications.

Making reliable judgements

Ākonga are being asked to demonstrate understanding of:

- change within the Earth system as a result of human activity
- effects of the human-induced change
- science ideas involved in the effect of human-induced change within the Earth system.

At higher levels of achievement, ākonga will demonstrate a stronger ability to communicate science ideas that explain our Earth, showing understanding of how human-induced change affects the Earth system. They will be able to use this understanding of human-induced change and science ideas to articulate the interconnectedness of these spheres:

- atmosphere
- biosphere
- geosphere
- hydrosphere.

Ākonga will discuss scientific implications within the Earth system. For example, ākonga will discuss how the effects result in ongoing changes to the spheres, recognising how an effect on one sphere leads to effects in other spheres.

Collecting evidence

This Achievement Standard has a research component that may include written, oral, and visual resources. Ākonga will need to keep a record of their resources so that they can be referenced. Kaiako may use milestones to support ākonga with time management, and to collect evidence of authenticity.

The final assessment could be written, oral, digital, or presented in a format agreed to in discussion with kaiako, and which allows ākonga to meet all aspects of the Standard.

Possible contexts

Ākonga can explore contexts of particular relevance or interest to them. Ākonga may choose to complete the assessment based on a case-study that arises from a human activity. Examples of a human activity could be:

- mining
- horticulture
- agriculture
- burning fossil fuels
- synthesising plastics.

Learning opportunities that may provide evidence towards this Standard include field trips, investigations (fair tests, pattern seeking, modelling, observation, identifying and classifying), expert speakers such as local iwi (kaumātua/kuia), and kōrero with whānau and hapū. While an investigation may be conducted as part of teaching and learning to collect data to use for this assessment, the investigation is not assessed.

Standard Exclusions

This Standard has one or more exclusions, or Standards that assess the same or similar learning. These Standards are excluded against one another to prevent assessing the same learning twice. You can only use credits gained from one of these standards towards your NCEA qualification.

Find out more about the NCEA Level 1 Exclusions List.

Literacy and Numeracy Requirements

Full information on the co-requisite for 2024 and 2025: Standards approved for NCEA co-requisite for 2024 and 2025.

NCEA Unpacking the Standard

Subject:	Physics, Earth and Space Science
Achievement Standard:	1.2 Demonstrate understanding of a physical phenomenon through investigation
Credits:	5

The intent of the Achievement Standard

The purpose of the Standard is for ākonga to be able to demonstrate understanding of a physical phenomenon through investigation. Ākonga will use analytical and critical thinking, and skills in problem-solving and communication.

Physics concepts and relationships form the basis for a way we understand how the world and universe behave. Physics concepts refer to ideas and knowledge related to physics, including ways to represent physical relationships. Relationships in physics are connections between physical quantities that can be observed in the universe. These relationships can be represented mathematically with formulae. By using formulae, other unknown physical quantities can be calculated and predicted with certainty.

This Achievement Standard aligns with the following items of Significant Learning:

- interpret representations, critique evidence, and communicate knowledge within physics, Earth and space science contexts
- apply inquiry approaches to develop understanding of physics, Earth and space science concepts, including how mātauranga Māori can inform inquiry practice
- understand that a range of physics concepts can be used to explain an interaction
- explore the nature of energy and force in the physical world
- apply appropriate representations of physical phenomena within physics, Earth and space science contexts.

Making reliable judgements

Through an investigation, ākonga will demonstrate understanding of a physical phenomenon by describing physics concepts and relationships involved. They must use evidence gathered through investigation, including numerical data, to support their description of relationships.

A description of relevant physics concepts involves describing ideas and knowledge related to physics that explain the physical phenomenon, including models that represent physical relationships.

A description of concepts and relationships involved in a physical phenomenon involves describing connections between physical quantities. They might do this by showing what

relevant formulae mean from a scientific lens. Ākonga will use evidence to support their description.

At higher levels of achievement, ākonga will explain how the physics concepts relate to the physical phenomenon, and how relationships are involved in the physical phenomenon. For example, ākonga could apply relevant physics formulae to processed evidence to explain the physical phenomenon. They will use evidence with greater skill by processing it and using it to support their explanation.

In an analysis of a physical phenomenon ākonga will integrate processed evidence into a discussion of how physics concepts and relationships are involved. For example, ākonga might discuss how a physical phenomenon can be understood in terms of relationships involved, and may apply physics concepts, with details about how they relate.

Collecting evidence

Assessment will follow a Teaching and Learning Programme that provides ākonga the opportunity to explore the Significant Learning and gain the understanding they need for this Achievement Standard.

For this Achievement Standard, ākonga will conduct an investigation either individually or in groups. They will submit an individual report or presentation for assessment. The investigation itself will not be assessed. Assessors can provide guidance to ensure appropriate data is collected.

Possible contexts

The context for assessment should provide an opportunity for ākonga to explore multiple relationships that are appropriate for Level 6 of *The New Zealand Curriculum*. Contexts are not restricted to any one field of physics; however, possible contexts include:

- power
- refraction
- acceleration.

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Literacy and Numeracy Requirements

Full information on the co-requisite for 2024 and 2025: Standards approved for NCEA co-requisite for 2024 and 2025.

NCEA Conditions of Assessment

Subject:	Physics, Earth and Space Science
Achievement Standard:	1.2 Demonstrate understanding of a physical phenomenon through investigation
Credits:	5

While it is expected that students will conduct an investigation to collect data, it is the physics concepts illustrated by the investigation that are assessed, not the investigation itself.
Assessor involvement during the assessment event is limited to:

- providing general feedback. They can suggest sections of student work that would benefit from further development, or skills a student may need to revisit across the work. Student work that has received sustained or detailed feedback is not suitable for submission towards this Achievement Standard.
- providing advice and guidance to students when selecting relevant information recorded as observations, or providing students with comparative data.
- helping students develop good practice that is not a requirement of the assessment such as referencing and attribution of third-party content, and presentation of work. Students should not be limited to a method or decision about presentation – this decision can be made in consultation with the assessor.

At the start of the assessment event, assessors need to provide students with commonly used resources, tools, or equipment to support development of student evidence.

Assessment activities that involve a practical component must follow relevant safety protocols, as described in Safety and Science/Pūtaiao Guidance for Aotearoa New Zealand Schools and Kura.
Students may not:

- collaborate on their use of evidence in the assessment activity, even though evidence may be collected as a group
- practise the exact evidence collection task prior to assessment
- receive feedback or feedforward on the exact task prior to the assessment.

Evidence for all parts of this assessment can be in te reo Māori, English, or New Zealand Sign Language.