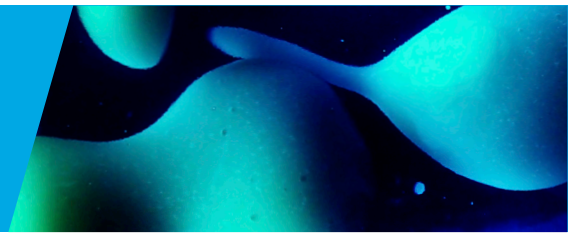


# CURIOSITY AT HOME

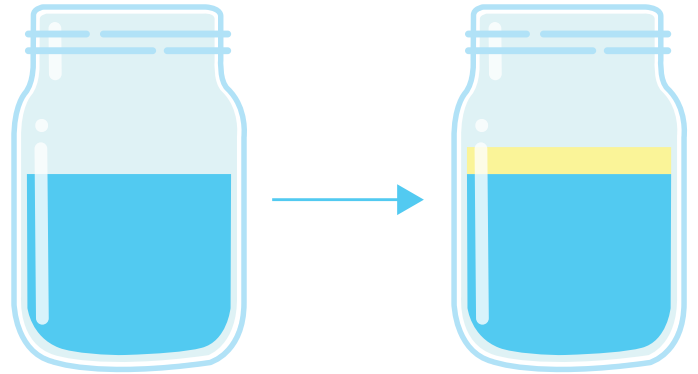
## FLUID MECHANICS



*Study liquids and gases by creating a lava lamp.*

### MATERIALS

- large clear drinking glass or jar
- $\frac{1}{3}$  cup vegetable oil
- food coloring (any color)
- water
- salt



### PROCEDURE

- Fill glass with water until it is  $\frac{2}{3}$  full.
- Add vegetable oil to the glass. What happens? Do the oil and the water mix?
- Add 4 drops of food coloring to the jar. Where does the food coloring go?
- Now, sprinkle salt on top of the oil. Continue sprinkling salt for as long as you want your lava lamp to keep bubbling.

### DID YOU KNOW

A couple of things. First, oil and water are what physicists call immiscible liquids, which means they don't mix together. The oil floats on the water because it is less dense, or lighter, than the water. Because salt is heavier than water, when you sprinkled it into your glass, it sank and brought a blob of oil with it. As it sank to the bottom, the salt dissolved into the water and the oil floated back up to the top.

Fluid mechanics is part of a larger science discipline called physics. Physicists study things like motion, light, sound, electricity and magnetism. Pilots, engineers, astronomers and police officers all use physics in their professions.

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