National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

NCEA Level 3 Mathematics and Statistics

Conditions of Assessment

General Information

Subject Reference	Mathematics and Statistics
Domain	Algebra, Trigonometry, Geometry, Statistics, Probability
Level	3

NB: It is expected that teachers are familiar with additional generic guidance on assessment practice in schools published on the NZQA website. This should be read in conjunction with these Conditions of Assessment.

For All Standards

Assessment tasks are designed so that each task provides opportunity for students to provide evidence for all grades. There are not separate tasks for each grade. Holistic decisions will be used in the awarding of a grade by reference to the achievement criteria in the standard.

Many of the standard titles use the wording *"…in solving problems*". It is important to note that acceptable evidence could come from a partially successful solution to a problem. Communication of the process of solving a problem may yield the required evidence of thinking, even though a correct final solution to the problem is not obtained.

Internal assessment provides considerable flexibility in the collection of evidence. Care must be taken to allow students opportunities to present their best evidence against the standard that is free from unnecessary constraints. Collection of evidence for these standards could include, but is not restricted to, an extended task, an investigation, or a more formal activity.

Students are expected to have access to appropriate technology. For statistics standards this would include statistical software.

Authenticity will be assured. For example for an investigation carried out over several sessions, this could include teacher observations or the use of milestones such as meetings with students, or journal entries of progress etc.

Specific Information for Individual Internal Achievement Standards

Achievement Standard Number	**91583 Mathematics and Statistics 3.11**
Title	Conduct an experiment to investigate a situation using experimental design principles
Number of Credits	4
Version	1

NB: It is important to read the section "For All Standards" at the start of this document.

Assessment of this standard involves an investigation. Sufficient time should be allowed for students to complete the investigation and to write the report about the investigation.

Opportunity must be available for students to review their plan with the teacher before data collection and make minor adjustments to their plan in consultation with the teacher.

Students can be provided with an experimental situation or may negotiate a suitable experimental situation with the teacher.

Background information related to the experimental situation is to be provided to the student and the context should be one that is accessible and able to be understood by the students. This background information should be provided in advance to allow time for students to research the context to gain that understanding. Students should be sourcing relevant contextual knowledge about the situation under investigation from places such as the internet, the school or local library, newspapers and magazines. These sources should be referenced in their report.

For the investigative question to be an appropriate one it is expected that a purpose for the investigation is evident.

If the student has negotiated an experimental situation with the teacher the student needs to source background information for that situation.

It is expected that randomisation methods be used for making formal inferences.

A further assessment opportunity needs to involve a new experimental situation.