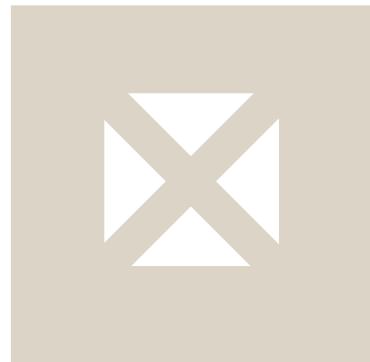


Topic 3

How to Reduce Ocean Plastic Pollution

Education Programme



Credit: ©Shutterstock

Ways to Reduce Ocean Plastic Pollution



Photo Credit: Beau Outeridge/Turn the Tide on Plastic

As we learned in **Topic 2**, ocean plastic pollution is upsetting our planet's natural balance and affecting the health of everyone on the planet. Tiny harmful pieces of plastic have even been found in our food and drinking water!

We all have an important part to play in reducing our use of plastic. Everything we do as individuals can help to make a difference.

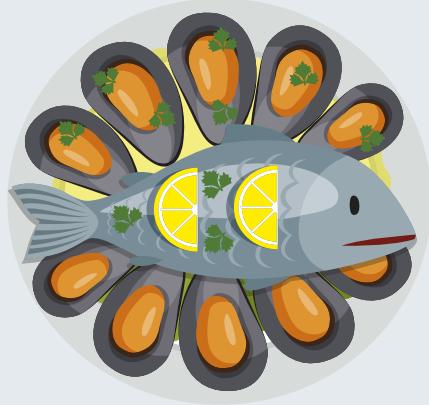
In this topic you will discover things you can do to help solve this problem. So, what's your plan? Are you in?



You can learn more about ocean plastic pollution in Topic 2



Plastic reaches us through the food chain and can affect our health. For example, one study found that people who love to eat mussels in Belgium could be eating up to 11,000 pieces of micro-plastic in a year (an average of 90 particles per meal over 122 meals)^a



There are more microplastic particles in the ocean than there are

stars in our galaxy

More than
50%
of sea turtles

are estimated to have ingested plastic or
other forms of marine debris



The average American uses 167
disposable water bottles a year, but only
recycles 1 in 4



2017

2027

The amount of plastic waste in
the ocean could
rise by a factor of 10
within the next decade

Plastic is not so fantastic

• •

Over 200 times more plastic is being made now than in the 1950s. If plastic production continues to increase by around 5 per cent each year, another 33 billion tonnes of plastic will be on the planet by 2050^c. We have to do something about the amount of plastic that we use, the types of plastic we use and what we do with that plastic after it's been used.

**Only 9 per cent
of the plastic ever
created has been
recycled!^b**

The Age of Plastics

• • • • • • • • •



We have had...

The Stone Age

The Iron Age

The Age of Plastics!^d



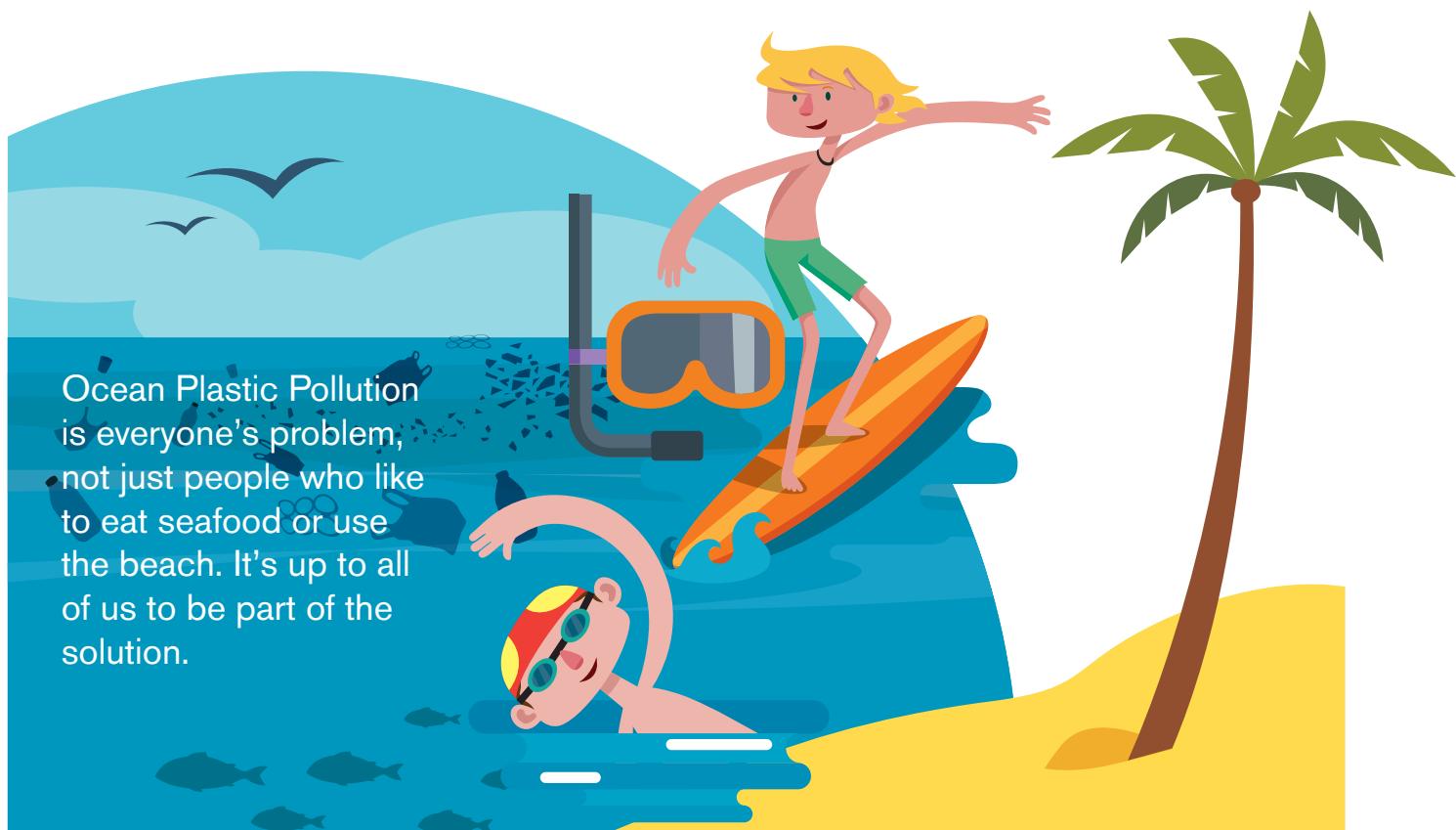
and now...

We must consider the environment and our ocean when we use plastic. Do we really need to use plastic? And how will we dispose of the plastic when we are finished with it?

It's everyone's problem!



Large group taking part in a beach clean. Photo ©Pedro Martínez / Volvo AB



It's you, it's me, it's all of us



.....

Dee Caffari. Photo: Ainhoa Sanchez/Volvo AB

“

We talk about the oceans and plastic pollution as if it's someone else's problem but it's not. It's you, it's me, it's all of us.

No matter what job we do, where we live, or who we are”.

Dee Caffari, skipper of Turn the Tide on Plastic in the Volvo Ocean Race 2017-18

”



Together, we can turn the tide on plastic pollution. Imagine if you and all the other students from around the world who are reading this booklet change one plastic habit, for example by not using plastic bottles and bags. The collective positive impact of your efforts will be very positive for our ocean and planet!

How can we stop plastic pollution?

It's useful to know our own individual plastic footprint (that is how much plastic you use). Once we know this we can start to understand how much plastic we use and make choices that will help the planet.



Can you think of anything else you can use instead of plastic to help turn the tide on plastic pollution?

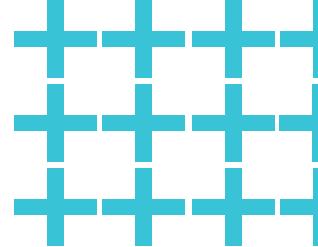
- Think about a regular week... How much plastic do you use? Plastic bags, plastic cups, plastic plates, sweet wrappers, food wraps, drink bottles... All of these contribute to your plastic footprint.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY

See Reducing Ocean Plastic Pollution worksheet 1.1 to help calculate your plastic footprint.

These plastics could potentially end up in the ocean if they are not disposed of correctly in the right recycling bin.

As we learned earlier, it is good to recycle if we have to use plastic but really it's best if we reduce the amount of plastic that we use, especially single-use plastic.



The R's

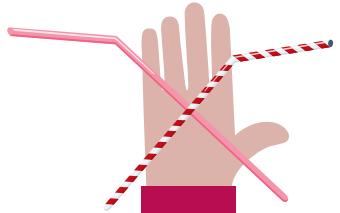


Here are some tips that will help you to reduce the consumption of plastic. These are known as the R's.



Rethink

The way you use plastic.
Do you really need it?



Refuse

Single-use and disposable plastic wherever possible. For example you can say no to a straw when you go for a juice.



Reduce

If it will leave behind plastic waste, don't buy it!



Reuse

Items that last. Choose glass, paper or stainless steel over plastic.



Recycle

What plastic items you can't refuse, reduce or reuse.



Do I really need this plastic item?



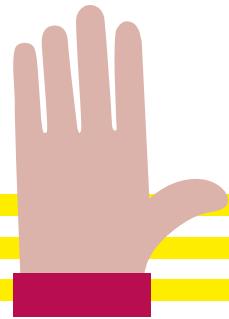
Rethink

When you are about to use a plastic item, stop! Think twice! Especially if it's something that you are only going to use once: a single-use plastic. Always reflect and think if there is something else you can use that won't cause harm to the ocean. Here are some items you can use instead of single-use plastic.

	Red Light (Bad)	Green Light (Good)
Plastic Water Bottle		
Plastic Bags		
Plastic Straws		
Plastic Toothbrush		
Plastic Cutlery		
Plastic Pens		
Plastic Helicopter		
Plastic Balloons		
Plastic Pouches		

NO THANKS!

Refuse



Try to refuse single-use and disposable plastic wherever possible. When offered just say 'No thanks'.

Examples of single-use plastic items that you can refuse:



Drinking straws



Plastic bags

Did you know that plastic bottles have chemicals in them? Chemicals from the plastic can seep into your drink in the bottle! Yuck!^e



Plastic bottles



Individually wrapped condiments



Plastic cutlery



Plastic cups and mugs for take-out juices and hot drinks

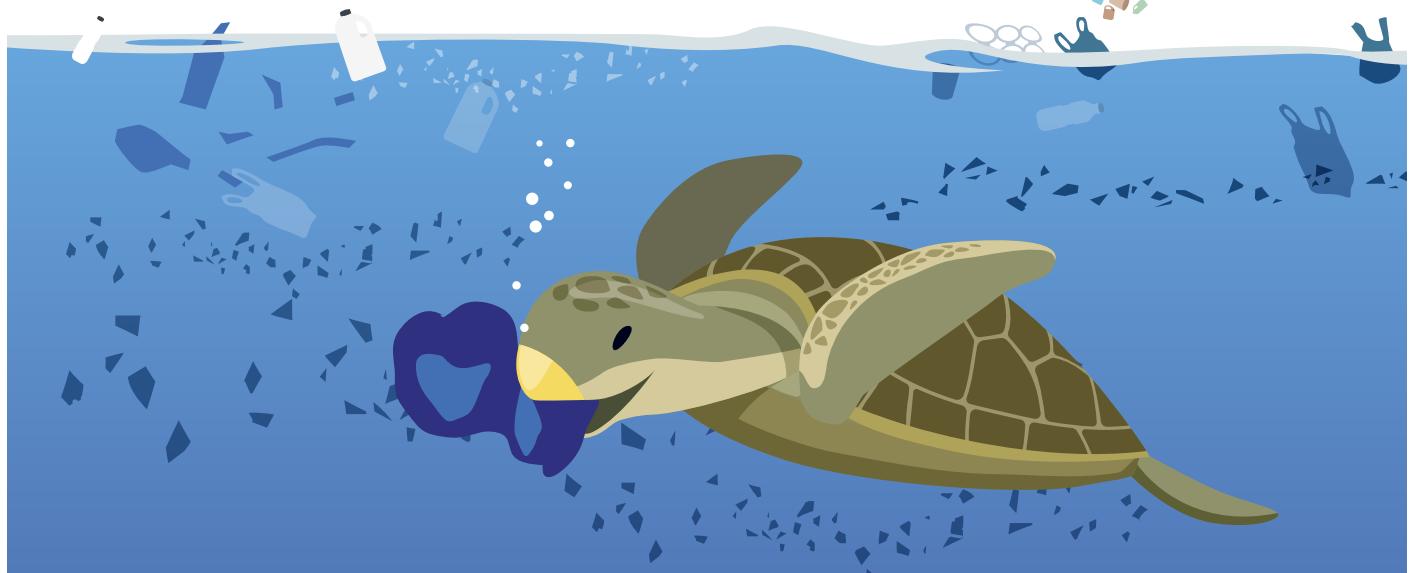


Foam containers from fast food producers and take away

A million plastic bottles are bought every minute around the globe. Most of these are not recycled and they end up in landfill and our ocean!^f

How to make your footprint smaller

Reduce



**Turtles can eat balloons if they end up in the ocean.
This makes them very sick or can kill them.**

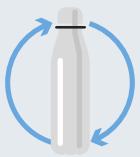
As well as all the actions in Rethink, the following steps will also help stop harmful plastics reaching our ocean.

- Don't release balloons or sky lanterns. These are usually made of plastic and often end up in the ocean.
- Don't use toothpaste or face and body scrubs with micro beads in them! Look out for big names and their codes like polyethylene (PE), polypropylene (PP) polyethylene terephthalate (PET) or polymethyl methacrylate (PMMA) on the ingredients list. These big names and codes mean there is plastic in the product so if you see them on the ingredients list at the back of the product container don't use or buy it.
- To prevent small micro fibres from your clothes entering the ocean you could choose to wear more natural materials like cotton and wool. If you do wash synthetic clothing you can use a microfiber catcher or laundry bags that can help reduce the amount of micro fibres that enter the ocean.

Reuse



Reuse



Reuse

Be creative and reuse plastic

If you already have plastic items at home there are lots of ways you can reuse them after you wash and clean them. They can become anything from useful household objects to creative art pieces!



Photo ©Pedro Martinez / Volvo AB

There are a lot of ideas on the internet. Here are a few to get you started:

- **Plastic juice cups or plastic yoghurt pots** – Storage pots for small items like hair clips or pots for growing plants.
- **Hard plastic containers** – Can be used to store food or for your school lunch or snacks.
- **Plastic bottles** – Reuse these for school drinks. Get help cutting bottles in half and paint them in your favourite colours to use as plant pots or as ways to keep pens and pencils organised. You can use the top of a cut bottle as a funnel to help pour water and not spill it! Be creative and make your own spaceship or floating boat from it!
- **Plastic bags** – Can be reused as shopping bags or storage bags, and there are lots of different items that can be made from them too. You can make a kite with some sticks, glue and string, you can braid plastic bags and make friendship bracelets, skipping ropes or woven baskets.
- **Plastic toys** – Give them to the local second-hand store so more children can have fun with old toys that you have outgrown.

Discover more exciting ways of re-using plastic in [My Positive Plastic Footprint](#)

|||| Last but not least... Recycle! ||||



As mentioned in **Topic 2** recycling is a good idea but it is not the answer to all our ocean plastic pollution problems. This is because very little of the overall plastic produced globally is actually recycled.

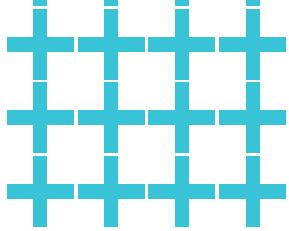
It's important to know the different types of plastic and which types can or cannot be recycled in your recycling bins.

Remember that the best solution is to avoid single-use plastic.

Recycled plastic can be made into something new, like new plastic bottles, carpets, fleece jackets, sleeping bags, skateboards and rucksacks!

Nearly 60% of the rubbish that ends up in a household dustbin can be recycled! Instead it ends up in a landfill!⁹





Reach for the skies and the oceans

Now you know about ways to reduce the plastic pollution in the ocean, starting today you can make a change. By taking action you can certainly help, whereas doing nothing will contribute to ocean plastic pollution.

There are lots of great people, young and old, standing up for our ocean around the world, creating small and big changes for a cleaner ocean. Do you want to be one of them?



Melati & Isabel co-founders of the youth movement Bye Bye Plastic Bags. Credit: Bye Bye Plastic Bags

Two sisters Melati and Isabel, aged 10 and 12 years old, set up a group called Bye Bye Plastic bags in Bali, focused on banning plastic bag use in their country. It's become such a popular idea with boys and girls your age around the world that more Bye Bye Plastic Bags groups have been set up in lots of other countries. Find out what's going on in your country!

More amazing champion stories

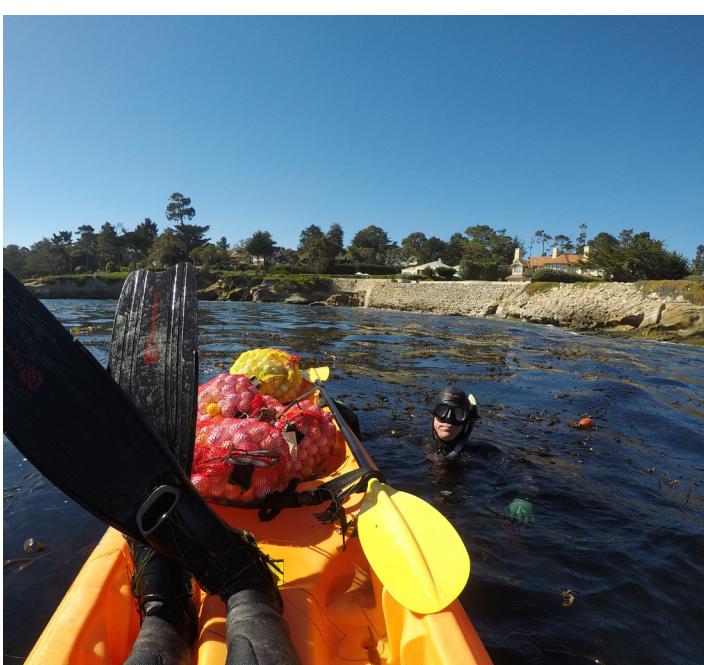
Afroz Shah, a young man in India, lived by the sea as a child and loved to visit the beach. He went to the city to study for some years and when he came back home he saw his beach was covered in rubbish. He couldn't even see the sand! He and his 84-year-old neighbour set about cleaning the beach.

Their work turned into the largest beach clean in the world! Hundreds of people helped them and after over a year of cleaning the beach they had removed tons of rubbish, and Afroz could see the sand on the beach again!



Photo © UNEP

For all his hard work in helping clean the ocean and inspiring people to make a difference, Afroz won the top United Nations Environmental award - Champion of the Earth in 2016.



Alex and her dad snorkelling for golf balls. Credit: The Plastic Pick Up

Two teenagers from the USA, Jack and Alex who love snorkelling and the ocean found thousands of golf balls under the ocean on their favourite beach. The balls were coming from a nearby golf course and breaking down into microplastics. They collected over 9,000 golf balls and started the group The Plastic Pick Up. Since then Alex has been snorkelling lots with her Dad and has removed over 50,000 golf balls!



Help Wisdom to Turn The Tide on Plastic!

These people show us that we can make a big difference by taking small steps. Start today, follow the R's, help keep the ocean clean and become one of The Ocean Race Champions for the Sea.

Wisdom and her friends will be very grateful if you stand up for their home. Now go to Wisdom's Worksheets, take the Champion's Challenge and become one of The Ocean Race Champions for the Sea!

Topic 4 has lots more information on amazing ways plastic is being reused so it doesn't end up in the ocean. Be sure to check it out and see if you can come up with any other great ideas!

Make a checklist of 2 or 3 things you are going to start doing today to help stop ocean plastic pollution. Share with your friends and family and encourage them to make a list too!

To find out lots more and follow the The Ocean Race check out www.learning.theoceancrace.com

Marine biologist and ocean advocate Lucy Hunt created this education programme.

All education resources copyright © The Ocean Race

Interesting words

Disposable: an object made to be thrown away after one or several uses.

Micro bead: is a small plastic bead that is less than 1 millimetre in size and often 100,000's of them are found in face and body scrubs or toothpaste.

Micro fibre: is a material that is mainly man made from a type of plastic, used in clothes and fabric production and can leak into our waterways and ocean

Plastic consumption: use of plastics.

Recycle: to make something new from something that has already been used.

United Nations: a global organisation that works with countries for a better world

References

^a Van Cauwenberghe, L., & Janssen, C. R. (2014). Microplastics in bivalves cultured for human consumption. *Environmental Pollution*, 193, 65-70.

^b Geyer et al. 2017 <http://advances.sciencemag.org/content/advances/3/7/e1700782.full.pdf>

^c Rochman, C. M., Browne, M. A., Halpern, B. S., Hentschel, B. T., Hoh, E., Karapanagioti, H. K., Rios-Mendoza, L. M., Takada, H., Teh, S., & Thompson, R. C. (2013). Policy: Classify plastic waste as hazardous. *Nature*, 494(7436), 169-171.

^d Stevens, E. S. (2002). *Green plastics: an introduction to the new science of biodegradable plastics*. Princeton University Press

^e <http://www.sciencedirect.com/science/article/pii/S0048969713004907>

^f<https://www.theguardian.com/environment/2017/jun/28/a-million-a-minute-worlds-plastic-bottle-binge-as-dangerous-as-climate-change>

^g<http://www.recycling-guide.org.uk/facts.html>