Achievement Standard

Subject Reference	Geography 3.8				
Title	Apply spatial analysis, with consultation, to solve a geographic problem				
Level	3	**Credits**	3	**Assessment**	Internal
Subfield	Social Science Studies				
Domain	Geography				
Status	Registered	**Status date**		04 December 2012	
Planned review date	31 December 2019	**Date version published**		17 November 2016	

This achievement standard involves applying spatial analysis, with consultation, to solve a geographic problem.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Apply spatial analysis, with consultation, to solve a geographic problem.	• Effectively apply spatial analysis, with consultation, to solve a geographic problem.	• Comprehensively apply spatial analysis, with consultation, to solve a geographic problem.

Explanatory Notes

1 This achievement standard is derived from the second Level 8 Geography Achievement Objective, and the values and key competencies of *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Geography*, Ministry of Education, 2010 at http://seniorsecondary.tki.org.nz.

This standard is also derived from *Te Marautanga o Aotearoa*. For details of *Te Marautanga o Aotearoa* achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Apply spatial analysis* involves:
- collecting and presenting spatial data relevant to the geographic problem
- completing manipulations of the spatial data to produce a layout related to the problem
- explaining the manipulations
- proposing a solution to the geographic problem.

Effectively apply spatial analysis involves:
- collecting sufficient spatial data to address the geographic problem
- completing manipulations of the spatial data to produce an accurate layout related to the problem
- explaining the manipulations in detail
- justifying the solution to the geographic problem. The justification demonstrates why the chosen course of action is better than the alternatives.

Comprehensively apply spatial analysis involves:
- evaluating the manipulations
- fully justifying the solution to the geographic problem. The full justification is an in-depth response that uses clarity of argument and holistic understanding to demonstrate why one course of action is better than the alternatives.

3 *With consultation* means students will initiate discussion with their teacher relating to which geospatial technique to use.

4 *Geographic problem* refers to a problem relating to aspects of the natural and/or cultural environment(s), and which includes a spatial dimension. The problem may be hypothetical, but real spatial data is used.

5 Collecting spatial data refers to either collecting data with a spatial component in the field or accessing spatial data from other sources.

6 Layout refers to a map and may also include other visuals such as tables, graphs, and images.

7 Manipulations refer to data transformations such as:
- measuring
- layering
- changing the symbols used
- sorting and editing a table
- querying the map
- using coordinate systems
- displaying a graph based on the map.

8 Appropriate geospatial technology is used for the manipulation and presentation of data.

9 Conditions of Assessment related to this achievement standard can be found at http://www.tki.org.nz/e/community/ncea/conditions-assessment.php.

Replacement Information
This achievement standard replaced unit standard 11088.

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