

Achievement Standard

Subject Reference	Mathematics and Statistics 3.12		
Title	Evaluate statistically based reports		
Level	3	Credits	4
		Assessment	External
Subfield	Statistics and Probability		
Domain	Statistics		
Status	Registered	Status date	4 December 2012
Planned review date	31 December 2016	Date version published	4 December 2012

This achievement standard involves evaluating statistically based reports.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Evaluate statistically based reports. 	<ul style="list-style-type: none"> Evaluate statistically based reports, with justification. 	<ul style="list-style-type: none"> Evaluate statistically based reports, with statistical insight.

Explanatory Notes

- This achievement standard is derived from Level 8 of *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007; and is related to the achievement objective:

 - Evaluate a wide range of statistically based reports, including surveys and polls, experiments, and observational studies:
 - critiquing causal-relationship claims
 - interpreting margins of error

in the Statistics strand of the Mathematics and Statistics Learning Area. It is also related to the material in the *Teaching and Learning Guide for Mathematics and Statistics*, Ministry of Education, 2012, at <http://seniorsecondary.tki.org.nz>.
- Evaluate statistically based reports* involves identifying and commenting on key features in reports relevant to conclusions made in those reports.

Evaluate statistically based reports, with justification involves supporting the comments made by referring to statistical evidence and processes described in reports, relevant to conclusions made in those reports.

Evaluate statistically based reports, with statistical insight involves integrating statistical and contextual information to assess the quality of reports with respect to conclusions made in those reports.

- 3 Evaluating statistical reports requires familiarity with:
- the statistical enquiry cycle
 - principles of experimental design
 - surveys and polls, including potential sources of bias
 - interpreting statistical inferences
 - interpreting a wide variety of statistical tables and graphs
 - analysing a wide variety of statistical situations
 - critiquing causal-relationship claims
 - interpreting margins of error.
- 4 Assessment Specifications for this achievement standard can be accessed through the Mathematics and Statistics Resources page found at <http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/subjects/>.
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Quality Assurance

- 1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.
- 2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference

0233