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

Water

Rain

Science of Weather
Water Cycle
Global Weather Patterns
Drought
Flooding
Imagery
Forecasting
Water Storage
Plant Requirements
Climate Factors
Geographic Factors
Our Senses
Effects on Soils and Catchments

Measuring and Recording Rainfall

Lake

Waiora, Waimāori, Waimate, Waitapu Aquatic Habitats Living Organisms Food Webs Life Cycles Cultural, Ecological, Economic Aspects Recreation Food Source Native Species: Eels, Pāteke The Eel Pass & Implications Introduced Species: Grass Carp **Pest Species and Threats Human Impact and Mitigation** Tāngata Whenua Treaty of Waitangi Kaitiakitanga Healthy Ecosystems & Biodiversity

Waterways

Aquatic and Riparian Habitats Living Organisms Food Webs & Interdependence Biodiversity & Life Cycles Cultural, Ecological, Economic Aspects **Human Impacts & Mitigation** Recreation & Public Access Native Species: Eels, Native Fish Introduced Species & Threats Responsibility & Measuring Sustainability RMA Planning and Legislation Sustainable Water Management Restoration Projects & Riparian Planting Water Use and Values Sustainable Energy Generation NZ Whitebait Fisheries



Water (continued)

Wetland

Waipiro & Rongoa Current & Historic Wetlands **Economic Values** Ecological & Biodiversity Values Wetland Plants Drainage Habitat Conservation & Restoration **Native Wetland Species** Endangered: Matuku, Fernbird Life Cycles Threats and Pest Species **Species Reintroductions** Filter Effects of Wetlands Cultural Attitudes & Values RMA Planning & Legislation Inter-related Ecosystems Fragile Foodwebs

Tanks

History of Water Storage Reasons for Water Storage Water Storage Issues Water Easements **Problem Solving** Cost and Maintenance Effective Systems Water Use and Sustainability Measuring Water Use Monitoring Water Use Water Quality Filters and Filter Systems Water Related Health Issues Pumps Design & Engineering Manufacturing **Construction Materials & Methods** Industry Standards & Testing Sustainable Infrastructures Measuring Volume

Catchment

Mauri and Tribal Boundaries Nutrients and Runoff Links: Deforestation & Erosion RMA, Monitoring & Legislation Planning for Sustainable Land Use Council Zonina "Strong Sustainability" Model Landowners & Permitted Activities Environmental Links to Wellbeing Fish Passes Water Storage Issues Dams & Environmental Effects **Environmentally Sustainable Energy** Pollution, Waimate Use of Agrichemicals **Environmental Protection Agency** Diadromous Fish **Tributaries & Braided Rivers Human Induced Impacts**

Sea

Estuaries & River Mouths Tidal Zones Science of Moon & Tides Maori Lunar Calendar Diadromous Fish Interdependence Waitai Kaitiakitanga, Taiapure & Mataitai Rahui & Sustainability Resource Management **Human Migration & Identity** Navigation Climate Change Global & Local Threats Migratory Species: Cook's Petrel Food Gathering Biodiversity Links: Land & Sea Ocean Currents **Protecting Ecosystems** Scientific Discovery Marine Issues

