



SINK OR FLOAT

Salty Seas and Density

Some scientists estimate that if we could take all the salt from the oceans and spread it in an even pile across the surface of the entire earth, it would form a layer more than 500 feet deep!

The saltiness in the water is caused from minerals (including sodium chloride, which we call table salt) entering the ocean through runoff. Runoff is rainwater that is not absorbed into the ground but instead flows over land and into streams and rivers. As it moves over the ground, it dissolves (breaks up) the minerals in the rocks and soil. When the rivers flow into earth's oceans, all that salt is emptied into the sea.

Ocean water can also gather salt if it seeps in through the ocean floor, where it is heated by magma (hot, liquid rock). The hot water dissolves minerals from rock in the oceanic crust. Hydrothermal (hi-drow-THUR-mul) vents on the ocean floor eventually push the hot, salty water back into the ocean.



I'm **Mr P.**, the host of *Unlocking Science* on Answers TV. Let's have some fun as we investigate God's amazing creation.

Let's do it!

What You'll Need

- Four clear 8 oz. cups
- Water
- 2 Tablespoons salt
- 2 Tablespoons sugar
- 2 Tablespoons baking soda
- Tape
- Marker
- Blueberries, small grapes, or raw eggs





Let's Experiment!

You may have noticed that it's much easier to float in the ocean than in a swimming pool. Why? Salt! Saltwater has a higher density than freshwater, which means the same amount is heavier, so things that would normally sink can float. Let's experiment with density!

What to Do

- Fill your cups about three-fourths full of water.
- Mix salt into one cup, sugar into the second cup, and baking soda into the third cup. There should be enough that you can see a little extra on the bottom of each cup. The fourth cup should be plain water. Label your cups with the tape and marker.
- Drop an egg or a handful of blueberries or grapes in each cup and observe what happens.

Are Salty Seas Proof of Creation?

The amount of salt in the seas is always growing. If the earth were billions of years old, as evolutionists believe, the ocean should be much saltier than it is today. In fact, the seas would be too salty for any creature to survive. But the oceans are swimming with life! Instead, we know that God created the oceans on day three of creation week, about 6,000 years ago.

Fun Facts

- » The earth is made of 70% water. Around 97% of that water is saltwater.
- » Many fish have an organ called a swim bladder. They can inflate or deflate the bladder to rise or sink in the water.
- » The Dead Sea in the Middle East is so salty that it is impossible for a person to sink in it.

