

## Achievement Standard

**Subject Reference** Biology 2.8

**Title** Describe cell structure and function

**Level** 2 **Credits** 3 **Assessment** External

**Subfield** Science

**Domain** Biology

**Registration date** 26 November 2004 **Date version published** 26 November 2004

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This achievement standard involves describing cell structure and function.

### Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"><li>Describe cell structure and function.</li></ul>	<ul style="list-style-type: none"><li>Explain cell structure and function.</li></ul>	<ul style="list-style-type: none"><li>Discuss cell structure and function.</li></ul>

### Explanatory Notes

- 1 This achievement standard is derived from *Biology in the New Zealand Curriculum*, Learning Media, Ministry of Education, 1994, p. 7, biological skills and pp. 20-26, achievement objective 7.1(c).
- 2 Cells will include: plant cells, animal cells, and unicellular organisms.
- 3 Cell structure and function will include:
  - cellular components and organelles: cell wall, cell membrane, cytoplasm, nuclear membrane, nucleus, chromosomes, mitochondria, chloroplast, centriole, cilia, flagellum, vacuole, contractile vacuole, ribosome, endoplasmic reticulum, lysosome, golgi body, eye spot;

- cell processes:
  - movement of materials: diffusion, osmosis, active transport, secretion
  - cell respiration and photosynthesis as they relate to the overall functioning of the cell (detail of the stages in the processes is not required)
  - enzyme activity and DNA replication;
- factors that affect cell structures and processes;
- reasons for similarities and differences between cells such as size, shape, relative numbers of organelles present, size of organelle (eg vacuole, cell membrane), internal structure.

4 Terms:

- *Describe* requires the student to define, give characteristics of, or an account of.
- *Explain* requires the student to provide a reason as to how or why something occurs.
- *Discuss* requires the student to show understanding by linking biological ideas. It may involve justifying, relating, evaluating, comparing and contrasting, or analysing.

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## Quality Assurance

- 1 Providers and Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against achievement standards.
- 2 Accredited providers and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Accreditation and Moderation Action Plan (AMAP) reference

0226