

OCEANS CHALLENGE | TEACHER GUIDE



Activity Overview:

In this activity, students will pledge to reduce or eliminate their use of one plastic object. In their Change is Simple lesson, students learned about ocean pollution and bioaccumulation. In an effort to help combat these issues, they will take action to reduce the impact they personally have on ocean pollution. Once they've written their pledge, they will then track their usage of that object for one week.

Prep Time: 10-15 minutes

Activity Duration: 30-45 minutes

STANDARDS ALIGNMENT

Common Core

- *W.3.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.*

NGSS

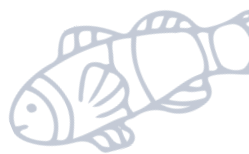
- *5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.*

MA Comprehensive Health

- *5.7.CE.6: Use accurate information when discussing environmental health issues (e.g., littering, deforestation, recycling, climate change, clean water) that impact people's health. [HE]*

MATERIALS NEEDED

- *Pledge templates*
- *List of common ocean pollutants*
- *Writing materials*
- *Coloring materials*
- *Student computers*





BACKGROUND INFORMATION

Ocean pollution is the collection of trash and debris in the ocean. Given that the average American throws away 185lbs of plastic trash every year, it's not surprising that over 90% of ocean debris is plastic waste. Plastic does not biodegrade, but instead becomes brittle due to salt water and UV light exposure. Eventually, plastics that enter the ocean from land photodegrade into microplastics that sink and ultimately end up in the ocean food webs. Animals are not equipped to digest the microplastics, so the plastic pieces and associated toxins build up in their bodies. Microplastics accumulate up the food chain, meaning that the highest concentrations of plastic contaminants are found in predatory animals, not the animals that eat the plastics directly. This phenomena is called bioaccumulation. Bioaccumulation of plastics and chemicals is a potential risk for humans due to the modern seafood diet.

INSTRUCTIONS

1. Go over the activity overview with your students. It's important to explain to the class that the object they each pick should be something they already use often and want to use less of!
2. Provide students with the list of objects they could choose for their pledge challenge.
3. Have students fill out their pledge template. Students will have to choose their favorite ocean animal to draw a picture of on their pledge poster. This is the animal they are protecting by cutting back on their plastic usage.
4. Either collect posters or have students store their posters in a safe place.
5. At the end of the day for the following school week, have students track on their pledge poster how often they used the item they pledged to cut back on.
6. At the end of the week, have students find how many times they used their pledge item. Then, have students display their pledges outside of the classroom to encourage others to do the same.





COMMON OCEAN POLLUTION

1. Paper towels
2. Plastic bags
3. Styrofoam
4. Aluminum
5. Disposable plastic bottle
6. Plastic utensils
7. Wet wipes
8. Food wrappers
9. Straws
10. Grocery bags
11. Bottle caps/cup lids
12. Disposable cups/plates/lunch trays





I PLEDGE TO USE FEWER _____

This will help reduce ocean pollution by...

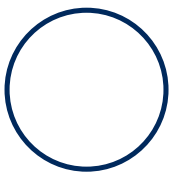


HERE'S WHO I'LL BE PROTECTING!

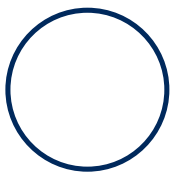
INSTEAD OF USING THIS OBJECT,
I CAN USE...

- _____
- _____
- _____

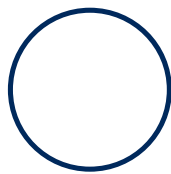
HERE'S HOW MANY TIMES I USED MY OBJECT THIS WEEK:



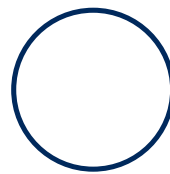
DAY 1



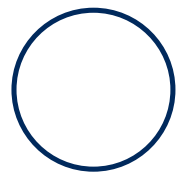
DAY 2



DAY 3



DAY 4



DAY 5

