

Field Sciences

Review of *Environmental Sustainability* achievement standards

Subfield	Domain	ID	Ref
Science	Environmental Sustainability	90810, 90811, 90812, 90813, 90814, 90815, 90828, 90829, 90830, 90831, 90832	EfS 2.1-2.6 and 3.1-3.5

The Ministry of Education has completed the review of the achievement standards listed above.

New Registration date **November 2014**

Date new versions published **November 2014**

Planned review date **December 2018**

Summary

The Education for Sustainability achievement standards were first registered in December 2007 for use from 2008 onwards. The standards had not been used sufficiently to be included in the Alignment of Standards reviews that took place from 2009 to 2012.

The purpose of this review was to ensure that the standards were fit for purpose, met quality design principles for achievement standards, and recognised worthwhile outcomes relating to *The New Zealand Curriculum* (NZC).

The school sector and other key stakeholders were consulted about the draft standards during October and November 2013. The responses to the consultation drafts were considered by a Working Group comprising teachers and other stakeholders from different contexts.

It was agreed that a one-year transition period would be put in place to enable teachers to phase in the new internally assessed standards as they developed new teaching and learning programmes, and assessment materials. During this period, teachers may use the replaced versions of the internally assessed standards (or the replaced standards) or the newly registered ones. The new externally assessed standards need to be used from 2015 onwards.

Main changes

- Changes to titles, with corresponding changes to the achievement criteria for each grade.
- Simplification of language used to ensure that there was greater clarity about the outcome being assessed for each standard at each grade.
- The grade descriptors within each achievement standard were expanded and clarified to give clear guidance to assessors regarding the requirements for each grade.
- Information relating to teaching programmes and assessment conditions was removed from the standards.
- Seven of the standards continued to recognise the same outcomes and were published as new versions (B category review) – see table below.

- Of the remaining standards, one was replaced by a new standard with broadly similar outcomes (Category C review) and three were designated expiring without replacement (Category D review).
- Three new standards were developed.

Further information about the purpose of the review and the detailed changes that were made to the standards may be found in the **Appendix**.

Impact on existing organisations with consent to assess

None.

Impact on Consent and Moderation Requirements (CMR)

The new and reviewed standards were registered on CMR 0233.

Impact on registered qualifications

Key to type of impact	
Affected	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
Not materially affected	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

The following Ministry of Education qualifications are impacted by the outcome of this review and will be updated when they are revised in 2015. The standards that generated the status *Affected* are listed in **bold**.

Ref	Qualification Title	Classification or ID
0928	National Certificate of Educational Achievement (Level 1)	90810, 90811, 90812 ,
0973	National Certificate of Educational Achievement (Level 2)	90813, 90814, 90815 ,
1039	National Certificate of Educational Achievement (Level 3)	90828, 90829 , 90830 , 90831, 90832

Impact of changes on [Exclusions List](#)

For transition purposes, the following exclusions will apply for new achievement standards.

Achievement standard	Excluded against each of these standards
90815 (EfS 2.6)	91734 (EfS 2.5)

Detailed list of achievement standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Internally assessed achievement standards categorised as category C or D expire at the end of	December 2015
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Externally assessed achievement standards categorised as category D expire at the end of	December 2014
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The last date for assessment of superseded versions of internally assessed achievement standards categorised as category B is the end of	December 2015
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Sciences > Science > Environmental Sustainability

ID	Ref	Title	Level	Credit	Review Category
90810	EfS 2.1	Plan, implement and evaluate a personal action that will contribute towards a sustainable future Undertake a personal action, with reflection, that contributes to a sustainable future	2	6	B
90811	EfS 2.2	Describe the consequences of human activity within a biophysical environment in relation to a sustainable future Explain how human activity in a biophysical environment has consequences for a sustainable future	2	4	B
90812	EfS 2.3	Describe world views, their expression through practices and activities and the consequences for a sustainable future [External]	2	4	D
90813	EfS 2.4 EfS 2.3	Describe values and associated behaviours in relation to a sustainable future Demonstrate understanding of how different personal values have implications for a sustainable future	2	3	B
90814	EfS 2.5 EfS 2.6	Describe aspects of sustainability in relation to a sustainable future [External] Demonstrate understanding of aspects of sustainability in different contexts [External]	2	4	B

ID	Ref	Title	Level	Credit	Review Category
90815	EfS 2.6	Work cooperatively to develop and present a strategy or design for sustainability in response to a future scenario	2	3	C
91734	EfS 2.5	Develop a collaborative response that promotes a sustainable future, in relation to a current issue	2	4	
90828	EfS 3.1	Evaluate a planned personal action that contributes toward a sustainable future Evaluate a personal action that contributes towards a sustainable future	3	6	B
90829	EfS 3.2	Investigate the interrelationship between humans and a biophysical environment in relation to a sustainable future	3	4	D
90830	EfS 3.3	Compare and contrast initiatives in relation to a sustainable future [External]	3	4	D
90831	EfS 3.4	Describe policies and practices, their development and contribution to a sustainable future [External] Analyse the impact that policies have on a sustainable future [External]	3	5	B
90832	EfS 3.5	Develop and justify a strategy for an organisation that will contribute to a sustainable future Develop a strategy for an organisation that will contribute to a sustainable future	3	5	B
91733	EfS 2.4	Demonstrate understanding of initiatives that contribute to a sustainable future [External]	2	4	New
91735	EfS 3.2	Evaluate measures that may be taken to sustain and/or improve a biophysical environment	3	4	New
91736	EfS 3.3	Analyse how different worldviews, and the values and practices associated with them, impact on sustainability [External]	3	4	New

Introduction

The Ministry of Education, in association with NZQA, reviewed the Level 2 and 3 Education for Sustainability achievement standards. The focus of this review was to ensure that the achievement standards met quality design principles for achievement standards and recognised worthwhile outcomes relating to *The New Zealand Curriculum* (NZC), and were derived from the Ministry of Education's *Teaching and Learning Guide for Education for Sustainability*: <http://seniorsecondary.tki.org.nz/Social-sciences/Education-for-sustainability>.

Purpose

The purpose of this project included:

- reviewing Level 2 and 3 achievement standards so that they were aligned with the outcomes from curriculum Levels 7 and 8 of the NZC
- addressing any duplication issues
- addressing any credit parity issues.

Principles guiding review

The process was guided by:

- the direction of the NZC – in particular the vision, values, principles, and key competencies and the conceptual strands of the Social Sciences learning area
- the Principles for Standards Review.

The principles guiding the standards review can be summarised as follows.

- A standard must be derived from a curriculum or established body of knowledge.
- A standard must have a clear purpose.
- A standard must allow valid and reliable assessment.
- Grade distinctions (between A, M and E) must be based on qualitative differences in achievement. Grade distinctions should not be based on the candidate being required to acquire and retain more subject-specific knowledge.
- Credit Parity – one credit should reflect a notional 10 hours of learning, practice and assessment for an average candidate.
- Achievement standards should not duplicate one another. Duplication occurs when the central knowledge/skills, understandings, and competencies specified for a standard are all largely similar to those of another standard.

In addition to this, the following decisions were made.

- All standards derived from learning areas in the NZC would be achievement standards (and not necessarily limited to 24 credits per level).
- The numbers of achievement standards assessed in an external time-bound written examination at any one level would be limited to three per subject. Independent advice from assessment experts clearly indicates that for valid assessment, in such examinations, a candidate needs a minimum of one hour for each Achievement Standard.

Review of Level 2 and 3 Education for Sustainability standards

These achievement standards were originally registered for use in 2008 and 2009 and were due for review to ensure that they continued to be fit for purpose.

Nature of Education for Sustainability standards

The Education for Sustainability (EfS) achievement standards were developed to support students in learning to think and act in ways that safeguard the well-being of people and the planet. In EfS, students explore the relationship between people and the environment. They learn about the environmental, social, cultural, and economic aspects of sustainability. They learn to show leadership by example and to contribute to collective decisions that lead to actions for a sustainable future. People can have very different views on sustainability. In EfS, students explore and evaluate different perspectives, rethink long-standing ideas, and consider alternative practices and directions. With the support of their teacher, they can take ownership of their learning and create new knowledge.

Education for Sustainability Teaching and Learning Guide

The [*Teaching and Learning Guide for Education for Sustainability*](#), Ministry of Education, provides background and information about the rationale, key concepts, pedagogy, learning objectives, connections, learning programme design, and resources for Education for Sustainability.

Schools that offer learning programmes that are assessed against Education for Sustainability achievement standards will use the *Teaching and Learning Guide for Education for Sustainability* to develop their own school-based curriculum that empowers students to:

- think critically and creatively about issues and solutions
- view the world from different perspectives, particularly those that are directly relevant to Aotearoa New Zealand
- negotiate complexity and deal with change and uncertainty
- be confident, connected, lifelong learners with a sense of responsibility for the well-being of their country and the planet
- connect thinking and actions in ways that will lead to a sustainable future – environmental, social, cultural, and economic.

Addressing Credit Parity

The decisions made regarding credit parity are based on the guideline of 1 credit representing 10 notional hours of learning and assessment time.

One achievement standard 90815 (EfS2.6), which was worth 3 credits, has been replaced by a new standard (EfS2.5) worth 4 credits to better reflect the amount of time expected to be spent in the teaching, learning and assessment of the skills required.

External and Internal Assessment

Sector feedback and best practice research into external and internal assessment provided the basis for the decisions made in relation to the mode of assessment. There are two externally assessed standards at each level (EfS2.4, EfS2.6, EfS3.3, & EfS3.4).

Rationale for Changes to Education for Sustainability Achievement Standards February 2014

What has changed?

Changes were made to the matrix, the achievement standards titles, and the subject references.

Changes to the matrix ensure that achievement standards at both levels clearly align with learning objectives from the *Teaching and Learning Guide for Education for Sustainability*, and provide clear learning progressions from Level 2 to Level 3.

Most of the achievement standards included changes in title, with corresponding changes to the achievement criteria for each grade. These changes were made to simplify the language used, and to ensure that there was greater clarity about the outcome being assessed for each standard at each grade.

The grade descriptors in each achievement standard were expanded and clarified to give clear guidance to assessors regarding the requirements for each grade.

Explanatory notes were reworded as necessary for clarity.

Other explanatory notes were re-structured to remove information relating to teaching programmes and assessment conditions. Information relating to assessment for internal standards was included in the new Conditions of Assessment that were developed for each level.

EfS2.1 *Undertake a personal action, with reflection, that contributes to a sustainable future*

The title and achievement criteria were reworded to express a single key outcome. The intent and purpose of the achievement standard are largely unchanged. Students are still expected to plan and reflect on their personal action, and its success, as part of undertaking the action.

EfS 2.2 *Explain how human activity in a biophysical environment has consequences for a sustainable future*

While the title and achievement criteria had minor rewording (a change from 'describe' to 'explain' to better reflect a Level 2 outcome), and was simplified, the intent and purpose of this achievement standard are largely unchanged.

EfS 2.3 *Demonstrate understanding of how different personal values have implications for a sustainable future* (previously EfS 2.4)

In the title and achievement criteria, 'describe' was replaced by 'demonstrate understanding' to better reflect a Level 2 outcome.

EfS 2.4 *Demonstrate understanding of initiatives that contribute to a sustainable future* (The expired EfS 3.3 had an outcome that was broadly similar to this.)

This achievement standard was changed from Level 3 to Level 2 to reflect a meaningful

learning progression from understanding the contribution of initiatives at Level 2, on to analysing the impact of policies at Level 3 (EfS 3.4).

The title and achievement criteria were reworded, to require understanding of at least two initiatives in relation to a sustainable future. The achievement criteria still require students to explain the similarities and differences between the initiatives within their response.

EfS 2.5 *Develop a collaborative response that promotes a sustainable future, in relation to a current issue* (previously EfS 2.6)

The title and achievement criteria were reworded to express a single key outcome. Feedback from users of the achievement standard indicated that the focus on a future scenario in the previous version was at times problematic. Students now have to develop responses that promote a sustainable future in relation to a contemporary issue. This still requires visioning and future-thinking.

‘Work co-operatively’ has been removed from the title; however, there is still an expectation, as expressed through the title and achievement criteria, that students develop responses in collaboration with peers and key stakeholders appropriate to the issue.

This achievement standard increased from 3 to 4 credits to more accurately reflect the time needed for learning and assessing the outcome.

This achievement standard became EfS 2.5 as there was a clear learning progression to EfS 3.5, where students are required to develop a strategy for an organisation.

EfS 2.6 *Demonstrate understanding of aspects of sustainability in different contexts* (previously EfS 2.5)

The title and achievement criteria were changed from ‘describe’ to ‘demonstrate understanding’ to better reflect a Level 2 outcome. The words ‘in different contexts’ were also included to clarify the focus and parameters of the requirements.

EfS 3.1 *Evaluate a personal action that contributes towards a sustainable future*

The intent and purpose of this achievement standard are largely unchanged.

EfS 3.2 *Evaluate measures that may be taken to sustain and/or improve a biophysical environment*

The previous EfS 3.2, *Investigate the interrelationship between humans and a biophysical environment in relation to a sustainable future*, was designated expiring. The new EfS 3.2 has a different focus to ensure better alignment with learning objective 8.1 in the *Teaching and Learning Guide for Education for Sustainability*, and to provide a clear learning progression from EfS 2.2.

While students are still required to research and analyse the relationship between humans and a biophysical environment, these findings are used to inform an evaluation of measures that could be taken to sustain and/or improve that environment.

EfS 3.3 *Analyse how different worldviews, and the values and practices associated with*

them, impact on sustainability

This achievement standard provides a clear learning progression from EfS 2.3. Feedback from users of the standard indicated that the consideration of worldviews was a higher level than explaining personal values in relation to a sustainable future (former EfS 2.3).

While the overall intent of the achievement standard is largely unchanged, the title and achievement criteria were reworded to express a single key outcome and to reflect the change in level.

EfS 3.4 *Analyse the impact that policies have on a sustainable future*

The title and achievement criteria were reworded to express a single key outcome, and 'describe' has been changed to 'analyse' to better reflect a Level 3 outcome. The intent and purpose of this achievement standard are largely unchanged.

EfS 3.5 *Develop a strategy for an organisation that will contribute to a sustainable future*

The title and achievement criteria were reworded to express a single key outcome. The intent and purpose of the achievement standard are largely unchanged.