FIELD SCIENCES

Review of *Biology* unit standards

Subfield	Domain	Id
Science	Biology	8092-8094, 8096-8099, 8102, 8103, 8105, 8106, 9224-9241, 12812, 12813

The NZQA National Qualifications Services has completed the review of the unit standards listed above.

Date new versions published **May 2010**

Planned review date **December 2015**

Summary

Unit standards in the *Biology* domain have been reviewed as part of the planned NQS cycle for maintaining standards.

Feedback from users of these unit standards indicated a need to increase the practical component of the unit standards for them to be nationally endorsed and fit for purpose. The review panel met in September and November 2009 and considered feedback. There were no issues identified with the reviewed standards. The review panel and consultation network included representation from secondary, tertiary, and industry training organisations. Changes were made to the unit standards and distributed for comment in February 2010 and there was no objection to the changes made through this review.

Main changes

- Special notes relating to legislation and references were updated.
- Titles of unit standards 8096-8098 were amended.
- Credit allocation for unit standards 8105, 9227, and 9228 has increased to better reflect the learning, practice and assessment time required to meet the standard.
- Credit allocation for unit standard 9225 has decreased to better reflect the learning, practice and assessment time required to meet the standard.
- Unit standard 8096 was reclassified from domain *Biology* to domain *Science - Core*.
- New unit standard 26420 was developed to assess tissue sampling and histological slide preparation and examination.
- Unit standards 8093, 8099, 8103, 8106, 9224, 9229-9241 were expired as there was low tertiary usage and industry no longer required these standards.
- Unit standards 8105, 90225, and 9228 have been replaced by unit standards 26509, 26510, and 26511 respectively.

Category C and D unit standards will expire at the end of December 2012

Impact on existing accreditations

Current Accreditation for			Accreditation extended to		
Nature of accreditation	**Classification or ID**	**Level**	**Nature of accreditation**	**Classification or ID**	**Level**
Domain	Biology	4	Standard	8096	4
Standard	9225	4	Standard	26510	4

Impact on Accreditation and Moderation Action Plan (AMAP)

None.

Impact on registered qualifications

The National Diploma in Science (Level 6) with optional strands in Biology, Chemistry, Food Science, Microbiology, and Molecular Biology/Biochemistry [Ref: 0235] requires the selection of credits from the *Biology* domain. The outcome of this review has affected the achievability of this qualification and it will be updated when it is reviewed in 2010.

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

All changes are in **bold**.

Subfield Science

Id	Domain	Title	Level	Credit	Review Category
8096	Biology **Science - Core**	Undertake a comparative biological experiment with guidance **Conduct a scientific experiment with guidance**	4	5	B

Subfield Science
Domain Biology

Id	Title	Level	Credit	Review Category
8092	Measure plant physiological processes	6	4	B
8093	Demonstrate understanding of plant physiological processes	6	8	D
8094	Measure animal physiological processes	6	4	B
8097	Undertake field sampling and measurements of plants **Analyse field measurements of plants**	5	4	B
8098	Undertake field sampling and measurements of animals **Analyse field measurements of animals**	5	4	B
8099	Identify flora and fauna	4	2	D
8102	Explain genetic change	5	6	B
8103	Demonstrate knowledge of biological issues relating to resource management	6	3	D

Id	Title	Level	Credit	Review Category
8105 **26509**	Explain the principles of evolution and bio-geography **Explain biodiversity of New Zealand**	4 **4**	3 **4**	C
8106	Examine and describe seed plant structure	6	5	D
9224	Demonstrate knowledge of communication and control systems in animals	6	8	D
9225 **26510**	Demonstrate knowledge of ecosystems **Demonstrate knowledge of ecosystems**	4 **4**	6 **4**	C
9226	Demonstrate knowledge of biological diversity **Demonstrate knowledge of plant and animal characteristics**	4	4	B
9227	Demonstrate knowledge of plant tissues	4	3 **4**	B
9228 **26511**	Demonstrate knowledge of animal tissues **Demonstrate knowledge of animal tissues**	4 **4**	3 **4**	C
9229	Demonstrate knowledge of embryology and organ formation	4	2	D
9230	Demonstrate knowledge of animal behaviour	5	3	D
9231	Demonstrate knowledge of Monera, Protista and Fungi	5	4	D
9232	Demonstrate knowledge of Plantae	5	4	D
9233	Demonstrate knowledge of invertebrate animals	5	4	D
9234	Demonstrate knowledge of Chordata	5	4	D
9235	Demonstrate knowledge of reproduction in animals	6	4	D
9236	Demonstrate knowledge of support and movement in animals	6	3	D
9237	Demonstrate knowledge of homeostasis of body fluids in animals	6	3	D
9238	Demonstrate knowledge of gas exchange in animals	6	3	D
9239	Demonstrate knowledge of circulation in animals	6	5	D
9240	Demonstrate knowledge of food intake and utilisation in animals	6	4	D
9241	Demonstrate knowledge of plant pathology	6	12	D
12812	Describe eukaryotic cell structure and function	4	5	B
12813	Demonstrate knowledge of the biochemistry of cells	4	5	B
26420	**Perform histological techniques**	**5**	**4**	**New**