



New Zealand Qualifications Framework

Levels 1 – 3, 2011

Chemistry

National Moderator's Report

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National Moderator's Report for Chemistry General Guidance for Assessors

The purpose of external moderation is to provide reassurance that teacher judgments are at the national standard and are made on the basis of assessment materials that are fair and valid. All assessment materials are expected to:

- give the student the opportunity to meet the requirements of the standard
- include an assessment schedule that gives evidence of appropriate student responses and clear judgments at all levels.

To help ensure best assessment practice teachers need to access the Subject Resources for Chemistry on the NZQA website: www.nzqa.govt.nz/chemistry

The resources on this webpage include:

1. annotated student exemplars
2. clarification documents
3. newsletters - current and archived editions
4. previous national moderator reports
5. a link to the TKI resources

Achievement Standards involving investigations

Achievement Standard 90169 (expired) and AS 90930 (Newly aligned): *Carry out a practical chemistry investigation with direction*

To achieve the newly aligned standard students need to carry out an investigation with direction. The step ups from achieved to merit indicates the investigation must be in-depth. For excellence the investigation must be comprehensive. The explanatory notes give further explanations of the language of the standard.

Achievement Standard 90694: *Carry out an extended practical investigation involving quantitative analysis*

This investigation is not with direction. This means the students must set their own purpose for the level 3 investigation. As the data collected must be in relation to a possible trend, there must be some relationship between the values selected for the independent variable. It is not sufficient to compare different juices for vitamin C or different bodies of water for dissolved oxygen content. Evidence containing development of the purpose, procedure, raw data and calculations are essential for all levels of achievement and must be kept throughout the investigation.

Standards involving calculations

90763: *Solve simple quantitative chemical problems*

90306: *Carry out an acid-base volumetric analysis*

90695: *Determine the concentration of an oxidant or reductant by titration*

Achievement with Excellence requires all numerical answers to be given to three significant figures and correct units. This implies that all data must be supplied with this accuracy as well.

Standard involving qualitative analysis

Achievement Standard 90305: *Carry out qualitative analysis*

It is important that this standard, involving qualitative analysis, provides sufficient opportunity for all levels of achievement. An ion which is an 'either / or' opportunity only provides evidence towards Achieved.

<p>The National Moderator reports will be replaced by newsletters and clarifications documents from 2012.</p>
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