

Can you clean the sea?

45 mins

Brownies

About this activity

Take our water clean-up challenge. Work in teams to remove as much pollution as you can from a batch of water. Whose water will be the cleanest?

Outcomes:

- Learn about water pollution
- Use enquiry skills and creativity to make a water filtration system
- Work as a team to solve a problem

You will need:

For each group:

- [Polluted waters image](#)
- Sand
- Fine gravel
- Cotton wool
- Coffee filter
- Pair of tights
- A 2 litre bottle, with the top third cut off and inverted into the bottom (cap removed) or a tube with a funnel and container below to catch the water

To make 'dirty' water:

- Water
- Oil
- Vinegar
- Small pieces of litter
- Leaves or grass
- Soil
- Marbles or similar small item
- Salt or spices

Can you clean the sea?

Our seas are full of litter and harmful chemicals.

Pollutants, including plastic, chemicals and bacteria, travel from our towns and cities to our seas, where they join pollution from activities that take place in our ocean, like oil exploration and fishing.

Part 1 Polluted sea

Use the picture of the ocean in the [Polluted waters image](#) to prompt a conversation about ocean pollution. Some pollution is visible, like plastic and litter, waste from fishing boats or oil spills. Other ocean pollution can't be seen easily, like chemicals, microfibres from clothes, and bacteria.

Talk about how ocean pollution can affect animals and people.

Part 2 Cleaning water

1. Make a batch of 'dirty' water. Add a range of materials, such as oil, vinegar, soil, bits of litter, leaves or grass, marbles or a similar-sized item, and a handful of salt or spices to water.
2. In small groups, try to clean the water using the materials you've been given. Layer the filtration materials in the neck of the bottle or funnel. Pour the dirty water into the bottle so that it runs through the filtration materials.
3. Try different combinations of materials. Which works best? Which group's water was the cleanest?
4. Talk about how clean the water really is. What was removed easily by filtration?
5. Think about organisms that are too small to see and those that have been dissolved. Have those been filtered?

Part 3 Take it further

1. Engineers are working on technologies to try to clean up the ocean. You could research some of these solutions, like the Ocean Cleanup Project. The best solution to the pollution problem is to stop it at its source. 80% of litter in the ocean comes from the land. Litter finds its way into rivers and is transported to the ocean, or it's washed into the sea from the beach. Could you carry out a litter pick or beach clean? Visit our [website](#) for guidance on organising a litter pick with your group.
OR
2. 70% of litter in the ocean is made of plastic. Could you reduce the amount of plastic you use? Our [Plastic-free party](#) activity will help you plan a celebration without any single-use plastic.
OR
3. Every time clothes are washed they release thousands of microfibres. These are too small to be filtered from washing machines and end up in rivers and seas. Use our [Stop ocean threads](#) activity to take action to reduce microfibre release.

Polluted waters

A lot of the ocean is polluted. What pollution can you see? What isn't visible?



Credit: Lidya Nada