

Notes on Density

By Ms Toal

Density

Unknown
substances:

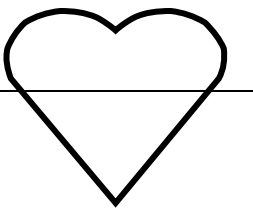
units:

Formula=

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

- g/ml or g/ cm³

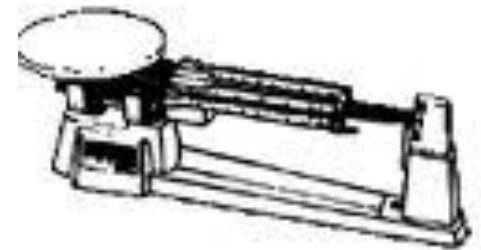
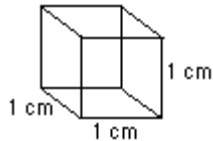
- Density = mass
volume

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


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

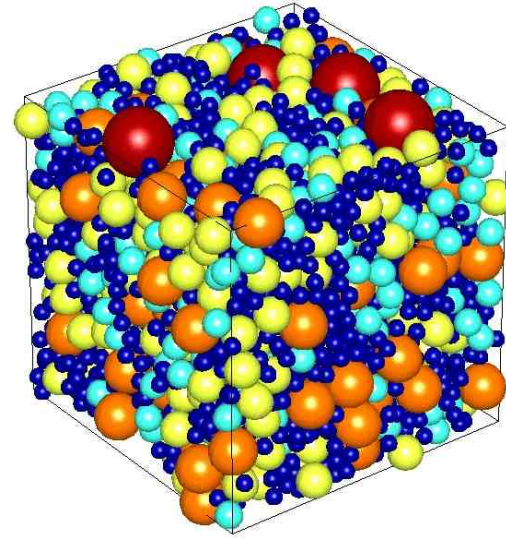
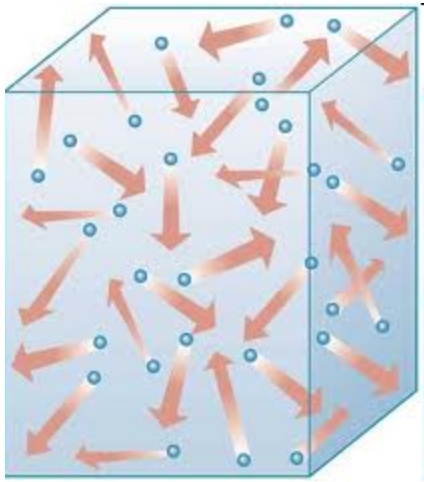
Volume of 1 cubic
(cm³) centimeter



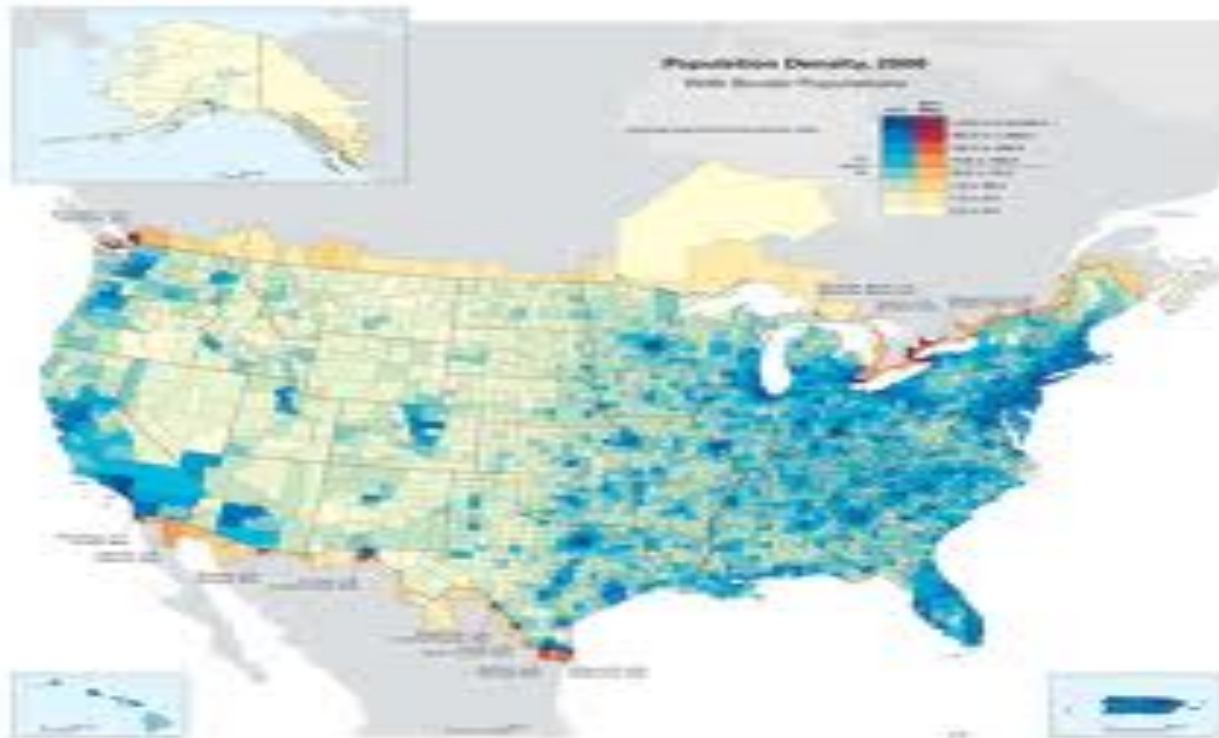
Float or Sink

- | | |
|---|--|
| <ul style="list-style-type: none">• <u>The density of water</u>• <u>Anything with a density that is LESS than 1.0 g/ml</u>• <u>Anything with a density that is MORE than 1.0 g/ml</u>• Let's look at clay... | <ul style="list-style-type: none">• <u>is 1.0 g/ml</u>• <u>will FLOAT</u>
• <u>will SINK</u> |
|---|--|

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



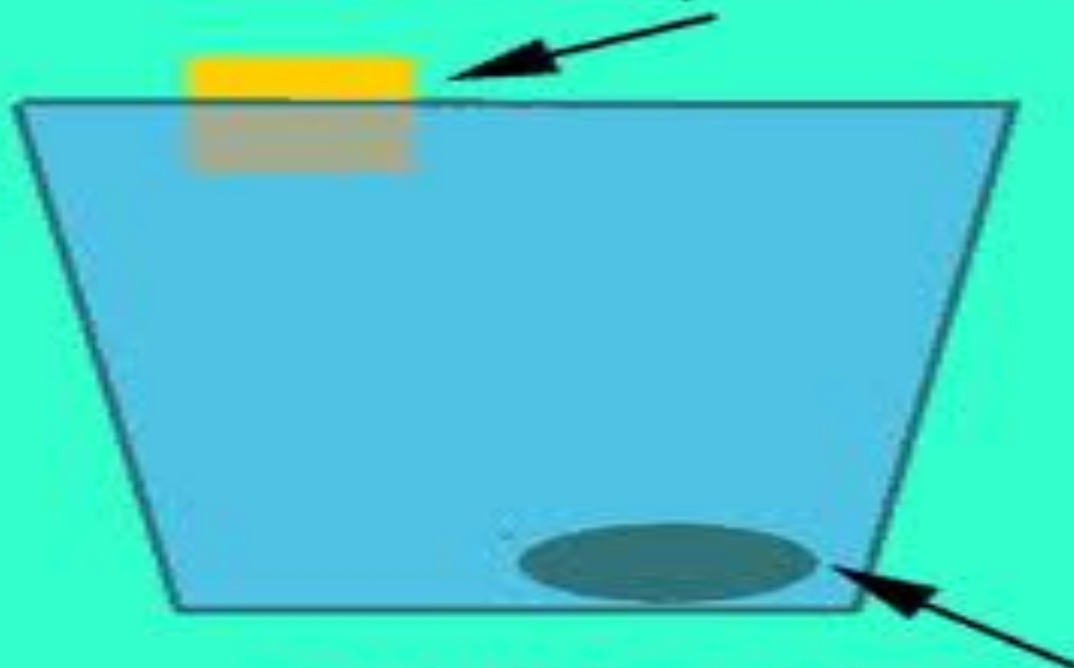
Population density







**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



- sulfur lake underwater