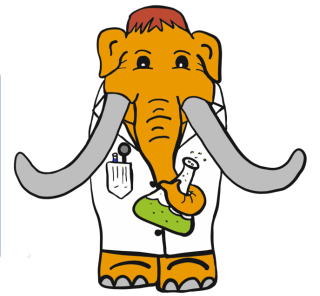


Science Saturday @ Home

Testing Salt Water Density



Gathering Supplies:

Salt Clear Glass

Water Spoon

Measuring Cup and Spoon (1 Cup and 1 tsp)

1 Grape (and 3-4 other small items)

Paper Towel

How To Steps:

Experiment with adding salt to water to see what you can make float!

1. Collect your grape and other items (Max used a large wooden bean, small marble, and plastic dice). A piece of paper to record your results with and tracking how much salt you added would make this more of an experiment!
2. Put 1 Cup of water into your glass. Then drop each of your items into the glass to see if any of them float. Use your spoon to take the items back out of your cup. Make a table on your piece of paper where you can mark if an item sank or floated.
3. If any of your items float, record that on your table. In Max's experiment the wooden bead was the only item to float in regular water.
4. Add 2 tsp of salt to your glass and stir until you cannot see the salt crystals. Remember to keep track of how much salt you are adding to your glass.
5. Drop each of the items that sunk in plain water into the salt water solution. Do any of them float now? If so make sure to mark that on your table.
6. Then repeat, but this time add 3 tsp of salt. You can keep going to see how concentrated you need to make the salt water to get other items to float. Some items may just have a higher density than the salt water and will keep sinking. This isn't a failure it is just part of the experiment!

Max Experimenting With Salt Water Density



Max decided to add a smaller plastic die to his test after he got the grape to float.

**After 15 tsp of salt were added to Max's glass and his trunk got tired of stirring he decided that his results showed that the large plastic die and the marble were denser than the salt water solution so they did not float!

Did You Know?

This experiment uses density, but what is density? Density is how much stuff or mass is in an object. If there are two objects of the same volume but one has more mass in it, then it will have a higher density than the other object. Think of a sugar cube and a metal cube. They may be the same size and have the same volume but the metal cube will have a higher density than the sugar cube because the molecules that make up the metal are packed closer together. If you look closely at the sugar cube you can probably see tiny air pockets between the sugar crystals. When an object is denser than the liquid it is put into, it sinks. If the liquid has a higher density than the object, the object will float on top of the liquid.

One of the saltiest bodies of water in the world is the Dead Sea, a salt lake, on the border between Jordan and Israel. It is located in a desert with only one freshwater river feeding it. The water evaporates faster than it comes into the lake making the salt content of the water higher. This makes the water very dense, and it has become famous for people being able to very easily float when laying on top of the water. There is so much salt in the water of the Dead Sea that nothing can live in it, which is how it got the name Dead Sea.