



Unit 3: Te rere o te wā | Time traveller

Topic introduction for teachers

Key ideas in this topic

- The water in our district has changed dramatically since humans arrived.
- Today, what we grow, eat, do for work and for fun is all shaped by water.
- There are challenges around how we use water now and how we'll use it in the future.



Imagine a landscape shimmering with water ...

Our district looks nothing like it did before humans got here. Heretaunga was a floodplain 1000 years ago. Now, it's a bustling fruit-growing district with an ever-growing demand for drinking water and irrigation.

Nature's impact

The fertile Heretaunga plains were created millions of years ago. Earthquakes raised the land above sea-level, and silt and gravel flowed down from the ranges.

Our district's braided rivers wander naturally, flooding land in high rainfall. Yet we also suffer from serious droughts.

Our pristine aquifer has provided abundant fresh water for drinking and growing food.

Repeated earthquakes have lifted land, reshaped the aquifer and altered the course of our rivers.



Image: Michael Fowler Publishing Limited

Human settlement

- At first, Maori lived on hills, not on the swampy plains. And yet Heretaunga haukūnui, the life-giving waters that covered the area, were a rich and vital source of food and materials.
- Europeans arrived and began draining the flat land, and farming on their fertile soil. Hastings city was built on swampy land and needed protection from the wandering rivers.
- People began drilling and taking water from the aquifer in the late 1800s.
- Humans engineered the environment by building stop-banks, planting pasture and draining wetlands.
- As the population grew, housing, industry and food-growing expanded across the plains.



Image: John Cowpland/Alphapix Photography

What does the future hold?

- More people means more pressure on our rivers and streams, and on our aquifer. They're all vulnerable to pollution and over-use. Hastings District's population is predicted to rise 16% by 2048, to about 95,000 people.
- Climate change means more droughts and floods are on the horizon.
- But cutting-edge science is also helping us to understand our water so we can care for it better, and communities are learning to care for their local waterways.



Image: Hawke's Bay Today

Activities in this unit

- Change on the plains
- Find the Mākirikiri Stream
- Draw a water memory
- Take action together

Other ideas

Before your visit to Waiaroha

- Pose an 'I wonder ...' question, such as:
 1. 'What would the Heretaunga plains have looked like before Polynesians arrived?'
 2. 'What would have it been like living in a marae next to the river in the 1800s?'
 3. 'If you were a farmer last century, what could you have done to stop your land being flooded?'

Discuss. Ask the students to come up with their own 'I wonder'. List questions to answer and then research them.

As a class, read a book about the history of an area or how places change with time, such as *The House that Jack Built* by Gavin Bishop.

As a class, make a history ribbon from paper or cloth. Fill in local events that students know about, and leave spaces where the class is going to find out more.

Interview your grandparents or someone who has lived in your community for a long time. Listen to kuia or koroua talk about their experience as a child. Did they experience earthquakes or floods? How have the rivers and plains changed over their lifetime? Make class posters and illustrations of some of their memories.

Research how the local rivers got their names - Ngaruroro, Tūtaekurī and Tukituki.



'Nā tō rourou, nā taku rourou ka ora ai te iwi' – 'With your food basket and my food basket the people will thrive.'

Discuss how growing and harvesting food has changed over time. From harakeke and raupō to apples, corn and grapes. From fish and birds to sheep and cows. How did local hapū harvest eels in the past? How do we water crops today?

At Waiaroha

Outdoors, look at the information panel 'Change on the Plains'. Discuss what differences it shows between the past and now.

In the Whare Waiaroha discovery centre, explore the Time Traveller digital map.

After your visit to Waiaroha

What did you learn at Waiaroha? These activities can be used to extend children's knowledge, share information and take action.

- Make a play that tells the story of how the plains changed after people arrived in Heretaunga. Perform it for your school whānau.
- Fill in the gaps in the class's history ribbon (paper or cloth). What major events did they learn about at Waiaroha?
- Have a class debate using a topic such as 'Draining land is good for people.' Students could debate from the perspective of a farmer, banker, school teacher, kuia or koroua and an ecologist.
- Put together a technology display. Research about past and present using ways to catch fish, harvest flax, raupo, apples and grapes. Discuss how we get water from rivers and the aquifer. What technology is used to water fruit trees and crops?