

Whitney Water Center Learning from Home

Episode 14: Displacement

Introduction

Do you ever wonder why the water in the bathtub gets higher when you get into the tub? That's displacement! It is also visible when ice is placed into a glass that already has water in it. *Displacement* happens when an object is put into the water; it pushes the same amount of water out of its way. The larger the object, the more water is displaced from the container. It's the reason why a bar of soap dropped into a full tub doesn't make it overflow, but when you climb it, the water might get close to the top or even spill over the edge.

Experiment 1:

Materials

- Water
- Marbles
- Small bowl or plate

Link to video

Facebook: <https://www.facebook.com/scctrwa/videos/2685458548445461/>

YouTube: <https://www.youtube.com/watch?v=a6b2MvFBX-s>

Estimating Buoyancy

1. Create a boat from a piece of foil.
2. Estimate how many marbles (or other like objects) your boat can hold and stay afloat.
Record your estimate on the table below.
3. Add marbles one at a time until the boat sinks.
4. Record your results on the table.
5. Redesign your boat and repeat the experiment!

Draw your Boat	Estimated number of marbles	Actual number of marbles

