

Microplastics Awareness Activity

Written by Laura Tiu, Florida Sea Grant; this lesson is adapted from activities learned from other educators

This is a simple hands-on activity where students will pretend to be a marine animal of their choice and will experience the difficulty of feeding only on their food source when plastics are also present in their environment.

Supplies:

- 1 plastic container (approximately 12x8 inches) with a lid for easy storage
- One small cup per participant
- One set of tong per participant (can also use spoons)
- 5 lbs. white rice, which represents the edible food
- 1 lb. brown or green lentils, which represents the microplastics
- Optional – minute timer, coffee filters, calculator



The image on the left demonstrates the set up of supplies, and the image on the right shows two students engaged in the activity.

Activity:

Ask kids to pick what they want to be; a baby fish, baby turtle, or baby seabird. Tell them that they are hungry and their food is the rice “floating” in the ocean (container). Unfortunately, there is also a lot of plastic (lentils) that has made its way into the ocean and is also floating in amongst their food source. Their job is to use their mouths (tongs) to put their food (rice) in their stomachs (cups), trying to avoid the plastic.

Modifications:

Time the activity. Allow 30 seconds or 1 minute to feed. This forces the students to eat fast and will ensure they get some plastic. If you have a large group, have them work in small groups of 2-3 per session at each container, with each participant having a set of tongs (or spoon) and cup.

For older kids, have them pour their “stomach contents” into a coffee filter and take it back to their desk. Ask them to count how many pieces of plastic and how many pieces of rice they had. Next, they can calculate the percent plastic in their diet by dividing the number of lentils by the total number of lentils and rice. For this activity, it was decided that if the percentage was over 20%, it resulted on mortality. This can be difficult if students collected a lot of “food,” so you may have to let them estimate how much rice and just count the plastic (lentils).

Discussion:

Reinforce the idea that many microplastics look just like food to small fish, turtles and birds. These microplastics may also get covered in algae and other biofouling and also smell like their food. When these animals eat the plastic, it can make them sick or even kill them; this is why it is important to keep plastic out of the environment.