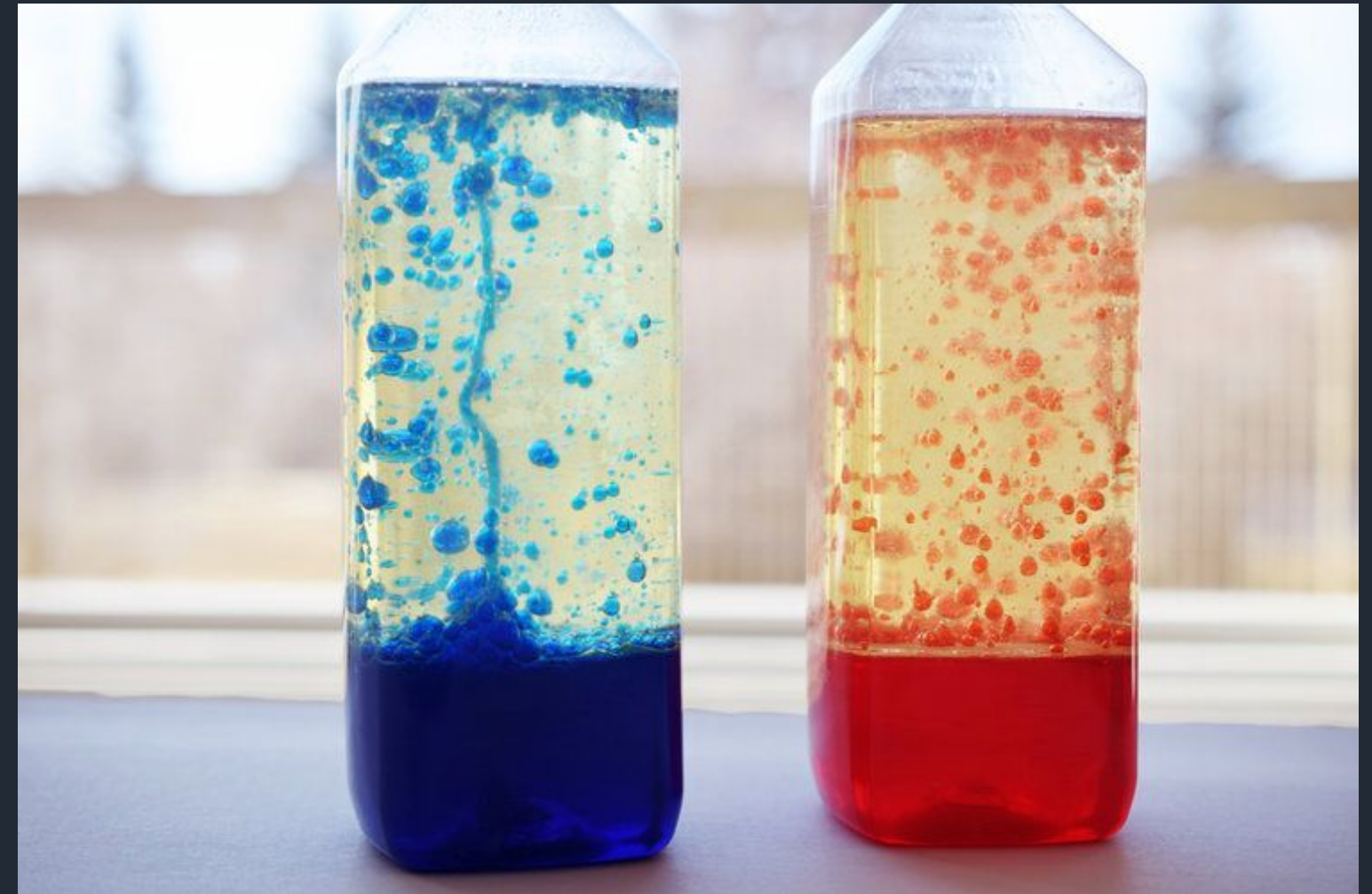




DIY Lava Lamps

What is a lava lamp?

- looks like blobs of lava inside the lamp, but it is not real lava
- blobs are instead made of colored wax and oil that move together



Materials?

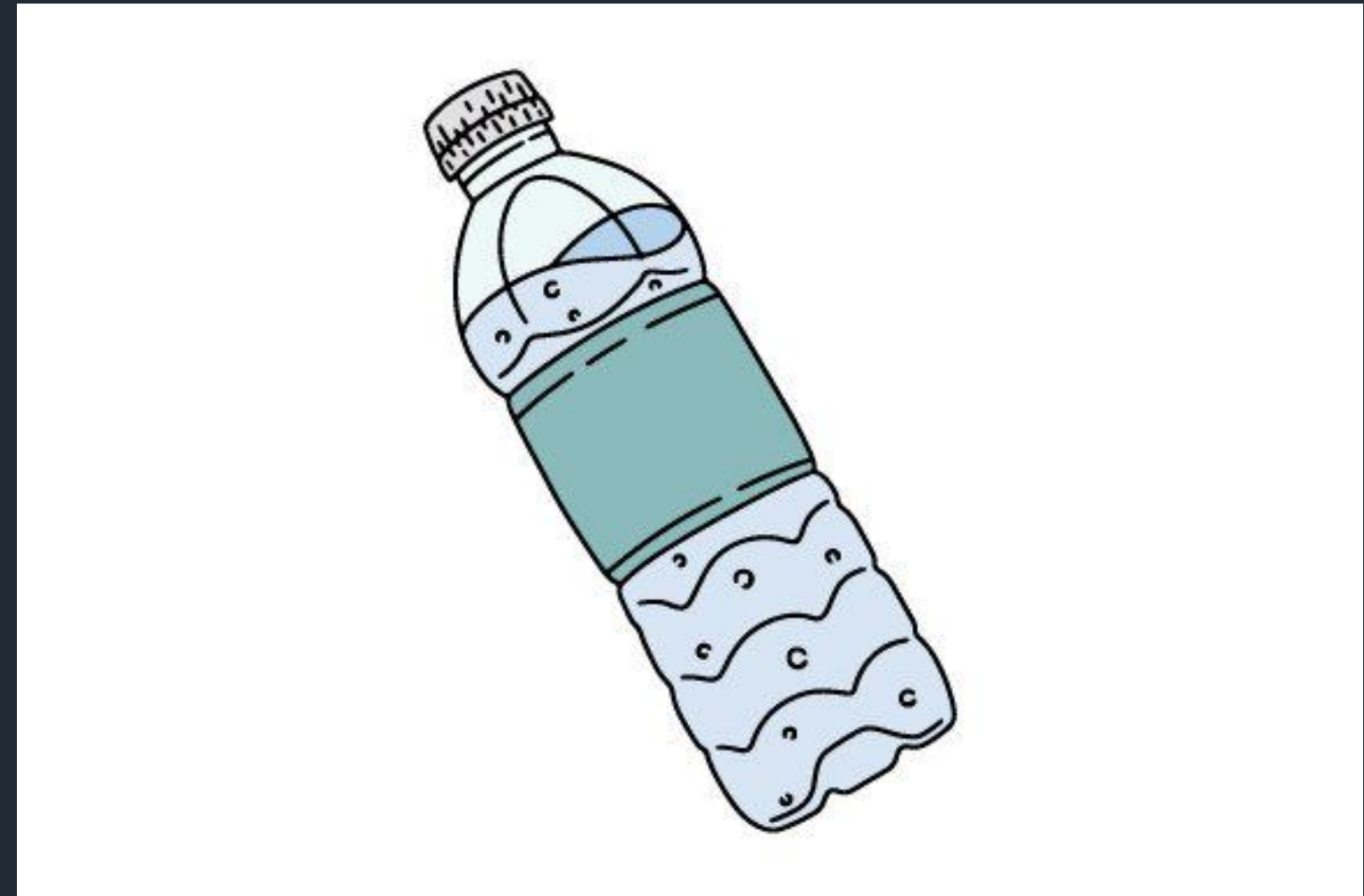
- Jars
- Water
- Vegetable Oil – This will float on top of the water.
- Food Coloring – For making your lava lamp colorful!
- Alka-Seltzer Tablets – These make the bubbles that create the lava effect!
- Flashlight



Step One

Let's start by adding water to your bottle.

1. Fill your bottle about **1/4 of the way** up with water.
2. **Water is a liquid** that will go to the bottom of the bottle because it's heavier than oil.
 - *Tip: Pour slowly to avoid spills!*

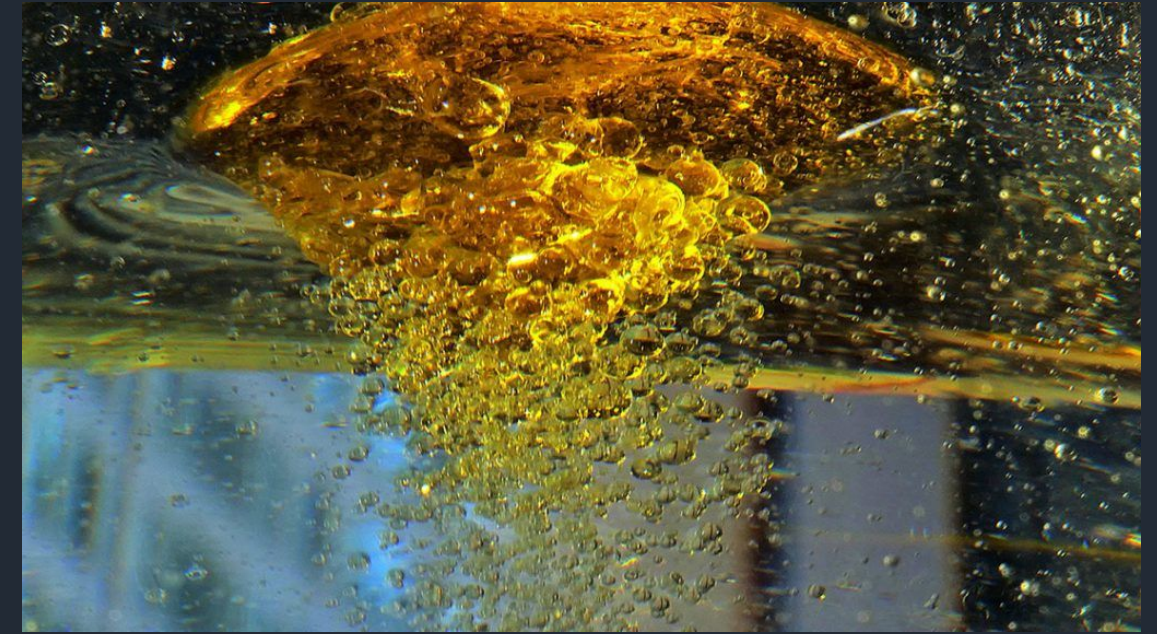


Step Two

Next, it's time for the oil!

1. Pour **vegetable oil** into the bottle until it's almost full.
 - What do u observe that is happening?
 - Does the oil and water mix?
 - If not, why not?

ANSWER: You will see the oil float **on top of the water** because **oil is less dense than water** .
This means the oil is lighter and will stay above the water.



Step Three

Let's make your lava lamp colorful!

1. Add a few drops of food coloring to the bottle.
2. Watch the food coloring drop into the water—but it **won't mix with the oil!** The color stays in the water because water is a liquid and oil is a liquid, but their molecules don't mix.



Step Four

Here comes the fun part: bubbles!

1. Break an **Alka-Seltzer** tablet into small pieces.
2. Drop them into the bottle, one piece at a time.
3. Watch the **bubbles** start to move the colored water up through the oil and then back down. This creates the "lava lamp" effect!
 - a. Why do the bubbles make the water move? **HINT: the tablet reacts with water and makes gas (bubbles)**

These bubbles are lighter than both the oil and water, so they push the colored water up through the oil.



What have we learned?

1. *Oil and Water do not mix*
2. *When the tablet reacts with water, it forms bubbles*
3. *These bubbles are lighter than the liquids, so they carry the colored water blobs up through the oil.*

