Tiakina a Tangaroa – Protect Our Seas

by Jill MacGregor

Overview

This article, about a class's science investigation, recounts how the students compare the sea life of a "protected" marine reserve with that at an "unprotected" beach. They discover clear differences and identify the harm people do to the environment by littering. The students raise community awareness of the issue by organising a sponsored parade.

The article shows students exploring and acting on issues and questions that link science learning to their daily living. It contains numerous photographs that record the students' investigation. The Māori names for sea life are supported by English translations in brackets, by labels, and by photographs. Some students may need support with the subject-specific vocabulary.

Texts related by theme "Spongy Skeletons" SJ 2.3.04 | "Wrybills at Risk" SJ 1.4.08 |
"Seeds for the Birds" SJ 2.4.07

Text characteristics from the year 4 reading standard

some words and phrases that are ambiguous or unfamiliar to the students, the meaning of which is supported by the context or clarified by photographs, illustrations, diagrams, and/or written explanations

some compound and complex sentences, which may consist of two or three clauses

other visual language features that support the ideas and information, for example, text boxes or maps

rimurapa

kina

hautai

A mass of shiny, reddish-brown **rimurapa** (bull kelp) swayed with the currents. Spiky **kina** grazed on beds of colourful **hautai** (sponges), **Neptune's necklace**, and **sea lettuce**.

Whole schools of **tarakihi** cruised past us, so close that we wanted to reach out and touch them. We saw a baby **oru** (stingray) and a **pātiki** (flounder) resting on the seabed.

We felt sure that the children of Tangaroa were happy and healthy here.

Neptune's necklace

sea lettuce

pātiki

oru

tarakihi

Since we had seen what a difference a marine reserve can make, we wanted to share our experience with others.

We organised a sponsored beach parade. We wrote waiata and made banners to inspire others to respect Tangaroa and all the creatures of the sea.

The funds we raised at our parade will go towards buying more snorkel gear so that children in other schools can learn more about marine reserves, too.

Protect our seas for the future!

Tiakina a Tangaroa! ∎

some places where information and ideas are implicit and where students need to make inferences based on information that is easy to find because it is nearby in the text and there is little or no competing information

some abstract ideas that are clearly supported by concrete examples in the text or easily linked to the students' prior knowledge

Reading standard: by the end of year 4

Possible curriculum contexts

SCIENCE (Nature of Science)

LEVEL 2 – Participating and contributing: Explore and act on issues and questions that link their science learning to their daily living.

ENGLISH (Reading)

LEVEL 2 – Purposes and audiences: Show some understanding of how texts are shaped for different purposes and audiences.

ENGLISH (Writing)

LEVEL 2 – Purposes and audiences: Show some understanding of how to shape texts for different purposes and audiences.

Possible reading purposes

- To find out about why marine reserves have been created
- To discover how a class shared their concerns with their community
- To identify the effect of pollution on beaches.

Possible writing purposes

- To describe the harmful aspects of human actions on beaches and sea life
- To persuade people to stop polluting the beach or a local environment
- To inform others of the role of marine reserves in protecting our beaches and sea life.

See Instructional focus – Reading for illustrations of some of these reading purposes.

See Instructional focus – Writing for illustrations of some of these writing purposes.

The New Zealand Curriculum

Text and language challenges

VOCABULARY:

- Possible unfamiliar or content-specific words and phrases, including "marine reserves", "protect", "foreshore", "snorkel", "unprotected", "emergency", "masks", "fogged up", "local", "jet skis", "dive flag", "lookout person", "flippers", "pod", "clumsy", "afloat", "murky", "darted", "clumps", "scuttled", "crevices", "seabed", "swirled", "thrived", "disturbed", "crystal clear", "clusters", "clung", "ledges", "swayed", "currents", "spiky", "grazed", "cruised", "sponsored", "banners", "inspire"
- The use of words in te reo that are not defined in English, including "Tangaroa", "kaimoana", "pāua", "waiata".

Possible supporting strategies

Develop vocabulary lists or word webs, associated with the beach environment and with snorkelling, which can be added to during reading.

Tell the students the story contains Māori language that may be unfamiliar. Prompt them to use context clues or the prior knowledge of other students who are familiar with te reo Māori to understand the words they don't know.

During reading, ask the students to note unfamiliar vocabulary for discussion after reading.

Identify the vocabulary that the students need support with to understand this text **and** the language that they are likely to encounter in many contexts. Focus vocabulary learning on the latter. Offer the students guidance on which words are most important for them to learn (and which are very low frequency and not such a priority).

The English Language Learning Progressions: Introduction, pages 39–46, has some useful information about learning vocabulary. (More information, PDFs of the ELLP booklets, and support materials are available online at: http://esolonline.tki.org.nz/ESOL-Online/Student-needs/The-English-Language-Learning-Progressions)

SPECIFIC KNOWLEDGE REQUIRED:

- Experiences of visits to New Zealand beaches
- Knowledge of conservation
- Knowledge of snorkelling
- Knowledge of te reo Māori and of Māori culture.

Possible supporting strategies

Discuss the students' prior experiences of beaches, especially the sea environment.

If appropriate, before reading the text, visit a local environment to raise the students' awareness of litter and/or pollution and build their background knowledge of environmental issues.

Students with snorkelling experience can support others to understand it. Explain how you can breathe through the snorkel so that you don't have to raise your head out of the water.

TEXT FEATURES AND STRUCTURE:

- Recount of an investigation, which includes features common to factual texts
- Extensive use of photographs that support the text, many with labels
- The names of sea creatures in te reo, often with English in brackets
- Many long and complex sentences and a wide range of verb forms
- Phrases with collective nouns, for example, "pod of clumsy seals", "mass of kelp", "clusters of tiny kuku".

Possible supporting strategies

Review the students' knowledge of factual texts. Remind them that photos, labels, and bracketed words all add information and support their understanding of what they are reading.

Discuss the structure of a factual recount. During reading, use a graphic organiser to make notes on the structure. For example, support the students to note that the first paragraph is designed to grab the reader's interest; the second paragraph tells the reader who, what, and where and defines the topic. The third paragraph gives the aim of the investigation and an overview of the process. (After reading this paragraph, ask them what they expect to read in the rest of the article.) Then the fourth paragraph begins the sequence of events (note that there is also a lot of description in the body of the text). The final page sums up the results. Have the students use their notes to help them summarise the investigation after reading. Refer back to this structure when they read and write similar texts.

Supporting English Language Learning in Primary Schools offers ideas for helping students with the language features of recounting (pages 14–19 in the year 3 and 4 guide, and pages 18–25 in the year 5 and 6 guide). In *English Learners, Academic Literacy, and Thinking: Learning in the Challenge Zone* (Heinemann, 2009), Pauline Gibbons classifies "Factual genres", including "procedural recount", and offers descriptions of some of their features (page 175).

If necessary, help the students understand long complex sentences by breaking them into separate clauses, identifying the main idea of each clause, and how they are connected. Using who, what, where, when, how, and why questions as prompts and breaking down the information together can help students to identify the main ideas.

Sounds and Words

Instructional focus – Reading

Science (Nature of Science, level 2 – Participating and contributing: Explore and act on issues and questions that link their science learning to their daily living.)

English (Level 2 – Purposes and audiences: Show some understanding of how texts are shaped for different purposes and audiences.)

Text excerpts from "Tiakina a Tangaroa – Protect Our Seas"	Students (what they might do)	Teacher (possible deliberate acts of teaching)
We were disappointed to find empty pāua shells, glass, and tin cans lying on the seabed. Plastic bottles and tangled strings of fishing line swirling in the rock pools. Litter had been blown into the sea from the beach or dropped from boats.	Students **locate** the items of litter as the cause of the children's disappointment. They use their prior knowledge to **infer** that people not managing their rubbish caused the litter to be "blown into the sea from the beach or dropped from boats". They **evaluate** this information and make a judgment about the impact of people and their litter on the environment.	**PROMPT** the students to locate information. Ask them to say what it was that disappointed the children. Discuss who or what was responsible for the litter. **ASK QUESTIONS** • The litter they found disappointed the children. How might the litter affect the beach environment? What do you think might happen if litter keeps polluting the environment? • How do you feel about litter in the environment? As you read the next paragraph, compare your thinking with what the children in the text think about it.
A week later, we explored a "protected" area – Kāpiti Island Marine Reserve. Huge pāua and kawari (whelks) shared their rocky home with kōtore moana (sea anemones), and cushion stars. Clusters of tiny kuku (mussels), koromāungaunga, and ngākihi (limpets) clung to the ledges.	Students **locate** the phrase "A week later" and **predict** that this introduces a new section of the text. They remember that the introduction told them the students were going to compare two places, and they **predict** that this section will compare this "protected" area with the "unprotected" area they have already read about. Students clarify information and unfamiliar words by referring to photos, labels, and bracketed words.	**MODEL** your thinking for the students. • When I notice the phrase "A week later", I know that the article has changed timeframe and that the author has purposely signalled this shift. Talk to your partner about what you think the article will focus on next. Remember what the introduction told us about the process of the investigation. If you were unsure about what it meant, what could you do to check? **PROMPT** the students to use their reading strategies to clarify the content-specific language. • In this paragraph, there are lists of the sea creatures the children saw in the water. There are a lot of words that are new to us. Remember to use the photos and the labels to help you identify each creature.
We organised a sponsored beach parade. We wrote waiata and made banners to inspire others to respect Tangaroa and all the creatures of the sea.	Students **ask and answer questions** to develop their understanding about the beach parade.	**EXPLAIN** that a useful reading strategy is to ask questions in your head as you read. The questions you ask help you to find information. **MODEL** how to ask useful questions: • I have heard "sponsored" before – sponsors gave us money to help build the new school hall. I wonder what it means in this context? Have the students raised money from the parade? How and what did they use it for? • I wonder what the banners had on them? In the photo, the banners look like they have sea creatures on them. That would make sense, as they want everyone to respect the creatures. **GIVE FEEDBACK** • You made links to your prior knowledge to understand where the litter came from and what was the cause. Making connections to what you already know is a good strategy when reading about new ideas or when you come across new information. • I saw you looking at the photo that goes with each new sea-creature's name. That is a good strategy for getting a better understanding of each creature.

METACOGNITION

- Which part of this text did you find the hardest to read? Why was that? What did you do to help you understand it?
- Checking back through the text to confirm or modify your inferences is an excellent strategy. What parts did you go back to? What did you find?
- What new words did you find in this story? You have recorded them in your vocabulary notebook – what will you do with them now? Which words do you think you should really focus on learning?
- What words and phrases helped you to identify the different sections of the article and the steps in the investigation? How will you use these types of words and phrases in other texts you read and write?

Reading standard: by the end of year 4

The Literacy Learning Progressions

Assessment Resource Banks

Instructional focus – Writing

Science (Nature of Science, level 2 – Participating and contributing: Explore and act on issues and questions that link their science learning to their daily living.)

English (Level 2 – Purposes and audiences: Show some understanding of how to shape texts for different purposes and audiences.)

Text excerpts from "Tiakina a Tangaroa – Protect Our Seas"	Examples of text characteristics	Teacher (possible deliberate acts of teaching)

Our class was learning about marine reserves. Marine reserves are areas that have been set aside to protect all the plants and animals in the sea and on the foreshore. People can swim, dive, and snorkel in the reserve, but they can't take anything away.

ADDING DETAIL

Writers consider their audience as they create texts. They provide details that support the main points and support the readers to make sense of the text.

In non-fiction texts, definitions are often an important type of detail. A sentence structure that is often used for definition is:
ITEM + is + GENERAL TERM + that + …
(MARINE RESERVES are AREAS that …).

PROMPT the students to consider their role as writers.

- Remember we are writing for an audience, and we want our audience to have enough information to understand our message.
- We have decided the main points we wish to share. Take time now to think about how you as a writer can make these points clear for the audience. What details, examples, or extra information need to be included? How will this help the reader? What definitions do you think your readers might need – especially in the introduction?

PROMPT the students to plan for their writing.

- A planning grid would be useful as you organise the extra information to support the main points. Remember to check that the extra information matches the main points.

For students who need support with planning and structuring their writing, you could provide a writing frame. A writing frame can provide varying levels of support, from a planning grid with the necessary sections (for example, Introduction: topic, definition, aim) and space for notes, to a three-column grid with the necessary sections, notes, and sentence starters. Provide opportunities for students who share a first language other than English to discuss their topics and plan their writing in this language.

Sophie thought we looked like a pod of clumsy seals!

COLLECTIVE NOUNS

Collective nouns describe a group or a collection. The use of a collective noun develops a noun phrase, for example, the noun "seals" becomes a noun phrase "a pod of seals".

EXPLAIN that collective nouns each refer to a group of things. Provide examples for the students from the text. Elicit other known collective nouns from students.

Collective nouns may be unfamiliar to some students, especially English language learners. Create charts or posters for collective nouns and the phrases you can make with them (some collective nouns may only have one phrase). Co-construct example sentences using these phrases. Note that the collective noun is in the singular and the noun it goes with is in the plural, and the whole phrase is usually singular – "The pod of seals **has** swum away." "The pod of seals is heading south." Collective nouns can also be used as plurals – see below.

PROMPT the students to make deliberate choices as they shape texts for an audience.

As a writer, you need to make choices about the language you select so that the reader has a clear image. In this text, the author describes the sea life in the marine reserve. She describes **schools** of fish, a **mass** of kelp, and **beds** of sponges. These collective nouns help readers to understand the amount of sea life in the marine reserve.

- Talk with your partner about a place in your writing where a collective noun would add more detail.

Ask the students to close their eyes and visualise the scene as the sentences are read aloud.

A mass of shiny, reddish-brown rimurapa (bull kelp) swayed with the currents. Spiky kina grazed on beds of colourful hautai (sponges), Neptune's necklace, and sea lettuce.

DESCRIPTIVE LANGUAGE

Descriptive verbs and carefully chosen adjectives help the reader to visualise the scene.

ASK QUESTIONS to support the students to identify the effect of using descriptive language.

- How has the author supported us to build a picture in our minds? Which words helped you to create an image in your mind?
- What does this mean for us as writers?
- Read your writing to a partner and ask for feedback about the image you wanted to build.
- How can you change or add to your writing so that you can build a clear image for your reader?
- Do you need to add or change the adjectives or verbs to enhance the images?

GIVE FEEDBACK

- I can see that you have used your planning grid effectively. The extra information is organised well and matches the main points.
- The choices you made when you recrafted your writing have really added detail. The use of the collective noun gives me a real sense of many lions.
- You've acted on the feedback from your partner. The changes you've made to your writing have really added to the images in my mind.

METACOGNITION

- Tell me how the planning grid helped you to organise your writing.
- I see you have changed some words from your first draft. What were you thinking about when you chose what to add in?
- Sam gave you feedback on your first draft – what did he say that helped you to improve your writing? How did this help you, and how will you use this next time?

Writing standard: by the end of year 4

The Literacy Learning Progressions