

Assessment Specifications

Level 3 Biology 2027

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General information

Domain:	Biology
Standards:	91603, 91605, 91606
Assessment method:	Examination, end of year
Assessment medium:	Printed paper

[Biology subject page](#)

[National secondary examinations timetable](#)

Information relating to all achievement standards

Papers will contain resource-based questions.

Candidates may use annotated diagrams to show evidence where appropriate.

Special assessment conditions

Refer to the NZQA website for further information:

[Aromatawai special assessment conditions](#)

Specific information for individual achievement standards

Standard:	91603
Title:	Demonstrate understanding of the responses of plants and animals to their external environment
Version:	2
Number of credits:	5

Candidates should be familiar with graphical and tabulated data.

In addition to the terms used in the achievement standard, candidates should be familiar with additional terminology, including (but not limited to) the following:

- relating to orientation in time: phytochrome; phytohormones (e.g. auxin, abscisic acid); photoperiodic behaviour; use of actograms; environmental cues / zeitgeber; entrainment; biological clock and rhythms; activity periods; free-running period
- relating to orientation in space: navigation, home range
- relating to interspecific relationships: mimicry, allelopathy
- relating to intraspecific relationships: reproductive strategies; cooperative breeding; courtship; agonistic behaviour; altruism, including kin selection.

Standard:	91605
Title:	Demonstrate understanding of evolutionary processes leading to speciation
Version:	2
Number of credits:	4

Candidates should be familiar with graphical and tabulated data.

In addition to the terms used in the achievement standard, candidates should be familiar with additional terminology, including (but not limited to):

- types of selection, including directional, stabilising, and disruptive selection
- genetic diversity
- allele frequency change
- mitochondrial DNA (mtDNA) and nuclear DNA (nDNA) evidence for evolution
- phylogeny
- clade
- ring species.

Geological events influencing speciation include tectonic movement, glaciation, orogeny, and sea level change.

Standard:	91606
Title:	Demonstrate understanding of trends in human evolution
Version:	2
Number of credits:	4

Resource material may use the names of currently recognised species. If candidates use named species in their answer, any information they produce must be consistent with those species named.

Trends are limited to those exhibited by early bipedal hominins onwards, and may involve comparison with other living hominids (apes). These may include any skeletal features related to bipedalism. Any discussion of the causes of hominin evolution should consider the selection pressures that would lead to evolutionary change.

Cultural evolution covers the following eras and tool cultures, and key species associated with them through to development of agriculture and early settlements:

- Earlier, Middle, and Later Stone Age
- Middle and Upper Palaeolithic Period
- Neolithic Period
- Oldowan, Acheulean, and Mousterian tools.

Dispersal of hominins covers the period up to 6,000 years ago. Candidates should be able to demonstrate understanding of the changes that could drive such dispersal.

Scientific evidence relating to human evolution may include: skeletal remains, nuclear and mitochondrial DNA, tools, evidence from scientific and comparative dating.

Answers must be based on scientific evidence.
