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Achievement Standard 91160 (Biology 2.8)

Investigate biological material at the microscopic level

Internally assessed, 3 credits

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Achievement Standard 91156 (Biology 2.4)

Demonstrate understanding of life processes at the cellular level

Externally assessed, 4 credits

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Achievement Standard 91157 (Biology 2.5)

Demonstrate understanding of genetic variation and change

Externally assessed, 4 credits

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Achievement Standard 91159 (Biology 2.7)

Demonstrate understanding of gene expression

Externally assessed, 4 credits

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Achievement Standard 91158 (Biology 2.6)

Investigate a pattern in an ecological community, with supervision

Internally assessed, 4 credits

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Achievement Standard 91155 (Biology 2.3)

Demonstrate understanding of adaptation of plants or animals to their way of life

Internally assessed, 3 credits

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Achievement Standard 91153 (Biology 2.1)

Carry out a practical investigation in a biology context, with supervision

Internally assessed, 4 credits

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Achievement Standard 91154 (Biology 2.2)

Analyse the biological validity of information presented to the public

Internally assessed, 3 credits

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Introduction

National Certificate of Educational Achievement

The **National Certificate of Educational Achievement (NCEA)** covers three levels, with Level 2 typically being sat at Year 12.

NCEA Level 2 is awarded to a student who obtains 80 **credits**, 60 of which must be from Level 2 Standards.

Credits are obtained by achieving a **grade value** ('Achievement', 'Merit' or 'Excellence') from assessment of an **Achievement Standard**.

Internally assessed Achievement Standards are assessed throughout the year as assignments. Externally assessed Achievement Standards are tested at the end of the academic year as written exams (commonly called 'Externals').

This edition of *Level 2 Biology Study Guide* has been written to ensure full coverage and understanding of all the Level 2 Biology Achievement Standards.

Note: A full and up-to-date description of the Achievement Standards for a subject can be found through the NZQA website.

► **ESA Online** This ESA Study Guide may provide internet links that offer more detailed information and/or access to dynamic demonstrations.

This book covers the content needed to enable students to prepare for all eight NCEA Level 2 Biology Achievement Standards.

Each Achievement Standard is covered independently of the other Achievement Standards; this means that the book does not have to be read sequentially, and can be used for any NCEA Level 2 Biology programme.

Biology is a subject with a very extensive vocabulary, which must be learnt to gain understanding. **Key words** have been bolded in the text and form the basis for the index at the back of the book.

Only three Achievement Standards (Bio 2.4; 2.5; 2.7) are externally assessed. The exam for each of these three Achievement Standards is in the form of three or four large, open-ended, scaffolded questions. Each question is awarded a grade: Achieved (**A**), Merit (**M**), or Excellence (**E**). These grades contribute to the overall grade for the Achievement Standard.

- Achieved (**A**) requires candidates to **describe** – this means to define, or give the characteristics of, or give an account of something, or to provide annotated diagrams, or to provide models.
- **Merit (M)** requires candidates to **explain** – this means to provide a reason as to *how* or *why* something occurs.
- **Excellence (E)** requires candidates to **discuss** – this means *linking biological ideas* to show understanding. It may involve justifying, relating, evaluating, comparing and contrasting, and/or analysing.