

Activity 11: Action for marine environments



CURRICULUM LINKS

Learning areas

Science: Levels 1–4:

- Nature of Science: Participating and contributing

Science capabilities: Engage with science

Technology: Levels 3 and 4:

Technological Practice: Brief development

Learning intentions

Students are learning to:

- Use appropriate tools to plan for action to target an issue for their local marine environment
- Carry out successful, meaningful action
- Evaluate and review their action.

Success criteria

Students can:

- Record ideas relating to planning for action, including setting criteria
- Participate in informed action for the marine environment
- Reflect on brief and criteria to evaluate the success of action.

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BACKGROUND NOTES

WHAT IS ENVIRONMENTAL ACTION?

Environmental action is a learning process where students plan and implement a project to address an issue related to the environment and sustainability. Examples of potential actions include habitat restoration for native species, awareness raising through videos or blogs, contributing to reducing climate change and many other innovative projects. Action should be appropriate for your community.

ACTING FOR THE FUTURE OF OUR OCEANS AND MARINE RESERVES

After their inquiry and learning about the current situation for your local marine environment, students will probably already be motivated to address some of the issues they have encountered. There are currently many issues facing our oceans. Environmental action can make a real difference for marine environments. Communities and schools can become involved in the protection and enhancement of marine habitats and species to encourage positive changes for the future health of the environment.

WHY PARTICIPATE IN ENVIRONMENTAL ACTION?

Student participation in environmental action is empowering and inspiring for students and encourages them to become informed, active participants in society. They should have a good understanding of underlying causes related to issues and be able to justify why carrying out action is important.

An environmental action has a meaningful, authentic, real-life purpose such as enhancing the health of the marine environment, raising awareness about marine conservation or contributing to a positive future for a threatened species.

HOW DO WE CHOOSE WHAT TO DO?

The environmental action students choose will be a natural progression from their inquiry. An action should make a difference for the focus issue and contribute to a positive future for that issue. Sharing decision-making and leadership with students will increase their enthusiasm and engagement. Consider the time and resources you have available when making decisions. A decision-making tool may also help to select which action will be most effective to address an issue.


When choosing a suitable action, students may also need to consider the needs and opinions of other groups of people in the community.





Student Advisory Board Community Event, Abel Tasman National Park. *Photo: Wendy Reeve*

CAN SCHOOLS REALLY MAKE A DIFFERENCE?

Schools can make a significant impact for their marine environment with targeted action. See the *Examples of effective action* on  page 8 for real-life examples of students who have made a real difference to our oceans. Action is most effective and far-reaching when it is collaborative across organisations, groups and schools.

REVIEWING AND REFLECTING ON YOUR ACTION

Reviewing environmental actions can be helpful for learning and for informing future monitoring and action. Reviewing and monitoring can be especially beneficial when encountering setbacks, to identify next steps. Reflecting is helpful at any stage of your project, and is most helpful when carried out at regular steps along the way.



LEARNING EXPERIENCE 11: ACTION FOR MARINE ENVIRONMENTS

Resources for this activity

- Student worksheet: *Brief for action* (🔒 page 11)
- Student worksheet: *Action plan* (🔒 page 12)
- Example weekly action plan: 🔗 <https://goo.gl/5LFmm2>.

Vocabulary

Action, outcome, community, kaitiakitanga, kaitiaki, brief, criteria, reflection, decision.



Focus question:
How can we make
a real difference for
marine environments?

Inquiry stage 1: Planning for action



REVIEW YOUR MAIN FOCUS ISSUE FOR YOUR MARINE ENVIRONMENT



These are suggestions only, teachers are encouraged to adapt and change material to suit their students

- Reflect on your inquiry, survey results, visit notes and research to understand the context for action.
- Ensure that you have the positive future students are aiming for (from 🔒 *Activity 10: The future of marine reserves*) in mind when planning for action.
- Review the causes of your focus issue and discuss how you could address these causes.

WORKING WITH KAITIAKI AND COMMUNITY

- Revisit the concept of kaitiakitanga (see 🔒 *Activity 10: The future of marine reserves*). Identify how students could be involved with kaitiaki in your community.
- Contact iwi and inform the wider community about your findings and ideas, before you plan for action. What are people already doing about this issue? Is there any way students can collaborate with other groups working in this space?

Consider factors such as: Who could add value to your action?

Are there people you know of who have strengths that would enhance your action?

- How can you work with kaitiaki? There may be an opportunity for students to support kaitiaki in their roles, and learn more about kaitiakitanga from a practical perspective.



DECIDING ON AN ENVIRONMENTAL ACTION



- How will you use your knowledge and skills to take action for the marine environment in your local area?
- Make a list or a brainstorm of possible action options that will target your issue. Choose your top three action ideas (that students are motivated to carry out and feel will make the biggest difference).
- Students can then decide on an option for action. Why are they choosing this action? What will the action achieve? Ensure that the chosen action aligns with their values and will make a difference to the focus issue and its causes.
- Identify which action will have the most positive outcomes and the fewest potential obstacles/problems.

Potential consequences of action

To help to make a choice, use the decision-making grid in the *Tools for environmental action resource*: www.doc.govt.nz/education-toolsforaction, Section E: Making decisions about action, page 13.

Creating a brief

A brief explains what is going to be done and why. The brief tells you what the action will look like and how it will function. Completing a brief will help to ensure the action is well-planned and effective.

- Complete a brief that will help to keep you on track. A template *Brief for action* is given on [page 11](#).

Example action criteria

Criteria are points that tell you what your action needs to include.

- Decide on some criteria to determine whether your action is successful. For example, our action needs to:
 - a. target the issue and its causes
 - b. be relevant to our community.
- Identify a measurable, achievable goal for the environmental action. For example, if your issue is to increase the number of dotterrels at a local marine reserve, your goal could be to carry out predator control to increase the population of dotterrels by 10%.
- Complete the *Brief for action* on [page 11](#). This brief template includes setting criteria and a goal.




PLANNING FOR ACTION



Action plan

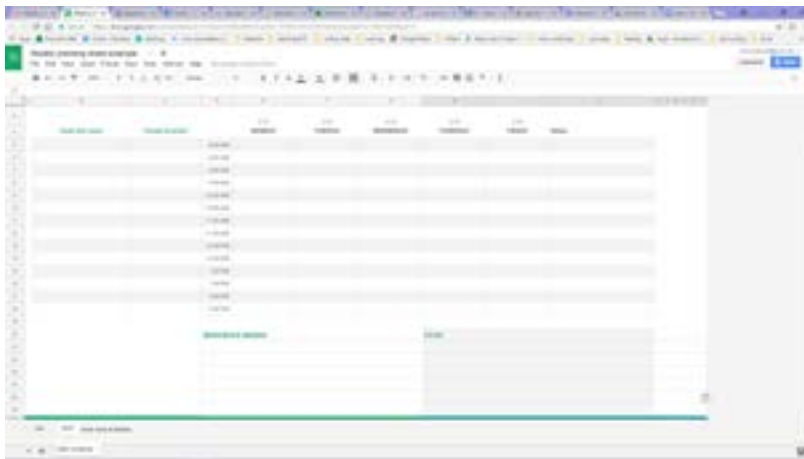
Complete an action plan to determine what resources, time and people power you will need to achieve your marine goals.

- For more information to support with planning for action, see the *Tools for environmental action resource*:  www.doc.govt.nz/education-toolsforaction, Section F: Planning your environmental action, pages 14–15.

Planning as you go

Planning is key to success of an action. With limited resources, it is very important that time, money and energy is not wasted. Planning should be flexible and be modified regularly. As the action is planned, more direct ways to achieve this can often become more obvious.

- Students can plan their project using a tool they are comfortable with, for example a notebook, iPad, computer and software such as MS Excel or Google sheets.




For an example of how a weekly plan for an action project could look, see:  <https://goo.gl/5LFmm2>.

For other ideas about live planning, see:  <http://technology.tki.org.nz/Videos/Planning-for-practice/Live-planning>.

Inquiry stage 8: Implementing action



TIME FOR ENVIRONMENTAL ACTION

- Now it is time to bring plans and ideas into reality to make a real difference for your marine environment. Use your planning and brief to help you implement a successful action project.
- Remember to take photos and record your actions as you go for later reflection, sharing and measuring. Refer to your brief and criteria to monitor action as you go and make sure your action is on track for success. You could use the *Action plan* template on  page 12.



EXAMPLES OF EFFECTIVE ACTION FOR MARINE ENVIRONMENTS

Target Issue: plastics and litter

Curious minds: Can litter art help keep our islands clean?

Schools from Great Barrier Island/Aotea have held beach clean-ups, created artworks and analysed the rubbish on their beaches. Students from three primary schools on the island joined forces to present their findings to their community. For more information, see: <https://www.curiousminds.nz/stories/can-litter-art-help-keep-our-islands-clean>.

Plastic parking ticket problems and solutions

Highlands Intermediate students from New Plymouth found out from their investigations that plastic parking tickets were littering their beaches. They set out to address the causes of this issue. For more information see: www.stuff.co.nz/environment/87034677/young-scientists-spot-problem-with-councils-plastic-parking-tickets.

Organising beach clean ups

Ensure you are targeting the causes of the litter on local beaches, as well as cleaning up the results of them (as in the above examples).

DOC restoration advice and how to organise a beach clean-up: www.doc.govt.nz/beach-clean-ups.

For more information about how to conduct your own local beach clean-up and more, see: Sustainable coastlines: <http://sustainablecoastlines.org/events> and <http://www.loveyourcoast.org.nz/learn>.

Target issue: Not enough marine protection

Kamo High School plays important role in creating a new marine reserve

Kamo High School students saw a need for a marine protected area in their community and were heavily involved in contributing to it becoming a reality. For more information see: https://www.youtube.com/watch?v=_lUMgSZqDJ8.

For information about monitoring your marine environment over time to see if it requires protection, see: The Marine Metre Squared (Mm2) project <https://www.mm2.net.nz>. This project is a reliable survey to assess the health of a marine environment over time. Monitoring your shoreline regularly is a reliable way to see the changes that are occurring there. The website has tools and templates for data comparison.

For ideas about how to initiate a marine protected area in your local environment, see: <https://www.nationalgeographic.org/activity/create-a-marine-protected-area>.






Tinui School students planting dunes as part of Conservation Week, Castlepoint Scenic Reserve, September 2009. Photo: Sandra Burles



Target issue: a species in danger

Rahotu School's dotterel defenders

This Taranaki school has been working collaboratively with community groups and iwi to make a difference for dotterel shorebirds, which are a threatened species in their area. Read about their sign making, monitoring, planting, trapping and other efforts to protect dotterels! See:  <https://www.taranakiconservationists.com/single-post/2017/10/01/Dotterel-Defenders-smashing-it-in-September>.

For other inspiring ideas about marine conservation actions, see Experiencing Marine Reserves' action page:  www.emr.org.nz/index.php/education/kids-conservation-action and Nature Space:  www.naturespace.org.nz.

Inquiry stage 9: Review and reflect



NEXT STEPS

Now that you have achieved a successful action, it doesn't have to stop there. How are students thinking and feeling about your action and results?



- What would you do differently next time?
- What is the next step for your environmental journey?
- How can you give back to the people who helped?

Measuring and monitoring the action

- Is there an ongoing need for carrying on your action project? How could you sustain the action/project and involve others?
- How did you measure change resulting from your action?
- Look at your brief to see if you met the criteria for action. Did you achieve what you hoped to achieve?

Inquiry stage 6: Sharing our findings



Share successes

- Celebrate your action success with a community event or public announcement. Share your story with local media or on social media.
- Enter the DOC Habitat Heroes competition: link www.doc.govt.nz/habitatheroes to share your conservation action journey and resulting successes.
- Share your action stories with DOC by emailing them to conserved@doc.govt.nz.



OTHER RESOURCES ABOUT ENVIRONMENTAL ACTION

- Habitat Heroes: An annual competition run by DOC. Tell your story about your students' environmental action. Go to <http://www.doc.govt.nz/habitatheroes>.
- DOC *Tools for environmental action*. This resource contains information about environmental action, funding and planning tools: www.doc.govt.nz/education-toolsforaction.
- Comprehensive guide to planning for action by Taking IT Global (TIG): http://tig.phpwebhosting.com/guidetoaction/Guide_to_Action_en.pdf.
- Education for sustainability. TKI: <http://nzcurriculum.tki.org.nz/Curriculum-resources/Education-for-sustainability#collapsible3>.
- General funding for action information:
 - Community Net Aoteroa: community.net.nz
 - Nature Space national funding: naturespace.org.nz/national-funding
 - Community Matters: www.communitymatters.govt.nz.
- *Blue* (film) – ideas for conservation actions: <https://bluethemovie.org/take-action>.
- See the Enviroschools website: enviroschools.org.nz for information about how to become a whole school committed to sustainability.
- See the Volvo Ocean Race's *Keep the oceans clean!* resource for ideas about environmental action to clean up the oceans: maritimemuseum.co.nz/sites/default/files/volvo_keep_the_oceans_clean_pack_0.pdf.
- Action competence information: <http://health.tki.org.nz/Key-collections/Curriculum-in-action/Making-Meaning/Teaching-and-learning-approaches/Action-competence-learning-process>.
- Sea cleaners: <https://seacleaners.com>.
- Love your coast – resources to support planning your own beach clean-up events: www.loveyourcoast.org.nz/learn.



Brief for action



The environmental action we have chosen is:

How will this action help to solve the focus issue?

Key steps in your action project:

-
-
-
-

What is our goal for action?

What are our criteria for success?

The action needs to:

-
-
-

What makes our project special and how do we feel about it?

People who may be able to help:

How will we know we are successful?

How can we measure our success?



Action plan



What we will do:

Why are we doing this?

Step number	Details of step	Time frame
1		
2		
3		
4		
5		

Resources

Materials we need:	Where we could source this:	Cost:
Total cost		\$

Skills needed	Knowledge required	Who could help?

