



DIY Lava Lamp

Have you ever seen a lava lamp before? They display several fascinating scientific properties! Unfortunately, lava lamps can be pretty expensive. BUT, you know you can make one using some simple ingredients around the house? Before we do, let's take a look at some of the science behind our DIY Lava Lamps:

Background

Unlike normal lava lamps, which rely on scientific properties of heat, our lava lamp relies on properties of density. When we create our lava lamp, we will be using water and oil to demonstrate this.



Oil, which is the yellow substance on the left, is less dense than water. Because of this, the oil does not sink below the water, but instead remains on top of it

In addition to this, oil is also hydrophobic, meaning it is repelled by water. This is different from substances that are hydrophilic, meaning they can mix with water. We will see this hydrophobic property in play lots with our lava lamp!





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Now that we know the science behind it, we can get to making our lava lamp! For safety, make sure you have a parent with you!

Materials

Clear Container (preferably a plastic bottle or glass jar)

Water

Food Coloring (any colors)

Oil (Vegetable, Canola, Baby, etc.)

1 Alka Seltzer tablet

Flashlight

Step 1

Fill your container 1/3 of the way full with water, similar to the picture on the right.



Step 2

Take several drops of food coloring (any color[s] you want!) and mix them in with the water.



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Step 3

Using a bottle, pour your oil on top of the water. There may be slight mixing of oil and water at the center, but this will be fine.



Step 4

Take your Alka Seltzer tablet, break it in half, and drop it into the container.

Step 5

As bubbles from the tablet form, turn off the lights in your room and illuminate the container with a flashlight. You should see bubbles floating in the oil, like a lava lamp!



And that's it! Proud of your DIY Lava Lamp? Share it with us on Facebook (@gndunescenter) or Instagram (@dunescenter) and we might just post it!