

Field **Māori**

New Hangarau Level 1 and revised *Generic Technology* achievement standards

Achievement standards

Domain	ID	Subject reference
Generic Technology	91044-91046, 91052	1.1-1.3, 1.9

The Ministry of Education and NZQA Māori Qualifications Services have completed a revision of the achievement standards listed above.

New Registration date **December 2013**

Date new versions published **December 2013**

Planned review date **December 2016**

Summary of review and consultation process

In 2010 the Ministry of Education, in association with the New Zealand Qualifications Authority and subject working groups, began to develop achievement standards derived from outcomes in *Te Marautanga o Aotearoa* (TMoA). This development also addressed duplication of outcomes, credit parity, fairness, consistency and coherence. The development was guided by the direction of *Te Marautanga o Aotearoa* and the Standards Review Guidelines. A copy of TMoA is available at: <http://tmoa.tki.org.nz/Nga-Marautanga-o-Aotearoa/Te-Marautanga-o-Aotearoa>.

Teacher subject working groups were involved in the development, and draft achievement standards were the focus of wide consultation, especially with wharekura (secondary programmes in Māori-medium schools) and kaiako (teachers). Resources were also developed to support these standards.

The development of these Level 1 achievement standards was completed in time for implementation in schools in 2014.

English medium technology standards listed in the table above were amended to show that they also relate to Whāinga Paetae (Achievement Objectives) in TMoA.

Main changes resulting from the review

- All TMoA Level 1 (NZQF Level 6) outcomes are now assessed using achievement standards.
- Grading criteria for achievement standards were reviewed in accordance with the Standards Review Guidelines.
- Five new standards were created for *Hangarau* that align to TMoA outcomes.
- Four Generic Technology achievement standards (91044-91046 and 91052) were amended to show that they also derive from TMoA Whāinga Paetae. The following additional changes were made to these four standards:
 - Broken hyperlinks have been replaced. Where hyperlinks were included in Explanatory Notes relating to teaching and learning the entire section has been removed.

- Text within Explanatory Notes relating to teaching and learning has been removed.
- The standards have been rolled over to a new review date of 2016.
- The publication date of the Teaching and Learning Guide has been removed – reference is now made to the ‘current’ version.
- Minor editorial changes have been made.

For a detailed description of the review of, and the changes to, the *Hangarau* standards see the appendix at the end of this report.

Impact on Consent and Moderation Requirements (CMR)

All new achievement standards have been registered on CMR 0233.

Impact of changes on [Exclusions List](#)

None.

Achievement standards’ classification, title, level, and credits

The following summary shows the changes made to the standards as a result of the review. All changes are in **bold**. Where a new or a new version of an externally assessed achievement standard is registered, the following designation appears after the title [**Externally Assessed**].

Revised achievement standards

Engineering and Technology > Technology > Generic Technology

ID	Ref	Title	Level	Credit
91044	1.1	Undertake brief development to address a need or opportunity	1	4
91045	1.2	Use planning tools to guide the technological development of an outcome to address a brief	1	4
91046	1.3	Use design ideas to produce a conceptual design for an outcome to address a brief	1	6
91052	1.9	Demonstrate understanding of the ways a technological outcome, people, and social and physical environments interact	1	4

New achievement standards

Māori > Te Marautanga o Aotearoa > Hangarau

ID	Ref	Title	Level	Credit
91714	1.1	Te whakaputa tauāki mai i te mātauranga Māori kia puta ai he hua hangarau o ēnei rā	1	4
91715	1.2	Te whakamahere i te putanga o tētahi hua hangarau mai i te mātauranga Māori hei whakaea i tētahi tauāki	1	4
91716	1.3	Te whakaputa i tētahi ariā hoahoa mai i te mātauranga Māori hei whakaea i tētahi tauāki	1	6
91717	1.4	Te whakaputa i tētahi hua hangarau mai i te mātauranga Māori hei whakaea i tētahi tauāki	1	6
91718	1.5	Te whakamahi rawa, tukanga rānei mai i te mātauranga Māori hei hanga i tētahi hua hangarau mō te ao hurihuri nei	1	6

Appendix

Development of Hangarau Level 1 Achievement Standards

Process of aligning standards with Te Marautanga o Aotearoa (TMoA)

The Hangarau Level 1 achievement standards were developed to align the outcomes with the level 6 Ngā Āhuatanga o te Hangarau (Concepts of Technology) and Te Whakaharatau Hangarau (Technological Practice) strands of the Hangarau learning area of TMoA.

The process of aligning achievement standards with TMoA was informed by a series of audits across all learning areas conducted by Māori-medium subject specialists. The audit identified two options for the Hangarau learning area:

- translate the Technology standards into te reo Māori; or
- develop a unique set of Hangarau achievement standards.

However, translating the Technology standards would not reflect the whāinga paetae within the Hangarau learning area of TMoA, whereas developing a unique set of Hangarau standards has the following advantages:

- It offers students the opportunity to be assessed against a set of standards derived from a Māori perspective.
- It offers teachers in senior secondary Māori-medium settings an alternative set of standards to assess their students against.
- It acknowledges the importance and value of mātauranga Māori.
- It encourages the growing of more kaihangarau (Māori technologists).

A specialist Hangarau writing panel, consisting of subject specialists working in wharekura, was convened by the Ministry of Education to develop the new suite of standards informed by the recommendations from the audit report.

They developed five Hangarau-specific achievement standards (AS91714 1.1–AS91718 1.5) that align with Te Marautanga o Aotearoa. These standards reflect the essence of Hangarau and what differentiates them from Technology.

While there is a similarity between Technology and Hangarau in terms of developing solutions to meet people's needs, there is a fundamental difference in the way that decisions are made to achieve the solution in Hangarau. In Hangarau the emphasis is on mātauranga Māori.

This means that any decision making in Hangarau is determined by consideration of Te Ao Māori, both traditional and contemporary. This involves consideration of the knowledge, skills and understandings of our tūpuna, as well as the values and beliefs that underpin these. In order to make decisions, a knowledge of tikanga and kawa is needed and decision making must consider the impact on whānau, hapu, iwi (and take in their opinions and views), and also the impact on Papatūānuku and Ranginui.

Conditions of Assessment were developed to assist in the interpretation of achievement standards and the development of teaching and learning programmes.

Five Generic Technology standards were deemed to meet TMoA Whāinga Paetae. Those standards were revised to include a reference to TMoA.

Addressing Duplication

The existing Technology achievement standards were carefully analysed to avoid duplication.

Addressing Credit Parity

The credits allocated to the standards reflect the time required for the teaching and learning involved. Three standards carry a credit value of 4 and two standards carry a credit value of 6.

External and Internal Assessment

The method of assessment for each standard best reflects the teaching and learning involved for each standard.

The Hangarau writing panel decided that internal assessment was most appropriate for the Level 1 Hangarau achievement standards. This reflects the nature of a Hangarau teaching and learning programme at this level.

What has changed (summary)?

Five Hangarau specific achievement standards (AS91714 1.1–AS91718 1.5) have been written reflecting the knowledge base, skills and understandings of Hangarau that can be achieved by ākongā at Level 6 of Te Marautanga o Aotearoa.

The set of standards has been written to ensure that generic skills, knowledge and understandings are assessed in a Hangarau context. They are complemented by English medium Technology standards. Skills include:

- brief development
- using planning tools
- understanding design
- understanding modelling and the relation of structure of materials to function
- understanding the role of other disciplines, and
- understanding the interaction between an outcome and the people and environment it is located in.

Achievement standards 1.1–1.4 (AS91714–AS91717) follow the technological process from conception through to the production of the technological outcome. The benefit of this is that students are able to follow the complete process from start to finish and gain credit for each step.

Each standard requires students to draw upon mātauranga Māori. In the Kōrero Āpiti there is an explanation of the Hangarau context and other related kōrero, including technical terms. The understanding of these terms by the teacher and student is crucial to understanding Hangarau, as is an understanding of ngā kōrero tuku iho o ngā tūpuna.