

Notes on Density

By Ms Toal

Density

Unknown substances:

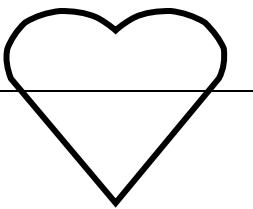
units:

Formula=

- You can determine the identity of a substance by its *density*

- g/ml or g/ cm³

- Density = mass
volume

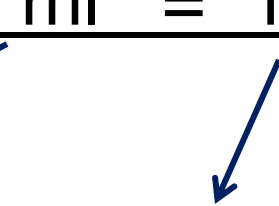
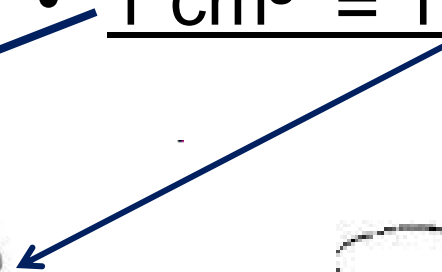
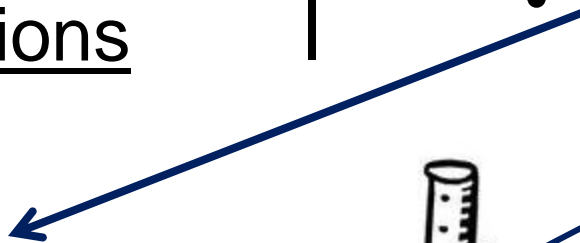
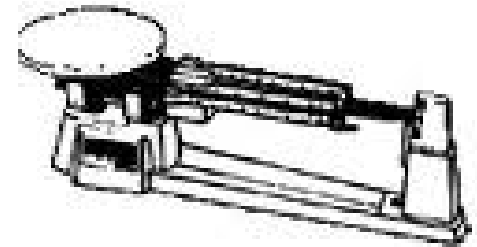
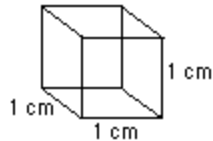
$$D = \frac{M}{V}$$


Density of water

- Weight of water
- All other matter
- Conversions

- 1 ml fresh water (4°C) weighs 1 gram.
- is based relative to this density.
- 1 cm³ = 1 ml = 1 g

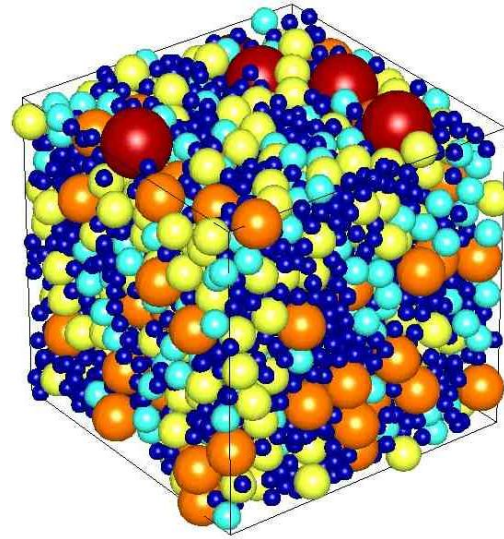
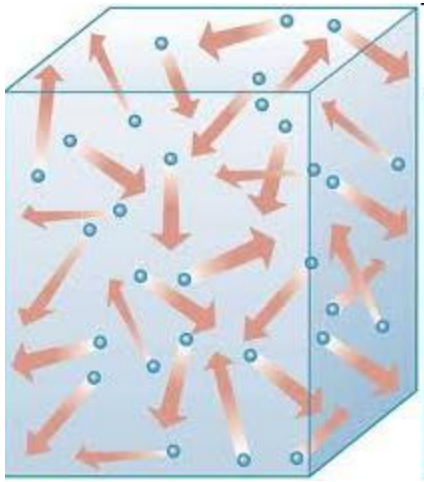
Volume of 1 cubic
(cm³) centimeter



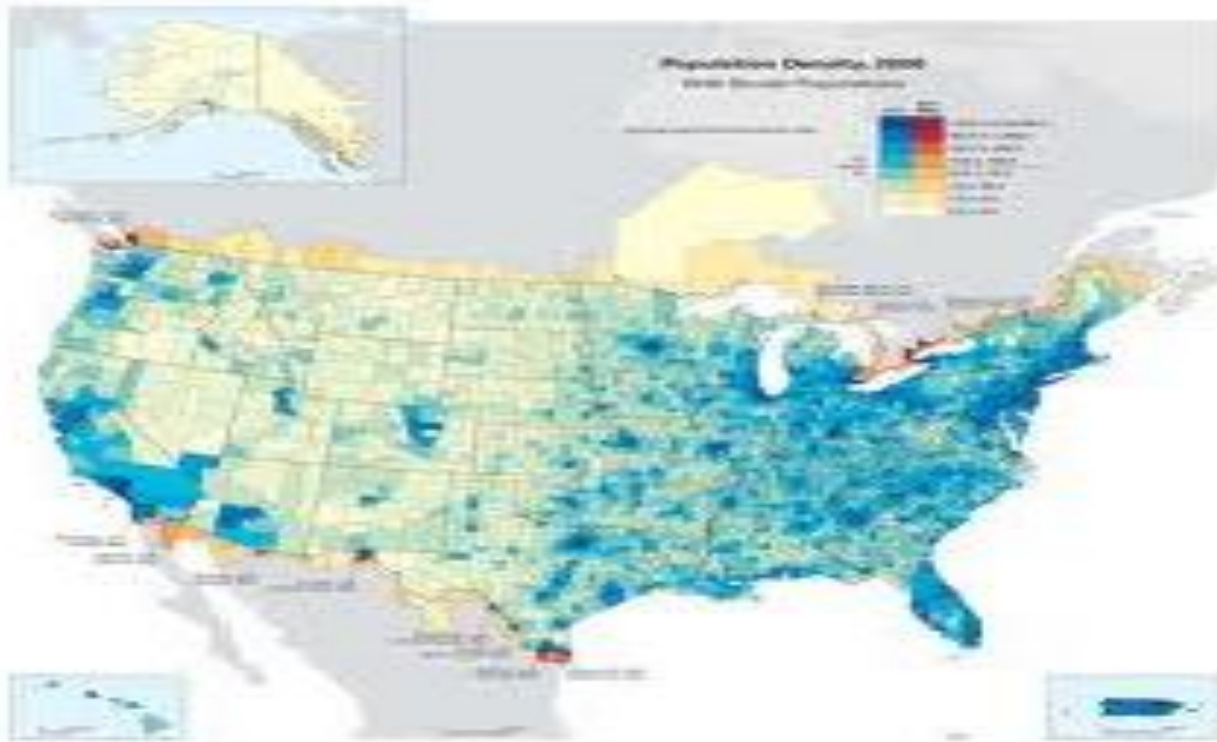
Float or Sink

- The density of water
 - Anything with a density that is LESS than 1.0 g/ml
 - Anything with a density that is MORE than 1.0 g/ml
 - Let's look at clay...
- is 1.0 g/ml
 - will FLOAT
 - will SINK

How much matter (mass) is inside
per unit of volume



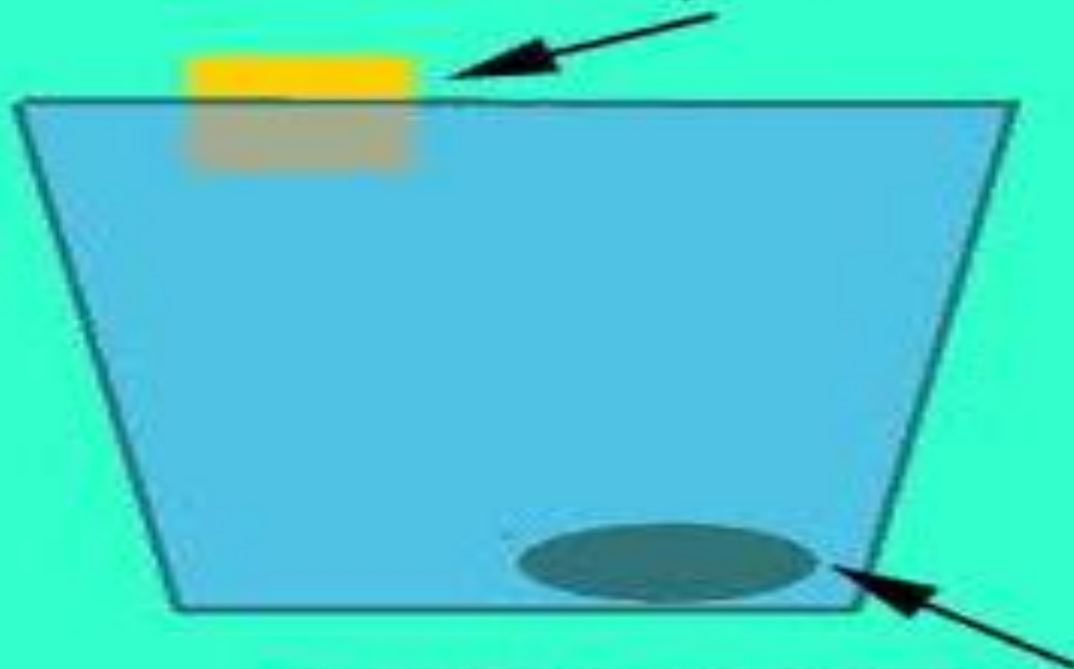
Population density







Wood is less dense than water, and floats



Rock is more dense than water, and sinks



Remember,
 $\text{Density} = \frac{\text{Mass}}{\text{Volume}}$



Salt water



Fresh water

- What do you think will happen when a regular coke can and a diet coke can are put in a tub of water? Float or sink, which one/both? Guess

