Whitebait Connection Canterbury

National Inanga Spawning Education Programme

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Whaka Inaka – A science programme incorporating community engagement

Whaka Inaka Pest Monitoring Module – getting 16 schools involved

Report card - results

Environment Investigators – all about inanga

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Whaka Inaka – A science programme incorporating community engagement

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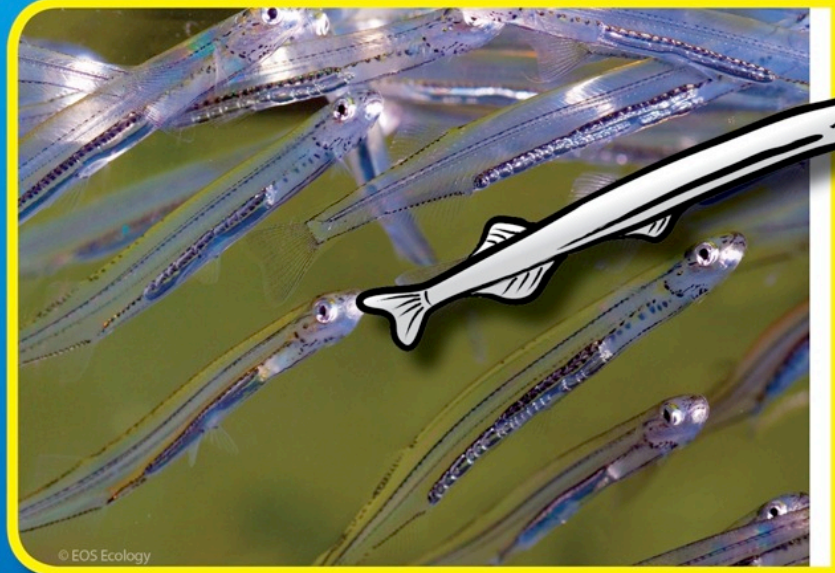
Report card - results

NISP resources

National Inanga Spawning Education Programme



Environment Investigators

Inanga Whitebait

Presented by:

whitebait Connection
Xstream about freshwater life

EOS ECOLOGY

The National Inanga Spawning Education Programme is supported by...

whitebait Connection
Xstream about freshwater life

Mountains to Sea Conservation Trust

CURIOUS MINDS
HE HIHIRI I TE MAHARA

Department of Conservation
Te Papa Atawbai

EOS ECOLOGY
AQUATIC SCIENCE & VISUAL COMMUNICATION

WE ♥ WHITEBAIT
WHAKA INAKA : CAUSING WHITEBAIT
MARINE ECOLOGY RESEARCH GROUP

Christchurch 'love zones'

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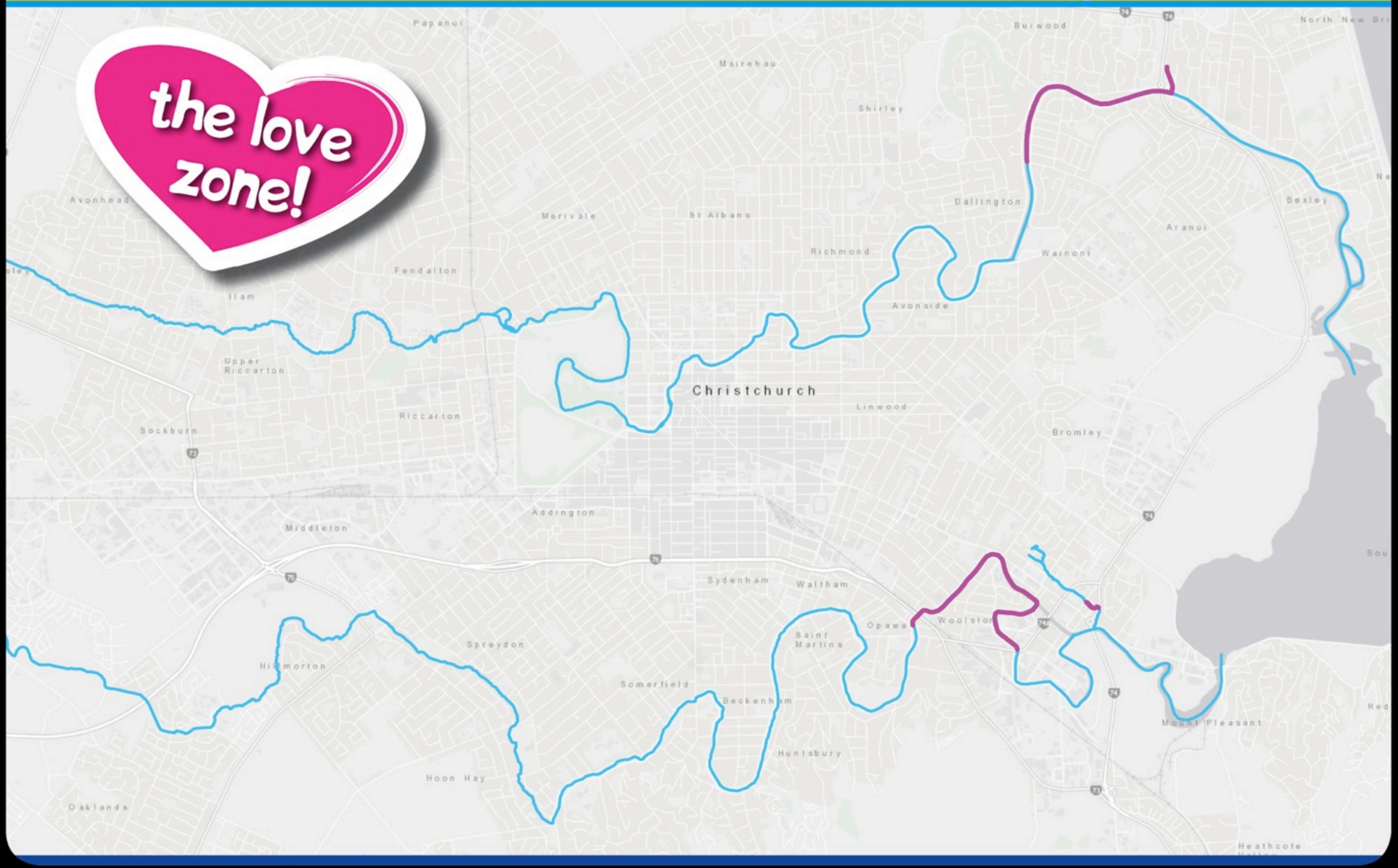

Spawning zones determined by Shand Orchrd / Resilient Shorelines & Whaka Inaka : Causing Whitebait

The Whitebait Connection Framework

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PHASE 1:
Teacher planning session

0.5 hour meeting with teachers and Whitebait Connection Co-ordinator to discuss the implementation of the whole programme.

PHASE 2:
Classroom introduction

1 hour classroom session with students where the Whitebait Connection Co-ordinator introduces the programmes concepts to the class.

PHASE 3:
The Inanga Experience

Depending on student ages classes get EITHER:

A) a class riverside field trip for up to 2 hours with Whitebait Connection Co-ordinator/s where students do their own spawning habitat assessment..*or,*

B) an in-class fish tank exhibit for a term where they will learn how to care for inanga and experience their development, includes up to 2 hours with Whitebait Connection Co-ordinator/s in-class to provide extra learning opportunities.

PHASE 4:
Develop an Action Plan

Whitebait Connection Co-ordinators will provide teachers with resources for them to guide a classroom session where students develop their own Action Plan to ensure a happier future for their local inanga population.

+

classroom resources

Phase 2: classroom intro

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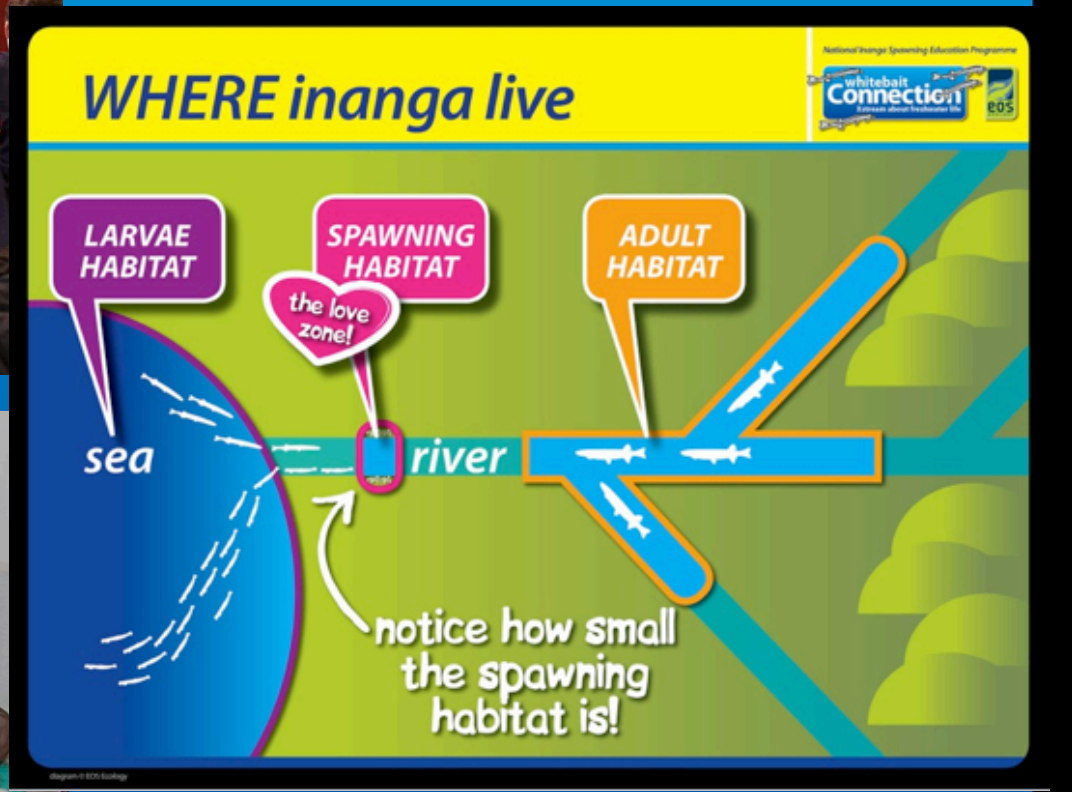

Classroom resources

National Inanga Spawning Education Programme

- *Compiled existing resources that relate to inanga (DOC, regional councils, WBC etc)*
- *Created some new resources*

Phase 3: inanga experience: assessing ‘the love zone’

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HABITAT ASSESSMENT continued... (tick ONE score per line item i.e., either 0, 5 or 10 points – then write the score in the righthand column)

Attributes:	Score: → 0 points = BAD no good for spawning, or if spawning occurs none of the eggs will survive	5 points = OK spawning will occur but improvement will increase spawning and egg survival	10 points = GOOD good spawning and egg survival	Your points: write each attributes points here ↓
bank material What is the DOMINANT material (inorganic) that forms the bank? Assess this over a 1m band that spans the high spring tide mark.	Continuous bare rocks, rip-rap, gravel, sand, mud, concrete or wood.	Mainly patches of earth/loam (soil) but with other material mixed in.	Continuous earth/loam (soil).	5
vegetation cover How much of the ground is covered by living vegetation (i.e., how much of the bare ground underneath is hidden by growing plants). Assess this over a 1m band that spans the high spring tide mark.	Less than 50%	Between 50–75% ✓	More than 75%	5
vegetation height Take the average or what is representative of the main/DOMINANT vegetation in the area. Ignore any smaller discrete clumps of larger vegetation. Assess this over a 1 m band that spans the high spring tide mark. Measure to where the growth starts to thin out.	less than 10 cm (plants are too short and won't be able to keep the ground moist) more than 50 cm (plants are likely too big to be any good as spawning habitat)	Between 10–20 cm ✓	Between 21–50 cm	5
vegetation type Select the DOMINANT vegetation type in that band. Assess this over a 1m band that spans the high spring tide mark.	Large woody plants (trees, gorse, blackberry, shrubs), yellow-flag iris, herbs.	Raupo, flax, Carex	Pasture grasses/rushes. The better types for spawning are tall fescue (Schedonorus phoenix), creeping bent (Agrostis stolonifera), and Edgar's rush (Juncus edgariae).	10
root mat thickness Use your hands to pull apart the vegetation until you can see the ground. How thick are the vegetation and roots at ground-level? Assess this over a 1m band that spans the high spring tide mark.	Vegetation is very easy to pull apart, no roots growing over the ground surface, low density of plant stems, can see bits of the ground even before you start pulling the plants.	When you pull apart the plant stems you can see areas of bare soil. (i.e., little coverage of root mats over the ground surface) ✓	Vegetation is hard to pull apart. Lots of roots/stems at ground level. (i.e., it is hard to get to the soil below the root mats)	5
ground moisture Check the ground at the base of the vegetation to see how damp it is. Assess this over a 1 m band that spans the high spring tide mark.	Very dry and dusty.	Dry in some places. ✓	Damp or wet.	5
cover for fish Adult fish congregate before spawning time and need lots of cover to protect them from natural predators. Look in the area between your 1m band and down into the water at the bank. Is there any vegetation growing there, or are any plants overhanging the banks, or large logs or boulders in the water that might provide cover for adult fish?		✓ No fish cover OR Only ONE of the following: – Tall plants that would be emergent at high tide. – Large plants closely over-hanging the water. – Submerged aquatic plants. – Logs or large boulders in the water.	At least two of the following: – Tall plants that would be emergent at high tide. – Large plants closely over-hanging the water. – Submerged aquatic plants. – Logs or large boulders in the water.	5
bank maintenance Are the banks mowed regularly so that the grass is always short at your spawning site?	Banks regularly mowed and grass kept short. ✓		Banks rarely mowed, or mowed more than 2 months before the inanga spawning season.	0
livestock protection **(for rural areas only)** Is your spawning site fenced to prevent livestock access?	No sign of any fence of any type; livestock can readily access the banks. There is sign of recent damage from livestock access.	There is a temporary fence (i.e., an electric wire on temporary stakes) installed, but no permanent one. OR there is a fence but it is damaged (meaning that livestock can get in), or there is an open gate that allows livestock access to the site.	There is a permanent fence that prevents livestock from accessing the site at all times. There is no sign of recent damage from livestock access.	✓

Tally up all your attribute points from both pages here → 65

- **A score of 90–120 indicates that the spawning habitat is in good condition for spawning!**
- **A score of 55–90 indicates that the spawning habitat is OK, but would be better with improvements.**
- **If you a 0 score for ANY of the attributes then spawning is UNLIKELY to occur – needs improvements.**

Phase 3: inanga experience: caring for inanga

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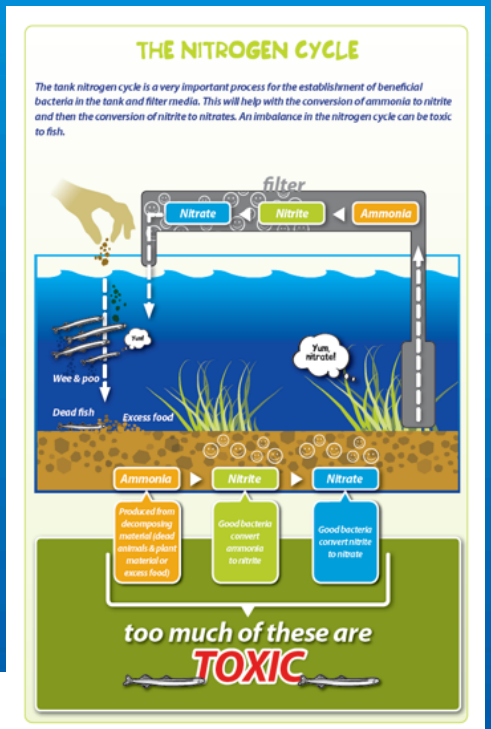
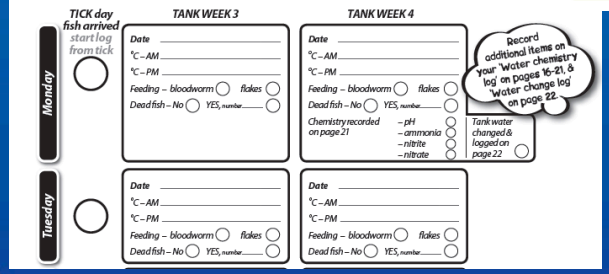


Fish & tank maintenance tasks/log



Phase 3: inanga experience: caring for inanga

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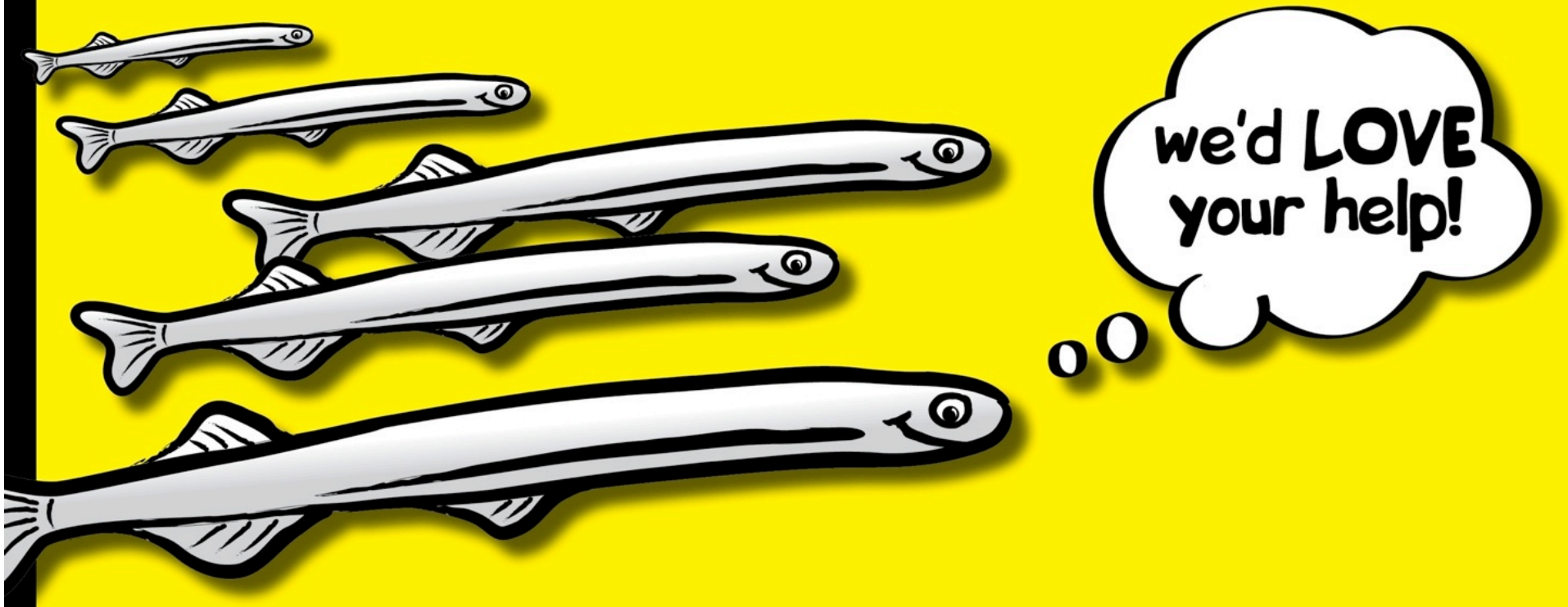
Fish release day

HOW we can help the inanga!



Action

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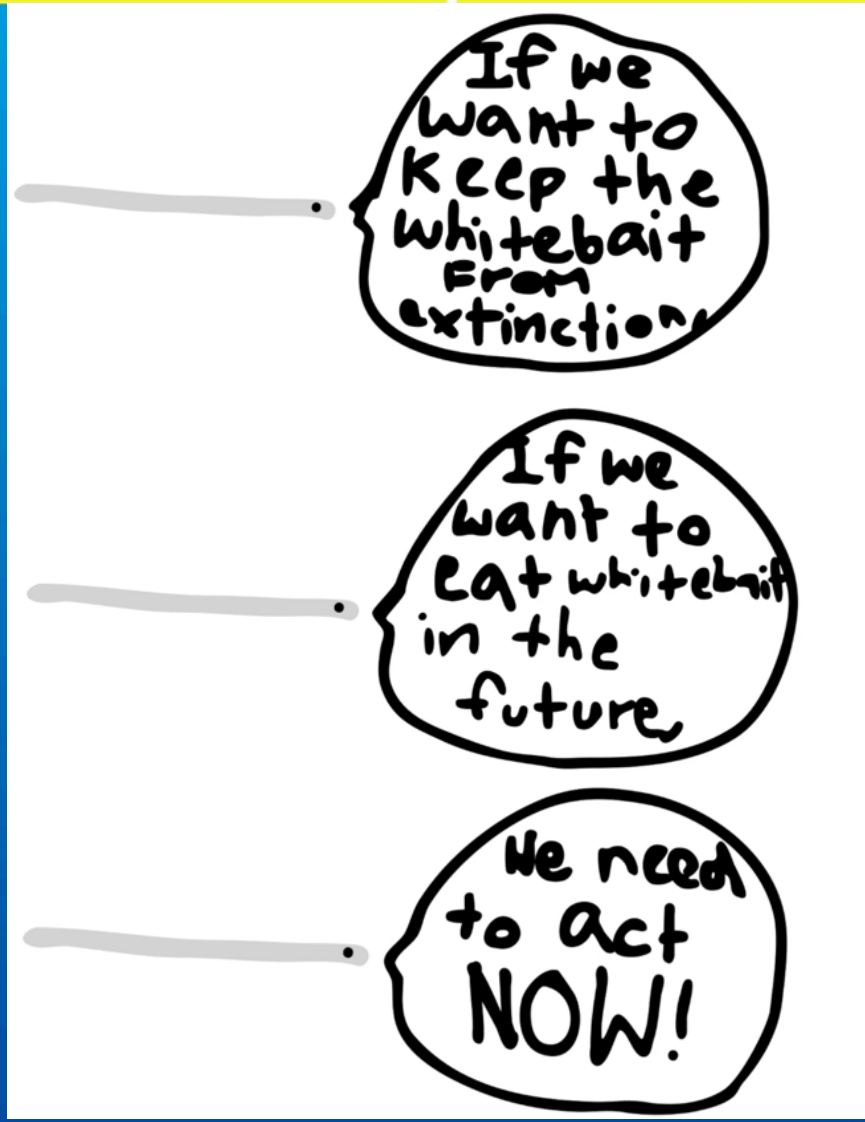
Video of Olive (Lyttelton Kidsfirst Kindy) explaining habitats to her friends.



An animation created by St Martin's School students

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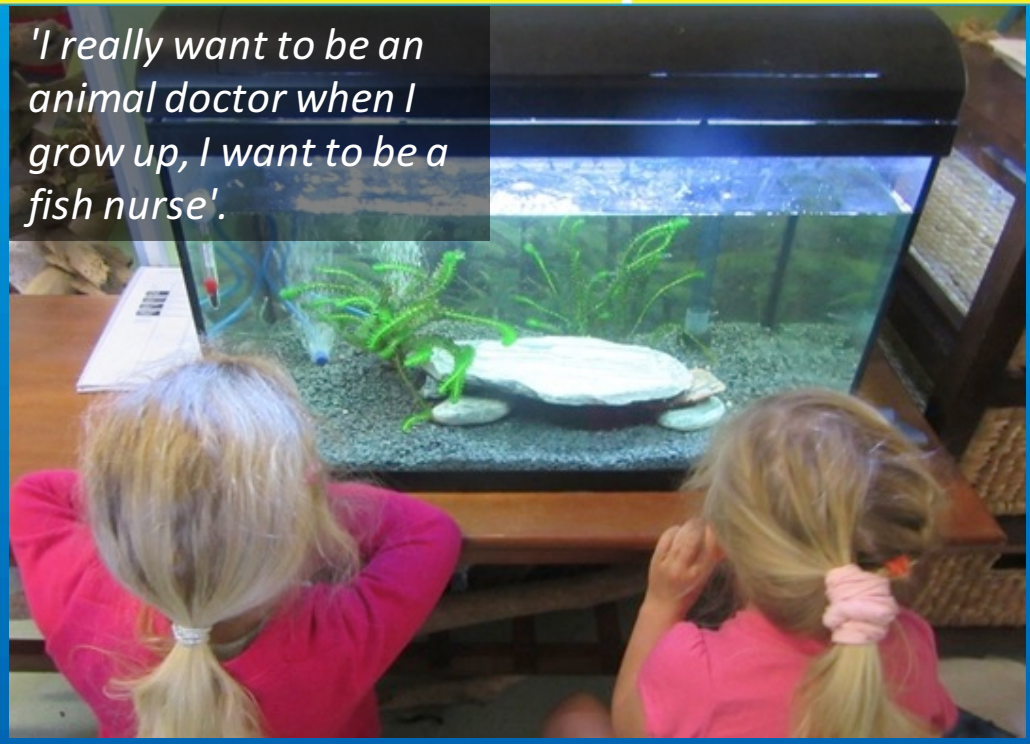
'I really want to be an animal doctor when I grow up, I want to be a fish nurse'.



WHITEBAIT
Whitebait swim and shine
Hunting for food in the river
They glide and dart so fast
That they are a blur

Action

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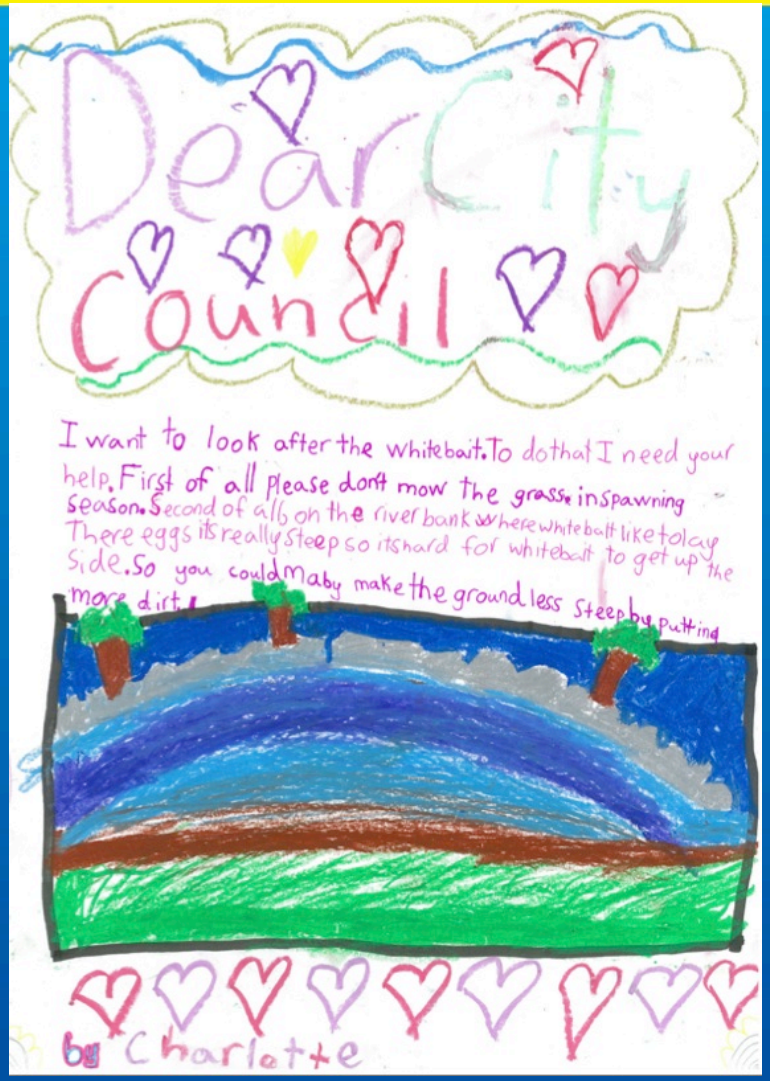

One of the letters to the Christchurch City Council asking for improvements to be made to the love zones – Bamford School

Te Waka Unua's call to action as part of their presentation to the Regional Council Zone Committee

Ōpāwa School's call to action as part of their presentation to the Christchurch City Councillors and Mayor.

Song challenge for 2017

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Little Inanga – by Lyttelton Kindy

There's a little inanga, swimming in the water

A little inanga, doing what he ought-a

He swam right past the whitebaiters

Up the river to the long, long grass

There's a little inanga, swimming in the water

Swim. Swim. Swim.

BIG thanks to Kim Jones for the support