

## The Homemade Lava Lamp

Goal: To understand different liquid densities.

Supplies: An Alka-Seltzer Tablet, Water, Cooking Oil, Food Coloring, and a Clear Container.

Steps:

1. Fill your container nearly to the top with water.
2. Pour a layer of oil on top of the water and then add a few drops of food coloring.
3. Break up an Alka-Seltzer tablet and drop a piece into the container.
4. Watch the magic!

The Science:

Cooking oil, food coloring, and water all have different densities. What is density? Density is how tightly packed the insides of something are. Say you have a lunchbox. One day, there is so much food that you can't even eat all of it and it is heavy to carry around. That lunch box would be dense. The next day, your lunchbox is lighter because it isn't so full. It would be less dense. Cooking oil and food coloring are both more dense than water. This means that they sink to the bottom. When you add in the Alka-Seltzer, it throws drops of the cooking oil toward the top of the container. However, they sink again because the cooking oil is heavier than the water.

Sometimes, science doesn't work out. In my video, my lava lamp didn't work. The reason for this is because I had the wrong cooking oil.

My cooking oil stayed on top of the water instead of sinking down. If your experiment doesn't work correctly, can you explain why?

## What Happened?

Fill this space with a drawing or an explanation.