

# Noteset 7A (Part 1) - In Class Presentation

## States of Matter Review

### States of Matter

Way that particles interact (bond) with each other in space

Ionic : Strong (solids)

Polar Covalent : Weak (liquid)

Non-Polar Covalent : Very weak (gas)

### Define "state" of matter

Volume : Space a set of particles occupy

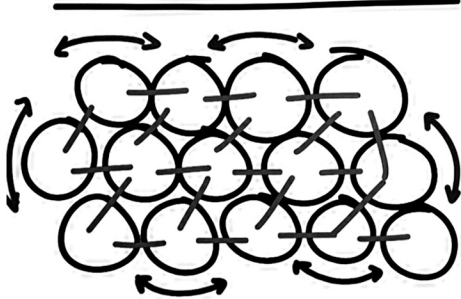
Shape : The way the particles interact, and

whether the particles move or stay in place

### Visual for States of matter

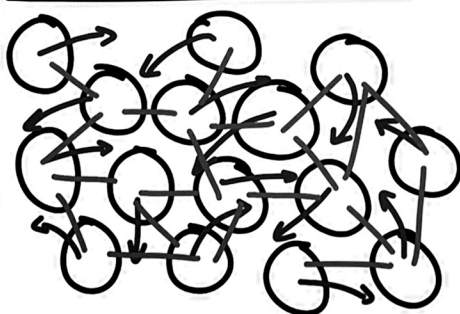
#### Solid

fixed Shape  
fixed volume



#### Liquid

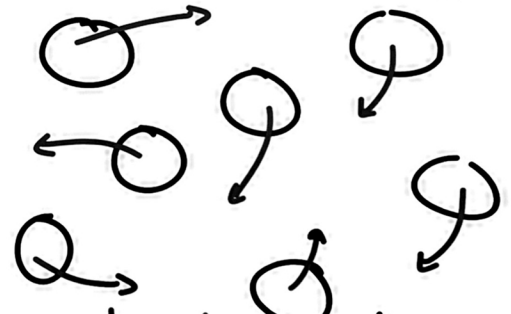
variable Shape  
fixed volume



→ bond movement

#### Gas

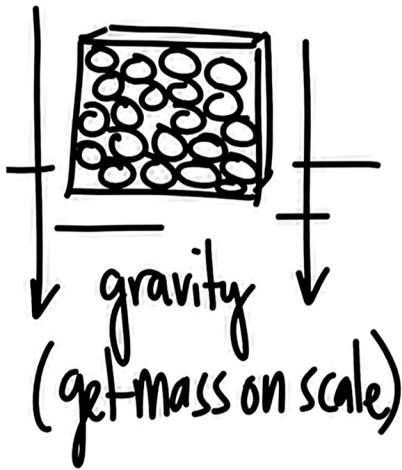
variable Shape  
variable volume



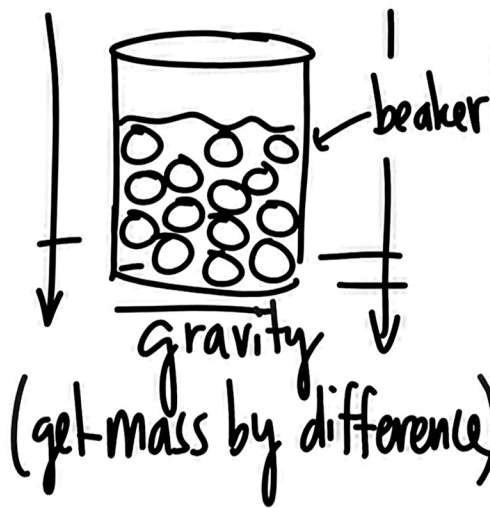
no bonds random move.

# Comparing Solid/Liquid to a gas

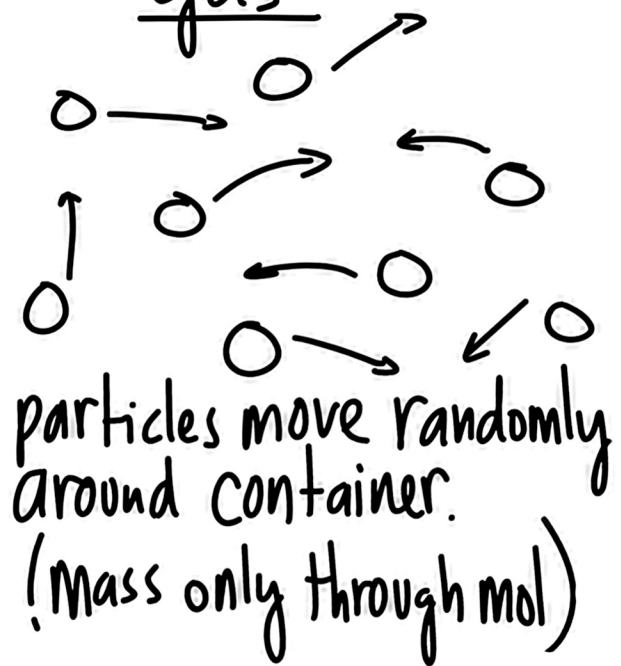
## Solid



## Liquid



## gas



## Properties of a gas

### Volume (V, L)

Space that matter occupies

### Pressure (P, atm)

# collisions with other particles/container in 1 second

### Temperature (T, K)

Speed of a particle (i.e. how fast they move)

### Number of Particles (n, mol)

How many gas particles are in a sample.