Burnley College

HOME MADE LAVA LAMP

WARM UP YOUR WINTER WITH YOUR VERY OWN HOMEMADE LAVA LAMP! GET TO KNOW HOW LAVA LAMPS WORK, WHILE CREATING YOUR OWN!

Festive FUN

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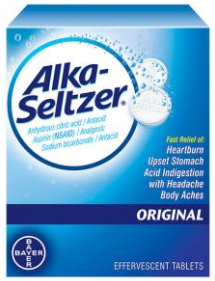
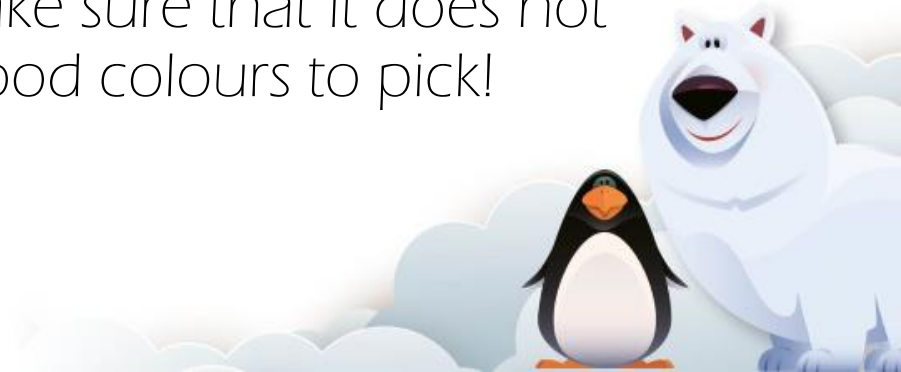
INGREDIENTS

You will need the following to make your lava lamp:

- a clear glass, jar or plastic bottle
- vegetable/sunflower oil
- water
- food colouring
- Alka seltzer tablets or antacid tablets



Hint: when choosing the colour of food colouring, make sure that it does not match the colour of your oil. red or blue are usually good colours to pick!



METHOD

1. Fill most of your glass/jar/bottle with oil.
2. Fill the rest with water.
3. Add a few drops of food colouring.
4. Allow the liquid to settle. the food colouring should mix with the water, and the oil and water should separate into two layers.

Health and Safety: Overall, this is a very safe experiment. However, you should avoid eating/drinking any part of the mixture. Also, be careful not add too many alka seltzers at once, as this may cause a lively reaction and create a bit of a mess!

METHOD

5. Break up an alka seltzer tablet into pieces, then add to the mixture, one piece at a time.
6. Watch your lava lamp come alive!
7. Add another alka seltzer tablet to keep the lamp going if the reaction starts to slow down.

Health and Safety: Overall, this is a very safe experiment. However, you should avoid eating/drinking any part of the mixture. Also, be careful not add too many alka seltzers at once, as this may cause a lively reaction and create a bit of a mess!

THE SCIENCE

Left on their own, oil and water don't mix. One of the reasons is to do with density. The water sinks to the bottom of the mixture because it is more dense than the oil.

However, when you add the alka seltzer, this causes a chemical reaction that creates little bubbles of carbon dioxide. These bubbles stick to the water droplets. This makes them less dense than the oil, and so they rise to the top.

When the water/carbon dioxide reaches the top, the carbon dioxide bubble pops. This now makes the water bubble more dense than the oil, and so it sinks back to the bottom.