Kūtai

by Ross Calman

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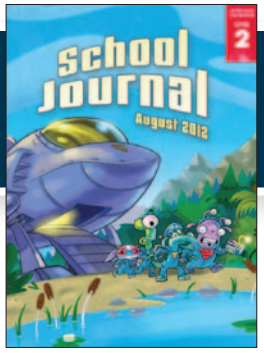
Level 2, August 2012
Year 4



Overview

As a companion piece to "Kūtai Fritters" from the same Journal, "Kūtai" provides information about the origins, guardians (kaitiaki), uses, and habitats of this shellfish, which could once be found in many parts of New Zealand.

This report has a theme of sustainability of natural resources, showing how past and present human actions have helped or hindered survival of the kūtai. The role of Māori tikanga to support sustainability provides another connection between the two texts.

There are a large number of Māori words (including the names of different shellfish) and cultural concepts that may or may not be familiar to students.

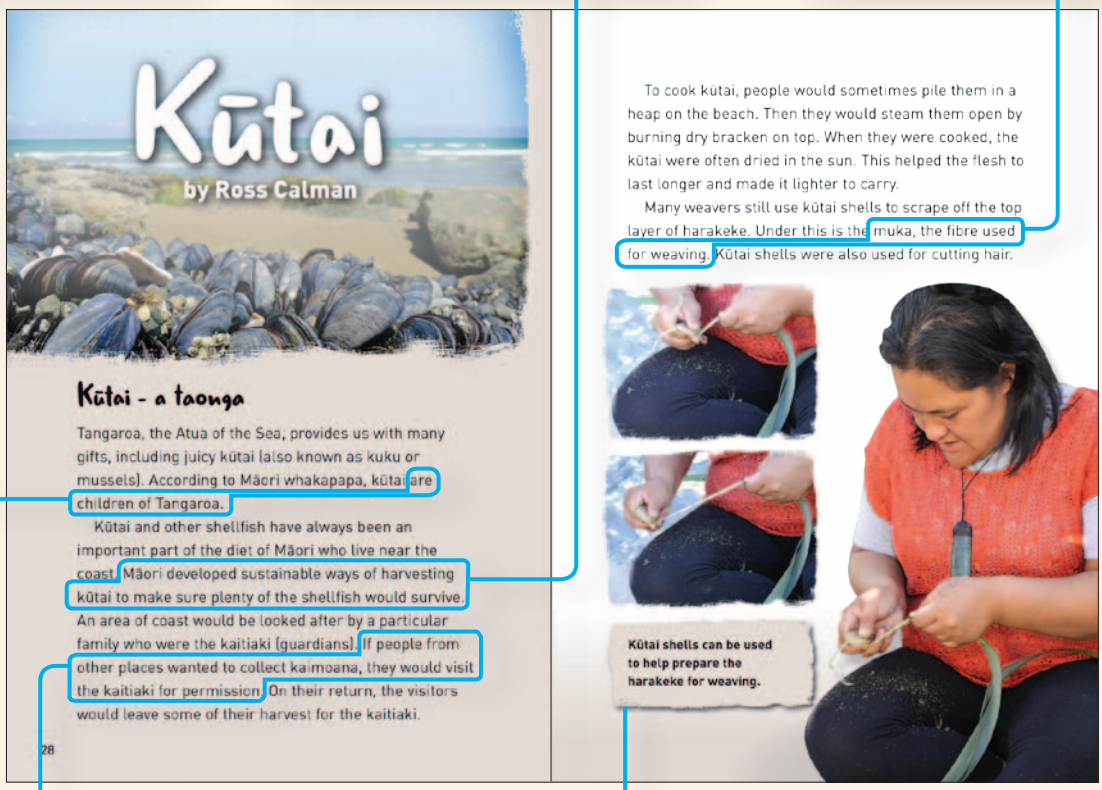
Texts related by theme **"Kūtai Fritters"** L2 August 2012 | **"Tiakina a Tangaroa: Protect Our Seas"** L2 Oct 2011 | **"The Hidden Midden"** SJ 2.3.10

Text characteristics from the year 4 reading standard

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

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 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



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Kūtai - a taonga

Tangaroa, the Atua of the Sea, provides us with many gifts, including juicy kūtai (also known as kuku or mussels). According to Māori whakapapa, kūtai are children of Tangaroa.

Kūtai and other shellfish have always been an important part of the diet of Māori who live near the coast. Māori developed sustainable ways of harvesting kūtai to make sure plenty of the shellfish would survive. An area of coast would be looked after by a particular family who were the kaitiaki (guardians). If people from other places wanted to collect kaimoana, they would visit the kaitiaki for permission. On their return, the visitors would leave some of their harvest for the kaitiaki.

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To cook kūtai, people would sometimes pile them in a heap on the beach. Then they would steam them open by burning dry bracken on top. When they were cooked, the kūtai were often dried in the sun. This helped the flesh to last longer and made it lighter to carry.

Many weavers still use kūtai shells to scrape off the top layer of harakeke. Under this is the muka, the fibre used for weaving. Kūtai shells were also used for cutting hair.

Kūtai shells can be used to help prepare the harakeke for weaving.

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

Reading standard: by the end of year 4

Possible curriculum contexts

SCIENCE (Living World)

LEVEL 2 – Life processes: Recognise that all living things have certain requirements so they can stay alive.

ENGLISH (Reading)

LEVEL 2 – Structure: Show some understanding of text structures.

ENGLISH (Writing)

LEVEL 2 – Structure: Organise texts, using a range of structures.

Possible reading purposes

- To learn about kūtai and what they need to survive
- To understand why and how Māori protect kūtai
- To learn about the special things we need to consider when gathering kaimoana
- To make connections with the story "Kūtai Fritters".

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

Possible writing purposes

- To report on another species that is both used and protected by people
- To write instructions or guidelines for a different purpose.

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

The New Zealand Curriculum

Text and language challenges

VOCABULARY:

- Possibly unfamiliar words and phrases, including "According to", "sustainable", "harvesting", "guardians", "harvest", "bracken", "weavers", "molluscs", "bivalves", "hinged", "straining", "plankton", "green-lipped", "sewage", "chemicals"
- The use of te reo Māori, including some translations in parentheses.

Possible supporting strategies

Spend some time familiarising yourself with the Māori vocabulary. Depending on the knowledge of your students, provide accurate support for pronunciation and meanings. You could use the Ngata dictionary (www.learningmedia.co.nz/ngata).

This may be an opportunity to engage with your school community or local iwi to discuss local cultural understandings about kaimoana.

Before reading, preview any words that may be unfamiliar to your students. You could give pairs of students two or three vocabulary items. Have them find out the meaning of each item, construct sentences with them, and explain their items and their sentences to the other pairs. Provide resources (including simple dictionaries, bilingual dictionaries, visual prompts) and support the students to find the meanings of their items and to prepare explanations and example sentences. Record and display all the vocabulary items, explanations, and example sentences for students to refer to.

Help students identify other words or expressions they need to learn, including scientific terms such as "sustainable", "molluscs", "bivalves", and "hinged shells".

The English Language Learning Progressions: Introduction, pages 39–46, has useful information about learning vocabulary.

SPECIFIC KNOWLEDGE REQUIRED:

- Experience of seeing, gathering, using, and/or eating shellfish
- Knowledge of the conditions shellfish need in order to survive and the factors that can harm them
- Understanding of kaitiaki.

Possible supporting strategies

Review the students' knowledge of shellfish and where and how they live. Activate or build their background knowledge, helping students make connections between their own experiences and the information in the report. Keep in mind that some students may be unaware of their special knowledge, possibly assuming "Everyone knows that" and taking concepts such as sustainability for granted. Also look at concepts of kaitiaki such as rāhui.

TEXT FEATURES AND STRUCTURE:

- Use of headings
- Descriptions and explanations
- Photographs that illustrate points in the text
- Captions
- The footnote to explain "plankton"
- The bulleted list of guidelines
- The use of the verb form "would + verb" describing habitual actions or routines in the past
- Connections with the text, and between this text and "Kūtai Fritters".

Possible supporting strategies

Review the features of a report briefly, pointing out the use of photos, headings, captions, and a set of instructions.

Display all the headings. Have students work in pairs to predict what kind of information they think will occur under each heading. Have the pairs share their ideas. As they do so, record the main points of their predictions, introducing and explaining key concepts and vocabulary where appropriate.

You could conduct a jigsaw reading to practise summarising and to provide support with the length and complexity of the text. After introducing the text and providing support with key vocabulary and concepts, assign one of the first three sections to pairs or individuals. Tell them to read the text and prepare to summarise the main points. Support each pair or individual in reading their section. When they have finished, have the students share their information and check their predictions about each section. Then reread the whole text as a group, including the dos and don'ts on page 32.

Sounds and Words

Instructional focus – Reading

Science (Living World, level 2 – Life processes: Recognise that all living things have certain requirements so they can stay alive.)

English (Level 2 – Structure: Show some understanding of text structures.)

Text excerpts from "Kūtai"	Students (what they might do)	Teacher (possible deliberate acts of teaching)
Māori developed sustainable ways of harvesting kūtai to make sure plenty of the shellfish would survive. An area of coast would be looked after by a particular family who were the kaitiaki (guardians). If people from other places wanted to collect kaimoana, they would visit the kaitiaki for permission. On their return, the visitors would leave some of their harvest for the kaitiaki.	*The students **ask and answer questions** about "sustainable ways of harvesting" to **infer** that protecting the supply meant there would always be food.* *They use their knowledge of grammar to understand that this extract describes past times and actions.* *Students **make connections** between the text and their own experiences of visiting and sharing to **infer** that the visitors left kūtai for the kaitiaki as a way of thanking them for the kaimoana and for looking after the coast.* *The students **think critically** about past practices to form hypotheses about collecting kūtai today.*	**PROMPT** the students to answer a question as they read the text. • Read page 28, and as you read, look for information to help answer the question "How did Māori living near the coast make sure there would always be a good supply of kūtai?" • Highlight the text or make notes as you read. • When you think you have the information, work with a partner to compare notes. Then combine the information you've found, and write a sentence that answers the question and demonstrates your new knowledge. Record the students' answers in a modelling book or on a chart and discuss them with the group. • Think about what you've learnt about the past and how things might have changed over time. • What hypotheses do you have about these changes? • As you continue reading, check your hypotheses against any new information you find. • Were your hypotheses right? What can you conclude about the sustainability of kūtai now?
Hururoa (also called hoemoena, or horse mussels in English) can grow over 30 centimetres long. They are the largest shellfish found in New Zealand today. People have found fossils of giant mussels from 100 million years ago. Those mussels grew up to 1.5 metres long.	*The students **make connections** between the text and their own knowledge of shellfish to **visualise** the size of the horse mussels.* *They **make connections** between pieces of information in the text, their knowledge of fossils, and their knowledge of changes over vast periods of time to **infer** that, like other life forms, mussels have evolved and become much smaller.*	**PROMPT** the students to make connections and inferences. • Think about the information in this extract. • Most rulers are 30 centimetres long. How does making a connection with the size of a ruler help you visualise the size of a horse mussel? • Now think about something that is 1.5 metres long and visualise a mussel that size. • What connections can you make between the text and what you know about other creatures that lived 100 million years ago? (For example, giant lizards or dinosaurs) • What can you infer about the changes that have happened over time for mussels?
Gathering kaimoana – dos and don'ts • DO put back any rocks that have been lifted or turned over. • DON'T open kaimoana over the shellfish beds.	*Students **make connections** between the text and their knowledge of reading other, similar text structures to **infer** that the writer uses this format to pass on important information.* *They **ask questions** about the reason for each do and don't, drawing on their prior knowledge of collecting shellfish and what they have learnt in the text to make and justify inferences, for example, to **infer** that not putting turned rocks back might harm the kaimoana.*	Make a two-column chart. Copy the text from page 32 into the first column. **DIRECT** the students to discuss the reason for each item, offering support where necessary. • Why do you think you should replace rocks? • Discuss possible reasons, using the rest of the text to help you, and share any information or ideas. • Write a reason alongside each do and don't. • If you're not sure of a reason, how could you find out? • Do you agree with this list? What other suggestions would you make? **GIVE FEEDBACK** • I saw you use information in the text, as well as your own experiences of gathering kaimoana, when you inferred that … You were integrating information, and that's an excellent way of deepening your understanding of new information.

METACOGNITION

- Show me a place where you were unsure of the meaning of the text. What strategies did you use to work it out?
- Talk with a partner about what helped you understand why people have become more aware of pollution.
- How did knowing about how reports are written help your understanding of what you were reading?

Reading standard: by the end of year 4

The Literacy Learning Progressions

Assessment Resource Banks

Instructional focus – Writing

Science (Living World, level 2 – Life processes: Recognise that all living things have certain requirements so they can stay alive.)

English (Level 2 – Structure: Organise texts, using a range of structures.)

Text excerpts from "Kūtai"	Examples of text characteristics	Teacher (possible deliberate acts of teaching)

About kūtai

Kūtai are shellfish that belong to the very large group of animals called molluscs. Kūtai are also known as bivalves because they have two hinged shells. Pipi, tuatua, and toheroa are also bivalves.

SCIENTIFIC INFORMATION

In a report about a living thing, the subject is usually placed in the category (or species) it belongs to. The information helps readers understand the "family" of the species and what they have in common. Sometimes the writer gives other examples to help readers make connections with more familiar members of the group.

MODEL the way information is selected and organised in a report. You may wish to create a diagram to show the "family" that kūtai belong to.

- The heading of this section tells me I'm going to learn factual information about kūtai.
- The first sentence tells me where kūtai fit in the animal kingdom: they are part of a group called molluscs.
- The next sentence tells me that within the mollusc group, there is a smaller group called bivalves, and it explains what they are.
- Finally, the writer gives more examples of bivalves: this helps me understand how they are related.
- When you're preparing to write a scientific report, think about the information you need to include to help your readers understand the family of the living thing you're writing about.

For students who need support with constructing this type of paragraph, you could use this paragraph as the basis for a writing frame. Display the paragraph. Delete the optional sections. Model filling in the gaps to describe another living thing. Co-construct another example, if appropriate, showing the students how to modify the frame (for example, by missing out one of the categories). If necessary, give them more practice (for example, by providing more gaps that they fill from a word bank) before prompting them to use the frame in their own writing.

Writing frame:

_____ are _____ that belong to a very large group of animals called _____. _____ are called _____ because _____. _____, _____ and _____ are also _____.

In some places, water pollution has made shellfish poisonous. Water pollution is caused by sewage and stormwater, waste from factories, and oil spills.

EXPLANATIONS

Explanations tell how or why something happens. They often describe the cause of something. The words the writer uses makes this relationship clear to the reader.

LISTS IN A SENTENCE

When several items are listed in a sentence, writers use commas to separate the items. The word "and" before the last item shows that all the items relate to the main verb.

ASK QUESTIONS to help the students refine their writing and meet their audience's needs.

- Will your audience understand each piece of information?
- Are there places where you need to explain something?
- Where might you need to add information to help your readers understand the cause of something?
- Ask your writing partner to review your work and point out any facts that need an explanation.

Some students may need support with identifying relationships between ideas, such as cause-and-effect relationships. These students will need support to explicitly identify the cause and the effect and the words or phrases and sentence structures that show the relationship. They will need many examples and modelling and opportunities to practise.

Gathering kaimoana – dos and don'ts

- DO find out how many fish or shellfish you are allowed to take and how big they must be.
- DO say a karakia before you take your kaimoana.
- DO return your first find to Tangaroa.

INSTRUCTIONS

A bulleted list is a good way for a writer to communicate rules, instructions, directions, or guidelines directly to the audience. Each item in the list starts with a strong imperative verb, such as "Do" or "Don't".

MODEL

- Let's reread page 32. This list shows me, as the reader, what things I should and should not do when I'm gathering kaimoana.
- The use of upper-case letters for "Do" and "Don't" helps me to know that these are important instructions. Putting them in a list helps me remember them – I could even copy this list and put it on the noticeboard at the beach to remind other people!

GIVE FEEDBACK

- You've provided good scientific information about … How can you help your audience understand the scientific names you've used?
- The explanation of the bittern's needs helps your readers understand why it's important for us to protect its habitat. This makes your report more interesting and informative.
- You've gone from a very long list of instructions to a shorter list. Asking your writing partners for help in deciding which things to leave out has worked well.

METACOGNITION

- How did you decide on the information you would need for your report? How did you check this would suit your audience?
- Which part of this report was most difficult? What could have made it easier?
- What have you learnt about organising your writing while you were working on this report?

Writing standard: by the end of year 4

The Literacy Learning Progressions

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