



NEW ZEALAND QUALIFICATIONS AUTHORITY  
MANA TOHU MĀTAURANGA O AOTEAROA

# **National Qualifications Framework Levels 1–3, 2005**

## **Graphics**

### **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**

There is little doubt that this year has been one of consolidation. With the implementation phase for all levels of achievement standards behind us, it is exciting to see most schools have started reviewing and modifying their programme material to better suit their community of learners, course directions and assessment requirements. Schools should be congratulated on their efforts to continue the development of their own assessment activities as this clearly has a positive impact on learners' engagement, commitment and ultimately, standard of work. Schools are becoming more familiar with the process of developing appropriate assessment material and more accurate in making decisions on internal assessment evidence.

Although many schools are still using the Ministry of Education exemplars, it is encouraging to see the number of individually prepared design briefs appearing in moderation submissions. This year's wide variety of material is a good indication that schools are allowing learners to research interesting, new concepts and develop diverse and innovative outcomes for teacher-prepared or client-driven design problems. Design activities that promote this form of thinking build a sound foundation for learner success. They give learners opportunities to apply their creative talents and demonstrate the technical skills that are inherent in learning how to solve authentic design problems as well as meeting the objectives of the achievement standards.

However, teachers are still coming to terms with the skills needed to write an effective design brief that presents learners with clear directions and unquestionable requirements for the standards to be met. Considering this information is the crucial interface between learners and the assessment system, this must take precedence in school preparation for 2006. Poorly written design briefs will severely impact learners' abilities to succeed. It is a professional responsibility to ensure learners are provided with adequate information.

The use and purpose of 'design' is improving, but still requires significant attention. Learners continue to apply design terms with little understanding of their significance in outcome development. Improving learners' understanding of 'design' can have a lasting impact on the way in which they engage in all aspects of life, including understanding human needs and refining their own ideas as solutions. There is a desperate need for teachers to engage learners in discussions that will enhance their understanding of design appreciation and awareness. It is worth noting that even though 'the' design process can take the form of a linear path (as defined in the *Guidelines for*

*Graphics years 9-13* and which tends to be used at a junior level as a start point for students beginning the process of engaging in a design task) it can also be something that works as a dynamic interplay of key stages. At levels 2 and 3, students should be deciding on their method of using design stages, as this will ultimately support the creation of a best possible solution to meet the end user's needs. The most important part of any design event, for evaluation purposes, is that the evolution of the outcome is well tracked through either annotated or graphically represented communication methods. Students should be able to communicate their reasons for the choices and decisions they make about the principles and elements of design throughout their outcome development.

Last year there was a situation where many learners struggled to meet the requirements needed to achieve a level 3 standard. There is significant improvement in the standard of level 3 submissions this year and it appears many schools are able to identify and apply the depth of thinking and graphic skills needed for this level of study.

It is apparent in the moderation of learners' submissions assessed against unit standards that some learners are producing work of a very high quality. However, they have been denied the opportunity to gain Excellence and Merit grades by their school's choice not to use achievement standards as an assessment tool. Teachers have a professional responsibility to their learners and community to make an appropriate judgment about the assessment tools best suited to their learners.

## **Level 1**

### **AS 90041: Produce a mock-up and model**

#### **Mock-ups**

A problem still exists with evidence submitted for this achievement standard in relation to the way a mock-up is used to explore, explain and test design ideas. Learners should be made aware that there needs to be a clear connection between the mock-up and how it informs design decisions. A way of improving this interaction may be to encourage learners to begin the design process by exploring ideas using cardboard or clay types of mock-ups instead of sketching. This tends to promote exploration of ideas through modification; adaptations made to these ideas can be catalogued as part of design development. Much of this evidence can take the form of annotation or a set of descriptive drawings showing the modifications or enhancements due to the use of this testing process. It is also important that **at least two** quality photographs are supplied with learners' work for clarification of the mock-up developments.

#### **Models**

Submissions of models are mostly successful pieces of work that represent a well planned and constructed scale version of a design. However, it is always important that **at least two** quality photographs are supplied with learners' work for clarification of the model scale and to show details from different viewpoints.

### **AS 90042: Apply a design process and design principles to identified needs and opportunities**

The appropriate writing of design activities is still inhibiting success in this achievement standard. Some of the problems relate to the way information is relayed to learners about the application of design process and the purpose of evaluation (reasoning and justification) at those key stages that support and justify the development of ideas. Evidence submitted appeared to reveal an imbalance between stages of the design process. Many students produced an abundance of research and concepts but design development and final solutions were vague. Research should be limited to

what will inform the design process and should occur throughout it as required. Design development appears to be poorly understood by learners. Development is a process in which questions about the concept, such as size, materials, joining details, colour, etc necessary to define the solution are answered. Learners could benefit from an improved explanation of design principles and elements, and demonstrations of how to relate these to their own design ideas. Merit and Excellence requires annotation as part of the decision-making process. This must reflect the reasons that design principles and elements make a difference, and relate directly, to the learners' design. *“Use of design language”* refers to the dialogue (annotated or graphical) that is inherent in the design process and clearly identifies the interaction of principles and purpose.

**AS 90044: Present design ideas that show design features and functions**

Most submissions show this standard is relatively well done and learners are achieving good results. Precision and accuracy could be further emphasised and encouragement to explore a wider variety of modes and media.

**Level 2**

**AS 90322: Produce a mock-up and model to explore design ideas**

**Mock-ups**

More information needs to be provided by the learner to show how the mock-up informs design development. Mock-ups are used to quickly explore ideas and help check things such as size, look and operation. These then inform design decisions by confirming design thinking or changing the way ideas develop. Mock-ups are quickly fabricated versions of a design idea. These can be constructed from cardboard, foamboard, clay, paper, or any other combination of materials that can be quickly assembled to test the aesthetic or function of a design. The evidence of mock-ups will be a fabricated object. The evidence about how these experiments have helped make design decisions must be communicated in the design concept development stages in the form of annotations or sketched visuals. Mock-ups are not represented in freehand sketches. Justification refers to a clear, in-depth explanation of why a particular approach has been used for the purpose of design development. If the mock-up is too large to be transported to moderation, it is important that **at least two** quality photographs are supplied with learners' work, clearly indicating scale and showing as much detail as possible.

**Models**

As with level 1, submissions of models are mostly successful pieces of work that represent a well planned and constructed scale version of a design. However, it is always important that **at least two** quality photographs are supplied with learners' work for clarification of the model scale and to show details from different viewpoints.

**AS 90323: Design and present a solution for an architectural or environmental brief**

**Assessment Task**

One major issue at this level of learning is the way the brief and specifications are written. It is extremely difficult for learners to complete a design task successfully without adequate specialised information. In many examples, the design brief does not clearly outline the issue that needs to be solved and the specifications are sometimes written in a way that makes them almost impossible to meet successfully during the design development of a solution. This impacts severely on the learner's ability to succeed in the design task and generate suitable evidence for evaluating against the achievement standard's criteria.

***Design Stages and Design***

There appears to be an imbalance between design stages of the design process. Many learners produced an abundance of research and concepts but design development and final solutions were vague. **Students will be assessed on their ability to develop and communicate design ideas.** Learners do not seem to understand how to use an evaluation process appropriately to analyse their design ideas. Much of the dialogue presented is more descriptive (a commentary of what is happening) than evaluative (an analysis of decisions being made). Effective design development can only be achieved through critical evaluation at each stage, so reasons for choices and decisions are discussed and justified. As with level 1, learners would benefit from an improved explanation of design principles and elements, and demonstrations of how to relate these to their own design ideas and why they make a difference. The combination of these principles and elements can have a profound effect on the suitability of a design for a specific purpose. Learners must be able to articulate their design reasons for including them within their own work.

***Presentation***

Learners should be encouraged to improve their presentation skills and use a wider variety of graphics, modes and media. There have been some particularly disappointing examples of work submitted that demonstrate poor drawing standards and levels of accuracy associated with certain modes of presentation. Many schools could look further afield than graphite and coloured pencils. Using other media types can be a source of inspiration to young designers.

***AS 90323: Design and present a solution for an architectural or environmental brief***

As for AS 90323.

***AS 90324: Design and present a solution for an engineering or technological brief***

As for AS 90323.

***Level 3******AS 90736: Develop and present a solution to an architectural or environmental design brief******AS 90736: Develop and present a solution to an engineering or technological design brief******AS 90736 Develop and present a solution to an medial or technical illustration design brief******In general and associated with all Level 3 achievement standards***

Schools need to focus on providing adequate guidance for level 3 learners. This needs to be applied through the written information given to learners in the assessment activity material and in class support. Level 3 requires a depth and level of complexity that is significantly more than level 2.

As with levels 1 and 2, there are issues with the writing of appropriate design tasks or providing appropriate information for students who are developing their own briefs. It is disappointing to see learners' evidence submitted with little or no supporting information from the school. This is because the learner has chosen to develop their own brief (as evidence for the external 3.2) as part of the submission for evidence applied to an internally assessed achievement standard. In this instance, learners must still be given important information about the requirements of internal assessment conditions and any information that can support them in their own design process development. They also need on-going supportive mechanisms to help them understand the interpretations of the standards criteria. There have been some excellent examples of level 3

submissions but schools that think learners who are developing their own brief do not need supportive information to review their options.

Many schools are still opting to use exemplar material supplied by the Ministry of Education. It is recommended that this material is reviewed continually to ensure it meets the expectations of the local community context.

Some inspirational material has been submitted for achievement standards as part of the internal moderation that has been generated for external competitions. It is encouraging to see schools have been careful to ensure the competition material is modified to include the achievement standard considerations.

Even though the standard of evidence has been better this year at level 3, there is still a need to review guidelines for the level of complexity, drawing standards and design analysis required within their submissions. Some examples that require further attention are:

- display an ability to select and apply different systems styles of drawing, generate, refine, substantiate design solutions
- demonstrate an ability to fluently and individually express and communicate design ideas, using a range of freehand and instrumental skills
- demonstrate well developed skills in layout, composition, and assembly
- demonstrate an ability to specify in detail the design problems and other relevant factors in a design and to evaluate each stage of the design development against these considerations
- demonstrate an ability to experiment with, select, and apply a range of illustrative and presentation techniques
- display considerable skills in communicating complex information through a variety of formal drawings
- demonstrate an ability to critically evaluate final solutions in terms of the original brief, suggest refinements or alternative solutions, and provide an accurate feasibility statement
- demonstrate an ability to carefully consider people's cultural needs and values
- show evidence of research into appropriate historical factors to improve the quality of a design and in some cases make it more acceptable to people
- show an awareness of the influence of design on society and our environment.

Like last year, most schools moderated had difficulty identifying what was required for a refined solution and on-going analysis. Learners must be encouraged to engage in interactive dialogue, which refers to the in-depth investigation and interrogation of their ideas that takes place in the content of their design drawings or annotations. This helps to support crucial decision-making processes that help ideas to evolve into the most appropriate solutions. Learners must be supported with positive guidance throughout their activities, making sure they sufficiently investigate the nature of the problem for which they are trying to develop a solution. Many learners are not negotiating the design process successfully by incorporating all elements associated with the key stages of design. As mentioned earlier the key stages can be dynamic and not linear in form. It is still a challenge for schools to ensure their learners are given adequate support and guidance to achieve this.

Very few of the submissions moderated were able to aspire to the refined or high quality standard of presentation expected at this level of work. Schools must ensure adequate support and direction are given to learners regarding presentation skills appropriate for each of the three areas.