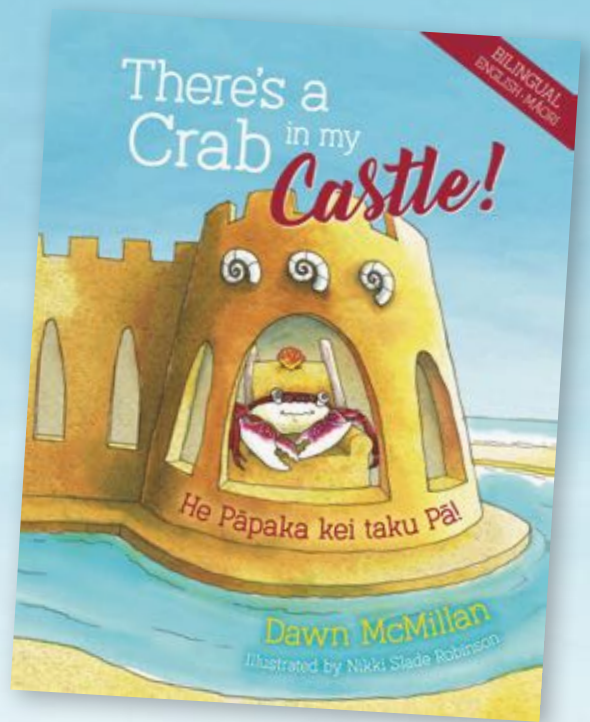


There's a Crab in my *Castle!*

He Pāpaka kei taku Pā!

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Māori translation by Stephanie Huriana Fong



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TEACHER RESOURCE



There's a cool crab
in my castle!
He'd like to be
the king.

Have you ever seen a crab claim a sandcastle as its own? Come to the beach and meet Crab and friends as they go about their day, cleaning the castle, staging a rock-pool concert, dancing to the beats and avoiding being eaten!

PUT ON YOUR THINKING HATS!



What made you want to read this book? Do you think Crab is safe in his castle? Why did the author ask for the notice on the title page? Why wasn't Kahawai invited to the concert? How do you think he's feeling? How did you feel when the tide was coming in?



Think about the risks of a visit to the rocky shore. Who will you go with? Are they responsible people? Plan your trip carefully. Remember to check the tide. Don't forget your hat and sunscreen!



The author and the illustrator decided to show 'eyes' on Sea Biscuit and the shellfish. Why do you think they did this, and do you think it is a good idea? Do you have a favourite seashore creature of your own, one that isn't in this story?



Exploring rock pools needs a careful plan. What gear will you need to take? How will you collect and record your data? Think about how you will protect the life in the pools and along the shore as you explore. Remember, this is their home.



Create a World Plan to make the sea and the seashore a safer place for animals and sea plants. What can you do at home to help the seashore environment? How could you study rocky shore creatures without making a trip to the shore?



Check out the Tidal Tidbits from the book that have been added at the end of this resource. Make a list of your favourite facts. How can reading the tidbits help us make better environmental choices? The crab in our story is a Purple Rock Crab, not a King Crab. Why did the author use the Purple Rock Crab instead of the King Crab? What is a moat? How have the author and the illustrator cleverly designed the moat?



FULL S-T-E-A-M AHEAD!



- **Would you like to be a marine biologist?** Talk to your friends about what a marine biologist might do. Make a set of questions you would like to ask a marine biologist. Do some research at your library or online (even better if you know a marine biologist!) to find your answers. You might find some answers at this link: <https://blog.doc.govt.nz/2010/03/31/the-life-and-times-of-a-marine-biologist/>
- **Use your technology and explore a rocky shore using a marine square or circle**

Your need: phone, camera, computer, a square

- Make a square frame by tying 4 x 1 m lengths of bamboo canes together, or a 4 m length of rope or twine with three knots tied at 1 m intervals that can be arranged into a square shape on the shore OR take a hoop and explore your shore life in a circle.
- Work in small groups. Study all the life within your shape. Voice-record your observations. Take photos. Print your photo images and make a classroom display. Add study notes to your display. You can find great instructions here: [Rocky shore survey](#)

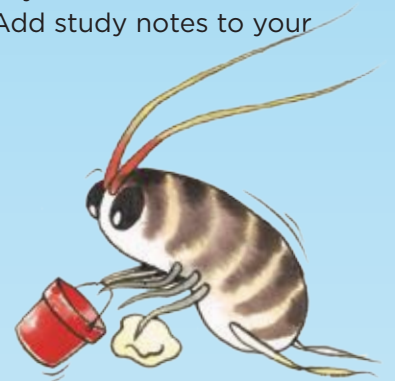
- **Design and make your own grand sandcastle.**

Do this at the shore, in the sandpit, or with modelling dough.

- **Check out these colouring pages**

[The Rocky Shore - who eats who? Colouring Book](#)

[The Rocky Shore - Seashore Activities](#) is full of interesting activities, including instructions on how to press seaweed.



- **Create a word search puzzle**

1. Fold a piece of paper to make a square.
2. Measure your square and divide it into evenly spaced *horizontal* lines.
3. Make evenly spaced *vertical* lines to make a square grid with the spaces all of equal size.
4. Work with a friend or in a small group. Write the names of seashore plants and creatures on the grid, using one letter per square. The words can go up and down, sideways, or diagonally. They can cross over each other using a letter from the word underneath.



- **Extras for experts: Google work**

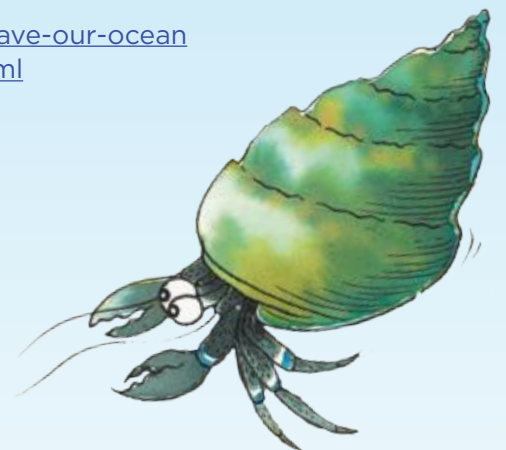
<https://www.noaa.gov/stories/these-5-technologies-are-helping-save-our-ocean>

<https://work.chron.com/machines-marine-biologists-use-10722.html>

Study Jacques-Yves Cousteau, co-inventor of the aqua-lung.

And something else to think about ... **Marine Engineering**

<https://www.funkidslive.com/learn/techno-mum/everything-you-need-to-know-about-marine-engineers/>



TE REO MĀORI

Look at the tidal tidbits page at the end of this resource. Practise saying the Māori names using the guide on the next page. Create a word search using only the Māori names for the creatures and challenge your classmates to find the words.

PRONOUNCING TE REO MĀORI

Vowels

- A** Say as the a in **aloud**
E Say as the e in **egg**
I Say as the e in **eat**
O Say as the oo in **door**
U Say as the oo in **zoo**

Long vowels are shown with a macron above them:

ā ē ī ō ū.

The macrons means that the sound of that vowel should last longer as it is said. If several vowels appear together, for example 'whaea', try to sound every vowel in turn.

Consonants

H K M N P W Pronounce as in English.

R The true Māori pronunciation of 'r' is somewhere between the English **r**, **d** and **i**. For example, *kōrero* could be written as 'kōdedo' or 'kōlelo' using the English alphabet.

T Pronunciation depends on the vowel that follows the 't'. In 'ta', 'te' and 'to' it is pronounced dully as cross between the English t and d. The t in 'ti' and 'tu' is sharper and is not softened by a 'd' sound.

Ng Say as the ng in **sing**.

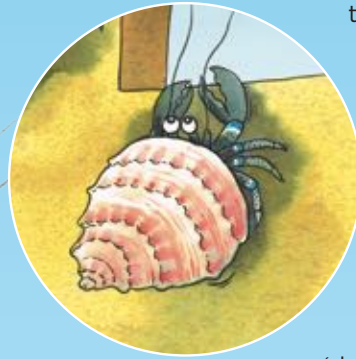
Wh Say as the f in **family**.

WRITE TO US

Dawn and Nikki would love to hear from you. Send photos or a rocky shore story of your own. They would love to see your illustrations, too! You can send your letters to them at 783 West Coast Road, Oratia, Auckland 0604.



Tidal Tidbits



Hermit crab/kāunga make their homes in old shells. As a hermit crab grows it needs to find a larger 'mobile home' to live in. Once inside a new shell the crab uses its pincers to cover the entrance to the shell. Usually the right pincer is the larger of the two and makes a very good 'door' to keep the crab safe.

Sandhoppers/mōwhīwhiti

Look in the seaweed on a sandy beach and you'll be likely to see sandhoppers. They jump out when their seaweed home is disturbed. Sometimes sandhoppers are called sand fleas — they are not fleas and they do not bite people! Sandhoppers help to clean up the beaches by breaking down organic material.



Purple rock crab/pāpaka is strong and fast and can be seen running over rocks, or hiding in cracks or under boulders. Pāpaka feed on green algae, snail eggs and small crustaceans. Sometimes they eat barnacles and limpets.



Sea biscuit/kina papa is also called sand dollar, snapper biscuit and cake urchin. Sea biscuits often gather on the ocean floor where it is soft and sandy. Little spines, top and bottom, allow them to burrow through sediment on the sea floor as they look for food, or to hide from danger.

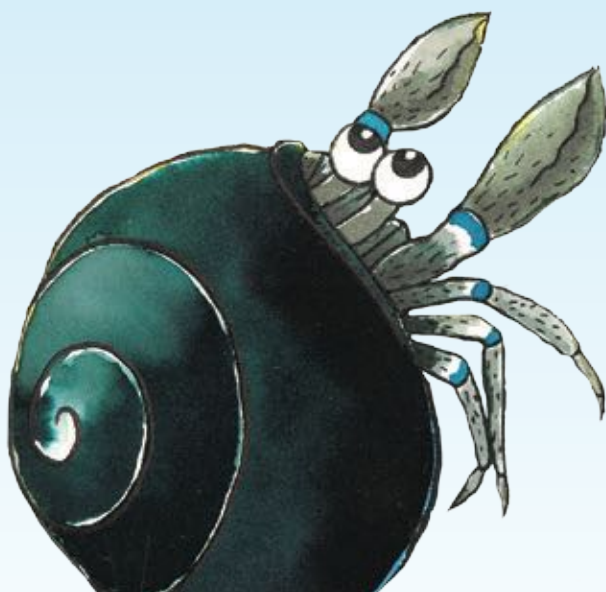


Snapper/tāmure are silvery-pink-to-golden fish with numerous bright blue spots over their upper sides. They can be found in a variety of places, from deep waters to shallow inshore rocky areas where they like to hide in kelp. Snapper can live up to 60 years!



Starfish/pātangaroa

In the New Zealand region, there are at least 184 species of starfish. In this story we have cushion star, found almost everywhere in New Zealand. Cushion stars come in a wide range of colours, usually blueish-green but sometimes black, orange or red. **Tangaroa wae whitu** is our giant seven-armed starfish. It can grow up to 75 cm in diameter.





Shrimp/manā is seen darting about in rock pools. It has a semi-transparent body marked with lines of red and green, and spots of orange and black on its leg joints and at the base of its tail. Mana are scavengers and you can see their food travel through their bodies.



Kina is a sea urchin. It looks like a curled-up hedgehog, with long and short moving spines and tube feet coming out from its oval ball-shaped shell. Kina move about using the action of their long spines and their tube feet. They can live for 20 years or more. The roe (eggs) found inside kina are a food for Māori.



Rock lobster/kōura is the name for both fresh water crayfish and marine lobsters. Aotearoa has two common types of marine rock lobster: the red spiny rock lobster and the larger green lobster. Both types are found in coastal areas. Female rock lobsters carry thousands of fertilised eggs under their tails for up to 150 days. A rock lobster can live for over 30 years.



New Zealand sprat/kupae are a small herring-like fish, usually measuring between 8 and 12 cm long. Sprats are a schooling fish that live offshore, in open waters. In vast schools of sprats there may be up to a million fish!



Twister fish/kokopara is a common triplefin fish, very small and very quick in the way it moves. Twister fish grow to between five and ten cm, and young ones may be as small as 25 mm. Triplefin fish eat everything whole. Triplefins 'sit down' on the floor of the rockpool, propped up by their fins. They move in short hops until they are threatened or see some prey to chase.



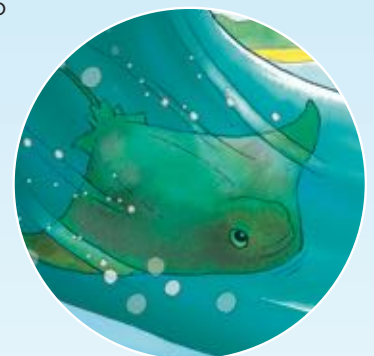
Kahawai is a strong, powerful fish. Kahawai can live up to 26 years and grow up to 65 cm long. They live in schools and some schools have up to a million fish. Kahawai eat mostly small fish that they herd to the water's surface, creating a bubble-up of water. Sea birds circle the 'boil up' for their share of the small fish.



Limpets/ngākihi have a powerful foot that clamps their cap-shaped shell to rocks. They can withstand storm waves and hours of sun exposure. They move about at night or when the tide is in to feed on small seaweed and algae that grows on rocks.



Stingray/whai can grow to over two metres across and four metres from the head to the tip of the tail. Stingrays give birth to live pups. Stingrays have no bones in their body. Their skeleton is made up of flexible cartilage, like the cartilage we have for our ears and nose.



References

www.naturalist.nz • www.teara.govt.nz •
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