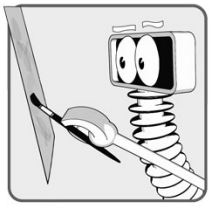


Name: _____ Date: _____

SCIENCE ART

Lava Lamp

Project:
Create your own lava lamp to observe what happens when you combine water and oil and to determine whether this process results in a mixture or a solution!

Materials:
- Alka-Seltzer Tablet
- Butter Knife
- Clear Plastic Bottle (1 Liter)
- Food Coloring
- Vegetable Oil
- Water

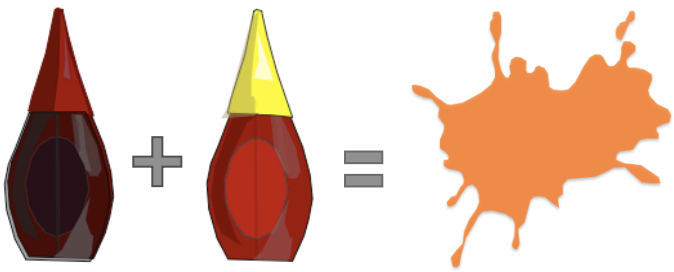
Instructions:

1. **Brainstorm:** Think about the properties of water and oil. If you were to combine these two liquids would you create a solution? Let's find out!

2. **Prepare:** Begin by removing the cap and label from your plastic bottle. Next, pour vegetable oil into your bottle until it is just over ½ full.

   Fill the rest with water leaving about an inch at the top free of any liquid.

3. **Color:** Use food coloring to color your lava lamp! You will want to use 10 drops, but the color is entirely up to you! You can stick to the primary colors (blue, red, or yellow), or you can combine these colors to create green, orange, or purple!



SCIENCE ART

Instructions (continued):

4. Activate: Next, use your butter knife to cut an Alka-Seltzer tablet into four pieces. These four pieces will provide you with four tries. Drop one quarter into your bottle and watch what happens!

**Alka-Seltzer is an antacid that will react with the water to form carbon dioxide at the bottom of the bottle. These bubbles, being lighter than both the water and the oil, will rise to the surface, mixing the contents of the bottle in the process. Ignore the chemical effects of the Alka-Seltzer and focus on what is happening when the relationship between the water and oil is disturbed. The Alka-Seltzer is creating this disturbance so that you do not have to shake the bottle.

Let's review this process! What happened when you added the water to the oil? Which liquid rose to the surface and which one sank? Did the food coloring dye the water or the oil? What happened when the Alka-Seltzer disrupted the relationship between the water and oil? Do you think this is a solution or a mixture? Discuss these questions with your friends. What do they think? Did their lava lamps produce the same results?

5. Store: If you would like to save your lava lamp, wait until all of the bubbles have dispersed and then put the cap on. To reactivate your lava lamp at a later date, simply remove the cap and add another quarter of an Alka-Seltzer tablet. You can also make your lava lamp more dramatic by adding other elements like glitter or plastic confetti!