

# Assessment Specifications

## Level 2 Biology 2024

Published in December 2023

### General information

<b>Domain:</b>	Biology
<b>Assessment method:</b>	Examination
<b>Assessment medium:</b>	Printed paper
<b>Standards:</b>	91156, 91157, 91159

[Biology subject page](#)

[National secondary examinations timetable](#)

### Information relating to all achievement standards

Candidates may be required to interpret diagrams and new information, draw diagrams, and write responses of one or more paragraphs.

Some questions may be resource-based.

Candidates may use annotated diagrams to show evidence where appropriate.

#### Equipment required

Calculators are permitted.

### Specific information for individual achievement standards

<b>Standard:</b>	91156
<b>Domain:</b>	Biology
<b>Title:</b>	Demonstrate understanding of life processes at the cellular level
<b>Version:</b>	2
<b>Number of credits:</b>	4

Understanding of the structure of DNA, and the meaning of semi-conservative replication as part of cell division, is expected.

Factors affecting the processes may include both direct and indirect availability of resources.

Photosynthesis includes both the light-independent and light-dependent processes.

Cell respiration includes both anaerobic and aerobic respiration.

Factors that affect enzyme activity within cells may include temperature, pH, substrate concentration, co-enzymes, co-factors, and enzyme inhibitors.

Similarities and differences between cells may relate to the overall functioning of the organism and justifying the reasons for these similarities and differences.

Movement of materials may also include facilitated diffusion.

---

<b>Standard:</b>	91157
<b>Domain:</b>	Biology
<b>Title:</b>	Demonstrate understanding of genetic variation and change
<b>Version:</b>	2
<b>Number of credits:</b>	4

Mutation as a source of new alleles requires candidates to understand the difference between gametic and somatic mutations.

Candidates may be required to draw and or interpret a Punnett square for any of the specified monohybrid or dihybrid inheritance patterns, and calculate the expected proportions of genotype and phenotype (expressed as a ratio, fraction, percentage, or decimal).

Understanding of genetic drift is considered to include founder effect and genetic bottlenecks.

---

<b>Standard:</b>	91159
<b>Domain:</b>	Biology
<b>Title:</b>	Demonstrate understanding of gene expression
<b>Version:</b>	2
<b>Number of credits:</b>	4

For nucleic acid structure and the nature of the genetic code, the bases are adenine, thymine, guanine, cytosine, and uracil; the relationship between them should be understood.

Examples such as sickle cells and cystic fibrosis in humans could be used to illustrate gene mutations.