



National Qualifications Framework Levels 1–3, 2007

Agricultural and Horticultural Science

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 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 learner the opportunity to meet the requirements of the standard
- have an assessment schedule that gives evidence of appropriate learner responses and clear judgments 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

Moderation in 2007 highlighted the need to repeat many comments made in the 2006 National Moderator’s Report.

Assessors should be aware of the latest registered versions of the achievement standards and the Ministry of Education (MOE) exemplar material developed for each internal achievement standard. Exemplar materials on the MOE site that did not meet the national standard have been deleted or modified and assessors are urged to download the current assessment activities for use in 2008.

Assessors should be aware that they can change the context of the MOE exemplars without affecting the validity of the task. Where significant changes are made to the exemplar materials there is a requirement for changes in the assessment schedule to meet the modified task. It is suggested that changes to exemplars should be minor such as changing a horticulture focus to an agriculture focus, or vice versa. If the provider wishes to make widespread changes it is advisable to disregard the exemplar material. Providers are encouraged to develop their own assessment materials.

Assessors are responsible for ensuring assessment activities, regardless of the source, meet the requirements of the current registered standard. Activities, whether purchased, self developed, received from a colleague or downloaded from a website still need to face the schools’ internal moderation system before being used for assessment and submitted for moderation.

The version number required on the moderation cover sheet refers to the achievement standard not the version of the MOE exemplar.

90156: Carry out an agricultural or horticultural investigation with guidance

Group work is permissible during the planning and carrying out of the investigation however individual work is mandatory when processing data and writing the final report. If group work is undertaken the assessor must provide evidence that each student has contributed to the plan

and collection of data. This could be achieved by a grid of student names containing criteria relating to level of involvement.

Assessors must give sufficient guidance to students to understand that *a valid range for the independent variable* involves at least three.

Processing of data, at a basic level, could be achieved by way of a well constructed table which clearly shows a pattern or trend (or lack thereof).

A valid range is required for merit, that is, the range is realistic for the given situation.

The main evidence looked for at merit level are the quality of the plan and the quality of data processing. Accuracy in both aspects is essential. Students who conduct multiple trials but then proceed to graph the results of all trials, not the averaged data, are not working at merit level.

The determination of excellence is the evaluation of how the actual plan used produces a valid conclusion. It does not involve what the student should have done; trialling the plan should have highlighted any deficiencies of the plan.

90157: Demonstrate practical skills in agriculture or horticulture production

Assessors must submit the discriminating criteria (the requirements for achievement, merit and excellence) used to award the level of achievement in each practical skill. Guidance as to type of criteria at different levels of achievement is provided in explanatory note 8. They emphasise quality of performance and not the coverage of a number of different stages.

Practical skills are discrete units of work not components of work (eg calculate the spray mix, spraying technique, clean up of sprayer) within a skill.

A “range” of practical skills (at least three) are required at each level of achievement. Offering more than three practical skills is advocated.

Judgements for practical skills require care. Excellence requires three skills at excellence level of performance; merit requires three skills at merit or excellence level.

Horticulture options should provide a greater range of *materials, equipment, products and conditions* to satisfy criteria 1. Naming four weeds, four garden tools and four plant diseases does not satisfy requirements. The MOE exemplars provide clear guidance.

Some assessors are adapting MOE exemplar materials to suit local needs but in some cases assessors require students to ‘explain’ or ‘justify’ certain techniques or equipment used. The standard does not require explanations or justifications at any level of achievement.

90450: Carry out an agricultural or horticultural investigation with supervision

The intent of the standard is that students plan their own investigation that extends over a period of time. This is different to the level 1 standard where the plan could be carried out in a single class period.

The expectation is that students will carry out their own plan and that plans, data and reports will reveal differences in student responses if a common task is set.

Often the submitted task clearly and correctly states that the investigation is to be conducted individually during all stages however, the method, data and processing are often identical in student reports.

Group work is not permitted when assessing this standard.

Template sheets are not permitted because they provide too much guidance (unlike the focus of the Level 1 investigation). A checklist as used in the TKI exemplars is allowed.

90455: Describe how livestock behaviour impacts on productivity

Assessors should ensure that the terms “task” and “management practices” are not incorrectly substituted for each other in this standard.

At achievement and merit level students are required to explain how interactions between behaviour and management impact on productivity within a production system.

The task can apply to a variety of livestock species at the achievement and merit level however, the excellence criteria does relate to a production system which on a pig, poultry or dairy unit will involve a single livestock species.

90649: Research the production and marketing of a locally produced primary product

The high 6 credit value indicates that student research should be exacting and comprehensive. At least two factors affecting supply and two factors affecting demand need to be explained at all levels of achievement and detailed information on significant management practices within the production process is essential.

The standard has a research focus but evidence from 2007 moderation indicates that many students were content with downloading and/or submitting extracts from secondary data that had some relevance to the product selected. Such information was rarely analysed in a manner that allowed for the integration of ideas essential for merit and excellence. It is expected that students will provide relevant, accurate data.

Explanations of management practices and market requirements often lacked the level of understanding and detail required at level 3. Descriptions of what happens do not constitute an explanation.

A single interview with a producer, on its own, does not constitute “research”. It must be supported by information derived from other sources.

Explanatory note 4 requires students to *acknowledge sources of information in a traceable reference system*. It is suggested that tasks provided to students provide examples of how books, internet material etc. should be acknowledged.

Students who present relevant and some irrelevant material on both production and marketing but who cannot establish linkages are achievement students at best.

While it is relatively straight forward for students to access relevant information on the production process, information on marketability is often more difficult to access. Marketing is an essential aspect of the standard and requires equal importance.

Assessors should modify the exemplar assessment schedule to fit the primary product that students are researching. There is an expectation that if all students are researching apples then evidence statements specific to apples is provided. If students are researching different primary products then it is not possible or practicable to provide evidence for each product. In this case, there is an expectation that evidence will be of an equivalent standard to that provided in the schedule.

90650: Investigate production and marketing of a nationally significant primary product

The information-gathering techniques to be used are stipulated in explanatory note 3 and the MOE exemplar has been modified to accommodate the changes made.

Surveys, if used, must contain relevant questions to the aspect of production or marketing being investigated. Survey responses must be analysed and this information used to draw conclusions and make recommendations.

Most students use secondary data and field trips as techniques. They must provide the raw information, at least as an appendix, and show evidence of analysis of the raw information from which they draw conclusions and make recommendations.

When writing reports it is not permissible to introduce new information that was not gathered using the identified information-gathering techniques.

Information from all techniques must be used when reporting on the investigation.

The main weakness in student reports is establishing linkages between production and marketing using the information students had found out.

Assessors should modify the exemplar assessment schedule to fit the primary product that students are investigating. There is an expectation that if all students are investigating apples then evidence statements specific to apples and not potatoes is provided.

Unit Standards

18984: Describe plant parts and their functions

The comments made in the 2006 National Moderator's Report still apply and should be referred to for additional clarifications.

Assessors should ensure that questions/tasks related to element 3 *Describe the effect of the physical environment on plant growth* are clear in terms of what knowledge they require students to demonstrate and that questions/tasks related to element 4 *Describe soil as a growing medium* are assessing the requirements of the element.