

Activity 7

Title: Marine Reserves and Mātaitai

Teacher Instructions: Read and carry out Sean Allen's lesson plan about differences between marine reserves and Mātaitai. More info on Te Tapuwae O Rongokako marine reserve at Whāngara www.doc.govt.nz

To understand the significance and Biodiversity of Marine Reserves and Mātaitai.

LESSON NO 1 - Duration 60 mins.

By Sean Allen (Student Teacher - University of Waikato)

<u>Curriculum area</u>	<u>Level</u>	<u>Topic</u>
Social Studies. Science. English.	Year 3/4. Level 2.	To understand the biodiversity of Marine Reserves and Mātaitai.
<u>Achievement Objective(s)</u> Social Studies: Understand how places influence people and people influence places. Science: (Living World) Recognize that all living things have certain requirements so they can stay alive. English: (Ideas) Show some understanding of ideas within, across and beyond texts.	<u>Learning intentions: (In child speak)</u> By the end of this lesson students will be able to ... <ul style="list-style-type: none"> • Understand how people and marine environments depend on each other. • Discuss ways in which we can maintain the biodiversity of Marine reserves and Mātaitai. • To actively listen to, tautoko (support/affirm) other people. 	
<u>Environmental Education</u> Aims: Aim 1: Awareness & sensitivity to the environment & related issues Aim 2: Knowledge & understanding of the environment & the impact of people on it; Aim 3: Attitudes & values that reflect feelings of concern for the environment Aim 4: Skills involved in identifying, investigating & problem solving associated with environmental issues. Aim 5: A sense of responsibility through participation & action as individuals or members or groups, whanau, or iwi, in addressing environmental issues. Concepts: Interdependence Sustainability Biodiversity Personal & Social Responsibility For Action	<u>Environmental Education learning intentions</u> By the end of this lesson students will be able to ... Show an understanding towards the role in which Marine Reserves play in the sustainability of marine life. Identify how people influence the sustainability and biodiversity of Marine Reserves. Demonstrate legitimate concern for the depletion of fish stocks/sea life in the Whāngara area. Show an understanding as to how the Mātaitai contributes to the problem of compliance issues of the Marine Reserve. Identify how they can contribute positively to the maintenance and success of both the Marine Reserve and Mātaitai. By the end of this lesson students will be able to ... Understand how all living things rely on each other for existence and how this impacts on a viable natural environment, capable of supporting life, now and in the future. Understand ways in which we can ensure the sustainability of fish stocks and sea life for future generations. Understand how all sea life is interrelated and are at risk because of peoples intervention and invasiveness. Understand how through the Māori concept of	

<p>Dimension: Education about the environment</p> <p>Maori perspectives: Bicultural perspectives</p> <p>Context: Local environment</p>	<p>kaitiakitanga people can take individual action and responsibility.</p> <p>Develop their own environmental values and attitudes so they can understand how social, political, ecological and economic factors, impact on and influence the ecological sustainability of the environment.</p> <p>This learning is accessible to both Māori and non Māori.</p> <p>Te Tapuwae o Rongokako Marine Reserve/Mātaitai Whāngara. This is pertinent to all Ngāti Porou people of the East Coast, but more specifically to the whanau of Whāngara.</p>
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Teaching sequence/Student moves/Activities and Assessment

Teaching sequence

Pre lesson Preparation:

(T) To ensure all resources needed are available and suitable for the lesson and write learning intentions on the white board.

(T) To have children seated on the mat in the shape of a horse shoe, so as to see the teacher and whiteboard. Teacher to check that students can see AOK.

Teacher Expectations: (10 min)

(T) To reinforce teacher expectations of the lesson including participation, behaviour, rules of engagement and the importance of actively listening. **Any questions?**

(S) To respond appropriately.

Introduction

(T) To introduce the subject of Environmental Education and have the children Brainstorm what they think it is about.

(S) Students would respond appropriately.

(T) If students are unable to provide answers then guide them towards the education and understanding of how people impact on the air, land, water, plants, animals and natural resources. Bring to their attention that it is also about people, communities, social and cultural values.

Ignition:

(T) To start the lesson with some thought provoking questions, (Display these on the teachers work station as A4 size for all students to see).

Q: Have you thought about, how important food supplies are to people all around the world and why?

(Pause).

Q: Have you thought about, how important traditional food supplies are to certain cultures around the world and why? (Pause).

Q: Have you thought about, how important traditional food supplies are to Māori in New Zealand & why? (Pause).

Q: Have you thought about, what it would be like if a Natural food supply was to disappear (run out)?

(Pause).

Q: What could be done to make sure this doesn't happen?

(T) These are some of the very real issues that are happening all around the world and also here in New Zealand. During the next 3 lessons we will be learning about a local solution to this very real environmental issue.

Teaching sequence: (15 min)

(T) To introduce the learning intentions and ask the students to say them out loud and together.

- Understand how people and marine environments depend on each other.
- Discuss ways in which we can maintain the biodiversity of Marine reserves and Mātaitai.
- To actively listen to, tautoko (support/affirm) other people. **Any questions?**

(T) To explain the meaning of biodiversity. **(The variety of all life on earth, plants, animals, and micro organisms, the genes they contain and the ecosystems they form).**

(S) To respond appropriately.

(T) To introduce the following questions and have the children Brainstorm examples and teacher to record on the white board.

Q: If you think back to the questions I asked before, what do you think is a Natural but traditional food supply for Māori?

(T) Try to direct the children towards, **kai moana**, fish, kina, paua, boo boo, cray fish etc. If students take too long to identify **kai moana**, then restructure the question or tell them the answer.

(S) To respond appropriately.

Q: How could we sustain (look after/manage) the Biodiversity of the Marine environment and ensure the food supply (kai moana), doesn't disappear (run out)?

(T) Try to direct the children towards a **MARINE RESERVE**. If students take too long to identify **MARINE RESERVE**, then restructure the question or tell them the answer.

Q: Does any one know of any Marine Reserves in our area?

(S) To respond appropriately.

DVD Presentation: (20 min)

(T) To introduce the **Experiencing Marine Reserves 3rd Edition**, DVD and ask the students to position themselves on the mat in front of the TV so they can all see it clearly.

(S) To respond appropriately.

(T) To explain to the children that they need to **focus on the comparisons between the Marine Reserve and the local Marine area** and to also **identify the many benefits and reasons** for having a Marine Reserve.

(T) On completion of the DVD, ask the children to form the learning horse shoe again. The class will then discuss and summaries the comparisons and benefits, in an **open class forum**, i.e. more fish, bigger fish, crayfish, etc and i.e. no take protocol, an asset for future generations and an undisturbed natural environment, etc.

(S) To respond appropriately.

(T) To record findings on the white board as definitive lists.

Q: So what is a Marine Reserve?

Q: How, can this type of Natural Marine environment be achieved?

Q: What is the relationship between people and the Marine Reserve?

Q: What makes a Marine Reserve different to any other Marine area? This one reason will allow us to maintain the biodiversity of the area.

(T) To direct the children towards the fact that Marine Reserves and People are interdependent of each other and that a NO TAKE Policy will maintain the biodiversity of the area and ensure the preservation of the abundant sea life.

Introduction of Mātaitai: (10 min)

(T) To introduce an aerial map of the Whāngara area that clearly shows the Marine Reserve boundaries and also the location of the Whāngara coastal village.

(T) To invite children to look at the map and think about how the Marine Reserve could provide the Natural, traditional food supply for Maori?

(T) Explain to the children that the Marine Reserve is like the Kohanga of the sea and that sometimes you can get to many students at the school and sometimes they have to go somewhere else. Note: (Research shows that the Marine Reserve creates a spill over effect for surrounding areas).

Q: How could local tangata whenua exercise their customary rights to take kai moana from the sea, without taking it from the Marine Reserve?

(T) Try to direct the children towards the understanding that the area beside the Marine Reserve, Whāngara Bay could be used because of the spill over effect from the Reserve.

Q: Does any one know the name of this area?

(T) Prompt them that it is another version of a Marine Reserve but is controlled and monitored by the local Tangata whenua and it is for their use only. If students take too long to identify Mātaitai, then restructure the question or tell them the answer.

Q: What is the difference between the Marine Reserve and the Mātaitai?

(S) To respond appropriately.

(T) To direct the children to the fact that the Marine Reserve has a no take policy but the Mātaitai is there to provide kai moana for local tangata whenua.

(S) To respond appropriately.

(T) To provide positive comments and to reinforce the children's inquiry, problem solving, and ability to work cooperatively during this investigative process.

Conclusion/reflection/summing up: (5 min)

(T) In an open class forum, reflection horse shoe, we will now quickly reflect on what we have learnt today.

Q: Can any one give me some examples of why Marine Reserves are important to people and the biodiversity of the Marine environment?

(S) To respond appropriately, i.e. sustainable Natural resource, we are dependant on each other; the overspill from the Marine reserve can provide kai moana for local Tangata whenua, etc.

Q: Can any one identify how we can take action to maintain the biodiversity of the Marine environment?

(S) To respond appropriately, i.e. support the no take policy of the Marine reserve, inform other people about the no take policy, report any one they see breaking the rules of the Marine reserve (as discussed in DVD), as a visitor to the marine reserve, they should only look, observe and learn from this unique ecosystem, but in no way disturb the local environment.

Q: What are the differences between a Marine Reserve and Mātaitai?

(S) To respond appropriately, i.e. Marine reserve is a no take policy, Mātaitai is for local tangata whenua

to use, maintain and control.

(T) If we look at the success criteria of the lesson, please put your hand up if you think you have been successful in achieving your learning intentions.

(T) Inform the students that next week we will be going on a field trip to Te Tapuwae o Rongokako Marine Reserve/Mātaitai in Whāngara to meet with **Hone Taumaunu**, the founding member of the Whāngara Marine reserve/Mātaitai and the representative for local tangata whenua and **Jamie Quirk**, who represents the Department of Conservation who work in conjunction with tangata whenua to manage the Marine reserve. Encourage the students to bring a parent as this is a learning opportunity for all.

(T) To hand out permission slips to take home and have parents sign and return ASAP and remind them that no returned slip, means no travel.

Resources:

DVD; Experiencing Marine Reserves Edition 3, sourced from Samara Nicholas, Director of Experiencing Marine Reserves, www.emr.org.nz

DVD player, TV, lesson plan, whiteboard, whiteboard markers, aerial resource of Whāngara, A4 question sheets, permission slip.

Assessment:

Through observation, the teacher will observe students who are/aren't participating, contributing and actively listening while involved in open class forums and brainstorming activities. The discussion during the reflection horseshoe will summarize students learning and in conjunction with a show of hands will indicate who has been successful in achieving the learning intentions of the lesson.