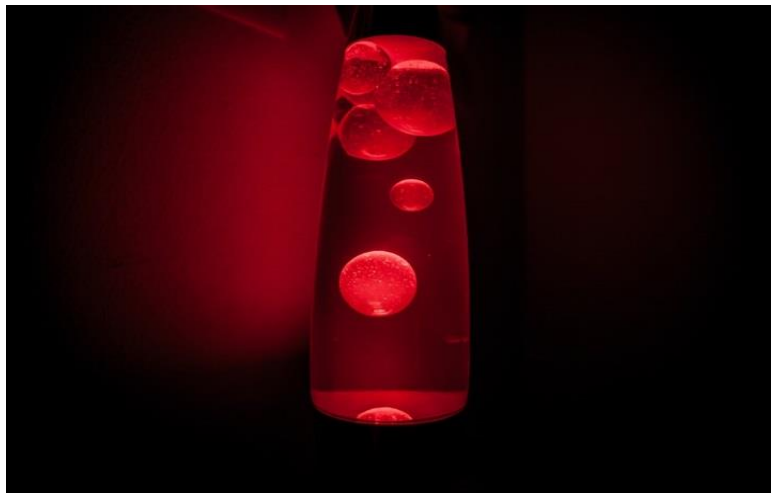


## Create Your Own Lava Lamp

### Material:

- Water
- Vegetable Oil
- Recycled Water Bottles
- Food Coloring (Optional)
- Alka Seltzer
- Hot Glue

**Objective:** Explorers will learn about density and polar vs nonpolar molecules



## Lesson:

- Give each explorer a recycled water bottle (*Make sure they each have a lid as well*)
- Add water roughly 2/3rds of the way full
- Add in 1/3 cup of vegetable oil (*This should make it almost to the top, but make sure you leave a little room for other items*)
- Have kids observe how the oil and water does not mix. Explain that this is because water is heavier than the oil. Also, the molecules in water is polar while the oil does not have polar molecules.
- If no food coloring or alka seltzer is available, hot glue the top to the bottle. Have kids shake it to observe the oil and water separating. You have your lava lamp.
- If you are adding in food coloring, add it now. Watch how it sinks down to the bottom with the water. *The food coloring is also heavier and will only mix with the water. This occurs because the food coloring has polar molecules. (Only polar molecules can mix.)*

- If you do have Alka Seltzer, add it to the mixture and watch what happens. Bubbles will be created by this and force the water to move back and forth from the top of the container.
- Hot glue the top to the bottle. Have kids shake it to observe the oil and water separating.