

Weird Science: Clean the Ocean

You'll Need:

- ◆ Bin of Water
- ◆ Cleaning supplies (plastic fork/spoon, plastic cups, foil, coffee filters, cotton balls, sponges, ziplock bags, etc.)
- ◆ Water "pollutants" (canola oil, cocoa powder, flour, coffee grounds, shredded paper, dirt, glitter, Styrofoam pieces, plastic pieces, etc.)
- ◆ Fake "money"

The Problem:

Take a minute to think about all the amazing creatures and plants that call the ocean home! What is your favorite ocean creature? These ocean creatures homes are being threatened by pollution in the ocean. Do you know what **pollution** is? What kinds of pollution do you think get into the ocean? Where do they come from? Pollution gets into the ocean many ways! Trash and harmful chemicals can get washed into rivers and streams and carried all the way out to the ocean where ocean currents take them far from land. Oil and other chemicals can be spilled or leak into the ocean. All these pollutants can harm or kill the plants and animals that call the ocean home! Check out some of these books at the library or some of these videos about pollution in the ocean!

Books:

- *Little Turtle and the Changing Sea* by Davies Becky
- *The Tale of the Whale* by Karen Swann
- *The Last Straw: Kids vs. Plastics* by Susan Hood
- *What a Waste: Rubbish, Recycling, and Protection our Planet* by Jess French
- *Plastic, ahoy!: Investigating the Great Pacific Garbage Patch* by Patricia Newman
- *Tracking trash: flotsam, jetsam, and the science of Ocean Motion* by Loree Griffin Burns

Videos:

- [What Really Happens To the Plastic You Throw Away—Emma Bryce](#)
- [Why the Ocean?—One World One Ocean](#)
- [What is Plastic Pollution—Peekaboo Kidz](#)
- [How Bit The Great Pacific Garbage Patch Really Is—Science Insider](#)

How do you feel about pollution in our oceans?

Investigate:

The best thing is to make sure garbage and pollution doesn't end up in the ocean to begin with! But what happens once it's out in the water? Today we're going to think about how we can clean up the oceans!

1. Form a team of scientists/engineers. Find 1-3 people near you that you want to work with to clean up your patch of the ocean.
2. Each group will get a large bin of "polluted" ocean water, littered with pieces of garbage and other pollutants that have washed out to sea. Take a minute to look at your ocean. What pollutants do you recognize? What are your thoughts? Compare it to your clean sample of ocean water. Your challenge will be to get your ocean as clean as possible using the provided supplies.
3. Take a look at the provided cleaning tools. You have 5-10 minutes to brainstorm how you'll use the tools to clean the ocean water. But there's a catch! Cleaning the ocean is very expensive so each of these tools has a price and each team has only a certain amount of money to spend.
4. After the brainstorm time finishes, purchase your tools and get cleaning! You may only use your purchased supplies but if you have extra money midway you can buy more!
5. You have 20-30 minutes to get your water as clean as possible.
6. Give a sample of your water to the head scientist. Compare each group's water. Which is the cleanest? What materials were the easiest to clean out? Which was the hardest? What was the most successful method you found? Who got their water cleanest for the least amount of money?

*How do you think real scientists and engineers
could clean our oceans?*