



Combating marine debris



To be sustainable our systems must evolve. Powerful ideas left idle change nothing.

We need to get everyone on board.

YEAR LEVEL

Years 7 - 10

MATERIALS

Access to YouTube and equipment for Ss to view video clips on

Cause and Effect Chart

KEY WORDS

- Ethics
- Sustainability
- Source Reduction Plan
- Cause
- Effect

Orientation: Why was plastic invented?

Ask this question to your Ss and elicit ideas. Make examples of how useful plastic is in everyone's daily life. Ss could make a list of the top 5 items that they use in their daily life and see if these contain plastic. Guaranteed some of your Ss will come up with something electronic in their top 5.

Ethics:

Ask Ss if they know where the majority of our plastic items are being made? See if any come up with Asia. Also see if Ss understand that a lot of our plastics and waste ends up being sent back to Asia for recycling. Have Ss watch the video clip about e-waste garbage being sent to China and Africa for recycling.

http://www.youtube.com/watch?v=EnqvFNstr_4

After Ss have watched the video clip, see how it made them feel. Ask them if they noticed anything about the waterways in the clip. Have a discussion on the ethics about these types of waste being sent to these countries.

Sustainability:

Work with Ss to come up with a definition of sustainability.

Sustainability = development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

This definition was created in 1987 at the World Commission on Environment and Development. In order to overcome the challenges faced by humanity we need to find ways to behave in harmony with it. Elicit some ideas from Ss about alternatives to plastic bags and plastic bottles. You could start this activity by firstly getting Ss to list 5 positive things about plastic and 5 negative things.





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Behaviour and action:

Write the following two statements on the whiteboard: 'Think local, act global' and 'Think global, act local'. You may notice the terms are reversed.

Discuss the difference between the two. Which of these statements do your students most agree with? No matter which, there are two verbs central to the statements: 'think' and 'act'. By thinking and acting about local or global environmental issues, we can all create positive change.

Consider our environmental responsibilities as Australians.

- What is Australia's role as an environmental leader?
- If we lived in a developing nation and were concerned about our water supply, our food sources or our income, would it be easy to make environmental choices?
- How does culture or wealth influence environmental responsibility?
- Is it fair to argue that we must become environmental stewards because of the wealth we enjoy as Australians?

Source Reduction Plan:

Ss can pick one item they found on their beach clean-up or an item that ends up in the rubbish in their school or daily life and create a Source Reduction Plan.

For information on 'How to create a Source Reduction Plan?', check out Tangaroa Blue's 'How to' video section on their website:

<http://www.tangaroablue.org/resources/how-to-manual.html>

Ss can use the internet to research environmental alternatives to the product they have chosen and then look at how they are going to communicate this to their audience. It might be a short video campaign, a poster or a letter to a company. The methods are endless. Check out this video link for an interesting idea for a video campaign - it will inspire your students:

<http://www.youtube.com/watch?v=gnStoxmEKTQ>

There are some schools in Australia, such as Laura State School in Far North Queensland, that have developed a Source Reduction Plan and actually implemented it at their schools. Have a look at this web address for more details:

<http://www.tangaroablue.org/schools/qld/68-laura-state-school/251-laura-students-designing-recycling-for-cape-york.html>





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Preparation:

To help Ss prepare a Source Reduction Plan, they need to think about cause and effect. Ss first pick an item they would like to create a Source Reduction Plan for and complete a Cause and Effect Chart (see end of this lesson for a printout of the chart). Once Ss know the cause and effect of the item they have chosen they can begin to look at ways to reduce the cause in their Source Reduction Plan.

Tangaroa Blue Foundation Teacher and Student feedback and reflection forms.

Feedback and student reflection is an important part of the student learning process and will also enable Tangaroa Blue to improve our education kit to reflect teacher and learner needs. Please go to the Tangaroa Website and fill in our online feedback/reflection forms:

Student feedback: <https://www.surveymonkey.com/r/3MTGL23>

Teacher Feedback: <https://www.surveymonkey.com/r/3M38HSC>



Cause and Effect Chart

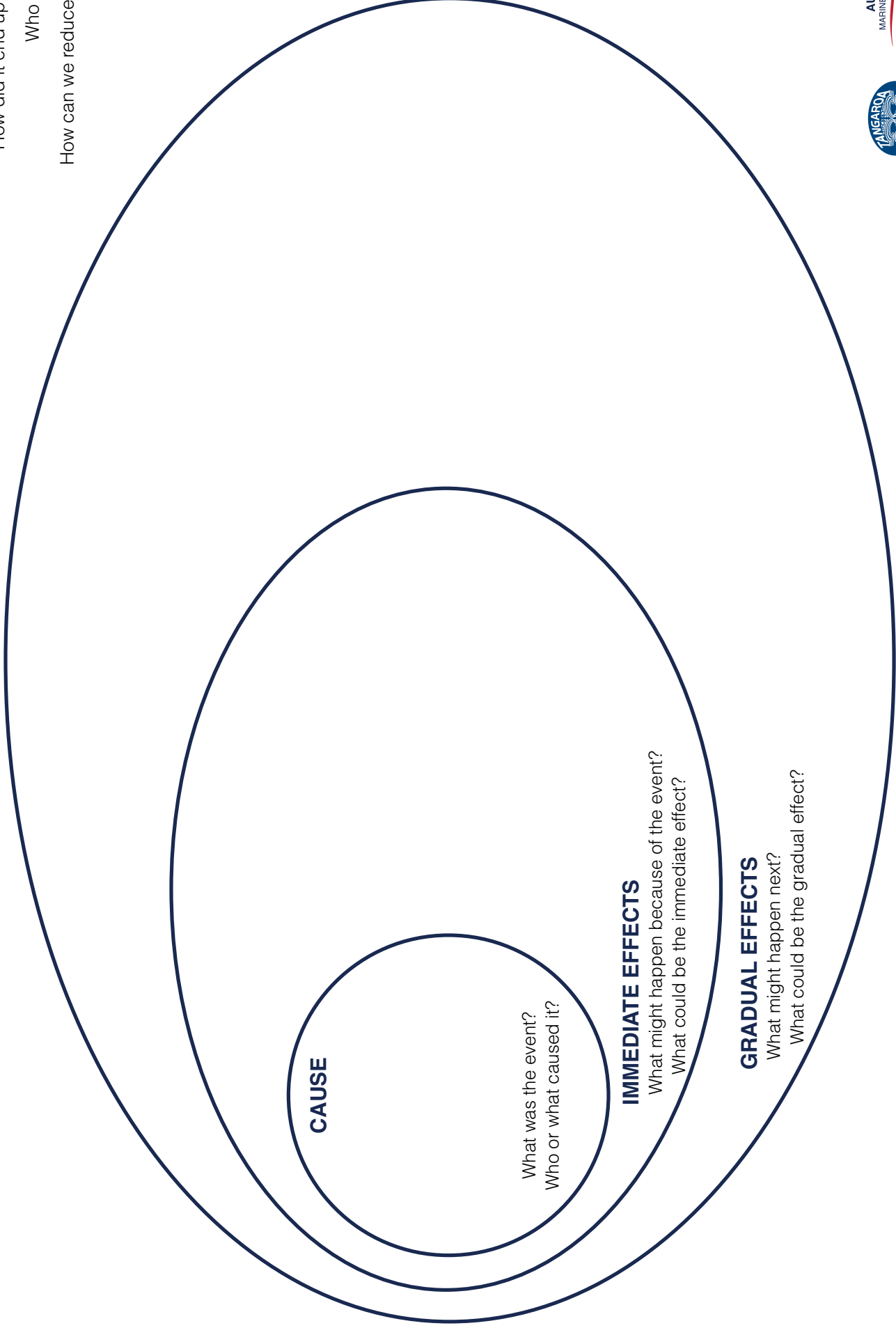
What is the marine debris item that you are going to create a Source Reduction Plan for?

What human activity uses that item in daily life?

How did it end up in the ocean?

Who is it affecting?

How can we reduce the problem?





Source Reduction Plan (SRP)

Please turn over the page for help in completing this form.

1. Your Organisation's Name:	
If we have questions about this plan who should we contact? Name:	
Phone/Email:	
Name of Your Nearest Town:	
Name of the Clean Up Site/s:	
Today's Date:	

2. Name of item or group of items being targeted in this SRP? (For example, water bottles or recreational fishing gear.)

3. For the item listed in Question 2, do you know where the item/s is coming from?

Yes – go to Question 4 No – see information for Question 3 on the back of this sheet

4a. Where is the item coming from?	
4b. How do you think it is ending up on the beach/ocean?	

5. Why is stopping this item from ending up in the ocean/beach/river important for your community?

6. What actions/changes could the community do to make this plan successful?

7. Decide who can help you fix this problem:

Which organisation could help? (For example, Local Council.)	What can they do? (For example, provide bins or signs, or change behaviour.)

8. Decide who will talk to these organisations

Which organisation/group will you contact? (For example, Local Council.)	What is the name of the person you need to contact?	How will they be approached? (For example, phone call, face-to-face.)	What are you going to ask them to do?	Who is going to contact them and when?

9. What date will you review this plan to see if it is working? _____





Information to help you fill out this form

When should you use this Source Reduction Plan?

The aim of this form is to help people find a way to stop things that they are finding during their beach/river clean ups from ending up on the beach/river or in the ocean. The Source Reduction Plan is best used to find a solution to an item that you know is coming from a local source.

What each question means

Question 1 - asks you for your contact details, also which beach or area you are making this plan for.

Question 2 - asks what item you are trying to stop from ending up on the beach or in the ocean/river – this could be a single item like a waterbottle, or a group of items like recreational fishing items.

Question 3 - asks if you know where the item is coming from? For example, if waterbottles are found on the beach/ocean - are they being left there by people littering, or are they coming from somewhere else. If they have lots of different languages on them they might be washing in from another country or maybe from passing ships. If you know where the item is coming from go straight to Question 4, if you don't know where they are coming from is there someone else in your organisation or community that might be able to help you answer this question? If not contact Tangaroa Blue Foundation for more help. Once you have found the source then you can continue onto Question 4.

Question 4 - asks you to explain where this item is coming from and why it is ending up on the beach/ocean.

Question 5 - how will the community benefit by stopping this item from ending up in the ocean/river? Some reasons may include the health of the saltwater country, the item is dangerous to people or it will make the area more beautiful. Answering this question may assist you in getting community support for this plan.

Question 6 – asks what actions or changes could the community make which might help stop this item from ending up on the beach/ocean.

Question 7 – What other groups/organisations can help you with this plan? This might include the Local Council, other local government agencies or other community groups. Some people you might want to talk to are people that are in charge of parks/reserves, waste management or community engagement. Think about what you need those groups to do that will help solve this problem.

Question 8 – Outlines exactly who you are going to ask for help, find out the person's name that you need to talk to, their contact details and what are you going to ask them to do. Also decide what is the best way to contact them for example, call them, meet face to face, send them an email and who in your organisation is actually going to contact that person and when.

Think about the cost involved in getting this project done – do you need to find funding?

What happens if the person that you ask for help says no – find out why they said no and see if this is something that can be fixed or is there someone else that can help you? Also think about asking community partners – like schools, environmental groups or Men's Groups – can these groups help?

Question 9 – Set a date that you will review your plan to see if all the steps have been completed and if they are working. Sometimes a Source Reduction Plan might be complete but when you do your next beach clean up that item is still there so it may not solve the problem. This means you may need to make a new plan involving new partners with new ideas. Tangaroa Blue Foundation is also available to provide support contact info@tangaroablue.org

