

This lesson will empower students to be able to take action on the marine plastic pollution problem.

First we learn about what science is doing to help answer questions about marine plastics. Then, we learn about advocacy and action that is occurring in Australia and globally to help reduce plastics.

SCIENCE ON PLASTIC

**THERE IS LOTS OF
RESEARCH ON PLASTIC
POLLUTION, WHICH
HAS INCREASED OVER
THE YEARS**



Marine plastic pollution is a huge environmental issue, one of the biggest of the past century.

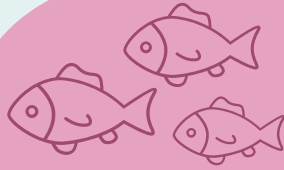
Due to this, lots of scientific effort has gone into researching plastics. Scientists are looking at how much plastic is in the environment, how it is getting there, where it came from, and ways to reduce it.

We need scientific information about the amount of plastic, before we can really begin to tackle solutions.

EXAMPLES



ONE RUBBISH
TRUCK OF PLASTIC
ENTERS THE OCEAN
EVERY MINUTE
GLOBALLY



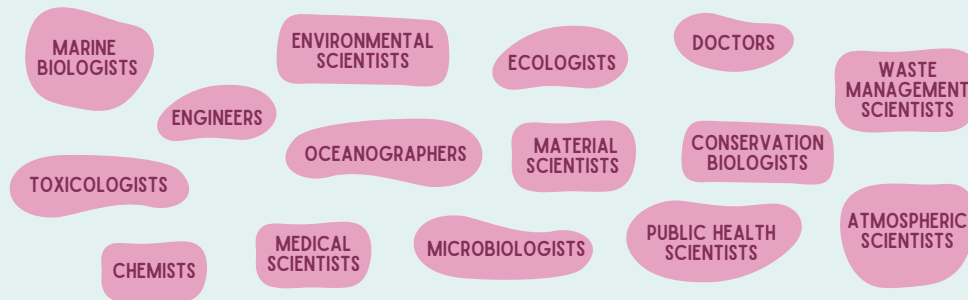
50% OF FISH IN
AUSTRALIA
HAVE PLASTIC
INSIDE THEIR
STOMACHS



MICROPLASTICS
HAVE BEEN FOUND
IN THE BLOOD,
LUNGS AND
BREAST MILK OF
HUMANS

Some examples of scientific evidence that shows the amount and source of plastic and microplastic.

WHAT TYPE OF SCIENTISTS WORK ON PLASTIC POLLUTION?



Marine debris and plastic pollution is a huge global crisis, so lots of different types of scientists are working to help find solutions.

Some examples include:

- Environmental Scientists who study the impact of plastic pollution on ecosystems and develop strategies for managing and reducing waste.
- Marine Biologists who focus on how plastics affect marine life, including health, behavior, and population dynamics.
- Chemists who analyse the chemical composition of plastics and the toxins they release into the environment.
- Ecologist who examine the broader effects of plastic pollution on ecosystems, food chains, and biodiversity.
- Waste Management Scientists who develop and improve methods for recycling, waste reduction, and sustainable disposal of plastics.

GROUP DISCUSSION

**WHAT TYPES OF QUESTIONS DO YOU
THINK SCIENTISTS SHOULD BE TRYING
TO ANSWER ABOUT PLASTIC
POLLUTION?**

Students here can work in groups or as a class to come up with the key questions that they think scientists should be trying to answer about plastic pollution.



GOVERNMENT

WHAT ACTION DOES THE GOVERNMENT TAKE TO REDUCE PLASTIC POLLUTION?

Governments take various actions to reduce plastic pollution.

Some of this action includes bans and restrictions for single use plastics, recycling, public awareness campaigns and creating laws.

LOCAL GOVERNMENT ACTION



PLASTIC BAGS

BAN ON SINGLE USE
LIGHTWEIGHT PLASTIC
BAGS



SINGLE USE PLASTIC BANS

CUTLERY, STRAWS, PLATES
AND BOWLS, COTTONS
BUDS & HEAVY WEIGHT
PLASTIC BAGS



WORKING ON

BREAD TAGS, COFFEE
CUPS, CONFETTI, FRUIT AND
VEG BAGS, TAKEAWAY
CONTAINERS

Every state and territory has a ban on single use lightweight plastic bags.

Most states have banned cutlery, straws, plates and bowls, cottons buds & heavy weight plastic bags.

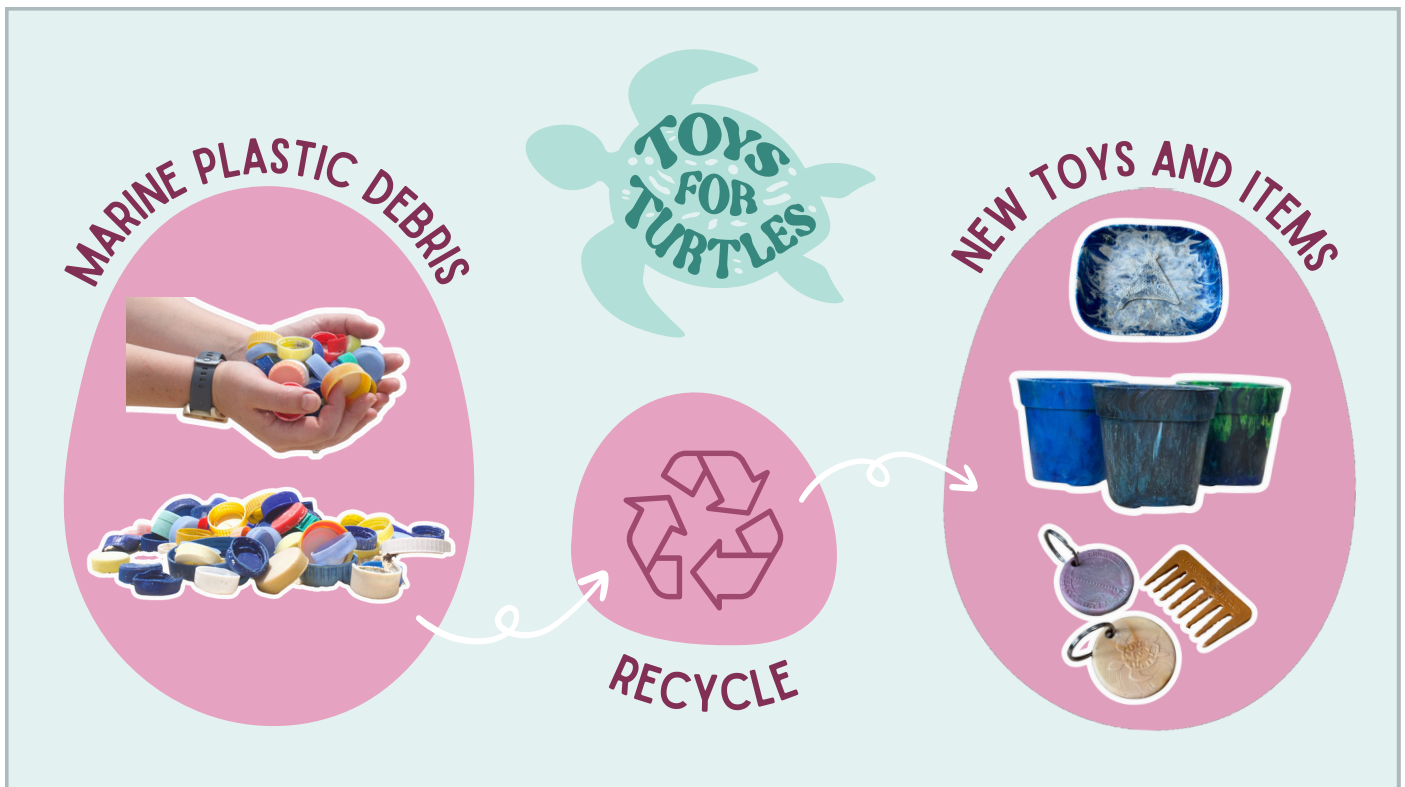
There has been some movement on banning bread tags, coffee cups, confetti, fruit and veg bags, takeaway containers. This is still in its early days and needs more focus.

YOUTH ACTION



This video can be played to provide another style of learning for the students. Audio will be required, however there are audio cues available. The video goes for 4 minutes.

https://www.youtube.com/watch?v=Er7AmyJzcEE&ab_channel=DohaDebates



An example of action that is being taken is the Toys for turtles a project which is helping to clean up the beaches around the North East Arnhem Land region.

Using special plastic recycling machines the project will create new toys and plastic recycled items for the community.

Turtles are one of the marine animals that are particularly impacted by marine plastics. So by helping to clean up the beaches around Arnhem Land we are saving the turtles from plastic pollution.

DISCUSSION POINTS

WHAT CAN YOU DO?

**HAS YOUR BEHAVIOUR TOWARDS
PLASTIC USE CHANGED SINCE YOU
BEGAN LEARNING MORE ABOUT IT?**

Students can take part in a group discussion to talk about individual actions that can be taken to help reduce plastics. This includes not just reducing individual plastic use but also advocacy and encouraging others.



Here we would like to circle back to the solutions that were introduced at the start of the presentation series.

What can we all be doing to help reduce the impact that plastic waste is having?

We can recycle - putting the bottles and recyclable items in the correct bins.

We can find plastic alternatives. Using a reusable drink bottle and reusable shopping bags are a great idea.

We can do research by completing beach clean ups and finding out what kind of plastic is present in our area.

We can stay educated by sharing the information we learn with others.

Reduce reuse recycle

PRACTICAL

**COMPLETE THE WORKSHEET ABOUT
SCIENCE AND ACTION**

Students can fill in the worksheet provided in the lesson pack