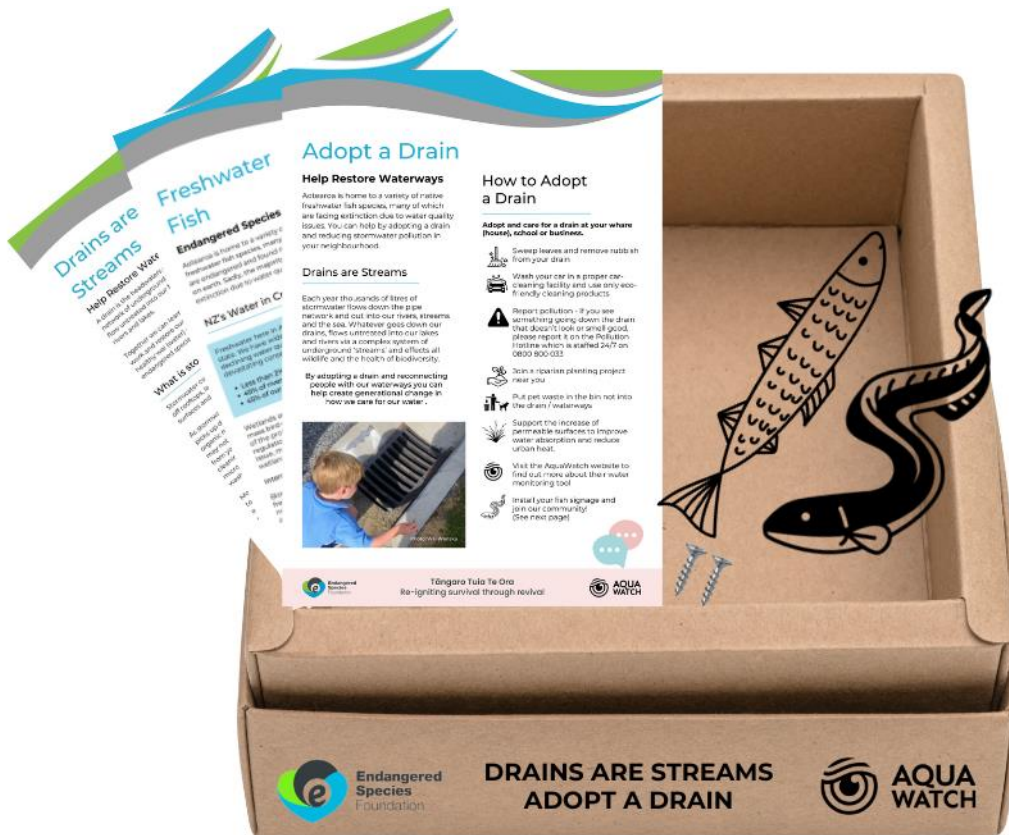![Endangered Species Foundation logo]

Tāngaro Tuia Te Ora

Drains are Streams
Education Modules

Through hands-on experiences, and community engagement, these education modules aim to enable an introductory learning experience for children in the "Drains are Streams" programme.

They are suggested outlines of educational sessions and activities that can be used and tailored to suit your individual rohe (area), hāpori (community) and tamariki (children).

www.endangeredspecies.org.nz/awhi-awa

Session 1 - Programme Introduction and Importance of Wai / Water – from a Māori world view

Objectives:
1. Introduce the concept of "Drains are Streams" and the importance of water in our lives.
2. Explore Māori perspectives on water and its significance to Aotearoa and your rohe (area).

Activities:
1. **Karakia and Whakatauki Introduction:**
   Introduce a relevant whakatauki (proverb) highlighting the importance of preserving water. For example, Waikato Tainui have whakatauki relating to wai (water) and tuna (longfin eels) on [this page](#).

2. **Storytelling and Mythology:**
   Share Māori myths and legends related to water, emphasizing the cultural importance attached to rivers and streams.

3. **Guest Speaker:**
   Invite a local kaumātua (elder) or a cultural expert to speak about the spiritual and cultural connection Māori people have with water.

4. **Your pepeha:**
   A pepeha is a traditional way of introducing oneself and expressing a connection to specific ancestral lands, waters, and other elements of the natural environment. It serves as a personal statement of identity, heritage, and belonging and typically includes details about a person's whakapapa (genealogy), maunga (mountain) and awa (river) affiliations, and connections to ngā tohu o nehe, important landmarks. Wai and waterways hold significant importance, symbolising life, sustenance, and spiritual connections. Many pepeha include references to rivers, lakes, or seas that hold cultural significance for the individual or their ancestors. These waterways often represent the lifeblood of the land and are integral to the community's history, providing a basis for cultural practices, stories, and traditions.

   The connection to native species in a pepeha reinforces the interdependence between the people and the natural world.

   Ngā pātai – Questions to consider:

   - Do you have a pepeha?
   - What are the important maunga (mountains), awa (rivers) and ngā tohu o nehe (important landmarks) in your rohe (area)?
   - Are there other parts of the natural environment that you connect with?
   - How does your pepeha and your connections to the natural world, highlight the role of waterways in sustaining native taonga species?

Resources:

Ngaa ika taketake o te awa o Waikato

- [Native-Fish-in-Waikato-River-A3-Poster-2014.pdf (landcare.org.nz)](https://www.landcare.org.nz)

Print out [this poster](https://www.landcare.org.nz) and put it on your wall. Ask tamariki to connect each fish with its Te Reo Māori name and its Pakeha name.
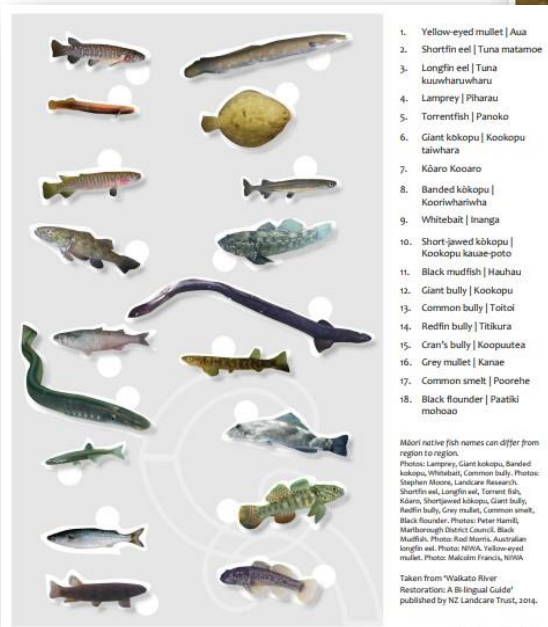
Place Based Learning

This resource supports teachers to develop learning opportunities that are place-based, inquiry-led, and focused on participation for change: [Pūtātara (education.govt.nz)](https://education.govt.nz)

[Ika - Freshwater Fish kete](https://www.endangeredspecies.org.nz):

- Te Reo and Māori freshwater fish factsheets
- Freshwater fish ID challenge – a fun game for tamariki to learn the te reo and English names of freshwater ika

Session 2 – Drains are Streams - Understanding Stormwater in our Community + explore our local storm water drains (field trip)

Objectives:

1. Develop an understanding of the local stormwater system and its impact on water quality.
2. Encourage direct observation and exploration of the community's stormwater drains.
3. Explore local waterways, such as rivers, ponds, or creeks, and discuss their ecological significance.

Activities:

1. Explain the concept of stormwater, its sources, and the potential pollutants it carries. Discuss the impact of stormwater on local waterways and ecosystems.

2. Hands-on Experiment:
   - Set up a simple experiment demonstrating how pollutants can enter stormwater drains and impact water quality.
   - Discuss how to keep our waterways healthy

3. Field Trip – Stormwater Drain Exploration - visit nearby stormwater drains and any wetland / streams in your area.

   Make notes and observe:

   - Plants
   - Any animals near the drains or waterways
   - Rubbish
   - How clear are your drains?

Resources:
1. [A4 flyer - Drains are Streams – Waterways](#)
2. [Empowered Students Share Stormwater Designs | by NZAEE](#)
   This resource supports schools and teachers to develop learning opportunities that are place-based, inquiry-led, and focused on participation for change.

Session 3 – Awhi Awa – Embrace a Stream

Objectives:

1. Awhi an awa - embrace a stream by engaging tamariki and the community to take responsibility for a waterway
2. Apply signage of native ika (kōaro) or tuna (longfin eel)
3. Educate and inspire tamariki and the community how to maintain the health of the drain and the waterways it connects

Activities:

1. Maintain health of your stream
   - Brainstorm ways to clean, restore and maintain the health of your waterway
   - Create schedule on calendar for regular visits to clean your waterway and make observations
   - Check out readings coming through on AquaWatch waka app.

2. Embrace a Stream
   - Apply signage of native ika or tuna (longfin eel).
   - Take photos and share story

Resources:
https://www.endangeredspecies.org.nz/kete-awhi-awa

- Awhi an Awa
- How to apply signage

How to Install Signage

Once you have bought an "Adopt a Stream Pack" from the Endangered Species Founda... tuna or kōanga ... are very si... ... ch

How to Apply Signage

A video with step-by-step instructions on how to apply endangered fish signage to your drain.

Session 4 – eDNA kits (optional for kura – primary and secondary schools)

OPTION 1: Freshwater eDNA Kits + Analysis

Freshwater eDNA packs **which includes a kit + analysis** can be ordered from Wilderlab here.

COST: NZ$290.00

This package includes a sampling kit and multi-species DNA metabarcoding analysis targeting fish, mammals, birds, invertebrates (now including kōura and kākahi), and many species of plants, algae fungi and bacteria. This analysis package is approved for NZFAP Plus accreditation.

Results for comprehensive eDNA samples taken from freshwater stream habitats now include the TICI stream health index. Please specify the 'river/stream' environment type when completing the sample submission form if you would like to receive TICI index values for your samples.