

Te Pūtake

Lesson summary

Te Pūtake is all about finding purpose! This topic focuses on exploring the purpose behind the design features of a Waka Hourua. Looking into how Kaitiaki elements or Atua influences design and supports practical outcomes to do with waka.

Tikanga & Kawa are a set of customs that guide indigenous cultures to live harmoniously in the laws of nature. This topic encourages critical thinking about carbon emissions, prompting students to be sustainable thinkers and reflect on how the environment's natural laws can assist us in being indigenous innovators.

In this topic students will be encouraged to create and design their own Waka to gain a deeper understanding of Waka Hourua and its relationship to the natural world. (Atua Kaitiaki)

Core Objective:

Build the fundamental features of a Waka Hourua to discover its relationship to the natural world.

Specific Learning Intentions

- Understand and create key design elements to explore parts of the Waka Hourua.
- Understand, recognise & explore how wind & water influences parts of the material and design elements to achieve technological outcome
- Describe & identify how Tane Mahuta, Tawhirimatea & Tangaroa influence the design elements of a waka

Lesson sections and expected times:

- Warm up Quizlet (5 minutes)
- Introduction Activity -Te Pūtake (5 minute)
- Waka - (30 minutes)
- Te Pūtake (40-60+ minutes)

Total: ~ 1.5hrs

Curriculum Links: *Level 1 - 2*

Major links:

Science:

Understanding about science

- *Appreciate that scientists ask questions about our world that lead to investigations and that open-mindedness is important because there may be more than one explanation. (1 - 2)*

Investigating in science

- *Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models. (1 - 2)*

Earth systems

- *Explore and describe natural features and resources. (1 - 2)*

Technology:

Planning for practice

- *Develop a plan that identifies the key stages and the resources required to complete an outcome. (2)*

Technological products

- *Understand the relationship between the materials used and their performance properties in technological products. (3)*

Technological products

- *Understand that there is a relationship between a material used and its performance properties in a technological product. (2)*

Resources

Dictionary [Maori to English](#)

Sticks, stones, twine, paper, cardboard, bucket & water, tape & glue

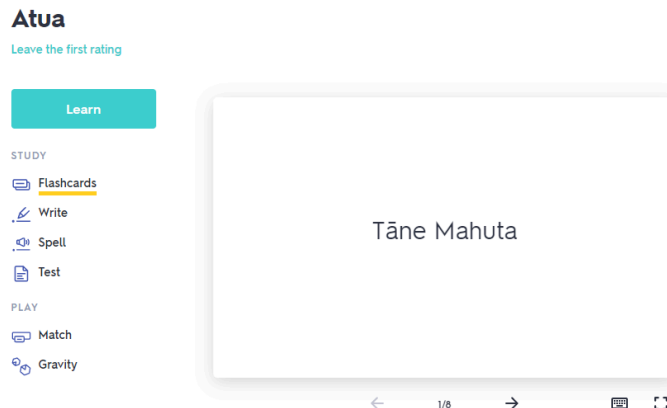
[Science learning hub](#)

[Download the Waka Teacher resource Kit](#)

Activities

Warm up game (5 Minutes)

Atua flash cards: [Link](#)



Introduction Activity (5 minutes)

Begin this lesson by introducing the activity 'Waka Hourua'. Describe the the topic name in relation to the activity... "to seek 'purpose'-pūtake and meaning about Waka Hourua"

Note: You may want to then specify your learning intention for this lesson!

Brainstorm ideas... Gather children's knowledge about what they know about traditional voyaging vessels.

Waka (30 minutes)

Parts of the Waka:

[Sails - Raa](#)

[Hoe / Hull - Steering paddle/ Hao](#)

[Lashing](#)

[Sails](#)



TTWH - Haunui Waka - Ngā Rā (The Sails)



Haunui Waka part one

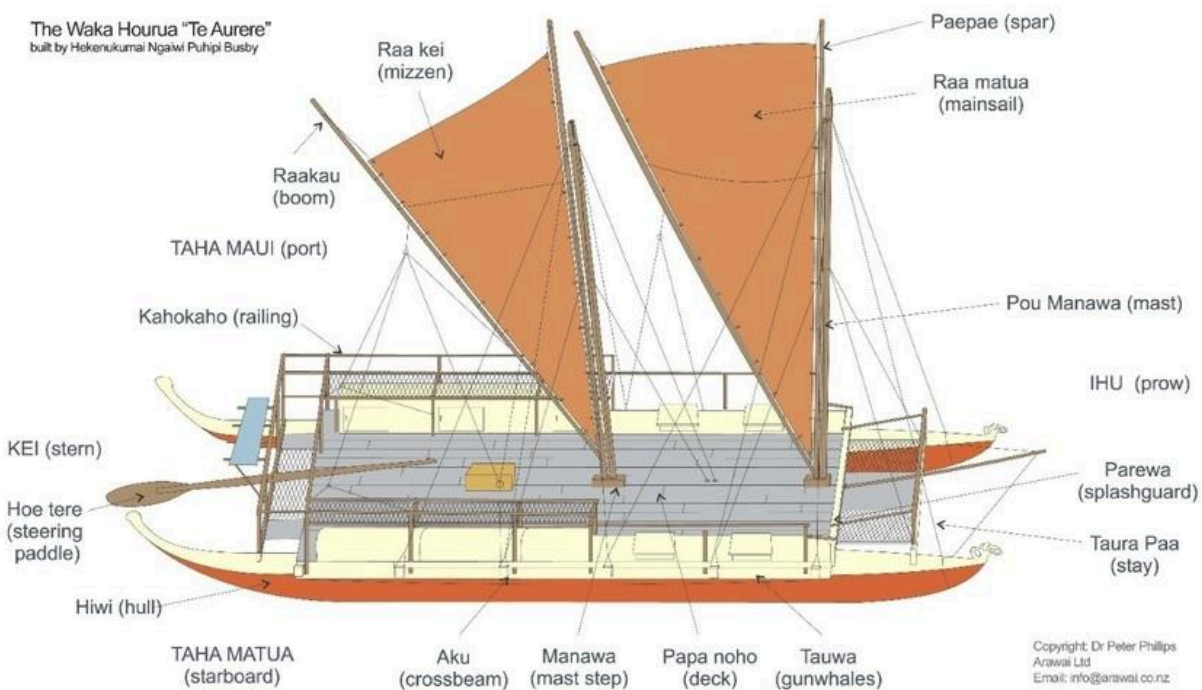
Learning about the parts of the canoe

If you have the confidence, read through each part of the Waka and discuss what 'Pūtake - purpose' each one has?

Focus on the key features being;

- **Sails** (Powered by air pressure and wind)
- **Hulls** 2x (The main part of the waka, used tō float through water. Sleeping & storing things)
- **Steering paddle** (Steering the canoe in certain directions)
- **Beams & platform** (Is the decking structure that lies on the 'Āku' beams which connects the two hulls together)

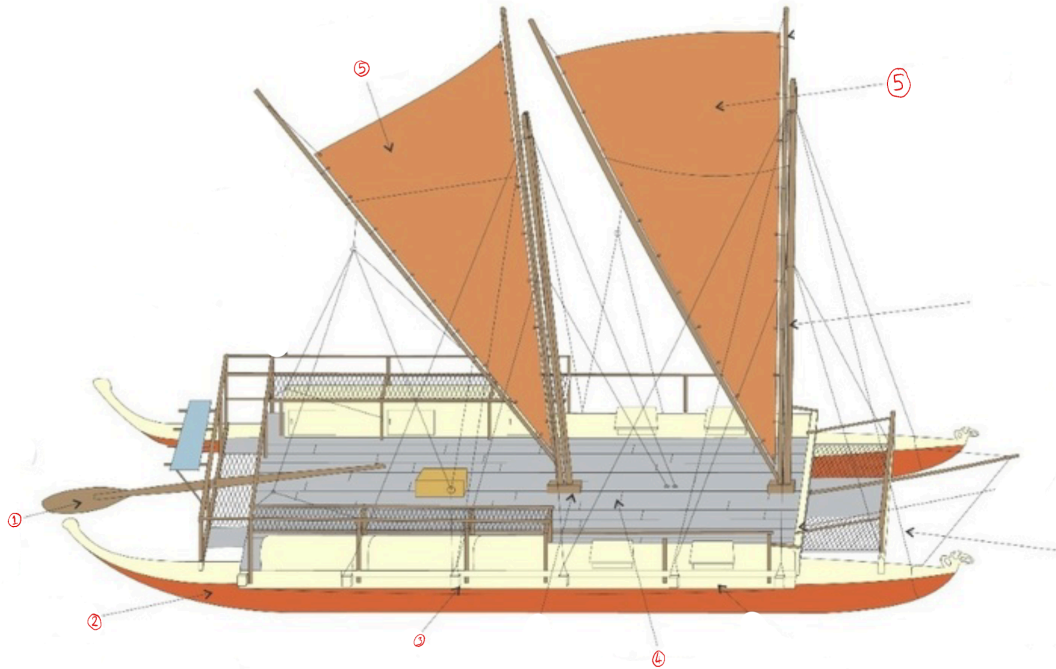
Those who are confident, challenge them to continue learning the specific names around the Waka.



Weblink here: <https://www.sciencelearn.org.nz/images/701-te-aurere>

Follow up activity:

- Name each part of the Waka
- Which part is powered by the wind? (Tawhirimatea)
- How is it powered by the water? (Tangaroa) i.e currents, swells etc
- Where do crew members sleep?



Name each section

Printable worksheet [here](#)

Te Pūtake (40-60+ minutes):

Lesson Summary: In this activity students will explore the how and why a waka is able to 'float & sail' .

Activity Start!

Prepare resources for students to explore experimenting.

Resources:

- Sticks
- Stones
- Paper & cardboard
- Bucket (Water)
- Glue, string, tape

Write the key question on your whiteboard:

Explore what natural resources are able to float & sail?

(A sail acts like a wing from a plane. If something floats lightly in the air it is likely the material can be used as a sail to generate wind power. I.e paper plane)

Does it float?
Does it sail?

Group activity:

Take your students to a stream or a pond (anywhere where you can safely experiment with water). If this is not possible use a bucket of water and keep this outside your classroom.

1. Ask your students to collect natural resources outside
2. Collate the resources and list each one on a paper (Do this as a class)
3. Now list each Atua Kaitiaki they think the item descends from? (*This is important as it links to the customary practices on a Waka Hourua*)

Te Pūtake: Now ask your students to test & experiment using one item at a time: try sitting them on top of the water or drop them into the air.

After each one complete the following chart: [Chart](#)

Example:

Atua Kaitiaki	Resource	Does it float on water?	Does it Sail? Does it drop slowly in the air?
Tane Mahuta Papatuanuku Tane Mahuta	Sticks Stone Paper	Yes No Yes	No No Yes (Aeroplane)

Follow up activity:

Branch your students into groups of three

Discuss the connection between the natural resources and a Waka Hourua

“A waka Hourua is made up of 4 key components.”

- Sail
- Hull
- Platform
- Paddle

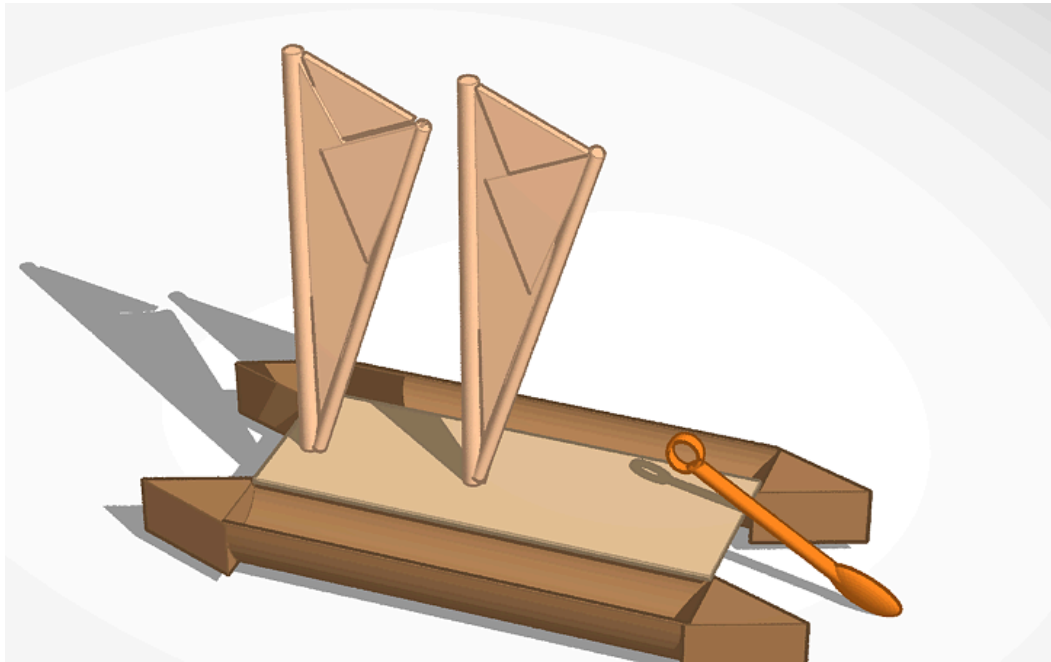
Design

Build a Waka Hourua!

Project the image below to assist students' ideas in making their own Waka Hourua using natural resources. Explain the 4 key components of the waka is what the aim is to achieve creating a waka.

There Waka must be able to do two things

- Float & sail



Output:

- Create and develop your own Waka Hourua using natural resources!

----- Lesson ends -----