

Assessment Specifications

Level 2 Earth and Space Science 2024

Published in December 2023

General information

Domain:	Earth and Space Science
Assessment method:	Examination
Assessment medium:	Printed paper
Standards:	91191, 91192, 91193

[Science subject page](#)

[National secondary examinations timetable](#)

Information relating to all achievement standards

Each examination will contain resource-based and knowledge-based questions.

Specific information for individual achievement standards

Standard:	91191
Domain:	Earth and Space Science
Title:	Demonstrate understanding of the causes of extreme Earth events in New Zealand
Version:	2
Number of credits:	4

In-depth and comprehensive understanding of the causes of extreme Earth events in New Zealand is shown when causes are explained in terms of processes and effects that occur in one or more of the geosphere, hydrosphere, biosphere, or atmosphere.

Application of understanding will also include predictions of future events, and likely impacts on land and population.

Extreme Earth events are those events that are extraordinary or remarkable on planet Earth, but which may occur commonly in parts of New Zealand (and its continental shelf) due to its position on plate boundaries.

Standard:	91192
Domain:	Earth and Space Science
Title:	Demonstrate understanding of the causes of extreme Earth events in New Zealand
Version:	2
Number of credits:	4

A Hertzsprung–Russell diagram will be provided. The x -axis will show temperature; the y -axis will show both luminosity and absolute magnitude.

An understanding of absolute and apparent magnitude of stars is required.

Characteristics of planetary systems could include prograde and retrograde motion, spherical or irregular shape, and ring systems.

An understanding of the role of gravity in the lifecycle of stars and planet formation is required.

Planetary systems will include both planets and dwarf planets.

Formation of moons includes capture, accretion, and collision theories.

Standard:	91193
Domain:	Earth and Space Science
Title:	Demonstrate understanding of physical principles related to the Earth System
Version:	2
Number of credits:	4

The sources of both terrestrial and solar heat energy include fission and fusion reactions. Equations are not required.

Physical properties related to wave properties includes frequency and wavelength. Equations/calculations are not required.

Physical principles related to the transport of heat includes heat capacity and latent heat.

Physical principles may be investigated in relation to climate change, local climate, and physical features.