

Lava in a cup experiment

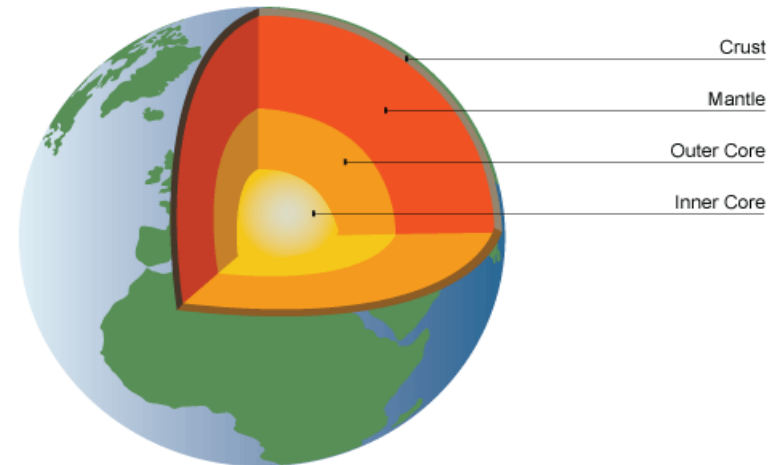


What is Lava?

The Earth's crust is made up of huge slabs called plates, which fit together like a jigsaw puzzle. These plates sometimes move.

Between the Earth's crust and the mantle is a substance called magma which is made of molten rock and gases.

When two plates collide, one section slides on top of the other, the one beneath is pushed down. Magma is squeezed up between the two plates.



YOU WILL NEED:

- A clear drinking glass/jar
- 1/4 cup vegetable oil
- Salt
- Water
- Food colouring

WHAT TO DO:

1. Fill about $\frac{3}{4}$ of the glass or jar with water
2. Slowly pour the vegetable oil into the glass. See how the oil floats on top
3. Add about 5 drops of red food colouring
4. Sprinkle some salt on top of the oil
5. Observe the blobs/bubbles moving throughout the water
6. Add some more salt to continue the process

HOW DOES IT WORK?

So what's going on? Of course, it's not real lava but it does look a bit like a lava lamp.

First of all, the oil floats on top of the water because it is less dense (lighter) than the water. The food colouring mixes with the water because it has the same density.

The salt falls to the bottom and starts to dissolve. As it does so it creates a gas (carbon dioxide). Gas or air is lighter than water so it floats to the top in the form of bubbles.

The air bubbles bring some coloured water with them to the top. When the air comes out of the bubble, the water gets heavy again and sinks to the bottom.

It does this over and over again until the salt is completely dissolved.