This resource kit has been designed to show you, the Science Teacher, the resources available in or from Waitakere City Council.

ACHIEVEMENT OBJECTIVES

Levels 4,5 & NCEA

EXPERIMENTS

RESEARCH PROJECTS

WATER USE

NCEA
Relevant assessments identified

PAMPHLETS

Waitakere City Council literature

RESOURCES AVAILABLE

Waitakere City Council literature

RESOURCES

The Waitakere City Council has made available all the public brochures from its various libraries and subsidiaries. These have been read, checked, visited, analysed, and categorised, and additional information sought about statements made or facts alluded to in them. Samples of the relevant documents are included in these Resource Kits. The knowledge of many staff in the council has contributed to the kits as well. WEB SITE: http://www.waitakere.govt.nz/

WATER USE AND CARE

ACHIEVEMENT OBJECTIVES:

Level 4: Investigate and classify aquatic living things.
Use simple food chains.
Investigate the effects of human intervention of food chain relationships in waterways.
Investigate examples of technology to clarify scientific ideas.

Level 5: Investigate and describe structural, physiological and behavioural adaptations which ensure the survival of aquatic organisms in their environment.
Investigate and understand trophic and nutrient relationships between producers, consumers and decomposers in our waterways.

NCEA: Research with direction, how biology and technology are related.
Investigate the ecological patterns of two different aquatic biological communities.
Describe the effect of an introduced plant or animal on a native species, and a method of management of the introduced species.

PRACTICAL WORK:

Food chains in local streams/estuaries.
Case study of local stream/estuary.
Analysis of a swale/rain garden/stormwater catchment
Analysis of a stream community.
Comparison of replanted and neglected stream banks.
Analysis of weed in local streams
Analysis of stream bank with a view to the school being involved in replanting it.
Measuring the health of several streams.
Investigating the pollution of samples of collected stream water by adding common pollutants like grass clippings, or oil.
Determining the oxygen content in samples from local waterways.
Comparison of water temperatures in waterways with overhanging trees against those that do not have this shade.
Natural filtering of polluted water - to investigate the scientific principles of swales and rain gardens
Litter in waterways and its effect on natural species.

RESEARCH PROJECTS:

Effect of exotic plants on local waterways
Weed control methods and their effectiveness.
Endemic species of the Waitakere waterways.
Causes of water pollution.
Council efforts to encourage replanting of stream banks.
Efforts to encourage the breeding of fish native to our local streams
Water usage in homes.
Stormwater management of motorway runoffs.
Stormwater management in new subdivisions.

PAMPHLETS INCLUDED IN THIS PACKAGE

WATER USE

What's Stormwater	small sized (not A4) but worthwhile summary on stormwater (enlarged excerpt included
Urban Stormwater Newsletter	several issues dealing with replanting and pollution problems
Every Drop Counts	pie graph about water use in the home – level 3 standard
The Ecology of Henderson Creek	excellent booklet showing vegetation, bird life, water quality indicators, species recorded at the creek , and a map
Streamline	several issues of EcoWater newsletter includes solutions to local problems
Water Matters	another series of newsletters about future plans for water use
Stormwater Factsheet	indicates where trial stormwater projects such as artificial wetlands and rain gardens are located
Green network booklets	Streamside Planting -- excellent pamphlet on planting close to a stream/waterway. Could be used for adaptations.
Stream banks Restoration	one page document about tidal stream replanting
EcoWater info sheet	for residents - *How to Save water* is about actual water use, with facts for research
Forest and Bird	*Native Plants for Stormwater Ponds and Wetland Restoration.* Plants are listed by species names only.