Whitney Water Center Learning from Home

Episode 11: Water and Density

Introduction

Even though salt water and tap water look the same, they are not the same density. *Density* the measure of mass compared to its volume. For example, one cup of feathers is much heavier than one cup of rocks; the rocks are denser than the feathers. We will see through experimentation that salt water does not have the same density as tap water.

Experiment 1: Do salt water and tap water mix?

Materials

- Empty container
- Food coloring (2 different colors)
- Table salt
- Two separate containers of water
 - o Salt water
 - The salt water solution can be prepared ahead of time by mix one part table salt with four parts tap water. Mix well; most of the salt should dissolve into solution.
 - Add food coloring
 - o Tap Water
 - Add food coloring (different from the saltwater)

Link to video

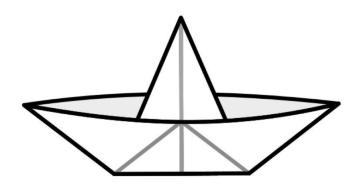
- Facebook: Please view on YouTube
- YouTube: https://www.youtube.com/watch?v=rd2iwyxSmuc



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





Regional Water Authority Tapping the Possibilities"