



National Aquarium Estuary Investigation

Pre Visit Information for the

Embankment Road Start

The National Aquarium Estuary Investigation programme is a real life ecology study at one of the most important habitats in Hawkes Bay! Students will be able to study the ecology of the estuary while learning about the animals that call it their home, from worms to fish! As well as seeing the estuary first hand, students experience teamwork and observation.

Objectives

After the estuary visit, students will...

Be able to define an estuary

Understand the importance of our estuaries in a local and global context

Recognize the threats to estuaries

Understand the importance of teamwork in research projects

Curriculum Areas Covered

Level Two Science-Living World

Ecology

Recognize that living things are suited to their particular habitat.

Level Three Science-Living World

Ecology- Explain how living things are suited to their particular habitat and how they respond to environmental changes both natural and human induced.

Level Three Science- Nature of Science

Investigating in science- Extend their experiences and personal explanations of the natural world through exploration, play, asking questions and discussing simple models.

Programme Overview

Students will walk around the lower estuary (side closest to the sea) while learning about the ecology of estuaries, how they were formed, and the plants and animals that live there. The starting point will be at Embankment Road (off Meeanee Quay) depending on the programme booked.

The total walk will take around an hour and a half, and there will be activities and research challenges to help your students understand the diversity of life that sits on Napier's doorstep! Animals studied include mud crabs, worms, birdlife, shellfish and marine fish.

Resources

We will supply resources including clipboards, observation sheets, 'treasure hunt' sheets, animal photographs and pencils. Depending on the tide, thermometers and hydrometers will also be available for your students to use.

Pre-Visit Activities

Before visiting the estuary, students could learn about what estuaries are and why they are important. If you are studying fish or bird life, you could make a diagram comparing which animals live in the estuary all year, and those that migrate to other areas.

Useful questions to ask that will prepare students for the visit include...

What makes an animal or plant suited to living at an estuary?

What makes living in an estuary challenging?

Where do New Zealand estuary birds migrate to? How are these places different to New Zealand?

How are estuaries under threat? What can we do to help?

If you are researching a particular estuary animal or plant, please let the education team know, and we can incorporate this into your visit.

Post Visit Activities

As part of the programme, students will be observing the estuary and taking notes on their 'estuary investigation sheet'. Due to human error, and different areas used by each group for their studies, results will differ between groups.

The groups formed for the estuary study can re- group in the classroom to analyze and compare results with others from the visit. Discussion could be based around:

How their answers are similar/different.

How results could be made more accurate.

What they would do differently if they were to study the estuary again?

On the back of each research sheet there are numerous questions and information which can also be covered in class. Answers for these sheets will be included with post visit information.

Other ways you can reinforce the LEOTC study is by asking students to describe their favourite animal from the estuary and why it is suited to living there.

Estuary Code

Please ensure that students understand that we need to be guardians of the estuary, and respect the millions of animals that call it their home. To make sure they are all safe,

Don't litter! (We hope to be picking up rubbish, not adding to it!!)

Keep to the paths! (Unless told by Aquarium Staff)

Please don't take anything home! (Everything feeds something at the estuary; don't deprive someone of a meal!!)

RAMS Information

The Ahuriri Estuary is a low risk environment, but it is constantly changing with weather and tides. Therefore, for the safety of yourself and your students please observe these safety guidelines.

The programme will involve a reasonable amount of walking. Please ensure that students have drink bottles and appropriate footwear before this visit.

There is a small chance of walking through shallow water (1-4cm deep) depending on tides.

Please ensure all visitors are sun smart before setting off! Hats and sunblock come highly recommended!

Students and adult helpers will be advised of safety rules on the date of your visit by our education staff. If you have any questions please contact us!

Further Information

Here are some useful websites for researching the estuary.

<http://www.napier.govt.nz/index.php?pid=200> This gives an overview of the track itself.

<http://www.niwa.co.nz/our-science/freshwater/tools/nzestuaries/life> has an overview of how humans change the ecology of estuaries.

<http://kids.nceas.ucsb.edu/biomes/estuaries.html> is a resource for students on estuaries in general.

<http://www.nrc.govt.nz/for-schools/school-information-packs/estuaries/> This is a nice, in depth guide to estuaries and the animals that live in them.

If you have any other question, please e-mail our education team! We look forward to seeing you all at the estuary!