



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

National Qualifications Framework Levels 1-3, 2003

Physics

National Moderator's Report

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General Guidance for Assessors of Achievement and Unit Standards

The purpose of external moderation is to provide reassurance that assessor judgements are at the national standard and are made on the basis of assessment activities that are fair and valid.

All assessment materials are expected to:

- give the learner the opportunity to meet the requirements of the standard
- have an assessment schedule that gives evidence of appropriate learner responses and clear judgements at all levels.

The Ministry of Education contracted subject experts to write assessment resources for achievement standards. These are not pre-moderated. The intention is that they are modified to suit teaching programmes and learner needs. They do not provide 'rules' but suggest different ways of assessing to the nationally registered standard.

General Overall Comment

The majority of assessors used exemplars from the TKI website. Many assessors modified the tasks to suit their own learners. Moderation showed that most assessors are making valid modifications to the exemplar tasks but need to take the same care in their modifications to the evidence and schedules. In the practical standards particularly, evidence needs to be explicit and the judgement statements in the schedule need to be changed to match the changes to the task itself.

It is recommended that assessors ensure judgement statements are consistent with the information given in the explanatory notes as well as the achievement criteria.

Level One

90180 Carry out a practical physics investigation with direction

Assessors are reminded that when using Ministry of Education exemplars it is prudent to use the latest version as changes have been made in response to teacher feedback. Assessment schedules are, of necessity, written in general terms. Assessors are expected to re-write them to make them detailed and specific to the evidence that is expected from the particular equipment available for use by the learners.

Level Two

90252 Take measurements of physical quantities and analyse data graphically to determine a relationship

In criterion one:

For Achievement, judgement statements require competency to be demonstrated in the *measurement of three different physical quantities*. Learners must satisfy the requirement to give a unit with a *measurement*.

For Achievement with Merit, judgement statements must make it clear that the required three valid *techniques* to improve *accuracy* are **different techniques** and that they are not simply the actions that would normally be taken when making a *measurement*.

It is appropriate to require at least two of these *techniques* to be the most important *technique* for the particular *measurement*. Learners must satisfy the requirement that they are aware of the need to express *measurements* to an appropriate number of significant figures.

For Achievement with Excellence, evidence should include a reason why a particular *technique* is needed for this particular *measurement* and judgement statements should require the justification statements to be in the specific context of the *measurement*.

In criterion two:

For Achievement, judgement statements should reflect the requirement of the standard that the type of *relationship between two variables* has been determined.

For Achievement with Merit, judgement statements should reflect the requirement of the standard that the *equation of a linear relationship* has been determined and the value of a *physical quantity* has been found.

For Achievement with Excellence, the judgement statement must, in addition, reflect the requirement that the *equation is for a non-linear relationship*.

90253 Report on the physics of an idea or application and its significance

Judgement statements need to more clearly define what is required in relation to the **significance of an idea or application**.

Unit Standards

Many unit standards have been updated and some modification of assessment materials may be necessary to ensure the requirements of the reviewed standards are met.