

TOGETHER FOR OUR MOANA - WE'RE SHAPING OUR FUTURE

RIMURIMU / SEAWEED

NZ CURRICULUM LINKS:

Learning areas:	Achievement objectives:
<p>Te Ao Māori Te reo (language), tikanga (customs and traditional values)</p>	<p>By learning te reo Māori, students can participate with understanding and confidence in situations where te reo and tikanga Māori predominate and to integrate language and cultural understandings into their lives ; strengthen Aotearoa New Zealand's identity in the world.</p>
<p>Aotearoa NZ Histories <i>Turangawaewae me te kaitiakitanga - Place and environment</i></p>	<p>Understand how places influence people and people influence places. Understand how people view and use places differently.</p>
<p>English</p>	<p>Listening, Reading, Viewing</p>
<p>Science</p>	<p>Living world - Develop an understanding of the diversity of life. The emphasis is on the biology of New Zealand, including the sustainability of New Zealand's unique fauna and flora and distinctive ecosystems.</p>

Overview

Explore how important seaweed is in the ocean ecosystem, and also think about the importance of seaweed for people.

Learning intention

Tamariki are learning to understand the role seaweed plays in an ecosystem.

LEARNING SEQUENCE

Based on the Inquiry model



Inspire

Provoke curiosity
and wonder



Explore/Educate

Gather information
Use / apply
learning



Activate

Reflect and act

Success criteria

Students can explain one or more reasons why seaweed / rimurimu is important.

Background information for teachers:

New Zealand has 850 native seaweeds, a third of which are endemic – they are not found anywhere else.

Why is seaweed important?

Seaweed is food for many creatures which live in the sea. Seaweed beds also provide shelter and a safe place for fish and shellfish to breed.

What are the parts of seaweed?

Seaweeds have a holdfast that anchors them to a surface, and a blade which may be divided into fronds. Large seaweeds can also have a stalk or stipe, which joins the blade to the holdfast.

Types of seaweed

There are three groups of seaweed, based on colour:

Green seaweeds are found between high- and low-water marks, where there is plenty of sunlight. A common species on New Zealand coasts is the edible sea lettuce.

Brown seaweeds are medium to giant-sized – kelps are the largest. One familiar type is Neptune's necklace, which has water-filled beads to stop it drying out.

Red seaweeds grow in water up to 25 metres deep. There are 550 species in New Zealand.

Kelp

Some Kelp can form underwater forests over 20 metres tall, providing food and a place to live for many sea animals. The forests can be of common kelp, bull kelp or bladder kelp, which is New Zealand's largest seaweed. Asian kelp arrived in the country's waters in the 1980s, but it is a threat to native habitats.

Traditional uses

Māori used some green and red seaweeds, such as karengo, for cooking. Bull kelp was made into pōha (kelp storage bags) by splitting open the blades and blowing into them. They were used to hold muttonbirds.

Modern uses

Agar, from some red seaweeds, is a jelly used to grow bacteria and to preserve food. Two other jelly-forming thickeners come from seaweeds and are used in cosmetics and food. Karengo has been harvested since the 1980s and is processed into a food seasoning. Tiny mussels are collected from washed-up seaweed and sent to mussel farms, where they will grow and be harvested for eating.

[Information from Te Ara](#)

LESSON PLAN

Rimurimu / Seaweed

Teachers are encouraged to choose and adjust activities to suit the learning needs and interests of their tamariki.

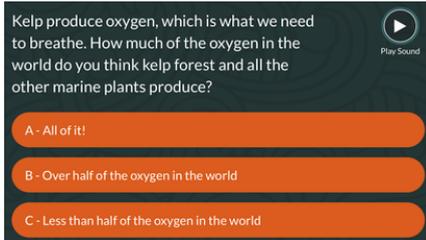


Inspire



Allow approximately 10 mins

- **Quiz** - Why is seaweed important to us? List ideas, then take the Young Ocean Explorers quiz - [how much oxygen do sea plants produce](#)



- **Watch** the very first Young Ocean Explorers video - [Riley confronts a big fear](#). Talk about tamariki's experience with seaweed.



Video is 3:10 minutes



Educate

Allow approximately 30 mins

- **Watch** - [Kelp Help! From Young Ocean Explorers](#). Notice the names for different parts of the seaweed.

Video is 3:23 minutes



- **Draw** some seaweed (teachers - you may like to collect some seaweed from a beach before this lesson for children to look at, or they could look at pictures). Label the blades, stipe and holdfast.

https://www.otago.ac.nz/_data/assets/pdf_file/0009/301113/Northern-NZ-Rocky-Shore-Guide.pdf



- **Te ao Māori** - Rimurapa is kelp that was important for early Māori. Learn with Tiki. [YOE quiz video - Rimurapa](#). Discuss why rimurapa was important for early Māori.

Videos are 1:11 mins all together



rimu = seaweed
rapa = blade

- **Watch** - [invasive species video](#) and [what can we do video](#) if we see any of these? Some seaweed from other countries can take over space where our native seaweed grows, smothering it.



Video is 1:50 minutes



Video is 1:09 minutes



Activate

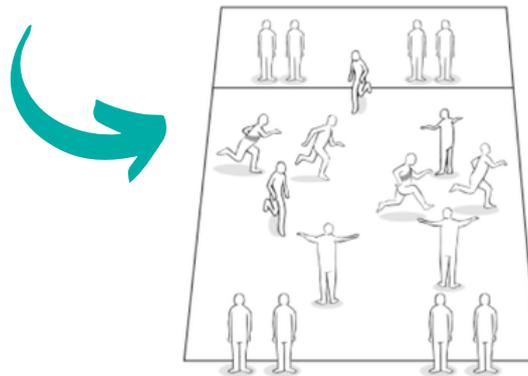
 *Timing will vary*

DAILY ACTION



MAKE A DIFFERENCE for our moana – pick up at least 1 piece of kirihou / plastic each day. Log how many pieces your class picks up on the [Young Ocean Explorers website](#).

Play – While you're outside pretend to be a kelp forest. Play a quick game of seaweed. [Seaweed game instructions](#).



Discuss – Add to your list of why seaweed is important. Have tamariki learnt anything new?

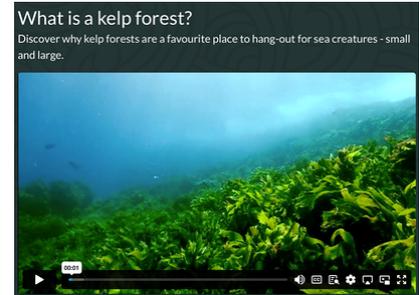
EXTRA LEARNING IDEAS AND RESOURCES

Watch

[What is a kelp forest? YOE video.](#)

Think about what makes kelp forests important.

Video is 1:24 minutes



Research

- [A guide to brown seaweeds of NZ - NIWA](#)
- [Te Ara - seaweed information](#) Tamariki could read about traditional uses for seaweed and then look at ideas for the future.

Invasive species.

- Caulerpa is an invasive seaweed that has travelled on currents and ship hulls from overseas and has recently been detected in NZ waters. **Find out more about it.** What does invasive mean? What makes a species invasive? What does Caulerpa look like? What do we do if we find it? [Read about how iwi from the Waiheke rohe/area are dealing with it. Ngati Manuhiri iwi from the Kawau rohe/area are also acting to stop the spread.](#)

Reminder!

Send in your letters before the 31st of March to: PO Box 228, Warkworth 0941. Then we can take them to Parliament!! We want our collective voices heard about why we need to protect our moana and why it is so important to us! More info in the intro lesson plan.

