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**2015**

# Achievement Standard 91389 (v1)

Demonstrate understanding of chemical processes in the world around us

**‘Acid Rain’**

**Credits**: 3

NAME

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| **Achievement** | **Merit** | **Excellence** |
| Demonstrate understanding of chemical processes in the world around us | Demonstrate in-depth understanding of chemical processes in the world around us | Demonstrate comprehensive understanding of chemical processes in the world around us |

SUBJECT REFERENCE: CHEMISTRY 3.3

**“Acid Rain”**

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Credits: 3

Time allowed: 10 hours of in-class and out-of-class time

Student instructions

Introduction

Acid rain is not a major environmental issue in New Zealand but there remains the threat of acid rain developing into a hazard for the flora and fauna of this country, with potential eruptions from volcanoes, particularly on White Island and central North Island. This assessment activity requires you to prepare a report for a local council that outlines the chemical processes involved and the effect on the environment should acid rain become an environmental issue in New Zealand.

You will be assessed on the comprehensiveness of your report and on your evaluation of the impact of, and issues that have arisen from, chemical processes.

This is an individual task that must be written in your own words. Quotes from sources should be referenced appropriately.

Task

Write a report that demonstrates an understanding of the chemical processes involved in the formation of acid rain, and the consequences of the chemical processes for the environment, flora and fauna, and/or people involved with the chemical processes.

See Resource A for links to information that you will need to process and interpret.

You will be assessed on how well your report demonstrates your understanding of the chemical processes involved in the formation of acid rain and the environmental effects of these processes.

In your report:

* describe the chemical processes involved including appropriate chemistry vocabulary, symbols, conventions and equations to give an account of the chemical processes occurring
* elaborate on the steps involved in the chemical processes
* make and explain links between chemical processes and the consequences of the chemical processes for the environment or people
* compare and contrast the links between chemical processes and their consequences.

Resource A

Links and references to information about the formation and effects of acid rain.

<http://www.epa.gov/acidrain/education/site_students/whatisacid.html>

<http://www.ypte.org.uk/environmental/acid-rain/1>

<http://www.chemistry.wustl.edu/~edudev/LabTutorials/Water/FreshWater/acidrain.html>

<http://www.buzzle.com/articles/chemistry-of-acid-rain.html>

<http://www.britannica.com/EBchecked/topic/3761/acid-rain/299475/Chemistry-of-acid-deposition>

<http://www.ausetute.com.au/acidrain.html>