



## Density: Lava Lamp

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### Materials:

- Vegetable oil
- Water
- Food coloring
- Alka-Seltzer tablet
- Cup or bottle without a lid
- Optional: timer

*Note: The reaction between Alka-Seltzer and water creates carbon dioxide gas. **Do not** place a cap or lid on your chosen container, or it will pop off and create a mess!*

### Directions:

1. Fill about 1/4 of the cup or bottle with water.
2. Fill the rest of the cup or bottle with vegetable oil.
  - a. The oil floats on the water because it is less dense.
3. Add a few drops of food coloring. Consider:
  - a. The food coloring is water-based. Will it sink like the water, or float on top?
  - b. Why doesn't the food coloring color the oil?
4. Break up an Alka-Seltzer tablet into 3-4 pieces.
5. If using a timer, press start when the tablet is added to the bottle.
  - a. Stop the timer when the tablet has fully disappeared to see how long it took.
6. Add more pieces of Alka-Seltzer to start the bubbling again.
  - a. How long does it take all the pieces to disappear?
  - b. Do you think it would take more or less time for the tablet to disappear if it is not broken up?