



Toroa at Taiaroa

A Social Science Programme for
Primary Students
at the **Royal Albatross Centre**

Programme Booklet for Teachers
2011

Programme Overview

Objective: To understand how the use of the Taiaroa Head site has changed from fortification to conservation. To observe albatross and other seabirds in their natural habitat and visit the disappearing gun.

Programme Description: From fortification to conservation, students will look at how the use of Taiaroa Head has changed over time. The headland's importance to Kai Tahu stems from its use as a Pa site (~300 years ago). The lighthouse and pilot station (1864) were set up to aid shipping travelling along the coast. In 1886 the focus changed to fortification and a number of gun batteries were installed, including in 1889 the Armstrong disappearing gun. Now Taiaroa Head is home to the only mainland breeding colony for the Royal Albatross in the world (1920). The evolution of the defensive site, the fact that human modification of the environment led to the settlement of the Albatross and the cultural change to a conservation ethic is a fascinating story from the social science perspective.

Time: 2.5 hours

Age Focus: Years 4-8 (although can be adapted for younger groups)

Cost: \$4/person

Curriculum Links: **Social Studies** Level 2-4
Science Level 2- 3 Living World

Spend the day on Otago Peninsula

Trip on the Wild Side

Make the most of your bus trip and journey through time on the Otago Peninsula. Investigate how natural and social events have shaped the Peninsula environment in the past and may shape it in the future.

New Zealand Marine Studies Centre:

There are a number of connecting programmes available at the NZ Marine Studies Centre and Aquarium. For programme details and bookings check out

www.marine.ac.nz

Location

Travel Times (one way):

Dunedin to the Royal Albatross Centre, Taiaroa Head

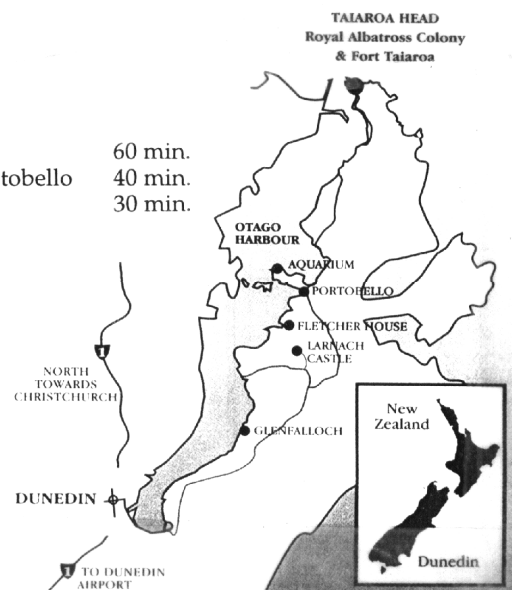
60 min.

Dunedin to NZ Marine Studies Centre (Aquarium), Portobello

40 min.

Royal Albatross Centre to NZ Marine Studies Centre

30 min.



Standard Programme Plan:

Time	Group A
0	Arrive, meet guide at reception - please arrive 10 minutes early
0 min	Introductory Activity – Education Room (30 min) - “Who Are You” – icebreaker game to look at what Albatross eat (optional) - Review programme plan and specific learning outcomes . - “Albatross Dress Up”– introduce features of seabirds and albatross. - “Albatross Life Cycle” – review life stages throughout the year. - “Timeline Display” - review of how people have used the site in the past.
30 min	Wildlife Refuge – Richdale Observatory (30 min) - Observe birds and note features (e.g. wing shape and length, colour, behaviour, type of feet etc.) - Discuss what is happening at this time of year. - Discuss why Albatross have chosen this site for nesting. - Review the life history of Albatross. - DoC monitoring board & display - Observe props (stoat, egg, preserved food etc.) - Observe shags - Albatross video (optional) - Other species (display board)
1 hr	European Fortification - Fort Taiaroa (30 min) - Tour the fortifications and disappearing gun - Discuss why Taiaroa Head was a good defensive site. - Identify what the troops needed for survival and recreation - Process drama to investigate what it would have been like for the lighthouse keeper to live here and experience the last 60 sec before the gun was fired.
1.5 hrs	Maori Pa Site – Displays / Education Room (30 min) - “Time and Taiaroa” a matching activity which link dates, names, photos and activities, to understand the physical and cultural changes of the site over time - “Maori Resources” a matching activity to look at how the Maori used the local resources. - Discuss how the site was used by the local Maori and the key features that made the site suitable for a Pa. - “Display Scavenger Hunt” – scavenger hunt in the interpretive display area to investigate the wildlife and history of the site.
2 hrs	Concluding Activity – Education Rm (15 min) - “Pass the Parcel” game to look at management issues - Discuss what students can do to help the Albatross - “Hands-on Head” game to review knowledge learned
2.25 hr	Depart
optional	Teacher led Activities - at Pilots Beach or cliff viewing area (activities available on web site)

Curriculum Links and Planning Guide

Social Studies Achievement Objectives	Specific Learning Outcomes	Activities
<p>L2 Understand how places influence people and people influences places.</p> <p>L3 How different groups view and use places and the environment</p> <p>L4 Understand that events have causes and effects.</p>	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. identify the change in name and use of the site over time 2. list three features of the Taiaroa Head that would make it a suitable Pa site for the Maori, defensive site for the Europeans, breeding site for the Albatross 3. identify how the site was modified for use as a Pa, to build the disappearing gun and fortifications, and to create a wildlife reserve to protect the Albatross 	<p>At the Royal Albatross Centre:</p> <ul style="list-style-type: none"> - Education Room Activity - Observatory Visit - Tour of Fort Taiaroa
<p>L2 Understand that people have social, cultural, and economic roles, rights and responsibilities.</p> <p>L2 Understand how time and change affect people's lives.</p> <p>L3 Understand how people remember and record the past in different ways.</p>	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Explain why the Maori required a Pa, what prompted the Europeans to build a disappearing gun and fortification and explain why Mr. Richdale camped out to protect the eggs and chicks in the 1930's 2. Describe three ways the past has been interpreted at the Royal Albatross Centre 	<p>At the Royal Albatross Centre:</p> <ul style="list-style-type: none"> - Education Room Activities - Observatory Visit - Tour of Fort Taiaroa - Viewing of poutokomanawa (carved pole) - Viewing of models and photos
<p>L2 Understand how people make choices to meet their needs and wants.</p> <p>L3 Understand how people make decisions about access to and use of resources.</p>	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Identify 3-4 groups of people that have a role in the present management of the Taiaroa Headland. 2. Identify 4 threats to the Albatross and explain why it is important to manage the Albatross Colony 3. Identify 3 groups who value the Taiaroa Headland site and explain why. 	<p>At the Royal Albatross Centre:</p> <ul style="list-style-type: none"> - Education Room Activities - Observatory Visit

<p align="center">Science Achievement Objectives</p>	<p align="center">Specific Learning Outcomes</p>	<p align="center">Activities</p>
<p><i>Nature of Science</i> Investigating in Science L3/4 Build on prior experiences, working together to share and examine their own and others knowledge.</p> <p>L3/4 Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.</p> <p><i>Living World</i> Life Processes L3/4 Recognise that there are life processes Common to all living things and that these occur In different ways.</p> <p>Ecology L3/4 Explain how living things are suited to their particular habitat and how they respond to environmental changes both natural and human induced.</p>	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. Distinguish between 3 different species of birds using the Taiaroa Headland to roost and breed (Black-backed gulls, Stewart Island Shags, Northern Royal Albatross) 2. Describe the different parts of an Albatross and their function and how these birds are suited for life at sea 3. Describe the lifestyle and lifecycle of an Albatross 	<p>At the Royal Albatross Centre:</p> <ul style="list-style-type: none"> - Display Activity - Observatory Visit

Other Curriculum Areas

Achievement Objectives	Specific Learning Outcomes	Activities
<p>English L3 Speaking, writing and presenting Select, form and communicate ideas on a range of topics.</p> <p>Drama L3 Initiate and develop ideas with others to create drama</p> <p>Visual Arts L3 Investigate the purpose of objects and images from past and present cultures and identify the contexts in which they were or are made, viewed, and valued.</p>	<p>Students will be able to:</p> <ol style="list-style-type: none"> 1. express their ideas and views on the science and social science learning outcomes. 2. Participate in the process drama activities in Fort Taiaroa 3. Describe the purpose of the different art work and display material and explain the context in which they were made, viewed and valued. 	<p>Discussions in education room, Fort Taiaroa and observatory.</p> <p>Process drama in Fort Taiaroa.</p> <p>Viewing of interpretive displays, (Photos, models, artwork etc.)</p> <p>Viewing of Maori Po and tukutuku panels</p>

Tour Guidelines

1. Supervisors

- Ratio of 1 adult to 8 students is required for primary level.
- Role of supervisors is to:
 - ensure that the students act in a responsible manner.
 - assist the students with the activities.
 - keep the noise level down and the group together.

2. Dress warmly

- It is always windy and cold at Taiaroa Head.

3. Arrive 10 Minutes Early

- If you are late, the time of your visit may be cut short as the observatory time is fixed and other tours are scheduled immediately after yours.
- Please allow time for a toilet break before the programme begins.

4. Group Size

- Please note only 25 people are allowed in the observatory at once.
- Please organise your students and adult helpers into groups of 25 or less before arrival.

5. Programme Length

- The programme is 2 hours and 15 min. long (includes 15-30 minutes in the Richdale Observatory, and 15-30 minutes in Fort Taiaroa).
- Please plan to have morning or afternoon tea before or after the programme (not during).

6. Lunch Areas

- Areas suitable for lunch include:
 - Pilots Beach, just below the head land, is a great place to view fur seals but please do not approach or disturb them.
 - grassy area to the east of the Royal Albatross Centre.
 - Education Room maybe available if the weather is wet (please check availability with Royal Albatross Centre staff in advance).

Shop and Cafeteria

- Please keep children out of these areas unless they are planning to make a purchase.

7. Observatory

- Please note that the observatory is unavailable from Sept 17th to November 23rd to avoid disturbing the birds during courtship and egg laying. During this time students will be taken to an outdoor viewing area where they will see fur seals, shags, other birds and possibly albatross flying. Students will have the opportunity to view wildlife that is not normally part of the programme.

No Smoking

- To reduce the fire risk to the colony, smoking is not permitted.

Pre-trip Preparation

In order to ensure that students get the most out of the programme we suggest that some pre- and post-trip work is done in the classroom prior to the visit to the Royal Albatross Centre.

1. Risk Assessment

Review guidelines on the web site and review with trip supervisors.
(www.school.albatross.org.nz/resources_home.html)

2. Pre-trip Activities

Use the activities on the web site and the resources listed to introduce the students to albatross and the Taiaroa headland.

3. Background Information

Review the information provided in this booklet. Further information about albatross and the Taiaroa Headland site can be found on the web site and in the reference list

4. Work Sheets

Programme worksheets are available on web site. Due to limited time during the programme, we suggest that teachers use them to follow up the programme in the classroom.

5. Tour Guidelines

Please review the Tour Guidelines with your students and adult supervisors prior to the trip to the Royal Albatross Centre.

6. Teacher led activities at Taiaroa Head

Extend your visit to Taiaroa Head by exploring the headland. Simple identification guides will help you find other species of birds and mammals that use the headland. Lunch at Pilot's Beach and follow a trail to look at how humans interact with the environment. Laminated copies of activity sheets are available from the Royal Albatross Centre.

7. New Zealand Marine Studies Centre

Combine at the Royal Albatross Centre programme with a visit to the NZ Marine Studies Centre and Aquarium. Spend the morning at the Aquarium and the afternoon with the Albatross or vice versa. The programmes are complementary and together create a unique learning experience for your class.

Resources

Royal Albatross Centre Activity Sheets

(download from www.school.albatross.org.nz/resources_home.html)

PRIMARY

Toroa at Taiaroa Worksheets

These work sheets work well as a classroom follow-up to the Toroa at Taiaroa Programme and look at how the Taiaroa Headland site was used by the Maori, Europeans and the seabirds.

Pre and Post Trip Activity - "Getting to know the Royal Albatross"

This activity can be done individually, in groups or as a class activity. We suggest you do it prior to the visit and then ask children to use a different colour pen to change or add to their answers after the visit. Send the student questions to the Royal Albatross Centre prior to your visit and staff will address them during the visit.

Fort Taiaroa War Office Game - "Tracking the Enemy"

This mapping activity requires students to read direction carefully, know the directions of a compass and think about what life would have been like during the time of war.

Food Chain Card Game - "Gulp and Swallow"

This card game illustrates local food chains and where albatross fit in. An excellent resource for both the Royal Albatross Programme and the NZ Marine Studies Centre programme.

Pukekura Place Names

Investigate places of importance to albatross and local Maori and guess their distance from Pukekura.

Create your own Albatross Mask

Colour template to construct an albatross face mask with beak.

Albatross Conservation Cartoon Story - "Yawn the Albatross"

This cartoon has information about the life of an albatross and how our fishing activities are affecting these birds.

Environmental Action Planner - "Tracking our Trash"

This action planner for Teachers gives an example of how students can make the vision to reduce the amount of rubbish going into the sea a reality.

Marine Rubbish Activity - "Tracking our Trash"

This activity takes students a few steps beyond just picking up trash from the local beach. By identifying the type of rubbish they can look at the source, harm rating on wildlife and find out how long it will take to break down in the ocean.

ALL LEVELS

Seabird Solutions Facts Sheets and Lesson Plans

Information about seabirds and conservation issues.

Wildlife Viewing Guide

Wildlife viewing activity guide for teachers.

Wildlife Information Guide

Animal species to look for at Taiaroa Head and information.

English Activity – “Poems about Albatross”

Encourage students to write about the flight observed in a creative way.

Human Impact Trail at Pilot's Beach

Look at the impact we have had on the local environment, Activity could be lead by teachers.

Problem with Plastic

Information on how our plastic rubbish is affecting wildlife in dramatic ways.

Toroa Waiata

A waiata (song) written by Rachel Wesley about the Toroa (albatross) at Pukekura.

Maori Pronunciation

A guide to the pronunciation of the Maori words used in the Pukekura Toroa Programme.

Crossword – Kai of Pukekura

A fun activity to learn the Maori names for the local food resources.

Relevant Web Sites

www.school.albatross.org.nz

The education part of the Royal Albatross Centre website. Lots of activities and information to download.

www.albatross.org.nz

The Royal Albatross Centre site - background information on the colony and history of Fort Taiaroa.

www.doc.govt.nz/seabird-resources

Southern Seabird Solutions fact sheets and lesson plans
Excellent resources

www.savethealbatross.net

Save the Albatross campaign by RSPB and Birdlife International.

www.forestandbird.org.nz/what-we-do/campaigns/save-albatross

Facts about the threatened albatross species and information on the campaign to prevent albatross deaths in the fishing industry.

[www.wwf.org.nz/what we do/species/seabirds/](http://www.wwf.org.nz/what_we_do/species/seabirds/)

World Wide Fund for Nature site with information on conservation issues surrounding albatross.

www.oceanwings.co.nz/albatross

A tourism operation in Kaikoura. Has a conservation section and information on what birds (including albatross) can be seen.

www.kcc.org.nz/birds/albatross.asp

Kiwi Conservation Club site with information on albatross and their threats.

<http://science.howstuffworks.com/great-pacific-garbage-patch.htm>

<http://science.howstuffworks.com/clean-up-garbage-patch.htm>

How stuff works articles on the problem the Pacific ocean is facing with plastics and how we can 'potentially' clean it up.

Toroa at Taiaroa – Student Worksheet Answers

Pukekura (Maori Pa Site - 1750 to mid 1800's)	
Features of Site Why was this site used for a Pa?	3 sides water/cliff, only needed to defend 1 hillside.
Food & Water What did the Maori like to eat and where did they get their food?	Fish, shellfish, birds from beaches and forests.
Shelter What structures were built on the headland? Where were the houses?	Only a Pa was built on the top of the headland. Settlements were found further back from the headland.
Transport Where did the Maori travel to and how did they get there?	By canoe to local fishing grounds and walking to shores/beaches to gather food.
Impact on Site How did the site change during this period?	From non occupied to nomadic visits to small settlements.

Taiaroa Head Signal Station (1920 to present)	
Features of Site Why was a signal station important to this site?	Alerted ships to the dangerous sand bar at harbour entrance.
Food & Water What did the signal men eat and how did they get their food?	Fish, birds, seals, sealions, whales locally and also foods from Dunedin city.
Shelter Where did the signal men live and where were the pilot boats moored?	They lived in a house next to the light house and also houses built on the land side of the headland for shelter and left the pilot boats at Pilots Beach.
Transport Describe what the role of the harbour pilot was.	To lead settlement ships safely into the harbour.
Impact on Site How did the site change during this period?	From sparse settlements to whaling and sealing stations to well established villages.

Toroa at Taiaroa – Student Worksheet Answers cont.

Fort Taiaroa (Defensive Reserve – 1885 to 1945)	
Features of Site Why was this site chosen for a defense reserve?	Overlooked entrance to harbour for incoming ships, only needed to defend 1 direction against land invasion with cannons protecting 3 sea sides.
Food & Water What did the troops eat? Where did their food come from?	Food supplies now come from Dunedin City
Shelter What types of buildings were built on the headland?	Army barracks were built on pilots beach and a parade ground was cleared.
Transport How were the people, equipment and supplies transported to and from the site?	By car, truck and ship.
Impact on Site How did the site change during this period?	From village to army base with restricted access.

Royal Albatross Colony (Wildlife Reserve – 1920 to present)	
Features of Site Why have the albatrosses come here to breed?	Headland is very island like with 3 sides water and a bottleneck connection to land. It is often windy which makes takeoff and landings easier for albatross. Food is available close by.
Food & Water What do albatrosses eat? Where is that food found?	Squid is the main diet with some octopus and fish. The continental shelf is close by, so food is readily available.
Shelter How do the albatross deal with the weather conditions?	They have feathers and a layer of down near the body for insulation, all of which are
Transport Describe how the albatross fly and where they go.	Albatross are gliders, which means that they use the energy of the wind to fly. This Royal Albatross is known to circumnavigate Antarctica, flying from one feeding ground to another.
Impact on Site How has the site changed during this period?	This headland has changed from defence area for the army to wildlife reserve with a very limited access.