

PLASTIC POLLUTION

AGES

Children 6+ years

PROGRAM DESCRIPTION

A program about the human impact on our waterways and oceans due to the global plastic trash crisis. Globally, plastic is the most abundant type of marine litter. Plastics are so abundant because they take so long to break down. Begin a discussion about what we use and dispose of that is plastic, i.e. straws, plastic cups, shampoo bottles, flip-flops, toys, pens, etc. Discuss microplastics, which include toothpaste, makeup, fleece, etc. Microplastics are small (less than 5 mm in diameter) but deadly to marine life. Activities adapted from “Talking Trash & Taking Action” by the Ocean Conservancy & NOAA Marine Debris. Suggested runtime: 30 min per activity.

MATERIALS AND PREPARATION

Activity #1: Plastic Breakdown

Materials:

- ½ sheet of scrap paper per participant

Children rip paper into tiny pieces until they can't be made smaller. Explain that this activity mimics how plastics break down in the ocean and other waterways. The tiny pieces of plastic that break down from larger ones are called microplastics, which are very harmful to marine life that ingests the plastics.

Activity #2: Trash Travels

Materials:

- Bowls or pie tins (1 per person)
- Spoons (1 per person)
- Lightweight breakfast cereal
- Water



Image source: Joelle Wake of Whiting Public Library, Whiting, IN

ADAPTATION:

For teens/adults, hold a plastic-free spa day by making natural scrubs from coconut oil, sugar, and salt, and/or face masks from honey and bananas.

TIP:

For a teen/adult plastic upcycling project, see also Plastic Bag Pot Craft on page 52.

Discuss how currents are important because they carry nutrients and organisms (like Crush from Nemo!) across the oceans. You can show current maps or have participants draw currents of maps. Then show a picture of the Great Pacific Garbage Patch.

Assembly:

- Fill each bowl $\frac{3}{4}$ with water, or have children do this themselves.
- Add $\frac{1}{4}$ cup of cereal (marine debris) to the water.
- Using the spoon, stir the water for 10 seconds near the edge of the bowl.
- Remove the spoon and observe what happens to the “marine debris.” Most of the debris (cereal) accumulates in the center of the bowl because it follows the current. Some other debris gets caught in another current and gets sent to the edge (shore/beaches).

Activity #3: Food or Foe

Materials:

- Vanilla pudding cups (1 per person)
- Small bowls (1 per person)
- Gummy bears (8 per person)
- Gummy worms (2 per person, precut into quarters)
- Spoons (1 per person)
- Napkins
- Sprinkles

Children replicate how marine debris is mistaken for food and ingested by marine wildlife.

Assembly:

- Add vanilla pudding to a bowl and mix in 2–3 drops of blue food coloring.
- Rinse and keep the empty pudding cup to upcycle it into a craft!
- Add quartered gummy worms and bears to the pudding.
- Add a spoonful of sprinkles to each bowl.
- One everyone has their “ocean” bowl, a spoon, and a napkin, tell them that they are sea turtles and are going to eat jellies.



Image source: Joelle Wake of Whiting Public Library, Whiting, IN

- Give children 20 seconds to collect as many jellies as they can using ONLY their spoons. Have them add the food onto the napkin. Tell participants not to eat anything yet!
- Look at what they collected. Explain that both the gummy bears (“food”) and worms (“plastic”) look very similar in the pudding, just like how plastic in the ocean looks to marine animals. If they have any sprinkles they have also ingested microplastics.
- Now they put everything back in the bowl and eat their ocean plastics.

Activity #4: Upcycled Jellyfish Pudding Cup Craft

Materials:

- Recycled pudding cups (1 per person)
- Googly eyes (1 per person)
- Recycled bubble wrap in 14–16” long strips (6–10 per person)
- Colored ribbon in 14–16” long strips (5–7 per person)
- Tape & glue
- Something sharp to put a hole in the pudding cup

To prepare, solicit recycled materials before the program. Cut strips and poke holes in the pudding cups before the program, or let older children do this themselves.

Assembly:

- String a piece of ribbon through and tie a knot on the inside of the cup, so it won’t pull through.
- Tape bubble wrap and ribbon strips to the inside of the cup.
- Glue googly eyes on the front of the pudding cup.



Image source: Joelle Wake of Whiting Public Library, Whiting, IN

TIP:

In the spirit of reducing plastic waste, be sure to use recycled materials for your jellyfish.

RESOURCES

Web

Video about plastic pollution from Oceana: <https://bit.ly/3oUAWwv>

What happens to the plastic you throw away from TED-Ed:
<https://bit.ly/3wE0Oyh>

Books

Non-fiction

Plastic Sea: A Bird's-Eye View (2020) by Kristi Blom and Geir Wing Gabrielson (children's)

Plasticus Maritimus: An Invasive Species (2020) by Ana Pego, Isabel Minhós Martins, and Bernardo P. Carvalho (children's)

The Last Straw: Kids Vs. Plastics (2021) by Susan Hood and Christiane Engel (children's)

Cast Away: Poems for Our Time (2020) by Naomi Shihab Nye (children's/YA)

Kids Fight Plastic (2020) by Martin Dorey and Tim Wesson (children's)

Taking on the Plastics Crisis (2020) by Hannah Testa and Ashley Lukashevsky (YA)

Fiction

Seagull Sid and the Naughty Things His Seagulls Did (2019) by Dawn McMillan and Ross Kinnaird (children's)

Stella Diaz Never Gives Up (2020) by Angela Dominguez (children's)

The Party's Over! Plastic Pollution Must End (2020) by Scott Andrew MacNeil Bernier (YA)