

# Lava Lamp in a Test Tube

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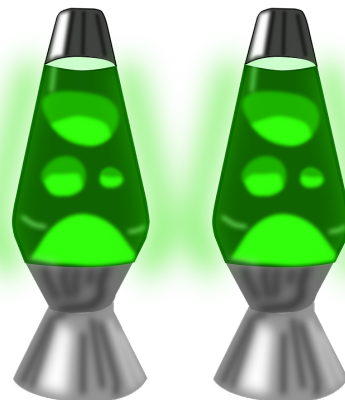
# How to prepare for experiment: extra help

- 1. Use a 50 ml test tube for all test tubes
- 2. Use 10 ml of water and 35 ml of vegetable oil for each child
- \*\*Prep can take 15-20 minutes and activity itself takes 5-10 minutes\*\*

# Lava Lamp in a Test Tube

## Materials

- Water (1/4)
- Vegetable oil (2/4)
- Gel food coloring (1-2 drops)
- Alka Seltzer tab (divided in 8 parts)



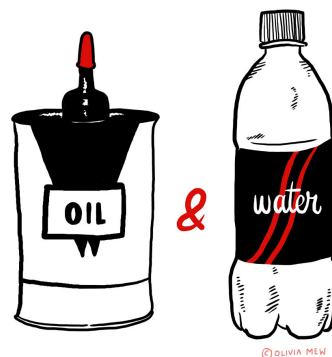
## Procedure

1. Add water to the test tube up to the **10** line
2. Add 1 drop of food coloring.
3. Mix it well. If you would like a darker color, add another drop of food coloring.
4. Add vegetable oil to the **45** line.
5. Drop a small piece of Alka Seltzer tab in the tube.
6. Enjoy your Lava Lamp effect!

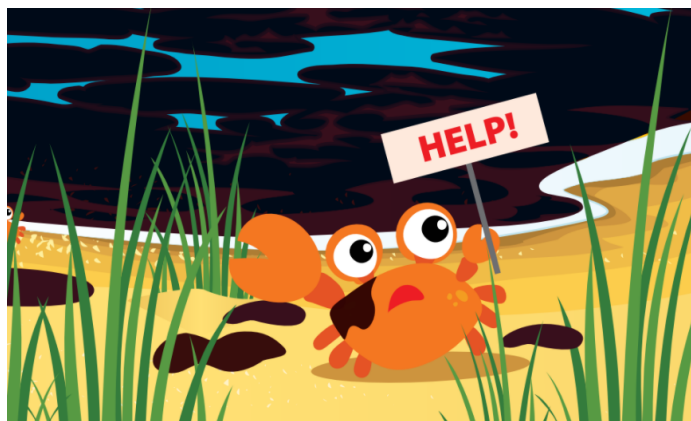
Note: After all bubbles disappear, you can cap the tube and take it home. If you want to see the lava lamp effect again, just drop another small piece of Alka Seltzer tab in the tube.

# Did you know? Oil and water do not mix.

The molecules of water do not like to mix with the molecules of oil. If you try to shake up the tube, the oil breaks up into small little drops, but it doesn't mix with the water. Food coloring only mixes with water. It does not color the oil.



## Why did the oil float on the water?



When you pour the oil into the tube with the water, the oil floats on top of the water. This is the same as when oil from a ship spills in the ocean. Oil floats on the surface because water is heavier than oil. Scientists say that the water is denser than the oil.

## Riding on a gas bubble

The Alka Seltzer reacts with the water to make tiny bubbles of gas. These bubbles attach themselves to the blobs of colored water and cause them to float to the surface. When the bubbles pop, the color blobs sink back to the bottom of the tube.



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# Credits

- Lava lamp experiment:  
<http://www.thecrazyscientist.com/looney-lab/experiments-2/chaotic-chemistry/terrific-test-tubes-lava-lamp/>
- Lava lamp picture:  
<https://pixabay.com/vectors/lava-lamp-1960s-1990s-green-309695/>
- Some info for oil not mixing with water and the oil spill example (??):  
<https://www.stevespanglerscience.com/lab/experiments/oil-and-water/>
- More info on this experiment:  
<https://www.stevespanglerscience.com/lab/experiments/bubbling-lava-lamp/>
- Oil and water:  
<https://www.flickr.com/photos/oliviaew/9517947455>
- Crabs:  
[https://sciencejournalforkids.org/articles/apes\\_topic/4-earth-systems-and-resources/](https://sciencejournalforkids.org/articles/apes_topic/4-earth-systems-and-resources/)
- bubbles:  
<https://pixabay.com/illustrations/kids-cute-clipart-cartoon-girls-2798936/>