

# PARTICLE NATURE OF MATTER

## PROPERTIES

1. MATTER CAN BE MADE SMALLER (SOLIDS & LIQUIDS).
2. THERE ARE SPACES BETWEEN PARTICLES
3. THERE ARE FORCES BETWEEN PARTICLES
4. DIFFUSION OCCURS. (LIQUIDS & GASES)
5. BROWNIAN MOTION. (GASES)

**VIBRATE**  
 VERY STRONG FORCES.  
 VERY SMALL SPACES.  
 NOT COMPRESSIBLE.  
 NOT MISCIBLE  
 NO DIFFUSION  
 NOT VISCOUS.  
 HIGH DENSITY  
 CRYSTALS DUE TO ORDERLY ARRANGEMENT

### BROWNIAN MOTION

constant random movement of particles.

### VISCOSITY

substance can be poured

### MISCIBILITY

ABILITY TO MIX WITH other substances.

### FLOW

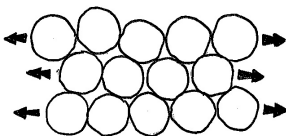
STRONGER FORCES THAN GAS  
 LARGER SPACES THAN SOLIDS.  
 NOT COMPRESSIBLE  
 MISCIBLE  
 DIFFUSES.  
 VISCOUS.  
 MEDIUM - HIGH DENSITY.  
 TAKES SHAPE OF CONTAINER

### DIFFUSION

movement of particles from a high concentration to a low concentration.

## SOLIDS

**HIGH DENSITY**  
**HARD** - STRONG ATTRACTIVE FORCES.  
**REGULAR SHAPE** - ORDERLY ARRANGEMENT



### MELTING

ABSORBS

ENERGY  
 RELEASE

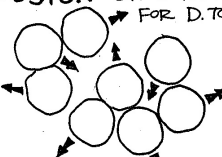
### SOLIDIFICATION

## LIQUIDS

**NOT COMPRESSIBLE** - SMALL SPACES.

**MISCIBLE** - SMALLISH SPACES, BUT ENOUGH TO MIX.

**DIFFUSION** - ENOUGH MOTION FOR D. TO HAPPEN



**VISCOSITY**  
 STRONGER ATTRACTIVE FORCES.  
 ALLOW LIQUIDS TO FLOW.

### EVAPORATION

ABSORBS

ENERGY  
 RELEASE

### CONDENSATION

## GAS

**LARGE SPACES** - EASILY COMPRESSIBLE.  
**MOVE FREELY, FILL CONTAINER.**

**MISCIBLE** - MIX EASILY (BECAUSE OF LARGE SPACES)

**DIFFUSION** - MOVE FAST OVER LARGE AREAS.

**BROWNIAN MOTION** - RANDOM MOVEMENT.

MOVE FREELY  
 WEAK FORCES  
 LARGE SPACES  
 EASILY COMPRESSIBLE  
 MISCIBLE  
 DIFFUSES  
 LOW VISCOSITY  
 LOW DENSITY

## SUBLIMATION

[duckingsciencebombs.wordpress.com](http://duckingsciencebombs.wordpress.com)