

Title	Demonstrate knowledge of ecosystems		
Level	4	Credits	4

Purpose	People credited with this unit standard are able to describe: the relationship between biotic and abiotic components of an ecosystem; ecological flows and cycles; changes in a biological community; and population dynamics.
----------------	--

Classification	Science > Biology
-----------------------	-------------------

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 This unit standard could include some field work carried out in a local ecosystem.
- 2 Glossary
Ecosystem refers to a defined area of an environment through which energy flows and nutrients are cycled.

Outcomes and performance criteria

Outcome 1

Describe the relationship between biotic and abiotic components of an ecosystem.

Performance criteria

- 1.1 The distribution of organisms is described in relation to the biotic and abiotic components of an ecosystem.
Range interspecific, intraspecific.
- 1.2 The concept of ecological niche is described in terms of the interactions of the ecosystem components.

Outcome 2

Describe ecological flows and cycles.

Performance criteria

- 2.1 Movement of energy is described in terms of the ecosystem.

- 2.2 Cycling of nutrients within a biological community are described in terms of the ecosystem.

Range one of – carbon cycle, nitrogen cycle, phosphorus cycle.

Outcome 3

Describe changes in a biological community.

Performance criteria

- 3.1 Ecological succession is described in terms of changes in a biological community.
- 3.2 The effect of pioneer and subsequent species is described in terms of changes in a biological community.

Outcome 4

Describe population dynamics.

Performance criteria

- 4.1 Population dynamics are described in terms of the ecosystem.
- Range population growth and density, K and R strategists, density dependent, density independent.

Replacement information	This unit standard replaced unit standard 9225.
--------------------------------	---

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 May 2010	31 December 2022
Rollover and Revision	2	27 January 2015	31 December 2022
Rollover and Revision	3	15 June 2017	31 December 2022
Revision	4	26 October 2017	31 December 2022
Review	5	22 October 2020	31 December 2022

Consent and Moderation Requirements (CMR) reference	0113
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

This unit standard is expiring