Whitebait Connection
Teacher Handbook

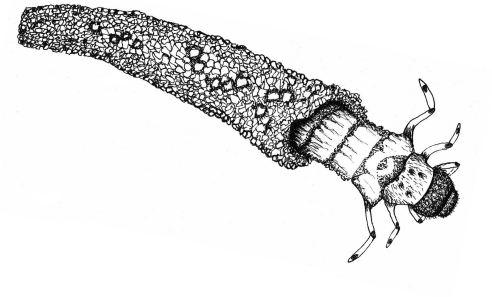
Years 1 - 4

Levels 1-2 of the NZ Curriculum

whitebait Connection
x-stream about freshwater life

www.whitebaitconnection.co.nz

Contents of handbook



Section One

1.1. Welcome

Kia ora and welcome to the Whitebait Connection's learning programme. We look forward to you joining us for a journey of discovery about freshwater in your local environment.

This handbook is designed to help you and your students understand the Whitebait Connection programme so we can make the most of the time we have together and work in a collaborative way to enhance freshwater in your community.

Whitebait Connection

Whitebait Connection is an action-based, environmental education programme for schools and communities, focussing on the health of our streams, rivers and wetlands.
The full Whitebait Connection (WBC) programme is a term-long inquiry and includes several sessions supported by your WBC Coordinator. Teachers then enhance these rich learning experiences with their own classroom planning.
The Whitebait Connection Coordinator delivers 4 of the 6 sessions and the classroom teacher supports the programme by teaching sessions one and three and assisting students to plan and carry out their freshwater actions.
For details see pages 4-5.
For information about the Whitebait Connection (WBC), our team and additional resources, see http://whitebaitconnection.co.nz

Whitebait Connection's key learning concepts

- Values of fresh water
- Interconnections and cycles of the environment
- Ecology and biodiversity
- Threats to the freshwater environment
- Responsibility for action and kaitiakitanga

Our approach

Our approach is **collaborative** and our team of coordinators are here to help you and your students to learn about and act for our freshwater environment.

Mountains to Sea Conservation Trust

Whitebait Connection's umbrella organisation is The Mountains to Sea Conservation Trust, see: https://www.mountainstosea.org.nz. This trust oversees experiential education programmes, including EMR (Experiencing Marine Reserves).

Whakamana te maunga, Whakamana te wai, He mauri o ngā tangata, Ngā mea katoa he pai.
If we look after the water from the mountains to sea, it will look after us. it is our life force.

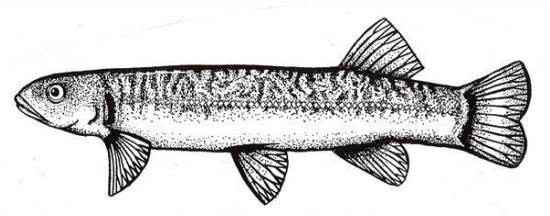
Kim Jones (left) Poutokomanawa/Co-Director, Freshwater Lead and Samara Nicholas (right), MNZMPoutokomanawa/Co-director, Marine Lead: Mountains to Sea Conservation Trust.

1.2. Aims/objectives of the WBC programme

Values and attitudes

Students (and their communities):

- **Care about whitebait/native fish and are motivated to help them**
- **Feel a sense of connection to local waterway/s**
- **Value clean fresh water as a precious resource**



Skills and experiences

Students:

- **Can carry out water quality testing on a local waterway**
- **Experience their local waterway/s and living things; strengthening their connections to them**

Learning and inquiry

Students:

- **Learn about their local waterway/s and living things through a learning inquiry**
- **Understand whitebait need healthy habitats and access from mountains to sea to complete their life cycle**

Working towards Kaitiakitanga

Students and their communities:

- **Find out about local freshwater issues and develop a sense of responsibility and self belief to want to help with these issues**
- **To be inspired/encouraged to carry out an action to help local waterway/s and streams**

(These can be demonstrated through our values continuum, the learning inquiry, observing students, the photo-story, learning activities and when a school carries out an action).

Example continuum:

Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*
1	*2*	*3*	*4*	*5*

1.3. Whitebait Connection Programme Structure

Inquiry stage	Details of session	Responsibility	Key outcomes
Before inquiry **Teacher and WBC Coordinator planning meeting (1 hour)**		**WBC Coordinator and teacher**	★ WBC Coordinator and teacher plan the WBC programme, & sign school agreement and forms ★ Identify sites for field trips, set dates.

1. Session One: Starting a Freshwater Inquiry (1-1.5 hours)

1	**Making connections**	• Introduce topic, form connections. • Introduce inquiry process. • Outline and share existing knowledge/understandings.	**Teacher and students**	★ Students complete bus stop activity Complete KWHL as a class. ★ Share KWHLs with WBC Coordinator.

2. Session Two: Introducing the Whitebait Connection (Facilitated) (1-1.5 hours)

2	**Strengthening connections**	**WBC programme introduction** • Introducing programme, coordinators and people involved. • Present 'big picture' key concepts, building connections with local freshwater.	**WBC Coordinator**	★ View the introductory slideshow and introduce key concepts. ★ Students connect to their local environment.

3. Session Three: Post Visit Follow Up (30 minutes)

3	**Dive in and ask**	• Developing and forming 'the big' inquiry questions. • Focus & support questions.	**Teacher and students**	★ Complete inquiry questions and inquiry plan as a whole class.

4. Session Four: Planning for field trip session (Facilitated) (1-1.5 hours)

4	**Diving deeper**	• Identifying and developing skills of research: e.g. observation • Planning the field trip. • Identify people and agency resources.	**WBC Coordinator**	★ Exploring monitoring equipment. ★ Developing skills in using equipment. ★ Risks and safety during field trip.

5. Session Five: Field trip/s (4 hours)

5	**Explore and discover**	**WBC Field Trip/s** • Experiencing fresh water through one or two field trips. • Carrying out investigations on freshwater health.	**WBC Coordinator**	★ Researching to answer big questions. ★ Observing stream health and gathering data.

6. Session 6: Finding the treasure: Follow-up classroom session (Facilitated) (1-1.5 hours)

6	**Finding the treasure**	• Summarising knowledge. • Sharing the knowledge gained. • Review and reflection on the inquiry.	**WBC Coordinator**	★ Repeat values continuum and document any change ★ Students share knowledge with the school community

7. Stage Seven: Collaborative planning and carrying out action

7	**It's all about action**	• Students plan and carry out actions for the freshwater environments based on knowledge gained in earlier stages.	**Everyone**	★ Students complete an action plan and then carry out their action. ★ Share knowledge and action with the wider community.

1.4. WBC Inquiry cycle

Use this inquiry learning cycle as a guide for the WBC programme. Each learning session described in section two is a stage in the inquiry cycle.
Please note: The inquiry cycle is flexible, and steps can be done in any order to suit your students. Reflection and reviewing are part of each stage. Use your school inquiry cycle as an alternative, if desired.
Full inquiry cycle: WBC inquiry cycle .pdf

Section Two

2.1. Details of learning sessions

Please pay close attention to orange text, as it relates to teacher considerations and requests.
Links to Google Docs/Slides are view only and teachers can make a copy to share with others.

Teacher and WBC Coordinator planning meeting	
Attendance required	**WBC Coordinators, Classroom teachers who will be involved**

Overview

- This meeting is for the WBC Coordinator to meet the teachers involved (or at least the lead teacher) to organise the details of the programme and go through the associated paperwork and responsibilities.

During the planning meeting we will:

- Discuss the classroom sessions we can deliver during the programme and adjust according to student needs and interests.
- Go through the School/WBC delivery agreement and the responsibilities of both parties. We will leave this with you to read and sign with senior management and BOT if necessary.
- Identify potential freshwater sites for field trips.
- Set dates for classroom sessions and field trips.

After the planning meeting the WBC Coordinator will send you the updated:

- Itinerary document (Your Coordinator will provide this)
- Risk Assessment Form (RAF)
- Student permission form example template

Please ensure the following actions are completed before the start of the WBC programme:

- Sign and return a copy of the School/WBC agreement.
- Review the Itinerary with your School Dates and Details for the field trips and class sessions. Contact your WBC Coordinator as soon as possible if there are any concerns.
- Review the Site Specific Risk Assessment Forms (RAFS) for the field trips. Your Coordinator will supply a specific RAF for your site. Ensure senior management have been consulted and make these available for students' parents if requested.
- Send out a Student permission form for students' guardians and ensure these are collected before the field trips commence. The school may choose to use this template or their own forms, WBC does not need a copy of the permission forms.
- Identify potential volunteers, parents and community members to ensure we have a **1:4 ratio (Years 0-9)** for maintaining our safety/supervision ratios. We also aim to involve the community as much as possible and parents are welcome to both class and field sessions.
- Review the programme outline and the resources available to support your classroom programme. You will also be invited to a google drive folder with useful teacher resources.

Inquiry Stage One: Making Connections

Starting a Freshwater Inquiry

Facilitated by	**Classroom teacher led**

Overview
During this session, the classroom teacher introduces the topic and establishes the students' prior knowledge and wonderings. The prior knowledge and wonderings are communicated to the WBC Coordinators who use it to plan the next stage.

Key concepts
- ➢ Fresh water is a precious taonga (treasure).
- ➢ Water moves in a cycle.
- ➢ Working together to share ideas and knowledge about freshwater and streams.

Curriculum links Achievement Objectives **Science: Levels 1 and 2** *Nature of Science: Investigating in Science* *Planet Earth and Beyond: Earth systems* *Material World: Properties and changes of matter*	Example Learning Intentions *Students are learning to:* - discuss the importance of fresh water - describe the water cycle - share prior knowledge about fresh water and streams *Teachers can create their own success criteria to fit their teaching style and learners' needs.*

Suggested details of session

Key concepts and timing	Details	Resources and Links
Introduce the topic of fresh water and streams (Approximately 5 minutes)	• Share ideas about why fresh water is important. • How much is fresh? Activity demonstration of the scarcity of clean, fresh water on the planet.	How Much Is Fresh.docx
Introductory slideshow/ bus stop activity (10 minutes)	• View the slideshow or use images as a bus stop activity. This slideshow includes 15 slides of images about fresh water, streams and living things. • Discuss the importance of fresh water and streams for living things such as native fish and people. • The images can act as prompts to recall students' prior knowledge and experiences. After viewing the images,	Bus stop activity slideshow 2020

	discuss the importance of fresh water and streams for living things and share and record students' ideas.	
Sharing prior knowledge and the inquiry cycle (10 minutes)	• Brainstorm students' knowledge about fresh water. • Complete a KWHL (what we know, what we want to know, how we will learn, what we learnt) together as a class to share prior knowledge, experience and wonderings. Or students could write or draw their before ideas. Share any prior knowledge with your WBC Coordinator. • View the WBC inquiry cycle (see page 5) and explain the learning process for the programme. This process will be used to guide our Whitebait Connection learning journey.	WBC KWHL Chart WBC inquiry cycle .pdf
Fresh water and the water cycle (10 minutes)	• Introduce the steps in the water cycle using a song or poster (see resources below).	Learning about the water cycle

Other water cycle resources		
The water cycle song by Scratch garden	Song about the water cycle (includes vocabulary evaporation, precipitation, condensation).	https://www.youtube.com/watch?v=Oq8iCsV4woE
Water cycle poster by USGS	Poster with water droplets showing water cycle process.	https://www.sciencekids.co.nz/sciencefacts/weather/thewatercyclediagram.html
Greater Wellington's Water cycle poster: water in the catchment.	Poster of the water cycle stages. Simple content.	75195 1WATER IN THE CATCHMENT.indd

Inquiry Stage Two: Strengthening Connections

Introducing The Whitebait Connection

Facilitated by	**WBC Coordinator**

Overview
This session introduces the Whitebait Connection programme, coordinator and 'big picture' key concepts.

Key concepts
- ➢ Programme outline and purpose
- ➢ Freshwater environments are rivers, streams, lakes and springs
- ➢ We have five native whitebait species who need healthy freshwater habitats

Resources Needed:
Teachers: please ensure the following are available for our presentation on the scheduled date:

- Projector and screen or television for displaying presentation
- Whiteboard or large white paper with markers for recording ideas
- Internet access (if available).

Curriculum links

Achievement Objectives
Science: Levels 1 and 2
Nature of Science: Investigating in Science
Planet Earth and Beyond: Earth systems
Living World: Ecology

Learning intentions
Students are learning to:
- recognise native freshwater fish and living things
- start to understand the life cycle of īnanga
- understand that freshwater environments are important habitat for native animals
- investigate issues for fresh water

Example Success Criteria
Students can:
- connect with their local streams and waterways
- complete the jigsaws to recognise whitebait species and begin to think about life cycles
- Experience freshwater issues through interactive games/activities

Suggested details of session

Key concepts and timing	Details	Resources and Links **Bold ➽: to be provided by WBC Coordinator**

Introducing the Whitebait Connection programme (Approximately 5 minutes)	• WBC Coordinator explains the WBC programme outline and purpose. • Revise learning from last session about the water cycle and fresh water. If available refer to student prior knowledge from KWHLs.	Student KWHLs from last session
Slideshow presentation (Approximately 10 minutes)	• Students are introduced to the key concepts through the *WBC Y 1-4 Introduction Slideshow**. The slideshow includes learning about fresh water, whitebait, freshwater fish, invertebrates, stream and river habitats and human impacts which can affect freshwater life (pollution, rubbish, sediment).	➽WBC_Intro_presentation Yr 1-4
EITHER: The Whitebait Wriggle *Interactive game about threats/issues for fresh water* (Approximately 10 minutes)	• Discussion of why freshwater animals need healthy habitats and introduction to threats and issues for fresh water. • Possible interactive game such as *'The Whitebait Wriggle'* to introduce life cycles of freshwater fish, threats and solutions.	The Whitebait Wriggle.pdf ➽
OR Who dirtied the water? *Interactive hands-on activity* (Approximately 10 minutes)	• Exploring the history of the area, past Māori and European settlement and issues for fresh water through the *'Who dirtied the water'* or inviting local speakers to share their knowledge.	Who dirtied the water.pdf ➽
The five whitebait species jigsaw and Īnanga life cycle jigsaw (Approximately 5-10 minutes)	• As you play the interactive games, half of the student group could complete the *NISP: The five whitebait species and Īnanga life cycle jigsaws* and half could do the game/activity at a time, then swap groups.	TW-NISP-2C_jigsaw_v2.pdf ➽ Inanga life cycle jigsaw ➽
Extra activities (Approximately 5 minutes)	• Possible catchment walk around the local area.	n/a
Wrap up (Approximately 5 minutes)	• Reflect on learning during session through a brainstorm or think, pair, share activity. • Group discussion of ways we are already taking action.	n/a

Other resources for teacher use or if extra time		
The Whitebait Wriggle by Amber McEwan	Book	https://www.mightyape.co.nz/product/the-whitebait-wriggle/22176960
What lives in fresh water cards	Printable PDF of cards- cut along dotted lines	https://drive.google.com/file/d/1FGHtYi3YQ968xex5mTP5ySNtq4HHueF1/view?usp=sharing
Whitebait Colouring sheet	Printable PDF	https://drive.google.com/file/d/1nua7pnbF9WMxhqte_X3-bQTGFNYSsJjL/view?usp=sharing

Inquiry Stage 3: Dive in and ask

Developing Your Learning Inquiry (Teacher led)

Facilitated by	**Teacher led**

Overview
This session develops wonderings into the big/rich inquiry questions for the students' learning journeys. Teachers then communicate the big questions to coordinators who use them to plan the next stage.

Key concepts
- ➢ Inquiry learning and developing big/rich questions

Curriculum links	Learning intentions
Achievement Objectives: Levels 3 & 4 English: Listening, reading and viewing, Speaking, Writing and presenting Inquiry skills and information literacy	*Students can:* - form a big/rich inquiry question to research

Suggested details of session

Key concepts and timing	Details	Resources and Links
Reflecting on inquiry cycle and KWHLs (Approx. 5 minutes)	• Review the inquiry cycle (see page 5 of this document). • Reflect on the students' KWHLs from stage one. Students could form groups to review their wonderings.	WBC inquiry cycle .pdf
Forming a big/rich question for inquiry (Approx. 10 minutes)	• Together, compile some big/rich inquiry questions which you are interested in investigating during the field trip and remaining WBC sessions. Example big inquiry questions are: - *How healthy are our local freshwater environments?* - *What are the current issues with local freshwater environments?* - *How do local people care for the freshwater environments?*	WBC Inquiry plan for water in your environment Google Slides example #2: Student inquiry plan

	- *How are we affecting local freshwater environments?*	
Inquiry plan and KWHL	• Together, students could also form an inquiry plan as a class to help to identify how they will answer their questions, how they will find the answers and who they could work with. • Record students' learning using the KWHL from stage one, or through drawings, art work, or videos.	WBC KWHL Chart WBC Inquiry plan for water in your environment

Other resources		
Additional Years 1-4 activities for supporting your inquiry/ WBC	This list of resources grouped in context can add value to your inquiry and provide student- friendly additional research material.	Additional Years 1-4 teaching resources to support WBC programme
Whitebait Connection website resources	Range of resources on WBC website	https://whitebaitconnection.co.nz/curriculum/teachers-and-coordinators-resources.html

Inquiry Stage 4: Diving deeper

Planning for the field trip

Facilitated by	WBC Coordinator

Overview
This session introduces students to stream testing, observation and using testing equipment. Students help to plan a field trip which supports the inquiry questions.

Key concepts
- Water testing: learning how to measure water quality
- How to observe changes to habitat
- Understand risks and how to keep ourselves safe
- How to use monitoring equipment

Achievement Objectives

Science: Levels 1 and 2
Nature of Science: Investigating in Science; Communicating in science
Planet Earth and Beyond: Earth Systems
Health & P.E.: Personal Health: Safety Management

Learning intentions

Students are learning to:
- use testing equipment to measure stream health
- develop skills in observation
- identify risks and think about how to manage these.

Success criteria

Students can:
- name and explain the basics of how to use testing equipment such as the thermometer and clarity tube
- observe stream features in pictures and make inferences about the health of streams.

Resources and equipment needed

Teachers, please have the following available for our session:
- Projector and screen or television for displaying presentation
- Whiteboard or large white paper with markers for recording ideas
- Internet access (if available)
- A suitable area to work in where water can be handled for student practise using equipment.

Coordinator will bring:
- Device to record learning and testing results
- Stream testing equipment

Suggested details of session		
Resource name	Description	Link to resource
Introducing the field trip (Approx. 10 minutes)	Preparation for the first field trip: itinerary for the day and key concepts.	**Stream prep session slideshow** ➽ Year 1-4 Field trip prep WBC session (PowerPoint/Google Slides)
Observing how healthy a stream is: 'I see, I think, I wonder…'	**Introducing stream testing: Teaching the skill of observation** ● Explain the skill of observation and how to observe like a scientist: use their 'eagle eyes' to focus. Model how to make an observation. ● View images of unhealthy streams, healthy streams, make observations together. Together, observe the pictures and discuss if they look unhealthy or healthy. What do students notice about these pictures? **I see...., I think..., I wonder**... Students can share what they see/observe about a picture, what it makes them think about/ what prior knowledge it links to and then what it makes them wonder about. ● Students could complete the *Sad stream, happy stream colouring sheet** to revise learning.	**Sad, stream, happy stream colouring sheets** ➽ EOS_Happy_Stream_Resource_5Up.pdf
Stream testing methods and observation (Approx. 20 minutes)	● Introduce students to the idea of testing the stream to see how healthy it is. ● Demonstrate use of the equipment and students can practise using it. ● Introduce the vocabulary of temperature and the idea of taking the stream's temperature (like taking our temperature to see if it is unwell). ● Also explain the meaning of clarity, sediment/dirt and bugs in the stream. ● Encourage students to practise using equipment and develop their skills: explain the testing methods for testing temperature, clarity and identifying bugs.	**Stream testing equipment:** ➽ ● **Clarity tubes** ● **Thermometer** ● **Other methods to be advised**

	Temperature: Measuring the temperature of a bucket of water. Explain that cold blooded animals are suited to cold water. Check to see how cool the water is. Clarity: have one clarity tube with teaspoon of dirt and the other with only tap water to compare. Relate sediment to trying to see as fish in the water and how this affects them.	
Thinking about safety (Approx. 5-10 minutes)	• How can we keep ourselves safe during the field trip? What could the risks be? Think about and discuss which risks could be at the stream and what students could do to keep safe.	See stream prep slideshow above.
Other resources for stream visit prep session		
Science Learning Hub: Monitoring stream health website	Interactive with videos, information and activities about monitoring streams	Monitoring stream health
Freshwater invertebrates guide by Landcare Research website	Detailed information about freshwater invertebrates (bugs) you might find in your stream and sampling methods.	https://www.landcareresearch.co.nz/resources/identification/animals/freshwater-invertebrates

Inquiry Stage 5: Explore and Discover

Field trip/s (3 - 4 hours)

Resources and information

Facilitated by	**WBC Coordinator**

Overview

The field trip/s are the experiential part of the Whitebait Connection programme where students explore and discover more about their local freshwater environment, make observations, collect data and build their inquiry to work towards answering their big/rich questions.

Key concepts

- Gathering data and using equipment to measure stream health with some simple tests
- Observing changes in the environment
- Following the safety plan and looking after each other and the environment

Curriculum links

Achievement Objectives

Science- Levels 1 and 2
Nature of Science: Investigating in science
Planet Earth and Beyond: Interacting systems
Material World: Chemistry and Society
***Health & P.E.**: Personal health: Safety management*

Learning intentions

Students can:

- gather freshwater data and work together
- make observations about habitat for living things, bugs and fish
- use the monitoring equipment to test fresh water
- use the safety plan from previous session in the field

Success criteria

To be determined by the teacher and WBC coordinator to suit students.

Resources and equipment needed for field trip

Coordinator will bring:

- Equipment for stream testing and associated gear.

Teacher and students to bring:

- Sturdy shoes that can get wet.
- Other personal gear: i.e. lunch, water, warm clothes, sun protection etc...
- Permission forms signed by parents for photos.
- Pens/Pencils.
- Camera (optional).

General timetable of field trip

(Subject to change according to conditions and site)

- Teacher and coordinator sign off health and safety paperwork: **Pre-site assessment form** ➽
- Briefing and **karakia** ➽
- Water quality testing and stream activities. This usually consists of monitoring tests such as: clarity, flow, temperature, as well as observations of habitat and freshwater life.
- There may also be biodiversity sampling (fish and bugs/macroinvertebrates) or other site dependent activities.
- Regroup and share results.
- Debrief and wrap up.

After the field trip:

Your coordinator will send through a photo-story of your field trip to help with next stages of inquiry.

Inquiry Stage Six: Finding the treasure

Post Field Trip Follow Up

Facilitated by	**WBC Coordinator**

Overview
This session reflects on students' experiences and observations during the field trip. Students also identify how they will share their knowledge.
This session helps to pave the way into session seven and may be combined into one learning experience.

Key concepts
- ➢ Reflecting on the experiences and observations from the field trip
- ➢ Issues in the local freshwater environment

Curriculum links

Achievement Objectives
Science: Levels 1 and 2
Nature of Science: Investigating and communicating in science
Planet Earth and Beyond: Interacting Systems

Learning intentions
Students are learning to:
- reflect on the field trip observations and results
- identify issues for fresh water
- reflect on their inquiry and share their findings

Example Success criteria
Students can:
- discuss their experiences and findings from field trip
- describe issues for fresh water

Suggested details of session

Key concepts and timing	Details	
Reflecting on the field trip experience through the Photo-story	• View the photo story from the field trip. After viewing, reflect on student experiences and findings. Discuss what surprised them, as well as what they learned and enjoyed. • Did you observe any issues for streams (such as pollution, litter or sediment) during the field trip? • Share observations of stream habitat. Explain that a stream is like a playground for bugs, there are different places and activities for bugs to do	Google Slides: Example Photo-story template (your WBC coordinator will send you a version of this with photos of your visit). **Photo story example_template DRAFT1** ➽

	within streams. Where did you find living things?	
Thinking about the health of the stream and the student inquiry	• Discuss: Did we find out how healthy the stream was? Why are we doing this monitoring? • Reflecting on results: have you answered your inquiry question(s)? If not, what is needed to answer your question/s?	Result sheets
Values continuum activity	• Identify new values and attitudes of students through the values continuum activity. This could be through a show of hands for this age-group. • Record positions through photos or notes. This can help with our evaluation processes.	Values continuum 2 ➽
Partnerships and sharing results	• Partnerships activity: who has been a part of our inquiry? Make a list of all those involved. Write letters of thanks and share what you learnt with them • Share the results and conclusions with your school community.	n/a
Issues for the stream and student inquiry	• Discuss a human impact observed at the stream, and talk about how we could help with the issue. • Lead in to talking about addressing the issue through action (next session).	n/a

Inquiry Stage Seven: It's all about action

Environmental action for fresh water

Facilitated by	**Students, teacher and WBC Coordinator**

Overview
This phase of the inquiry is about reflecting on knowledge, observations, research and information during the inquiry to plan action to address issues.
Students are assisted by WBC Coordinators to identify sources of support and to carry out the actions.

Key concepts

- ➢ Kaitiakitanga: protecting freshwater and maintaining the balance
- ➢ Environmental action can help to solve a freshwater issue

Curriculum links Achievement Objectives **Science: Levels 1 and 2** *Nature of Science: Participating and Contributing* *Integrated curriculum and key competencies*	Learning intentions *Students will:* - plan for action to address an issue - contribute to protecting and restoring fresh water and exercise kaitiakitanga

Suggested details of session

Students plan and an appropriate action for fresh water

- Reflect on any issues observed during your field trip or catchment walk (e.g. pollution, litter/rubbish, sediment).
- Assist students to identify one focus issue around local fresh water and streams that has come up during their inquiry. What could be done to reduce or resolve the issue?
- Assist the students to plan for an action to address this issue.
- Good examples of actions - walk through
- Use the environmental action planner and action inspiration ideas below to help you with the planning process.

Carry out your action

- Contact your coordinator for additional support with your action: Coordinator details
- Carry out the action with support from your community.
- Please invite your WBC Coordinator to any opening or celebration events for your action: we love to see your successes.

Suggested Resources: Stage Seven

Resource name	Link

Environmental Action planner PDF	https://drive.google.com/file/d/1_5qzn2bmCc0UykGmdIHYQk2pc7z-tTvc/view?usp=sharing
WBC Action Inspiration Ideas PDF	WBC Action Inspiration Ideas.docx.pdf
Google Slides Slideshow: WBC Planning and taking action	WBC Planning and taking action (New Branding) v1

2.3. Example Unit plan

<table>
<tr><td colspan="3">Whitebait Connection: Overarching Learning Outcome

To raise awareness, understanding and involvement in freshwater restoration and conservation through dynamic experiential environmental education opportunities.</td></tr>
<tr><td>Principles
Learning to learn
Inclusion
Community engagement
Future focus</td><td colspan="2">Key competencies
Thinking
Using language, symbols and texts
Managing self
Relating to others
Participating and contributing</td></tr>
<tr><td rowspan="2">Values
● Innovation, inquiry, curiosity
● Diversity
● Community and participation
● Ecological sustainability
● Integrity</td><td colspan="2">Levels</td></tr>
<tr><td colspan="2">1-2 (Years 1-4)</td></tr>
<tr><td>Curriculum links</td><td>Science
Nature of Science: Investigating in science, Understanding about science; Communicating in science and Participating and contributing
Living World: Ecology and Evolution
Planet Earth and beyond: Interacting systems
Material World: Chemistry and Society, Properties and changes of matter.</td><td>English: Listening, Reading and viewing; Speaking, Writing and presenting

Social Science: Social studies

Health & PE
Personal Health and Physical Development - Safety management</td></tr>
<tr><td>Key concepts</td><td colspan="2">Show knowledge & understanding of:
● What lives in fresh water in New Zealand and how animals are suited to their habitats.
● Whitebait are our native fish, there are 5 types.
● Begin to understand the life cycle of inanga.
● How to test if a stream is healthy.
● Issues in the local freshwater environment: e.g. pollution, rubbish, sedimentation.
● The importance of working together as local communities, including the ethic of kaitiakitanga (stewardship/guardianship/protection).</td></tr>
</table>

Section Three:
3.1 Documentation and planning tools

See links below for our Whitebait Connection documentation.

WBC School agreement	Standard WBC School agreement which outlines school and WBC roles, understandings and responsibilities.	WBC Coordinator_School Responsibility Agreement 2018.pdf
Student permission form template	Standard WBC Form to send home to parents for field trip permissions.	Permission forms
Risk Assessment Forms (RAF)	This RAF template will be adjusted by your WBC Coordinator with specific considerations for your chosen field trip site.	https://drive.google.com/file/d/15crhS7n3kr29BqWBF73lQfJdezGIkTo-/view?usp=sharing
Itinerary: School Dates and Details	The itinerary template will be adjusted by your WBC Coordinator with the dates and details of your sessions.	Your WBC Coordinator will provide this after your initial planning meeting.
Karakia	Our MTSCT karakia which opens the field trip.	Karakia
Evaluation forms	Your WBC Coordinator will also provide a link to the Google Forms versions of the evaluation form on completion of the WBC programme	Teacher evaluation form PDF https://drive.google.com/file/d/0B9xMnYa0UYWlR0c5LWdIUzRHM0k/view?usp=sharing
Pre-site assessment form	A health and safety form which your Coordinator will bring to the field trip and you will sign off to ensure that conditions are safe to go ahead.	Pre-site assessment form

We look forward to working with you and your students.