

Home Scientist: DIY “Lava Lamp”

Age Group: All Ages (young ones will need supervision); **warn them not to drink this experiment even though it’s beautiful!**

Materials and Equipment:

- Effervescent tablets(Alka-Seltzer)
- Food coloring
- Battery operated tea light(optional)
- Vegetable Oil
- Water
- Clean and mostly see-thru soda bottle (any size but if you have enough oil a bigger bottle is more dramatic)



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The Science: This is a great density experiment and gets kids wondering why the water and oil don’t mix together. Water is much denser than oil and hence settles to the bottom of the bottle. The tablets react with the water to form CO₂ gas bubbles. Try this with other types of fluids to see what happens. Ask the kids to consider what will happen before the fluids are poured together.

- 1) **Pour in about 1-2” of water in the bottom of the bottle**
- 2) **Add vegetable oil leaving a couple of inches at the top of the container**
- 3) **Add 7-8 drops of food coloring into the bottle. Notice how the food coloring moves through the two fluids which have separated due to the difference in their density**
- 4) **Add in an effervescent table to the bottle, a half tablet at a time fits nicely into most bottles.**
- 5) **Put the tea light onto the top of the bottle for some extra light. Watch your creation! Dispose of properly. You can keep the bottle around if capped(hot glue to seal). The fluids won’t mix and still are interesting to look at even when the bubbles stop.**