

SINK or FLOAT – Where does Ocean Plastic Go?



Whether it sinks or floats, plastic in the ocean is extremely dangerous for ALL marine animals. Animals can get tangled in it or mistake it for food. The type of plastic that animals may encounter in the ocean depends upon where they spend their time living and feeding – on the surface or on the sea floor.

INVESTIGATE:

Where does plastic go when it enters the ocean? Does it sink or float? Let's find out!

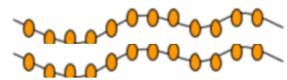
- 1. Build an ocean model.** Fill a container with water. You may add a bit of salt to make your model more realistic, but this step is not necessary.
- 2. Make a prediction.** Do you think the plastic items will sink or float in the water? In the table below, describe each item and make your prediction.

How do I know if it will SINK or FLOAT?

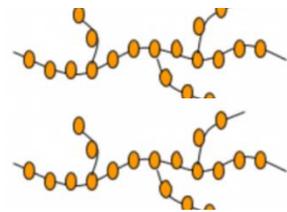
One factor that determines if an item will sink or float is **density**. If an object is heavy and compact (like a brick), it has *high* density. If it is light and takes up lots of space (like cotton candy), it has *low* density.

Plastic is made of long teeny-tiny strands. If the strands lie tightly against one another, the plastic will be hard and dense (like a pipe). If the strands are branched, the plastic will be stretchy and less dense (like a bag). High density plastic typically SINKS and low density plastics FLOATS.

Strands close = hard, dense plastic that **SINKS**



Strands branched = stretchy, airy, less dense plastic that **FLOATS**



- 3. Test your Prediction.** One by one, submerge each item into the water making sure that no air bubbles are trapped beneath it. Wait a moment and then record your results.

| Plastic Item | Plastic Description: Is it hard, stretchy, airy? | Prediction: Will it Sink or Float? | Results: Did it Sink or Float? |
|--------------------------|---|---------------------------------------|-----------------------------------|
| Plastic Bag Fragment | | | |
| Plastic Bottle Fragment | | | |
| Plastic Straw Fragment | | | |
| Plastic Spoon Fragment | | | |
| Styrofoam Packing Peanut | | | |



Image: Lantern Press.

CONNECT:

Answer the questions based on your Results and this Pacific Northwest Marine Life Poster

1. Which 3 items floated?

2. What animals might encounter these items while living or feeding near the surface?

3. Which 2 items sank?

4. What animals might encounter these items while living or feeding near the bottom?

5. Do you think that an item that floats can eventually sink? How?

TAKE ACTION!:

Great news! We can all take actions to keep trash out of the ocean and protect wildlife!

1. **Use a garbage can!** Wind and water can carry trash to the sea. Make sure garbage stays in the can and doesn't spill out. And of course, don't be a litter bug!
2. **Participate in a trash cleanup!** Check out Washington CoastSavers for local cleanups or organize your own using Ocean Conservancy's Do-It-Yourself Cleanup Kit or PSI's Cleanup BINGO sheet.
3. **Choose to reduce and reuse!** Reduce single-use plastics by carrying your own re-usable water bottles, mugs and bags. While you're at it, why not skip the straw, too!?

ENGINEERING SOLUTIONS:

Check out these amazing engineering solutions that keep trash out of the ocean!

Mr. Trash Wheel in Baltimore, Maryland: <https://www.mrtrashwheel.com/>

The Ocean Cleanup: <https://theoceancleanup.com/about/>