

Science in the New Zealand Curriculum

Making Sense of Planet Earth and Beyond

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Level 3: Achievement Objectives

Students can

- ▶ investigate the major features, including the water cycle, that characterise Earth's water reserves, *e.g., oceans, rivers, lakes, glaciers, ice-caps, snowfields, clouds;*
- ▶ gather and present information about the origins and history of major natural features of the local landscape, *e.g., volcanic cones, coastal cliffs, river flats, erosion scars, lakes, local soils;*
- ▶ locate and use information obtained from space exploration to clarify, challenge, and extend their ideas about the general nature and behaviour of the Earth, its moon, and the other planets in our solar system, *e.g., Moon missions, satellites, space stations;*
- ▶ justify their personal involvement in a school- or class-initiated local environmental project, *e.g., a school tree-planting project; paper, glass, metal, or plastic recycling.*

Level 4: Achievement Objectives

Students can

- ▶ investigate major factors and patterns associated with weather, and use given data to predict weather;
- ▶ collect and use evidence from landforms, rocks, fossils, and library research to describe the geological history of the local area;
- ▶ (a) use simple technological devices to observe and describe our night sky, *e.g., binoculars, simple star maps;*
- ▶ (b) investigate and use models which explain the changing spatial relationships of the Earth, its moon, and the Sun, and the way different cultures have used these patterns to describe and measure time, and position, *e.g., phases of the Moon, eclipses, tides, seasons, sun clocks;*
- ▶ investigate a local environmental issue and explain the reasons for the community's involvement, *e.g., replanting of a cleared hillside, re-introduction of indigenous birds to local area.*

Level 5: Achievement Objectives

Students can

- ▶ 1/2 investigate and describe processes which change the Earth's surface over time at local and global levels, *e.g., erosion, weathering, earthquakes, volcanoes, continental drift, plate tectonics;*
- ▶ 3 (a) use simple technological devices, such as telescopes and simple star maps, to observe and describe changing patterns in our night sky, *e.g., position of the Moon, orientation of the Southern Cross;*
- ▶ (b) use information obtained from technological devices, such as radio telescopes and satellites, to clarify, challenge, and extend their ideas about the general characteristics of some near and far space objects, *e.g., structure, size, surface landscape, climate; the Sun and other stars, Earth's moon, planets, comets, meteors, clusters, galaxies; feasibility of life;*
- ▶ 4 research a national environmental issue and explain the need for responsible and co-operative guardianship of New Zealand's environment, *e.g., water reserves, water pollution, soil erosion.*