

Assessment Specifications

Level 3 Biology 2024

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General information

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

[Biology subject page](#)

[National secondary examinations timetable](#)

Information relating to all achievement standards

Papers may contain resource-based questions.

Candidates may use annotated diagrams to show evidence where appropriate.

Equipment required

Calculators are permitted.

Specific information for individual achievement standards

Standard:	91603
Domain:	Biology
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.

Candidates should be familiar with the following terms:

- phytochrome
- navigation
- phytohormones eg auxin
- photoperiodic behaviour as it relates to both plants and animals

- use of actograms
 - environmental cues / zeitgeber
 - biological clock and rhythms
 - activity periods
 - entrainment
 - free-running period
 - home range
 - cooperative breeding
 - courtship
 - altruism including kin selection
 - agonistic behaviour.
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Standard:	91605
Domain:	Biology
Title:	Demonstrate understanding of evolutionary processes leading to speciation
Version:	2
Number of credits:	4

Candidates should be familiar with graphical and tabulated data.

Candidates should be familiar with the following terms:

- 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.

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

Standard:	91606
Domain:	Biology
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 Paleolithic Period
- Neolithic Period
- Oldowan tools
- Acheulean tools
- Mousterian tools.

Dispersal of hominins covers the period up to 6000 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, and evidence from scientific and comparative dating.

Answers must be based on scientific evidence.