

The Curiosity Box

DIY Lava Jar

In your pack you have:

- Lava jar with cork
- Food colouring powder
- Baby oil
- Glitter
- Fizzy tablets

You also need:

- A small jug of water

Your mission: Make a bubbling lava jar!

1 First you need to make your food colouring powder into a liquid. Unscrew the food colouring bottle and half fill the bottle with water. Now, holding the bottle firmly, push the dropper into the top until it is all the way in. Now replace the lid and screw tightly before giving the bottle a good shake.



2 Pour water into your lava jar until it's about $\frac{1}{4}$ full.

3 Nearly fill the rest of your lava jar with the oil, leaving a little bit of space at the top.

4 Wait for the layers of oil and water to settle and separate. This will take 1-2 minutes.

5 Add your food colouring drop by drop and watch it fall through the oil to see really cool explosions of colour.



If you spill the oil when pouring it into the bottle don't worry, you should have plenty and it washes off easily. It might make your bottle slippery though so be careful!

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6 Taking a little bit at a time, sprinkle the glitter in, and watch how it falls through the oil and the water. Does it move differently in one or the other?

7 When you are happy with the colour in your lava jar, push the cork on very tightly and gently swirl the jar to mix the colouring.

8 Break up your tablet into 4 pieces and carefully pull the cork out of your lava jar. Drop one piece of the tablet in and quickly push the cork back in tightly. Now watch the lava bubble!



Test it!

You can recharge your snazzy new lava jar by adding another piece of the tablet. Why not try adding a larger piece? Or crush a piece up and see if it bubbles differently!



What's going on?

Oil and water do not mix together so they will separate into layers. The oil lies on top of the water because the oil is less dense! This means that 1ml of water is heavier than 1ml of oil.

The food colouring is water based so it won't mix with the oil either so it falls through the oil layer! When you add the tablets, they react with water to form carbon dioxide (CO_2) gas. The gas bubbles push the water to the top and when the bubbles pop at the top the water falls back down again!



Share it!

We would absolutely LOVE to see your groovy gloopy jars! Take lots of photos and ask one of your grown-ups to post it to our Facebook page, or to email us at hello@curiosity-box.com