



BUILD YOUR OWN LAVA LAMP



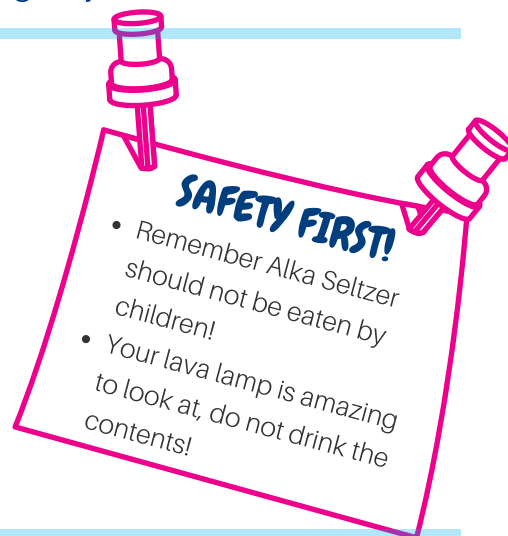
HAVE YOU EVER WONDERED WHY THINGS FLOAT?

Make your very own lava lamp and learn all about density, mass & volume as we discover the science behind floating objects!



YOU WILL NEED

- A bottle with a lid of any shape or size
- Cooking oil (any kind will work!)
- Food colouring, what's your favourite colour?
- Alka seltzer or fizzy vitamins broken into small pieces
- A jug of water



WHAT TO DO:

- Fill your bottle about one third full with water.
- Use your oil to fill the remaining two thirds of the bottle.
- Being careful not to spill any, add a few drops of food colouring to the mixture.
- Wait for the colour to mix with the water.
- Drop the broken Alka Seltzer or fizzy vitamins into the bottle, put the lid on and watch what happens!





BUILD YOUR OWN LAVA LAMP



AND NOW FOR THE SCIENCE...

- Did you notice the oil sits on top of the water?
- This is because the oil is **DENSER** than the water causing it to float on the top
- The density of an object is equal to its mass divided by its volume
- Something more dense than water will sink but something less dense than water will float

VOLUME

is a measure of how much space it takes up



EXPLORE FURTHER

For more resources and videos search for the following:

BBC Bitsize what is density?

Ted-ED why don't water and oil mix?

Lets Talk Science - Lava Lamps

MASS

is a measure of how much stuff it contains



WHAT NEXT?

- Try experimenting with a large bowl of water and objects you can find in the home:
- Can you find objects that float or sink?
- Can you make them less or more dense by changing the mass or volume of an object?
- Does this change whether the object floats or sinks?



COMPETITION TIME!

- Complete 4 challenges and submit an entry to our poster competition to be in with a chance of winning an EDT Experience Day at your school.
- For funded schools, you have the opportunity to receive the Industrial Cadets Challenger Award - click [here](#) for full details.
- Share a photo or video of your experiment with us on social media and use the hashtag #STEAMstars