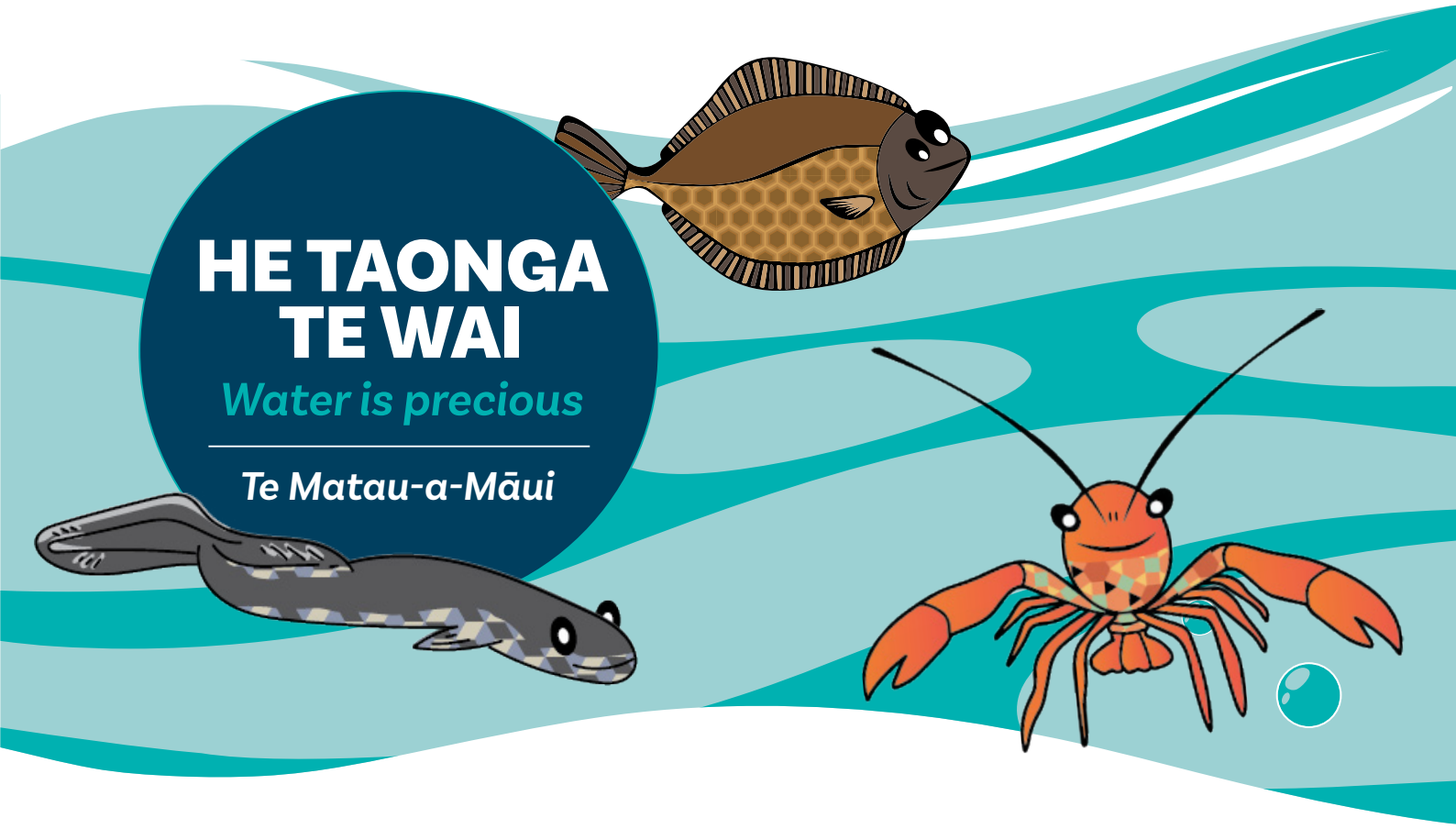

Lesson Plan One

Overview

This lesson plan introduces the context of water in Hawke's Bay through exploring local water features and stories. Reflect on prior knowledge and experiences with water and inspire a learning inquiry into aspects of water that students are curious about.

Teacher information

Activity components
Lesson plan 1 *(this document)*
Slideshow 1: Water in Te Matau-a-Māui | Hawke's Bay
PDF Poster 1: Water features of Hawke's Bay map – page 7
Student worksheet 1: Identifying water features of Hawke's Bay - page 8

Guiding questions
Why is water important?
What water features *(e.g., streams, rivers, lakes, wetlands, estuaries and aquifers)* are a part of this region?
What whānau stories or pūrākau describe water in the landscape and other perspectives?

NZ Curriculum links	*Level*	*Inquiry stages*
Social sciences and Aotearoa NZ histories	Years 5 -8	One - Immerse
Science	Level 3-4	Two - Pātai -Ask

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Understand

Through building knowledge about contexts and drawing on inquiry practices, I have a deeper understanding that:

- Māori history is the foundational and continuous history of Aotearoa New Zealand.
- Water is an important part of our lives and our connections to water are expressed through pūrākau, stories and experiences.
- Water is a vital environmental resource. It forms water features in the landscape.

Know

I have built my knowledge of stories about the people, events and changes in my local area, including knowledge of the stories iwi and hapū share about their history in the rohe.

I know:

- The stories of the landscape and water convey and shape culture and identity.
- Some major water features of Hawke's Bay - such as moana | oceans, roto | lakes, estuaries, and awa | rivers and streams.

Do

In my learning I can:

- Identify local water features and describe their significance to people.
- Describe people's connections to water in the region and the importance of water to people.
- Explore local stories and pūrākau.

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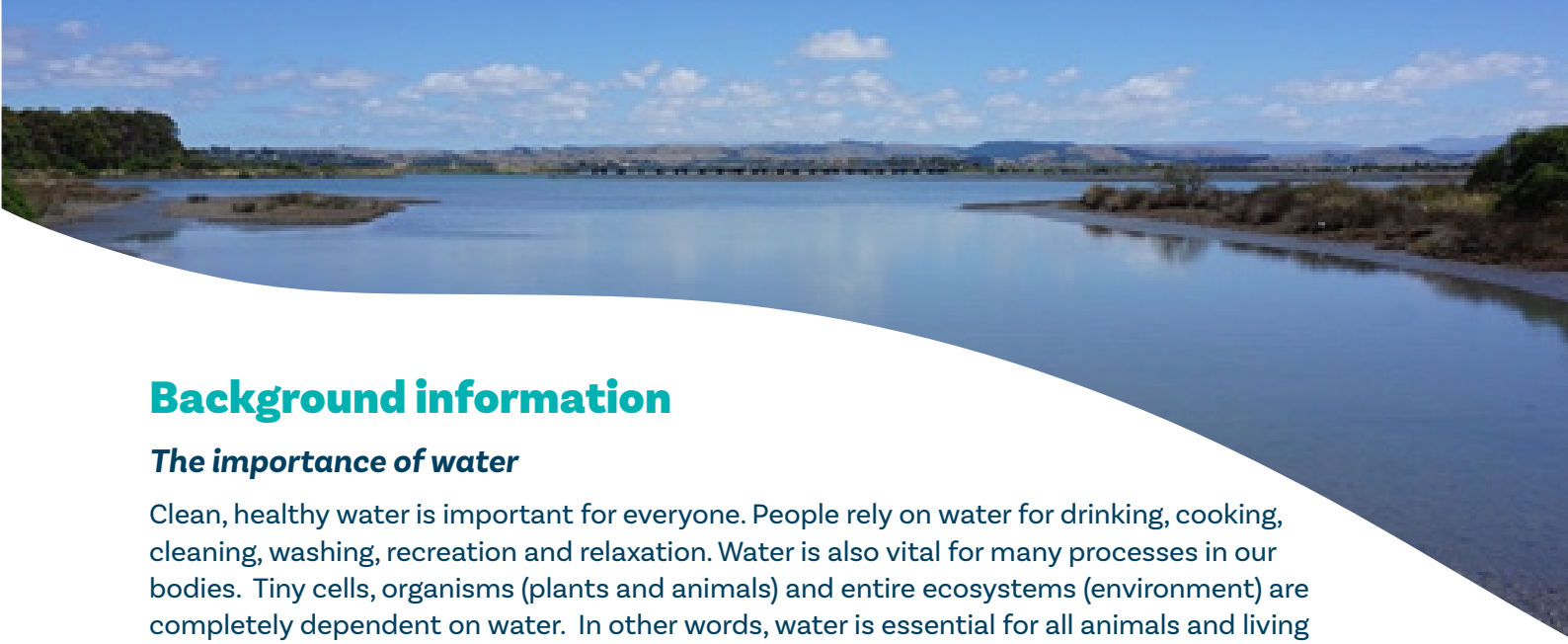

Background information

The importance of water

Clean, healthy water is important for everyone. People rely on water for drinking, cooking, cleaning, washing, recreation and relaxation. Water is also vital for many processes in our bodies. Tiny cells, organisms (plants and animals) and entire ecosystems (environment) are completely dependent on water. In other words, water is essential for all animals and living things to survive.

Water features of the region

Hawke's Bay, Te Matau-a-Māui, is home to a complex network of water features. Water is an integral part of the landscape: the ocean, rivers, streams, wetlands, estuaries, lakes and aquifers.

Water in the landscape has shaped the history and culture of Aotearoa New Zealand. The stories of the landscape and water convey and shape our culture and identities.

There may be kōrero tuku iho, kōrero ā whānau (stories handed down through generations and family stories) which have been passed on that could allow students to see different perspectives on water and express their connections to water and the landscape.

Māori express their connections to water and places by naming land and water features and through pūrākau: an ancient form of storytelling. Pūrākau create shared meaning and a sense of identity. The subject of water, features in many pūrākau from the area, including the pūrākau of Te Matau a Māui. Te Kauwae-a-Māui | Cape Kidnappers represents the curve of Māui's fish hook (Te Matau a Māui).

Mauri

In te ao Māori, mauri is the life force: an essence or energy which connects, binds and animates water, people, animals and the natural world. Everything, including water, has mauri. In water, mauri is demonstrated through healthy water and an abundance of living things such as plants and animals.

Ki Uta Ki Tai: From the mountains to the sea

The concept of Ki uta ki tai speaks of the interconnected nature of water and the landscape. Water flows from its source in mountain ranges, through groundwater and river networks and then discharges in the moana | sea. In Hawke's Bay the Tukituki River flows from the mountains to the sea: from the Ruahine Ranges, through the Ruataniwha Plains to the coast at Haumoana.

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Some examples of major Hawke's Bay water features

Rivers

Tūtaekurī River

Ngaruroro River

Te Awa o Mokotūāraro /Clive River

Wairoa River

Tukituki River

Waipawa River

Mohaka River

Porangahau River

Esk River

Aquifers

Heretaunga Haukūnui (Heretaunga Aquifer)

Ruataniwha Aquifer

Lakes

Te Roto o te Whakakī (Whakakī Lake)

Lake Whatumā

Lake Tutira

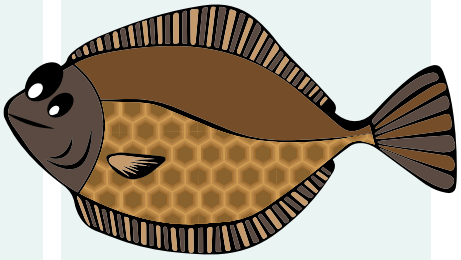
Lake Waikaremoana

Wetlands, lagoons and estuaries

Pekapeka Wetland

Te Whanganui-a-Orotū (Ahuriri Estuary)

Waitangi Estuary



Learning experience suggestions

The following are suggestions for teachers - please adjust the lesson plan to suit the students you work with.

Introducing water as a learning context

View Slideshow 1:
Water in Te Matau-a-Māui | Hawke's Bay to introduce water as a learning context.

After viewing the slideshow:

- Discuss how the slideshow prompted students to reflect on their prior knowledge and experiences with water.
- Discuss what students already know about water and which water bodies in the local area they are familiar with.

Water related pūrākau

Pūrākau and kōrero tuku iho, kōrero ā whānau (stories handed down over generations) help us to explain and understand natural features, history and events. Students can share these stories and discuss their understandings and experiences.

Students can then explore examples of pūrākau on the Ministry of Education website *here*.

Inquire into local pūrākau through your connections to hapu and iwi. Which local stories and legends speak of water? Share your local pūrākau with your class and school community.

Other relevant teaching and learning resources

Science Learning Hub article:
Water origins

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Water features of Hawke's Bay

Explain that water features are places where you can find a lot of water: they can be ponds, lakes, streams, rivers, wetlands, and estuaries.

Share prior knowledge and experiences of local water features.

View the map:
Water features of Hawke's Bay- page 6.

Discuss where students are on the map in relation to their school or home.

- Which water features are close?
- Which features are significant for students?

View Slideshow 1:
Water in Te Matau-a-Māui | Hawke's Bay, slides 13-18 The slideshow introduces the context of water and shows examples of the different water features. Inquire into other local water features, such as awa/rivers, repo/wetlands and roto/lakes. Take photos of local water features and find out more about the path of local rivers and streams.

Students could also bring in photos of water in Hawke's Bay from their travels to share their experiences. They can then complete Student worksheet 1: Identifying water features of Hawke's Bay and circle the places they have visited.

Reflection

Discuss how students and their families use and interact with water. Why is water important for people? Review some of the main water features (streams, rivers, lakes, wetlands, estuaries and aquifers) that are part of the local landscape and visit one if possible.

Extending learning

Use Google Earth, Google Maps or other mapping software to further explore water features in your local environment. Through the map, look at water features that are familiar to students. Students could then draw water related features in an artwork or write poetry about the water around them in nature.

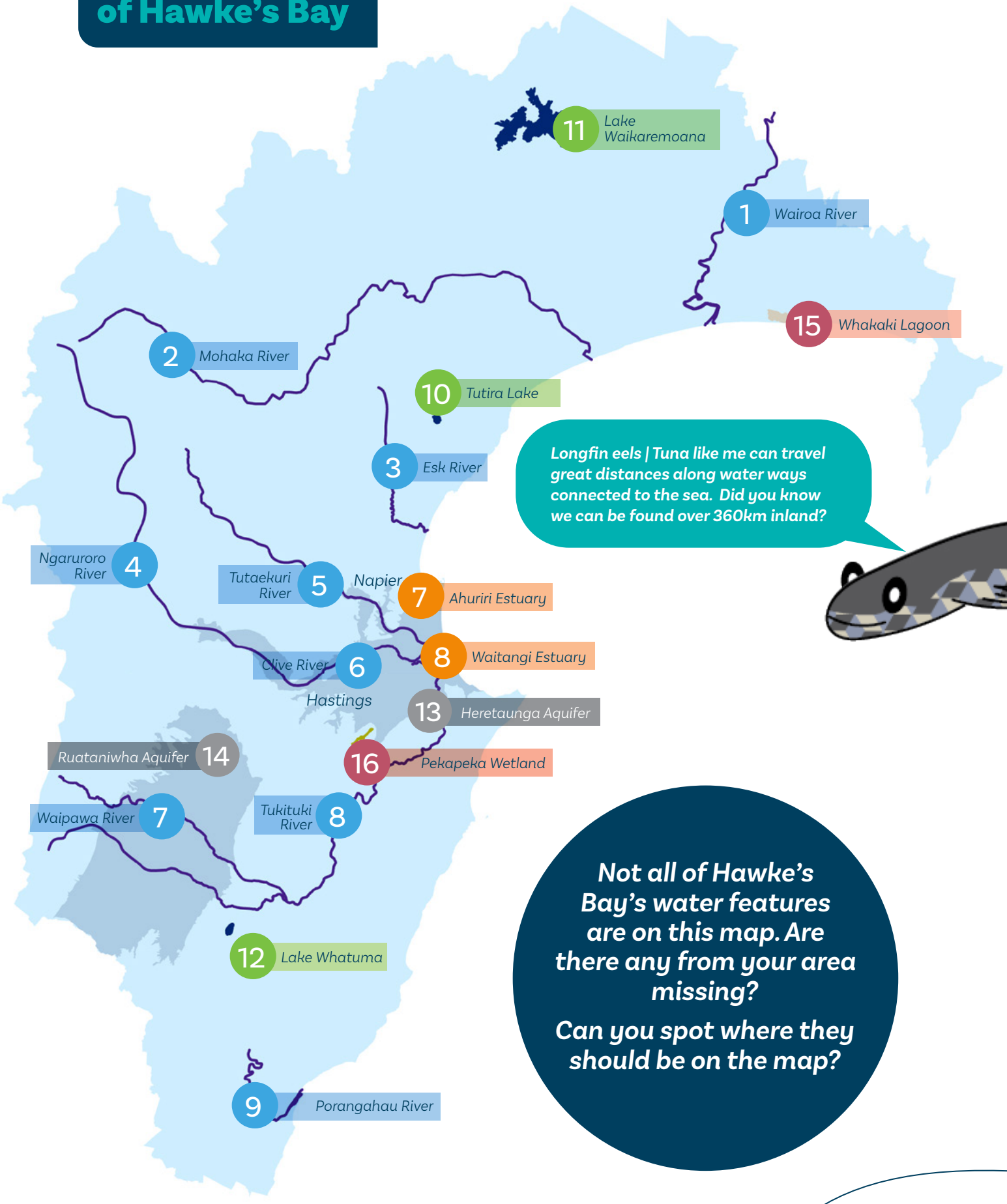
Starting an inquiry

Start a learning inquiry about water using the questions generated by students during the slideshow. Make an inquiry plan to discover how you could answer your questions.

Other resources

Water origins article by Science Learning Hub.

Water features of Hawke's Bay



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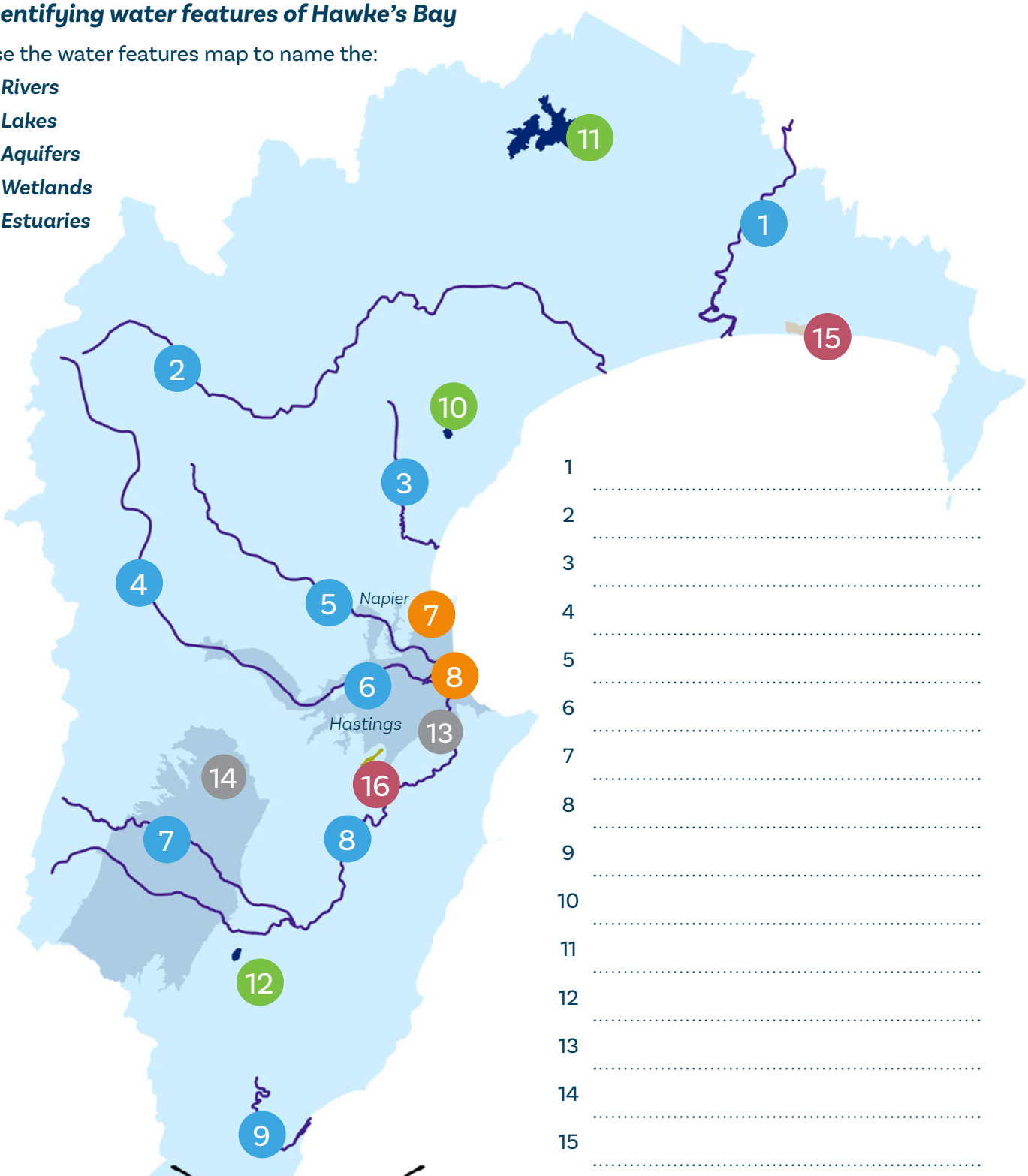
Student worksheet #1

Identifying water features of Hawke's Bay

Use the water features map to name the:

- ***Rivers***
- ***Lakes***
- ***Aquifers***
- ***Wetlands***
- ***Estuaries***



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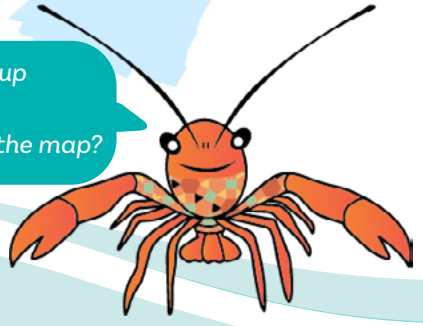

I've travelled over 100km up the Mohaka River.
Can you find my river on the map?

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