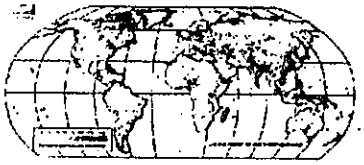
Density is...

the amount of _____in a given area.

Ex. population density

(Alaska has 1 person/mi², New Jersey has 1174 person/mi²)



Density

For science... density is equal to the mass of a thing divided by its volume.

D = _____

- Mass – amount of _____– measured in _____(g)
- Volume – amount of _____something occupies – measured in _____ or _____
- Mass = D(v) v = m/d

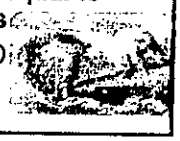
Volume

For regularly shaped objects- _____~ (cm)x (cm)x (cm)=cm³

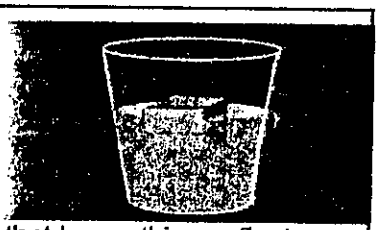
For irregularly shaped objects- use _____(amount of water pushed aside equals the volume of the object)

Archimedes Principle

- Archimedes- Greek philosopher
- Was in his bath tub one morning – he noticed that as his body went in to the water – the water rose out of the way. He realized that the volume of H_2O that rose was equal to the _____.
- So... the volume of an object is equal to the volume of _____ it displaces
- 1g H_2O = 1mL H_2O = 1 cm^3 H_2O



Buoyancy



-_____force that keeps things afloat.
-in water: an object _____if its buoyancy is greater than its weight; _____if its weight is greater than its buoyancy
-the buoyant force on the solid object is equal to the weight of the water displaced

Practice time

- If an object has a density <1g/cm3, what will it do if placed in water?
- If an object has a density >1g/cm3, what will it do if placed in water?
- If an object has a density =1g/cm3, what will it do if placed in water?