



Beach clean-up activity

There is no single solution to the plastic waste problem. One way to reduce marine debris and to activate students' understanding of being able to make a change is by doing a beach clean-up activity.

Orientation:

In this lesson you will be doing a beach clean-up. If you have been using the Malmo PowerPoint presentations be sure to take your toy with marine debris on the beach clean-up with you!! Ss might like to take pictures of it and create a story when they get back to the classroom. Elicit ideas from Ss about the kind of items they might find on the beach. Make a list of the top 5 items and keep it for later use.

Preparation for the clean-up:

If your school is lucky enough to have a team member from Tangaroa Blue Foundation visiting to do the beach clean-up workshop, then all you need to do is prepare your Ss and transport to the beach or river. If you are doing the clean-up workshop yourself make sure you have the clean-up kit organised from Tangaroa Blue Foundation. Spend some time familiarising yourself with the data sheets and Marine Debris Identification Manual. It will depend on the level of your Ss as to how involved they will be with the actual filling out of the data sheet during the 'sorting it out' phase in the next lesson.

It is worth while to view Tangaroa Blue's 'How to run a beach clean-up' video before you head out on your beach clean-up activity. There are also other useful 'How to' videos here explaining how to collect data and submit it online. To view the videos, follow the link: <http://www.tangaroablue.org/resources/how-to-manual.html>

Identification game:

You may want to print out some of the pictures from the Marine Debris Identification Manual and play a game where Ss have to say what the item is, what they think it is made out of or what it is used for. This will familiarise them with the types of items they are going to find on the beach.

Community connection:

Prior to the beach clean-up you may want to discuss with Ss who could come along to the beach clean-up from the greater community to help support the event, e.g. local ranger group, indigenous elders & community, city council, parents or some of the younger Ss from the local primary school. Ss could help create the invitation letters or make some of the phone calls. Having other members from the community at the event will increase Ss' interest levels.

YEAR LEVEL

Foundation – Year 6

MATERIALS

Beach clean-up kit

(gloves, bags, data sheets, Marine Debris Identification Manual)

Sunscreen, hats, shoes, water

KEY WORDS

- Tide
- Data sheet





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Considerations:

Weather conditions before and during the excursion will play a part in how much debris is on the beach. A storm or a big tide will usually bring more debris onto the beach. It will be best to go to the beach around low tide as this is when most debris will be left behind - www.bom.gov.au/oceanography/tides. Spend some time familiarising students with what tides are.

Safety:

Make sure you have all your equipment ready and that you have briefed Ss on all the safety requirements outlined by your school (such as sun safety) including what to do if Ss find sharps or containers containing liquids. Below are some safety tips for educators. Most of these tips feel like common sense to seasoned teachers. If, however, you are unfamiliar with teaching in an outdoor environment, there are a few extra management considerations to be aware of:

- Be very clear with expectations, especially around water. Ensure you conduct a full safety briefing before you start activities.
- Review a clear signal for getting everyone's attention and gathering in one place. This might be a call-and-response or a whistle signal. Ensure that students patrol each other when they hear this signal; some students may not realise when they are out of earshot.
- Establish a gathering place and a protocol for students who get separated from the group.
- Be ready for the weather. This might mean bringing extra footwear, hats, dry clothing or sunscreen for students who come to the field trip ill-prepared.
- Wait until after you have given instructions before you give students any materials to work with. This is true inside the classroom but even more so when you are outside and children are managing an elevated level of excitement.

Procedure:

Measure out the area to be cleaned up and make a note so it can be written on the data sheet. Discuss with Ss different ways that areas can be measured out and if time permits perhaps get Ss to try different ways of measuring e.g. with footsteps or lengths of rope. Have Ss in pairs spread out along the beach and pick up all the marine debris they can find. Take note of anything unusual you see.

Micro plastics and plastic resin pellets

These are most likely to be found right along the tide line and usually mixed up with seaweed. Remind Ss that these smaller pieces are very important to pick up and that if they find any plastic resin pellets that they can be sent away for analysis to find out what toxins they have absorbed. Place any plastic resin pellets found into a paper envelope.





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A typical place to look for plastic resin pellets and micro plastics.



What to do with the debris after it is collected:

Keep the bags in a safe place so that they can be sorted and counted in the next lesson. If you are doing the sorting straight away, then refer to the phase in the next lesson called 'sorting it out'.

Have a look at the Tangaroa Blue videos on 'How to collect data for the Australian Marine Debris Database and how to submit data into the online Australian Marine Debris Database.' You can view the videos by following the link:

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

Further learning opportunities during the beach clean-up:

- Have Ss brainstorm what they would wear to a beach clean-up if they lived in a very cold environment – discuss different types of clothing.
- Ss can measure out the area to be cleaned up – how many footsteps etc.
- Ss will be sorting the marine debris into categories afterwards.
- Talk about the tide and weather and how this affects marine debris ending up on the beach. Show Ss the tide line and speak about this.
- Discuss what to do with the marine debris afterwards – what are you going to do with it so it doesn't end up back in the ocean?





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Learning opportunities during the beach clean-up:

Beautiful shoreline:

The real purpose of today's field trip is the shoreline clean-up, but before you begin, be sure to take some moments to appreciate what makes this shoreline beautiful and special. Try not to pack too many activities in; you don't want to cram the day so full that students are completely over-stimulated. Do pick two or three ways to engage with the shoreline prior to your clean-up. This will give students an orientation to the physical area, as well as a deeper appreciation for the shoreline they're helping to rehabilitate.

Guiding questions:

- Does the ecosystem look the way we imagined it in class?
- What are your first impressions of this place?
- What lives here that we can't see?

Begin, if possible, with students sitting facing the water. Invite them to close their eyes for one full minute and listen to as many shoreline sounds as they can hear. Next, ask students to remain silent but to open their eyes for two minutes of silent observation. During this time, they can think about the following:

- Identify the sounds they heard and what created them
- Count as many types of living organisms as they can see
- Identify natural elements of the ecosystem
- Identify man-made objects
- Visually identify the furthest natural element they can see from where they sit
- Visually examine the closest or smallest natural element they can see from where they sit.





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Mini scavenger hunt:

Ahead of the visit, write down some open-ended descriptions of things to find at the shoreline. Try to engage all of the senses in your descriptions. You may hand out lists to students or conduct this hunt in a large group using boundaries and a signal to return.

Suggested scavenger hunt clues:

- Find evidence of humans on the shoreline
- Find something that will still be here 100 years from now
- Find something that is growing
- Find something that is decaying
- Find something that smells surprising
- Find something with a unique texture
- Find something camouflaged
- Find something beautiful
- Find something ugly
- Find something you can't explain.

