BIOLOGY
Demonstrate knowledge of biological diversity

level:	**4**
credit:	**4**
final date for comment:	November 2003
expiry date:	December 2004
sub-field:	Science
purpose:	People credited with this unit standard are able to: describe the characteristics which distinguish the Kingdoms Monera, Protista, Fungi, Plantae, Animalia: describe the characteristics and modes of nutrition of Monera; describe the characteristics, methods of locomotion, and modes of nutrition of Protista; describe the characteristics and modes of nutrition of Fungi; describe the characteristics and life cycles of selected plant groups; describe the characteristics of and the relationships between major animal groups; and describe the impact of humans on biological diversity.
entry information:	Open.
accreditation option:	Evaluation of documentation by NZQA.
moderation option:	A centrally established and directed external moderation system has been set up by NZQA on behalf of the Science and Technology National Standards Body.

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special notes:

1 It is intended that the context for learning emphasises:
an evolutionary perspective;
the importance of maintaining biodiversity;
the inexact nature of biological classification.

2 It is intended that groups of organisms chosen as examples to demonstrate characteristics reflect their significance in New Zealand ecosystems in relation to:
health or medicine;
food production;
other economic or commercial considerations.

3 This unit standard expects recognition of groups of organisms in the laboratory and in the field.

4 DNA is the abbreviation for deoxyribose-nucleic acid.

Elements and Performance Criteria

element 1

Describe the characteristics which distinguish the Kingdoms Monera, Protista, Fungi, Plantae, Animalia.

performance criteria

1.1 The description outlines the structural and functional characteristics which distinguish each kingdom.

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element 2

Describe the characteristics and modes of nutrition of Monera.

performance criteria

2.1 The description outlines the characteristics of Monera in terms of their structure.

2.2 The description compares modes of nutrition of bacteria.

element 3

Describe the characteristics, methods of locomotion, and modes of nutrition of Protista.

Range: including, but not limited to one example from each of - uni-cellular and multi-cellular algae, protozoa, slime-moulds.

performance criteria

3.1 The description compares the structure of the selected Protista.

3.2 The description compares differences in locomotion of the selected Protista.

3.3 The description compares differences in modes of nutrition of the selected Protista.

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element 4

Describe the characteristics and modes of nutrition of Fungi.

Range: may include but is not limited to - a yeast, a mould, a lichen.

performance criteria

4.1 The description compares the structures of fungi.

4.2 The description compares differences in modes of nutrition of selected fungi.

element 5

Describe the characteristics and life cycles of selected plant groups.

performance criteria

5.1 The description compares the structure of plants.

Range: may include but is not limited to - a liverwort, moss, fern, gymnosperm, angiosperm.

5.2 The description compares the life cycles of a moss and a vascular plant.

5.3 The description explains adaptations in plant groups to terrestrial life.

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element 6

Describe the characteristics of and the relationships between major animal groups.

Range: may include but is not limited to - Porifera, Cnidaria, Platyhelminthes, Nematoda, Annelida, Mollusca, Arthropoda, Echinodermata, Vertebrata.

performance criteria

6.1 The description outlines the structural and functional characteristics which distinguish each of the major animal groups.

6.2 The description outlines the phylogenetic relationships amongst the animal phyla, and amongst the vertebrate classes.

element 7

Describe the impact of humans on biological diversity.

performance criteria

7.1 The description distinguishes between the preservation of species diversity and the preservation of genetic diversity.

7.2 The description outlines one effort being made to maintain diversity.

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Comments to:

Science and Technology National Standards Body
Unit Standard Revision
PO Box 160
WELLINGTON

by November 2003.

Please Note: Providers must be accredited by the Qualifications Authority before they can offer programmes of education and training assessed against unit standards.

Accredited providers assessing against unit standards must engage with the moderation system that applies to those unit standards. [Please refer to relevant Plan ref: 0152]