Take Action

This section of *Take Action for Water* enables students to take ownership of their learning and understanding by applying it to a local environmental issue. Students lead a Take Action project which targets an environmental issue. After investigating and exploring the issue, students plan and take action to help the catchment and environment. Through evaluation and reflection the students monitor the success and on-going requirements of their project. A Take Action project may be anything from setting up a recycling scheme to designing a sustainable classroom. The teacher's role is to encourage and support student ownership of the project.

Take Action for Water uses the inquiry learning approach to facilitate the Take Action process. There are many different inquiry learning models being followed in schools and many schools are defining their own school model. It is intended that schools will incorporate their own variant of inquiry learning into the take action process.

19 What are we doing now? - Teacher notes

Linking to curriculum

L3/4: Nature of Science - Participating and contributing

Students will use their growing science knowledge when considering issues of concern to them.

Explore various aspects of an issue and make decisions about possible action.

L3: Technological Practice - Planning for practice

Undertake planning to identify the key stages and resources required to develop an outcome.

What are we doing now?

The purpose of this activity is to explore current environmental issues and relevant practices within your school, and assist students to decide upon one aspect of these that will become a focus for an action project.

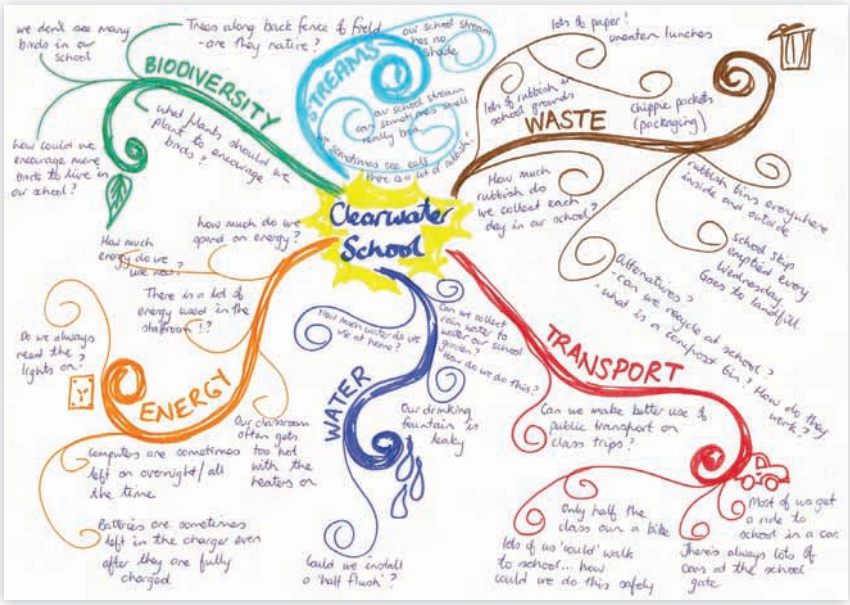
The Take Action cycle

The Take Action cycle provides a guide for the process of taking action. As with any good inquiry learning model, the Take Action cycle is not a linear process and students should revisit aspects of the process as needed. Students should be encouraged to ask questions, gather and analyse information, generate solutions, make decisions, justify conclusions, take action and evaluate the success of action taken.

Mind mapping collaboratively

Teachers facilitate the construction of a mind map that records current environmental issues and practices. Make the mind map interesting - use colour and draw pictures to illustrate and organise ideas and information. For more detailed information on mind mapping refer to How to Mind Map by Tony Buzan.

Questions and possible answers are listed in the activity notes to assist with focussed discussion around the different take action areas.



19 What are we doing now?

Introduction

- Write the learning intention on the board and discuss with students.
- Share Poster 5 with students. Explain the Take Action cycle and discuss what students will be doing at each of the stages.
- Start the cycle by introducing the 'what are we doing now?' section of the poster.

Learning activity

- Explain to students, in their role as kaitiaki, it is now time to use their new learning and understanding to take action for the school and local catchment. In 'talking partners' discuss:

  ? What is our school doing to look after our environment?

  Answers will vary but could include actions such as paper recycling, composting organic waste, walking school bus, planting native trees within the school grounds, switching lights and appliances off, and conserving water.

- Using the main action project headings outlined below (and any more that you can think of), create a mind map (on a large piece of paper) with students to record all that is happening, environmentally, within the school.

  This is an opportunity to record the positive, the negative and the future potential! You can refer back to this mind map as a record of your school environmental practices.

- The following questions will help facilitate the mind mapping process and encourage students to explore the different aspects of environmental practices within the school and local community.

Waste

? Where does our waste go?

All waste put into rubbish bins and the school skip, ends up in a landfill.

? How does our waste impact on a catchment?

Landfills are often found in valleys and lowlands where there are streams. These valleys are slowly filled with rubbish. This can reduce habitat for native freshwater animals, as streams are sometimes moved or covered up.

Leachate is created in a landfill as material decomposes and mixes with rain water. This can contain toxic chemicals and can enter groundwater and streams further down the catchment.

Learning intentions

- Students will investigate and explore current practices within their school (context - caring for the environment)

Success criteria

- Students can describe their school's current practices and how they impact on the catchment and environment

Resources

Poster 5: The Take Action Cycle

Useful reference book

How to Mind Map by Tony Buzan.

19 What are we doing now? - Teacher notes

? How much waste does our school have each day? How could we find the answer to this? What sort of waste do we have?

A waste audit will help you determine not only how much waste you have but also what different types of waste you produce. Examples of the types of waste include:

- paper
- organic (food) and garden waste
- recyclable (kerbside recyclable items)
- re-useable items (things that may be useful or of interest to someone else)
- landfill waste (things that can't be recycled and need to go to landfill) which can include packaging such as plastic cling wrap, yoghurt containers, plastic packets

? Are there other ways of dealing with our waste?

Paper waste can be reused and then recycled instead of being sent to a landfill.

Food scraps and other organic waste can be put to good use in a compost bin or worm farm.

Appropriate plastics, tins, cans and glass can be recycled.

Reusable items can be given to people that can find a use for them or taken to a second had shop (rather than throwing them out just because you don't want them anymore).

Consider waste issues when making shopping decisions to help reduce rubbish.

Every school has to pay for their waste to be removed and transported to the local landfill. By reducing the amount of waste you send to landfill you can save your school money.

Transport

? How do we travel to and from school?

Answers will vary. Answers can be collected and graphed to visually share results.

? How do our travel choices impact on our catchment?

Stormwater that drains off our roads can contain oil, rubber, petrol, and chemicals from vehicles.

This polluted water then drains directly into the nearest stream, river or into the sea. The more vehicles we have on our roads, the more pollution will enter waterways.

? What travel options do we have that reduce the impact on the waterways in the catchment?

Be healthy and walk, cycle, scooter or skateboard short distances. This could include your daily trip to and from school!

Using public transport options (eg. bus, train and cable car) reduces the number of cars on the road.

Car-pooling also reduces the number of cars on the road.

Energy

? How do we use energy within our school?

Answers will vary but may include heating, lighting, hot water heating, re-charging electronic equipment (eg. laptops and digital cameras), desk top computers, TV, video/DVD players, photocopiers, dishwashers, fridges, phones, faxes and school bells.

? How does bulk production of electricity impact on a catchment?

The construction and operation of power stations (eg. hydroelectric) impacts on stream ecosystems. Damming rivers enables the production of hydroelectricity. This severely reduces natural stream habitat and the ability of our native fish to migrate up and down rivers to successfully complete their life cycle. Energy production from renewable sources (eg. solar or wind) has less impact on the waterways of a catchment.

? Why should we be more energy efficient in our school?

By reducing the amount of electricity we use we reduce the overall energy demand of our community and country. The less energy we use, the less demand there is to build new energy generation infrastructure (eg. dams) which can have negative impacts on the waterways in a catchment.

? How could we increase energy efficiency in our school?

Turn off lights, heaters and appliances when leaving the room and at night. Change to CFC bulbs, stop drafts, insulate, install solar panels on school roof, buy energy efficient appliances and build with the sun and energy efficiency in mind.

Biodiversity

? What biodiversity can we see within our school?

Answers will vary. Do you have trees and plants in your school that provide habitat and food for native animals (eg. birds, lizards and insects)? Where are these trees and plants found?

? How could a rich biodiversity enhance our school and catchment?

Native plants provide habitat and food for our native animals. The more native habitat and food sources we have, the more native animals can survive in our catchment.

Native plants are suited to our local conditions. They also stabilise the land and prevent erosion of important top soil.

? How can we increase the biodiversity of native species in our school and catchment?

By planting native trees and plants in the school and community we are providing both food sources and habitat for our native animals.

Different animals prefer different trees and plants. If you wish to provide food and habitat for a particular animal (eg. birds, lizards and insects) you need to investigate what species of plant they prefer to eat and where they prefer to live.

Water

? How do we use water in our school?

Drinking water, hygiene (eg. hand washing and flushing toilets), irrigation (eg. watering gardens and grass) and cleaning.

? How does water wastage impact on a catchment?

The more water we take from our catchment, the less water there is for native aquatic animals to live in.

As water levels drop in our streams and rivers, the water warms more quickly which has an effect on the health of our native aquatic animals. There is less oxygen in warmer water which impacts on stream animals' breathing. Native aquatic animals prefer water temperatures of 10 – 15°C and start to become stressed as water temperatures increase.

19 What are we doing now? - Teacher notes

? How can we reduce water wastage in our school?

Identify where water wastage is happening (an audit).

Fix leaky taps, ensure that taps are not left running, water plants and gardens during cooler times of the day to prevent unnecessary evaporation of water, install half flush ability in toilets, install a rainwater tank.

Streams

? Is our stream healthy?

Discuss student's observations of local waterways.

? What are the land cover and human impact issues in the catchment?

Answers will vary. Do we know the answer to this? How could we find out more information?

? What kinds of pollution could be entering our stream?

Answers will vary. See teacher notes for Activity 13: Pollution.

In urban streams most pollution problems are related to stormwater drains and earthworks.

In rural areas animal waste, fertilisers and agrochemicals are the main pollutants.

Conclusion

- Refer back to Poster 5. Discuss the 'decide on a take action focus' stage of the Take Action cycle. Explain to students that it is now time to decide on a Take Action project focus area.

  ? Which of these areas should become the 'Take Action' focus for our school?

  If class discussion alone is not able to determine a class focus for action then you may wish to use the template opposite for students to complete and hand in. You can then collate information and assist students to determine a class focus for action.

Take Action project priority form

What do you think should be the 'Take Action' focus for our school?

What concerns you most about this issue?

What do we already know about this issue? What can we observe?

What could you do about this issue?

Student name .....

20 Gather information about the focus area - Teacher notes

Linking to curriculum

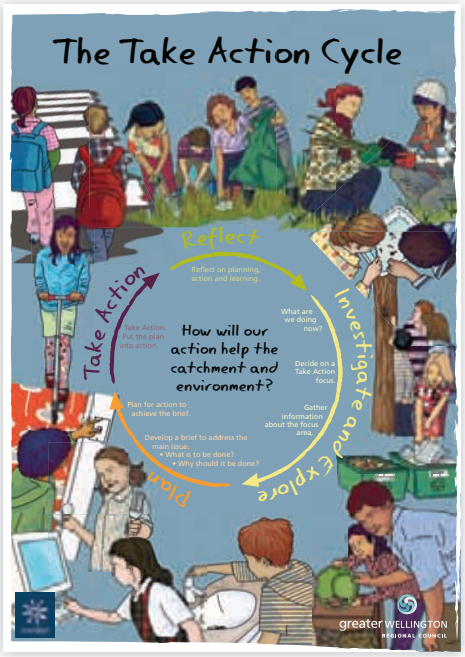
L3/4: Nature of Science - Participating and contributing

Students will use their growing science knowledge when considering issues of concern to them.

Explore various aspects of an issue and make decisions about possible action.

L3: Technological Practice - Planning for practice

Undertake planning to identify the key stages and resources required to develop an outcome.



Choosing your investigative tool

The investigative tools, listed below, assist you to collect information about your school's current environmental practices. Having clear information enables students to establish priorities for change and to propose and plan environmental projects.

The baseline information collected at this stage is also useful and interesting to reflect back on once the Take Action project is up and running. The comparison between the initial information collected and the post-project information can clearly show whether or not the action is achieving the desired results.

Your Take Action facilitator will meet with you to discuss which investigative tool will enable you to collect the information you require to plan your action project.

Investigative tool	Baseline data	Post-project data
Biodiversity mapping	Illustrates proportion of different types of land cover. Illustrates area of possible habitat and food sources for native animals.	Illustrates any change in area of habitat and food sources for native animals.

Using an enlarged school map, shade the different areas of land cover (eg. buildings, hard surfaces such as concrete, grass, plants and trees).

Identify the native plants and trees already found in your school. Identify the native animals (eg. birds, lizards or insects) that you wish to focus on that are already found in your school.

Use a land cover map to identify native bush areas in your catchment. These areas can be further investigated to establish which native birds are present that could then be attracted in to the school grounds.

Useful resources include

Life-size Guide to Native Trees by Andrew Crowe

Which New Zealand Bird? by Andrew Crowe

Take Action for Water - land cover catchment map

Investigative tool	Baseline data	Post-project data
Energy audit	Identifies how energy is currently used in your school. Identifies energy efficiency issues.	Identifies any reduction in energy usage (against trend). Identifies any change in energy efficiency.

20 Gather information about the focus area - Teacher notes

Establish how much energy your school currently uses by recording daily energy readings. Look back on past energy bills to identify energy usage trends.

Identify how much energy specific electrical items, found in your school, use. An energy audit helps to establish how energy is currently being used in your school (eg. what kind of lighting is used, how many lights are available for use, time used and the energy source for the lighting).

Useful resources include

NERI (National Energy Research Institute) - Energy-efficient Schools, a guide for trustees, principals, teachers, students, caretakers and energy managers

Cent-a-meter wireless electricity monitor

Investigative tool	Baseline data	Post-project data
Stream testing and mapping	Identifies current health of the stream. Map different types of land cover along stream banks and area of possible habitat and food sources for native animals.	Recognises any changes to the health of the stream. Map any changes in types of land cover along stream banks and area of possible habitat and food sources for native animals.

Use equipment to test the health of the local stream.

Use land cover catchment maps to identify the things that may be impacting on the health of the stream.

Walk a stretch of the stream to identify land cover and other issues (eg. poorly installed culverts and pollution). Locate and highlight these features on a map of the stream.

Useful resources include

Take Action for Water - stream testing kit and BLM 38

Take Action for Water - land cover catchment map

Investigative tool	Baseline data	Post-project data
Transport survey	Identifies the different modes of transport used by students and staff travelling to and from school. Identifies the proportion of people utilising environmentally friendly modes of transport.	Identifies any change in the proportion of people utilising environmentally friendly modes of transport.

20 Gather information about the focus area - Teacher notes

Survey students (and their families) about how they usually get to and from school. As part of the survey the following information could be collected:

- Usual mode of transport to and from school
- Reasons for using this mode of transport
- Willingness to support a walking school bus
- Parent availability to support a walking school bus

Useful resources include

The Walking School Bus information pack

Travel Planning Facilitator

Investigative tool	Baseline data	Post-project data
Waste audit	Identifies volumes and types of waste currently being sent to the landfill.	Identifies whether waste to landfill has been successfully reduced.

An audit will give you information about the volume and weight of each type of waste.

As part of the audit you will separate your waste into the following groups.

- Recyclables (plastics 1 & 2, glass and metals)
- Paper / Cardboard
- Reusables
- Organic waste
- Other (to landfill)

Useful resources include

Take Action website www.gw.govt.nz/takeaction

Investigative tool	Baseline data	Post-project data
Water audit	Detects possible water wastage.	Illustrates any change in water wastage.

An audit will reveal your current water use and management and help to highlight where and how water can be used more efficiently.

Create an inventory of all the items that use water in the school. Mark the location of these items on a school map.

20 Gather information about the focus area

Introduction

- Write the learning intention on the board and discuss with students.
- Refer back to Poster 5. Discuss the 'gather information about focus area' stage of the Take Action cycle.
- Before decisions about how best to address the focus area can be made, more specific information must be collected. This information will help the class to decide the issue of greatest concern.

Learning Activity

- Use the appropriate investigative tool to explore the focus area in your school (eg. audit, survey or mapping). Descriptions of investigative tools and how they can be used are found on the teacher note pages.
- Your Take Action facilitator will assist you to find the right tool for your focus issue and can assist with additional teaching and learning resources.
- Following the investigation students complete BLM 41.

? What are the main issues that we can take action to do something about?

What are the Take Action options for these issues?

Answers will vary.

Conclusion

- Refer to Poster 5. Discuss the 'identify the main issue' stage of the take action cycle.
- As a class identify the main issue that you will take action on.

Below are examples of focus issues that may be identified.

Biodiversity	Lack of food and habitat for kererū and tūī.
Energy	Too much energy being used.
Streams	Lack of community awareness about the mauri of the local stream.
Transport	Too many people coming to school in cars.
Waste	Too much organic waste in the school rubbish bins going to the landfill.
Water	Too much water being wasted.

Learning intentions

Students will investigate and explore their Take Action focus area (context - caring for the environment)

Success criteria

Students can carry out an investigation and gather information about their take action focus area

Resources

Poster 5: The Take Action Cycle

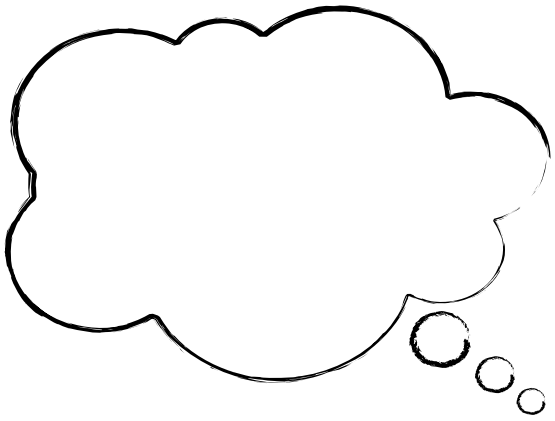
BLM 41: What did we learn from the information gathered?

Vocabulary

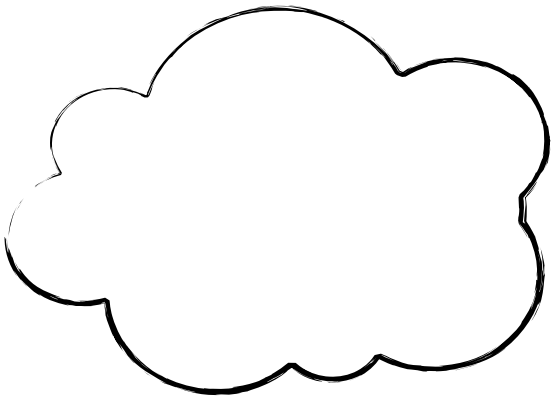
aspect, focus, situation

BLM 41: What did we learn from the information gathered?

Our Take Action project focus is...



The investigative tool we used to gather information was....



Plus	**M**inus	**I**nteresting

What are the main issues of concern? (look in the minus column)	Can we take action to solve this issue? Yes or No?	How can we take action to improve the issue?

21 Develop a brief - Teacher notes

Linking to curriculum

L3/4: Nature of Science - Participating and contributing

Students will use their growing science knowledge when considering issues of concern to them.

Explore various aspects of an issue and make decisions about possible action.

L3: Technological Practice - Brief development

Describe the nature of an intended outcome, explaining how it addresses the need or opportunity.

Describe the key attributes that enable development and evaluation of an outcome.

What is a brief?

A brief is a succinct, guiding statement that explains what is to be done and why it should be done. Developing a brief is not necessarily a 'one-off' exercise and it may need to be revisited, adapted and modified as the project progresses.

What are criteria?

Criteria define requirements for the action project (eg. how will it function and what will it look like?). Other things to be considered will include time, budget and consultation. Both the ongoing and final action project success can be measured against the criteria.

How will this help the catchment?

Students must clearly identify how their action project will enhance the mauri (and health) of the catchment. If it does not benefit the catchment or wider environment then it is not an appropriate action project.

Student ownership

Student participation in developing the brief and criteria is essential to enable the teacher's expectation of student ownership and responsibility of the project to be fully realised. It is important for student 'buy in' to be promoted and achieved early on in the process.

As the brief and criteria are developed it is essential for students to consult and share information with other stakeholders in the project to ensure their commitment and support (eg. principal, caretaker, teachers, students, school community and Board of Trustees if necessary).

Documenting the process and achievements

Ensure that all of your achievements are well recorded for both reflection and evidence purposes. Students often forget what things looked like (eg. pre-planting and volume of waste at initial audit). Digital photos are great for jogging the memory.

Documentation can also be utilised for award applications (eg. Greater Wellington Environmental Awards and Enviroschool Awards) as well as for promotional purposes. Some suggestions for how to do this include the following:

- Powerpoints / iMovies
- Blogs / websites
- Journal writing
- Picture books to share with junior students illustrating the process
- Scrapbook

Examples of briefs and criteria for action projects

Examples of action project briefs follow the activity notes page. These illustrate how to set out a brief for a Take Action project. Don't let these suggestions limit your choice of action project. There are many different ways of approaching and organising an action project. Your Take Action facilitator is available to assist you and your students to think outside of the square and take action in innovative and creative ways.

21 Develop a brief

Introduction

- Write the learning intention on the board and discuss with students.
- With the Take Action focus identified and the issues investigated, it is now time to decide the best way to Take Action. The action must have a positive effect on the environment.
- Refer students back to Poster 5. Discuss the 'develop a brief to address the main issue' stage of the cycle.

  ? What was the main issue that came out of our investigation?

  Answers will vary.

Learning activity

Brief

- Explain that a project brief is an explanation of what is to be done and why it should be done (eg. how it will help the catchment).
- Write the 'healthy breakfast cereal brief' example on the board and discuss with students.
- What is to be done…

  Design and make a breakfast cereal that is suitable for children aged between 4 and 10 years old…
- Why it should be done…

  that is healthy and provides long lasting energy.
- Hand out BLM 42. In small groups students brainstorm a project brief on the BLM that will address the identified issue.
- Groups report back and, as a class, collate ideas to construct a class brief that describes the action project issue.

Criteria

- Explain that criteria define the requirements (eg. how it functions and what it looks like) for the action project.
- Write the healthy breakfast cereal example of project criteria on the board and discuss with students.
  - *Cereal will be made from ingredients that are available from the local supermarket.*
  - *Cereal must be interesting and likeable for children.*
  - *Cereal must provide long lasting energy.*
- In small groups students brainstorm, on the BLM, criteria that will explain what things their Take Action project must achieve.
- Groups report back and as a class collate ideas to construct criteria that help define the requirements of the action project.

Catchment

- In small groups students reflect on the brief and criteria and decide how the action project will help the catchment and environment. They record their ideas on the BLM.
- As a class share ideas and discuss how the action project will help the catchment and environment.

Learning intentions

Students will create an action project brief, including criteria, that will describe how they are going to take action
(context - caring for the environment)

Success criteria

Students can understand and explain the action project brief and criteria for their Take Action project

Resources

Poster 5: The Take Action Cycle

BLM 42: Take Action project brief

Vocabulary

brief, constraints, criteria, design, implement, plan, specifications

Other

- Discuss the timeframe and budget for the action project with students.

Conclusion

- As a class, read over the completed brief and criteria.

  ? Are we happy with the completed brief and criteria? Do we need to make any changes?

  Make any necessary changes.

21 Develop a brief

Examples of Take Action project briefs

Reducing organic waste

Take Action project brief

Design and implement a system to reduce organic waste from our school going to the landfill.

Criteria

- System must work in all classrooms of the school.
- System must be hygienic and easily maintained by students.
- System must reduce organic waste going to landfill.

Timeframe

System must be up and running in three weeks.

Budget

$100

How will this help the catchment?

Less waste going to the landfill will allow current landfills to last longer, preventing the need to expand them or create new ones. This will reduce the loss of habitat for stream animals. Less rubbish entering streams will also protect animal habitats.

Energy efficiency

Take Action project brief

Design and implement a system or project to help increase energy efficiency in our school.

Criteria

- Action must prove to increase energy efficiency.
- Must show before and after data on our energy use.
- Energy monitors regularly monitor progress.

Timeframe

System must be up and running in three weeks.

Budget

$100

How will this help the catchment?

By reducing the amount of energy we use, we reduce the overall energy demand of our community and country. Less energy demand means less need for new power stations which have impacts on rivers and the atmosphere.

Telling others about our stream

Take Action project brief

Hold an event to share information with the community about the health of the local stream.

Criteria

- Gather information about the health of the local stream and the reasons for its condition.
- Organise an event for the local community to explain the health of the stream and the reasons for its current state.
- Advocate actions that could improve the health of the stream.

Timeframe

Last Tuesday of the term

Budget

$100

How will this help the catchment?

Raised awareness in the community may lead to people changing their behaviours that affect the quality of the stream (eg. stormwater pollution) or may lead to a stream restoration project.

Conserving water

Take Action project brief

Design and implement a system to help conserve water.

Criteria

- Action must prove to conserve water.
- Water wastage must be identified and managed.
- Water monitors regularly monitor progress.

Timeframe

System must be up and running in three weeks.

Budget

$100

How will this help the catchment?

By conserving water we are protecting the habitat of native aquatic animals. The more water we take from our catchment, the less water there is for native aquatic animals to live in. As water levels drop in our streams and rivers, the water warms more quickly, which has an effect on the health of our native aquatic animals.

Planting for kererū and tūī

Take Action project brief

Design, plan and carry out a planting to provide kererū and tūī with appropriate habitat and food.

Criteria

- Identify plants that kererū and tūī are known to feed on that would be suitable for planting site.
- The planting site must be 'prepared' to ensure plants grow successfully.
- Create a plan to ensure that the plants are looked after, after they have been planted.

Timeframe

Planting day to be held in three weeks.

Budget

$300

How will this help the catchment?

Native plants will provide feeding stops (eg. fruit and nectar) for birds within the catchment.

Walking school bus

Take Action project brief

Design, plan and implement a walking school bus to reduce the number of vehicles required to transport students to school each day.

Criteria

- Students and parents must be surveyed to establish routes suitable for a walking school bus.
- The school bus must reduce the number of students being driven to school.
- Establish an ongoing parent roster for the bus.

Timeframe

System must be up and running in three weeks.

Budget

$100

How will this help the catchment?

Less fuel, oil, and rubber will be left on the road and washed into the stormwater drains by rain. This will reduce the pollution in our local streams.

BLM 42: Take Action project brief

Take Action project .....

Criteria

- .....
- .....
- .....
- .....

Time frame ..... Budget .....

How will this help the catchment and environment?

22 Plan for action - Teacher notes

Linking to curriculum

L3I4: Nature of Science - Participating and contributing

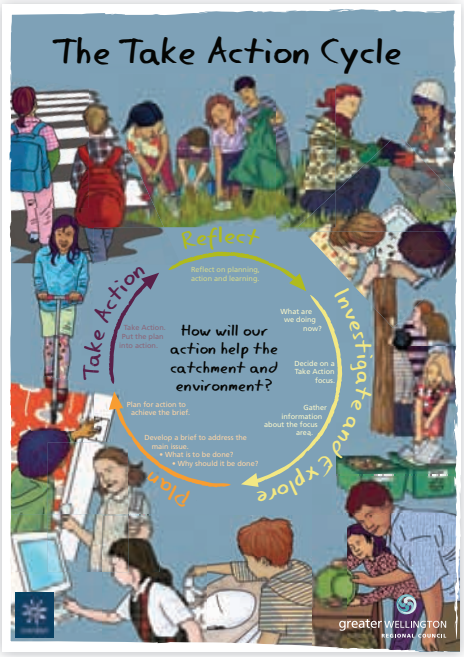
Students will use their growing science knowledge when considering issues of concern to them.

Explore various aspects of an issue and make decisions about possible action.

L3: Technological Practice - Brief development

Describe the nature of an intended outcome, explaining how it addresses the need or opportunity.

Describe the key attributes that enable development and evaluation of an outcome.



Presenting possible action projects to students

Your Take Action facilitator will discuss possible action projects with you when you meet. These are presented to students who can then discuss and determine which project will best fit their brief and criteria.

For teachers and students who have more experience in such planning and project work, you may wish to work through this process with your students rather than presenting ideas or options to them.

22 Plan for action

Introduction

- Write the learning intention on the board and discuss with students.
- Refer back to Poster 5. Discuss the 'plan for action to achieve the brief' stage of the cycle.
- In 'talking partners' discuss the following question:

  ? What are the possible ways we can take action to achieve our brief and criteria?

  Answers will vary.

Learning activity

- Teacher to share (and discuss) action project possibilities with students. Explain how each project would work and what is involved.
- As a class, decide upon the action project that will best achieves the brief and criteria.
- Hand out BLM 43. Students fill out the top section of the page (brief, criteria, budget, timeframe and project).
- In small groups students brainstorm, on the BLM, ways in which each criteria can be achieved.
- As a class, discuss how best to achieve each criteria and on an enlarged BLM 43 record the decisions made.
- Explain to students it is now time to fine tune the planning to enable successful action.
- Hand out BLM 44. In small groups students discuss and complete the BLM.

Conclusion

- Having now created our brief, identified criteria and planned for action… it is now time to take action.

  ? Are you confident that the planned action will make a difference for the environment?

  Are you confident that you know what you have to do?

Learning intentions

Students will plan a Take Action project that will achieve the brief and criteria
(context - caring for the environment)

Success criteria

Students can explain how their Take Action project will meet the brief and criteria

Resources

Poster 5: The Take Action Cycle

BLM 43: Planning to achieve the brief

BLM 44: Planning for action

Vocabulary

brief, constraints, criteria, design, implement, plan, specifications

BLM 43: Planning to achieve the brief

Brief

Criteria

1.

2.

3.

Project

Timeframe

Budget

How do we best achieve criteria 1?

Resources/tools

Who can help us?

How do we best achieve criteria 2?

Resources/tools

Who can help us?

How do we best achieve criteria 3?

Resources/tools

Who can help us?

BLM 44: Planning for action

Who will do what??

Prioritise the jobs and responsibilities…

Where will your action happen?

What questions do we need answers to?

How will we share our action project work with others?

- school newsletter
- school website
- parent/community information evening
- local media (radio and newspaper)
- school assembly
- other schools
- other…

23 Reflect on planning, action and learning - Teacher notes

Linking to curriculum

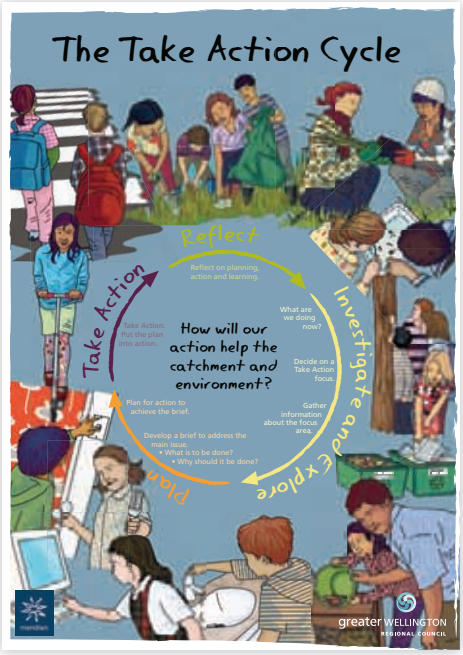
L3/4: Nature of Science - Participating and contributing

Students will use their growing science knowledge when considering issues of concern to them.

Explore various aspects of an issue and make decisions about possible action.

L3: Technological Practice - Outcome development and evaluation

Evaluate this outcome against the key attributes and how it addresses the need or opportunity.



Reflecting and evaluating

Taking time to reflect on the action project enables students to critically examine both the process and the action project outcomes. This is also an appropriate time to encourage students to reflect on their experiences with the project and their personal contribution.

Plan of maintenance

To ensure that your action continues to be successful it is important to have a long term plan so that the project's care and maintenance is planned and organised. Some things to consider include the following:

- What work is still required (eg. weeding, watering, feeding worms and collecting waste for compost)?
- Is an ongoing 'student monitor' system needed to ensure the project is maintained (eg. worm monitors to feed and maintain the worm farm and energy detectives to regularly survey energy use in classrooms)?
- What happens at different times of the year (eg. holiday care for the worm farm, mulching of planting sites to help retain moisture in the ground over summer and weeding over summer)?
- Do other students need to be trained so that the project continues the following year?

23 Reflect on planning, action and learning

Introduction

- Write the learning intention on the board and discuss with students.
- Refer to Poster 5. Discuss the 'reflecting on planning, action and learning' stage of the Take Action cycle.
- Having completed action for the environment, students reflect on whether or not the Take Action project has been successful.
- In 'talking partners' discuss the following questions:

  ? Did we achieve our brief and criteria? How can we prove this?

  Answers will vary.

Learning activity

- Using resources such as Poster 5, class brief, photos taken and power points, reflect on the action taken.

  ? What methods were used to achieve the action taken? What tools were helpful?

  Answers will vary but may include audits, surveys and mapping tools, and planning documents such as BLM 41, 42, 43 and 44.

  ? What would we do differently next time? What did we learn? How did we learn it?

- Hand out BLM 45. Students brainstorm individual answers to the questions on the BLM.
- Students feedback their answers in a class discussion.
- Collate ideas and opinions before writing up a class debrief document.

Conclusion

? How can we celebrate our success?

We can share our success with others (eg. different year levels, other schools and community).

? How can we ensure the on going success of our project?

Where appropriate, create a plan of maintenance and assign responsibilities.

? What is our vision for the future?

Answers will vary.

Learning intentions

Students will evaluate their Take Action project outcome against their brief and criteria
(context - caring for the environment)

Success criteria

Students can describe the success of their Take Action project against the brief and criteria and explain its impact on the environment

Resources

Poster 5: The Take Action Cycle

BLM 45: Reflect on planning, action and learning

Vocabulary

reflection

BLM 45: Reflect on planning, action and learning

meridian

greater WELLINGTON REGIONAL COUNCIL

Brief

Criteria

How will our action benefit the environment?

What has our action achieved?

Did we achieve our brief?

How can we prove/show this?

Were all of our criteria achieved?

How can we prove/show this?

What didn't work?

What would you do differently next time?

How could we extend or improve our action project?

How can we ensure our Take Action project continues? What maintenance is required?

What I learnt...

How I learnt...

What I enjoyed the most...