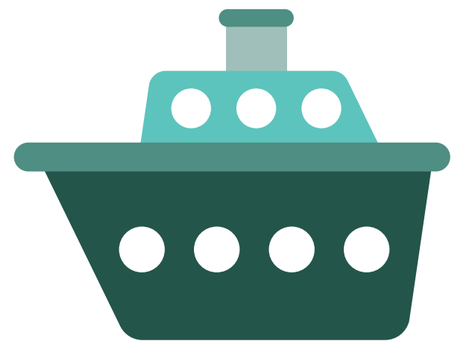
MOST*

The World's Smallest Boat

Materials

- Bread clip
- Toothpick
- Soap or detergent
- Water
- Takeout container



1. Fill the container with water.
2. Place the bread clip at one end of the container.
3. Place a drop of the soap or detergent on the toothpick.
4. Drip the soap in the circular hole of the clip and watch it zoom away.
5. How many times can you do this before you have to replace the water? Repeat and see if you can get the boat clip to go faster.

Variations

What happens when you change the shape of the bread clip by using nail clippers, such as an arrowhead, square, circle, etc. Is there a design that works the best? What if you used different liquid, like milk? Try using food coloring or different colored soap?

The Science Behind It

Water molecules are strongly attracted to one another. The attraction is so strong that you are able to overfill a glass to above the rim. The phenomenon is called **surface tension**. The water molecules are attracted to the soap/detergent molecules and race across the surface to the drop. The surface tension is then decreased across the water, making the clip boat propel forward.