Look Who Lives in the Ocean!
Saltwater vs. Freshwater Science Projects
(for young students)

You will need: two clear 16-ounce glasses, granulated salt, two racket balls and food coloring.

Have you ever been swimming at the beach and had ocean water accidentally get into your mouth? Why does seawater taste salty? When we drink a glass of bottled or tap water, it's freshwater—but the ocean is a giant body of saltwater. In fact, some people estimate that if you could remove all the salt from the ocean and spread it across Earth's land surfaces, the salt would be over 500 feet tall! That's a lot of salt! But saltwater is different than freshwater in more than taste, as the following experiments will show.

The Ol' Disappearing Salt Trick
Saltwater is made by dissolving salt into freshwater.

Place two glasses side by side. Label them #1 and #2. Pour 8 ounces of tap water into each glass. In glass #1, add 1 tablespoon of salt and stir. What happens to the salt? Discuss the results.

Compare & Contrast
Observe saltwater and freshwater side by side to consider their appearances.

Be sure the salt is completely dissolved into the water. Look at the salt water in glass #1 next to the freshwater in glass #2. Is there a difference? Discuss the results.

Whatever Floats Your Boat
Saltwater is denser than freshwater because it has all that salt in it. And the denser a liquid, the better objects tend to float on top of it. So, a boat will float higher in the ocean (saltwater) than it will in a lake (freshwater).

Place one racket ball into each of the glasses. Does the ball float higher in glass #1 (saltwater) or glass # 2 (freshwater)? Add more salt to glass #1 and try again. Any change? Discuss the results.

Layering Water
Since freshwater is less dense, it will actually float on top of saltwater.

Leave the racket ball in glass #1 but remove it from glass #2. Add a few drops of food coloring to glass #2 and stir. Slowly pour some of the colored freshwater onto the racket ball in glass #1 (the ball keeps the waters from mixing too much). Let settle. What happens? Discuss the results.

NOTE: Humans must drink freshwater to stay healthy. Accidentally drinking small amounts of clean seawater is not unsafe, but drinking too much saltwater can make humans very sick! Never purposefully drink large amounts of saltwater.