



# Climate Zones & Ocean Currents Activity for Kids

## Saltwater Density Layers DIY

 Duration: **20-30 min**

 Difficulty: **Easy**

 Cost: **\$0 to \$10**

Learn how to make layers of saltwater with different densities!

### Material List

- 4** Cups of water
- 4** Different colors of food coloring
- 1** Bowl of salt
- 1** Tablespoon
- 1** Test Tube
- 1** Pipette

### Instructions

- 1** Add a few drops of food coloring to each cup of water to make 4 different colors.
- 2** Add different amounts of salt to each cup of water. No salt in the first cup. 1 tablespoon of salt in the second cup. 2 tablespoons of salt in the third cup. And 3 tablespoons of salt in the fourth cup. Then mix up all the contents in each cup.
- 3** To make layers, use the pipette to carefully transfer each of the layers into the test tube, one at a time.
- 4** The liquid with the most amount of salt goes on the bottom, followed by the liquid with the second most amount of salt, then the third, and finally, add the liquid with no salt.
- 5** To help the layers stay separate, add the liquid slowly and tilt the test tube to transfer the liquid down the side.

### How It Works

You'll see that the 4 layers of water stacked in separate layers. This works because each band of saltwater has a different density. Water with more salt is denser and will be at the bottom. The water with the least amount of salt is less dense, so it stays at the top. In the real world, ocean water can also vary in how much salt is dissolved in it. Areas near the poles can be saltier than areas near the equator. Differences in the amount of salt in ocean water can create ocean currents, which moves thermal energy around our planet.

