National Chemistry Week 2025

"The Hidden Life of Spices"

Name:_____

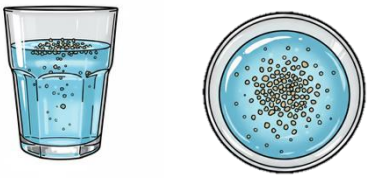
The Magic Lake: Moana and the floating pepper

Student Worksheet

1. Pour some water onto the plate and sprinkle black pepper on top. What does it look like?

Draw your *observations* here.

My observation

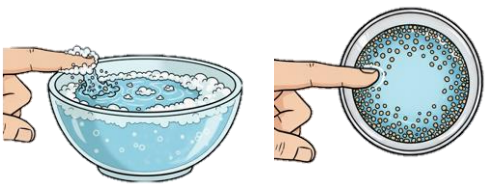


2. Make a prediction or *hypothesis*…What do you think will happen when you add a drop of dishwashing soap to the pepper? Write down your hypothesis.

3. Observation (circle)

What did you see when you added dishwashing liquid to pepper? (choose one or more)

- The pepper moved away quickly from the soap.
- The pepper sank.
- The pepper did not move.
- Something else: _____



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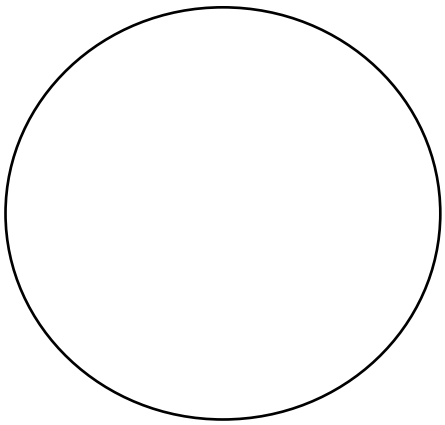
Draw your observation



4. Explain in words what you observed. Was your *hypothesis* correct?

5. What do you think would happen if you added
   a) Oil
   b) Hand sanitizer
   instead of dish-washing soap? Do you expect the same results?

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Color Painting with Turmeric

Student Worksheet

a. What is the color of the paper provided to you? What is the color of solutions 'A' and 'B'? Do solutions 'A' and 'B' have any differences?

b. Dip a Q-Tip into solution 'A' and draw any shape or pattern you want onto the colored paper. What do you see?

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c. Now let's see if we can change the color back. Dip another Q-Tip into solution 'B' and re-trace your drawing. What do you see? Did anything change?

d. Do you think all spices can change colors? How do you think turmeric changing color in different solution can be helpful?

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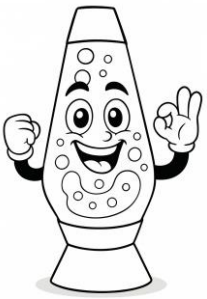
A Lava Lamp Chemistry Adventure

Student Worksheet

Let's explore how science creates magic – watch your lava lamp come to life through chemistry!

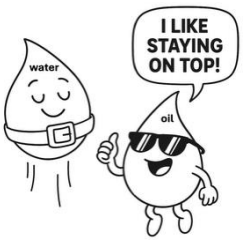
Welcome to the Magic Lava Lamp Experiment! Today, we'll explore how different liquids behave when mixed. You'll see colorful bubbles dancing up and down like a real lava lamp! By the end, you'll learn about density, mixing, and chemical reactions in a fun, hands-on way. Ready to make some bubbling magic?

1. Draw what your lava lamp will look like before adding the fizzy tablet. What do you expect to see — layers, colors, bubbles?

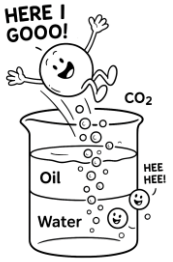


🎨 **COLOR ME!**

2. Which do you think will sink to the bottom, water or oil? Why do you think so?
   (Hint: Think about which one might be heavier!)



3. What do you predict will happen when we drop the fizzy tablet? Will it just sit there, fizz, and make bubbles, or will it explode?



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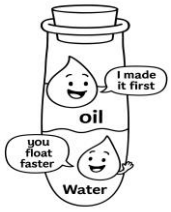
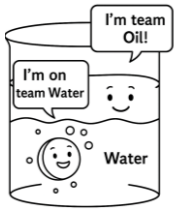
4. After watching, which liquid stays on top — oil or water? What does this tell you about their densities?



5. When you add food coloring, does it mix with oil or water? What do you notice about how it spreads?

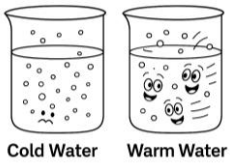


6. What do you think is inside the bubbles that rise and fall?
(Hint: It's the same gas that makes soda fizzy!)

7. When the tablet fizzes, do you think it's making a mixture or causing a chemical reaction? How can you tell?

8. Why do oil and water refuse to mix, no matter how much you stir?
(Hint: Think about "polar" and "non-polar.")

9. What do you think would happen if we used warm water instead of cold water? Would the bubbles move faster or slower? Why?



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10. Fill in the blanks!
The tablet makes _____ bubbles.
Oil floats because it is less _____.

11. What was the coolest thing you learned today about how liquids and gases behave?

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