



Plastic and ocean life

Lesson plan: how plastic harms sea life, a hands-on entanglement challenge, a microplastic hunt and ocean hero stories



Ages	9 to 15
Time	60 to 75 minutes
Group	Up to 35 students
Where	Classroom, with sand or soil samples collected beforehand or on a short walk
You need	The slides, rubber bands, microplastic hunt kits, one record sheet and one story planner per student

What students learn

- The main ways plastic harms sea animals: tangling, swallowing and microplastics.
- How many species are affected, and why fishing gear is such a big part of the problem.
- How to look for microplastics in a sand or soil sample.
- That people are already fighting back, and how to tell their stories.

Before the lesson

1. One loose rubber band per student.
2. For each group: a cup of beach sand from the high-tide line or schoolyard soil, a clear jar or plastic bottle with the top cut off, water, a sieve or piece of old cloth, tweezers and a white plate or paper.
3. Print one **Microplastic hunt** record sheet and one **Ocean hero story planner** per student.

The lesson

- 1** **What washes up? 7 minutes, slides 1 and 2.** Ask what students think is most common. Many are surprised that cigarette filters contain plastic.
- 2** **Tangled 12 minutes, slides 3 to 5.** Share the numbers, then run the rubber band challenge. Talk about how it felt.
- 3** **Mistaken for food 5 minutes, slide 6.** Link to the food web: animals don't know plastic isn't food.
- 4** **Microplastic hunt 20 minutes, slides 7 and 8.** Groups run the hunt and fill in the record sheet. If you find nothing, that is a good result too, and worth recording.
- 5** **Ocean heroes 15 minutes, slide 9.** Students plan and start a short story using the planner. It can be finished for homework.
- 6** **Wrap up 3 minutes, slide 10.** Discuss one or two questions.

Answers and what to listen for

Microplastic hunt: results vary a lot between places. Beaches near towns and river mouths usually have more. Fibres are hard to see without a magnifier.

Making it easier or harder

- **Younger groups:** skip the microplastic hunt or run it as a demonstration, and draw the ocean hero story as a comic strip.
- **Older groups:** compare samples from two places, for example the high-tide line and the water's edge, and discuss why they differ.
- **Link:** MCP's beach clean-up guide explains how to run a clean-up with your class.

Safety and good practice

- Wear gloves when handling beach sand, and never pick up needles, glass or anything sharp. Tell an adult instead.
- Use loose rubber bands, and stop the challenge if anyone feels pain.
- Wash hands after the hunt.

Curriculum links

- **Science:** human impact on living things, sampling and sorting, materials.
- **English:** narrative writing.
- **Ocean Literacy Principle 6:** the ocean and humans are inextricably interconnected.

The teacher reading has the science behind every slide, with links to the sources.

Free to use and share for education. Made by Marine Conservation Philippines. More free lessons: marineconservationphilippines.org/resources/teachers-resources/ Photos by MCP. Updated September 2026.