APPENDIX 1g: SOME LEARNING LINKS WITHIN THE PHYSICAL CONTEXT: PLANTS
Pan Pac Kiwi Crèche and Wilderness Education Base

Plants

Endemic Species

Gondwana Connection: Why here?
NZ's Unique (& Depauperate) Biota
Island Biogeography: Isolated Life Forms
Adaptive Radiation: Forming New Species
Importance of Biodiversity
Genetic Diversity & Classification
Endemic Plants in Ecosystems
Specific Species, eg: Kakabeak, Totara
Adaptations to Place & Climate
Endemic Plant Species: Roles & Functions
Biodiversity, Ecology & Our Values
Our Connection with the Natural Environment
Personal & Social Responsibility
National Identity & Emblems eg: Silver Fern
Unique Juvenile Forms: Why?
NZ's Divaricating Shrubs
Rongoa Maori
Endemic Plant Reproduction & Dispersal
NZ History, Cultures, Economics
Values & Perspectives
Habitat Preservation
HIPPO - What can we do?
Species Range Spread & Contraction
Vulnerability & Threats
Human & Natural Impacts
Our Natural Heritage

Native Species

Gathering & Using Data
Native Plant Dominance
Monitor & Report eg: High/Low Dominance
Genetic Diversity
Plant Adaptations to Place & Climate
Culture, Economics, Ecology
Our Values & Perspectives
Gondwanaland & Evolutionary History
Native Plant Reproduction & Dispersal
Ecosystem Components & Structure,
Ecosystem Processes
Chemical Connections: Plant Families
Rongoa & Western Medicine
Personal & Social Responsibility
Habitat Preservation
HIPPO - What can we do?
Variations & Commonalities
Plant Structure & Processes
Interdependence: Trophic Levels
Food Chains & Webs
Maintaining & Restoring Ecological Integrity
Global Biodiversity Patterns
Adaptations: Survival & Establishment
Specific Species eg: Mamaku Tree Fern
Classification: Taxonomy & Systematics
Range: Clues about How Earth Formed?

Land Plants

Human Reliance on Plants
Tracing Products to Source
Farming & Cropping: History and Present
Historical Errors: Learning Sustainability
Interactions: Effects of Introducing Plants
Herbicides: Impacts on Soil & Biodiversity
Farming, Food Production & Ethics
The GM Debate
Habitat & HIPPO - What can we do?
Plant Reproduction & Dispersal Methods
Botany: Kingdoms, Classification
Botanical Drawing
Trophic Levels, Food Chains & Webs
Populations, Niche Roles & Interactions
Propagating and Gardening Skills
Sustainable Food
Plants & Crops of Economic Importance
Species Diversity & Genetic Diversity
Natural Range & Adaptation
Technology in Plant Propagation & Use
Economic & Ecological Values
Cultural Values & Perspectives
Physics & Chemistry
Plant Composition & Processes
Horticulture, Research & Development
Vulnerability & Threats
Coastal Plant Roles in Life Cycles eg: Tuatua

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Plants
(continued)

Glossary of Acronyms

HIPPO – Habitat Destruction
Invasive Species
Pollution
Population
Over-Harvesting

Aquatic Plants

Ecological Roles of Aquatic Plants
Native, Endemic & Introduced
Economic & Cultural Values & Perspectives
Human Reliance on Plants
Tracing our Products to Source
Marine, Freshwater, Estuarine Species
Human Action: Informed vs Uninformed
Social & Personal Responsibility
Trophic Levels, Food Chains & Webs
Marine Processes
Physical, Chemical & Biological Processes
Aquatic Plant Reproduction & Dispersal
Botany: Kingdoms, Classification,
Populations, Niche Roles & Interactions
Healthy Aquatic Environments
Pollutants & Threats: HIPPO
Wetland Plants: The Filter Effect
Plant Technology eg: Sewerage Treatment
Problem Solving
Sustainable Aquatic Weed Control
Marine Threats: Introduced Aquatic Plants
Algal Blooms: What? Why?
Growth eg: Submerged, Floating
Aquatic Plants, Seaweeds & Algae
Specific Aquatic Plants eg: Milfoils

Pest Species

What is a Weed? Plant Pests & Threats
History: How did weeds arrive in NZ?
NZ's Biosecurity
Legislation for the Environment
Roles of Environmental Protection Authority
Specific Noxious Weeds eg: Pinus Contorta
Eradication vs Control: What's Possible?
Gathering & Interpreting Data
Evaluations of Success for Weed Control
Weed Control Methods & Ethical Debate
Problem Solving
Sustainable Weed Control
Plant Reproduction & Dispersal Methods
Culture, Economics, Ecology
Values & Perspectives
Environmental & Economic Impacts
Landowner Responsibility
Soil Conditions & Plant Growth
Attitudes eg: Settlers' Nostalgia for "Home"
Human Action: Informed vs Uninformed
Social & Personal Responsibility
Aquatic Weeds: "Check Clean & Dry"
Impacts of Chemical & Biological Controls
Impacts of Land Clearance
Ecological Integrity

Fossils

Fossil Fuels: the Vegetation Connection
Coal: Tracing Products to Source
Earth Detectives: What Fossils Teach Us
Time Capsules of NZ's Formative History
Species Range Clues: How NZ Formed
Time Detectives: Extinct Species
Evidence of Global Weather Patterns
Technology, eg: DNA Sampling
Geology
Land Composition, Structure, Processes
Impacts of Climate Change
Sea Levels & Life Forms
Minerals & Soil Nutrients
Decomposition & Preservation
Geothermal & Volcanic Activity
Seismological Activity in NZ
Geography: Changing Land Forms
Evolutionary Adaptations; How & Why?
Discovery & Analysis
Hypothesis & Critical Evaluation
Scientific Advances & Ethical Debate
Ecological & Economic Values
Cultural Perspectives
Museums: Preserving the Past
Mining & Related Industries

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