



Minds in Motion



Activity Rundown:

Chemistry and Valentine's day, nothing goes together better! This weekend Minds in Motion would like to give everyone the opportunity to incorporate a little chemistry into their Valentine's day. Together we will be creating a homemade lava lamp!



You will need:

- Clear jar, drinking glass, or water bottle
- confetti/ glitter (optional)(heart shaped to fit the season)
- Food coloring
- Alka Seltzer tablets (generic is fine)
- Water



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- ☐ Baby or cooking oil.

Let's do it!

- 1) To begin this project we must gather all of our materials! Just like in any chemistry experiment we want to make sure all our glass ware is nice and clean. Let's start off by filling our jar about $\frac{2}{3}$ full of whatever oil you have decided to use.
- 2) Now it's time to add glitter and confetti, this step is completely optional but it adds a nice festive effect to the final result especially if the confetti is heart shaped.
- 3) Now we slowly want to add water till our jar/glass is full, notice that the water sinks to the bottom.
- 4) Now you can choose to add several drops of food coloring to the jar, you can lightly stir it in if you want but it's more interesting to leave it.



- 5) Now it's time to add the Alka seltzer tablet. Drop the tablet in and watch your lava lamp come to life!! To extend the reaction you can always add more Alka seltzer tablets to the jar!



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- 6) The chemical and physical reactions happening here are fascinating! The oil sits on top of the water because it is less dense or lighter than water. When we add the food coloring it sinks slowly through the oil in little individual drops, and then starts to slowly spread through the water. This is due to the water based nature of the food coloring! Once we add the Alka Seltzer it begins to chemically react with the water to produce CO₂ gas, this causes droplets of water to rise into the oil creating the lava lamp effect. The water droplets stay separate from the oil due to the hydrophobic properties of oil. Basically this means that the oils and water don't mix!

Resources:

- 1) <https://littlebinsforlittlehands.com/homemade-valentines-day-lava-lamp/>



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Reach out!

We would love to hear from you about all the amazing STEM projects you are doing at home! Show us your finished products on any of the following social media platforms by tagging us or by using the following hashtags. We hope these projects have brought some excitement to your day during these difficult times.

Let us know how we did! Please [click here](#) to fill out a short survey on how well we did and what you would like to see more of in the future. Thank you!

Twitter: **@MyMindsInMotion**

Facebook: **@mindsinmotion2014 & @ucactiveliving**

Instagram: **@ucalgaryactive**

Please use the following hashtags!

#ucalgarycamps #ucalgarytogether

We hope you enjoyed our STEM Valentines day activity! Everyone at Minds in Motion would like to wish you and those closest to you a happy holiday!