

Science in the New Zealand Curriculum

Making Sense of the Living World

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Level 3: Achievement Objectives

Students can

- 1 distinguish between living things within broad groups on the basis of differences established by investigating external characteristics, *e.g., moth, butterfly, bee, fly; shark, trout, flounder; kòwhai, pòhutukawa, rewarewa;*
- 2 investigate special features of common animals and plants and describe how these help them to stay alive, *e.g., the five senses of people, feet of birds, camouflage and mimicry in insects, animals living in tidal zones, roots, leaves;*
- 3 research and describe how some species have become extinct or are endangered, *e.g., moa, dinosaurs, kòkako, kàkàpò, kauri snail, mountain gorilla, blue whale, cabbage tree;*
- 4 explain, using information from personal observation and library research, where and how a range of familiar New Zealand plants and animals live.



Activities...



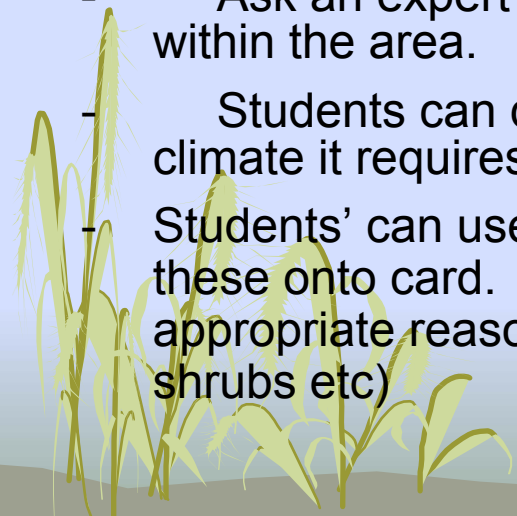
Example:

Locally we have a number of forests and beaches we can visit. Using Native plants as a topic, I would use the following activities:

- Introduce a variety of books, photos, videos as resources which contain pictures of native plants within this area

Visit a forest, local farm or forestry block where students are able to see firsthand some of the different types of plants.

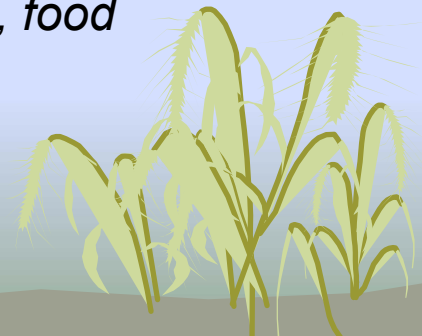
- Observational drawings of native plants. Students could use these as part of an assessment when they have learned more about specific features of the plant(s).
- Ask an expert to come and talk about specific native plants that grow within the area.
- Students can design their own plant noting its features and the types of climate it requires to survive.
- Students' can use real-life photos and pictures of native plants and place these onto card. Once cut out students are to classify these and give appropriate reasoning as to the classification they have used (Trees, shrubs etc)



Level 4: Achievement Objectives

Students can

- 1 investigate and classify closely related living things on the basis of easily observable features, *e.g., mussel, pipi, cockle; little spotted kiwi, brown kiwi; blue whale, pilot whale, sperm whale; breeds of cat, dog, horse; kòwhai, kàkà beak; ràtà, pòhutukawa;*
- 2 investigate and describe special features of animals or plants which help survival into the next generation;
- 3 investigate and describe patterns in the variability of a visible physical feature found within a species, *e.g., coat colour in cats, feather colour in budgerigars, human fingerprints, leaf shape and colour;*
- 4 use simple food chains to explain the feeding relationships of familiar animals and plants, and investigate effects of human intervention on these relationships, *e.g., lettuce leaf, snail, thrush; pollution, food production for people.*



Activities



Example: (these examples continue on from le

Native Plants:

- Invite a Kaumatua (Maori Elder) to come and share their knowledge on the medicinal properties, uses, history of some of the native plants (Ti Tree (Cabbage tree), Manuka, Harakeke (Flax))
- Research some of the traditional Maori customs behind growing, cutting, and using native plants (this could lead into Arts (weaving), Te Reo (Maori Language), Technology, Physical Education, Social Studies etc.
- Contact Environment Bay of Plenty and take part in the 'Native Planting' for schools activities. This activity involves previous study about native plants in the area, how to care and respect plants and the study of endangered and extinct plants within the area. Students are then shown how to plant seedlings and become part of a team that plants native plants on sand dunes, reserves and other specified areas around the town.

Assessment Ideas

Level 3:

To assess these achievements, activities could be provided where students:

- recognise the characteristics of a plant group
- identify and describe the different parts of a plant
- understand how different plants are suited to different climates

Level 4:

To assess these achievements, activities could be provided where students:

- Show their understanding of a conservation issue (students could write a letter to Environment Bay of Plenty, the local Council, Editor of the Newspaper)
- Draw/Construct a mural identifying the different parts, features, feeding habits of native plants.
- Construct a display showing the life cycle of a native plant. I have seen a wall display constructed by two Yr 6 students about flax. They showed various examples such as: seed, seedling, plant, kuia cutting flax and weaving a kete (maori kit), cuttings placed under flax plant, seeds falling on the ground starting the process again.
- Identify ways; different plants disperse their seeds.

Level 5: Achievement Objectives

Students can

- 1 investigate, and classify in broad terms, the living world at a microscopic level, *e.g., protists, plant and animal cells;*
- 2 investigate and describe structural, physiological, and behavioural adaptations which ensure the survival of animals and flowering plants in their environment, *e.g., the organ systems which animals use to locate, catch (or harvest), eat, digest, transport, and use food; territoriality; social behaviour; photosynthesis; osmosis; transpiration;*
- 3 investigate patterns in the inheritance of genetically controlled characteristics and explain the importance of variation within a changing environment, *e.g., simple monohybrid genetics, human reproduction, genetically controlled human characteristics such as eye colour, asexual and sexual reproduction in plants;*
- 4 investigate and understand trophic and nutrient relationships between producers, consumers, and decomposers.

