

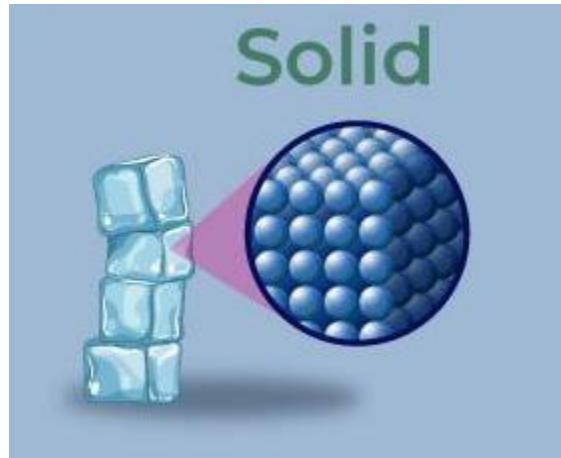
Unit 01 Principles of Chemistry

1 States of Matter

1.1 Arrangements of particles ;

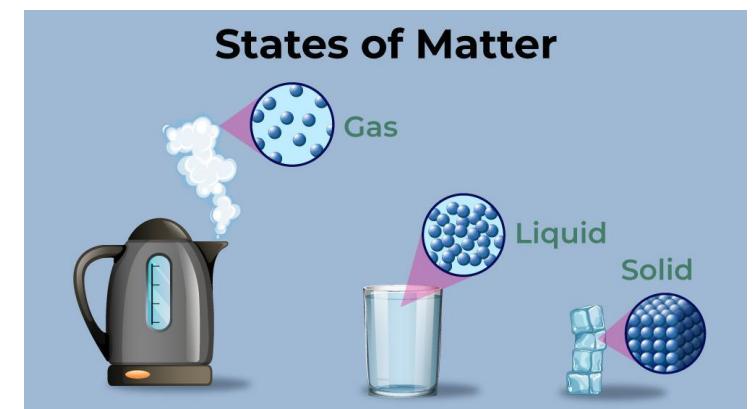
Solid

- Particles are arranged regularly, packed closely together.
- Only vibrates in fixed positions.
- Have strong attraction of force to keep the particles together.
- The particles in a solid have less kinetic energy than liquid and gas.



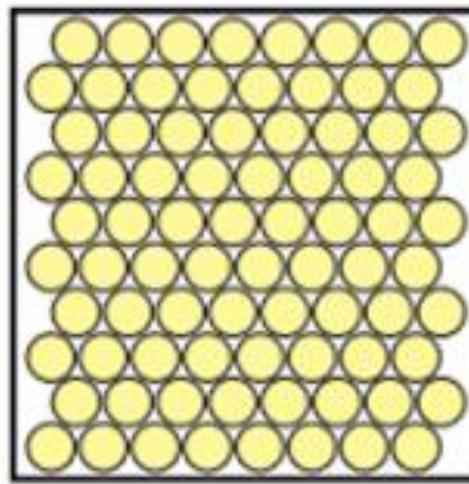
Liquid

- The particles are mostly touching, but a small gap can be seen in between the particles.
- Therefore, liquids are less dense than solids. (**Less dense means that less mass packed into the same amount of space.**)
- Have less attraction of force in between the liquid particles.
- Particles can move around and also arranged randomly.
- The particles in a liquid have more kinetic energy than solid and less kinetic energy than gas.

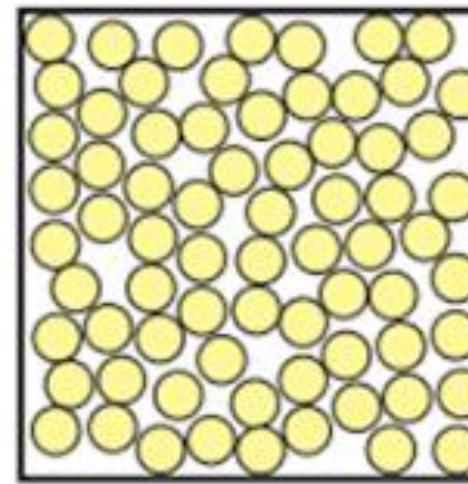


Gas

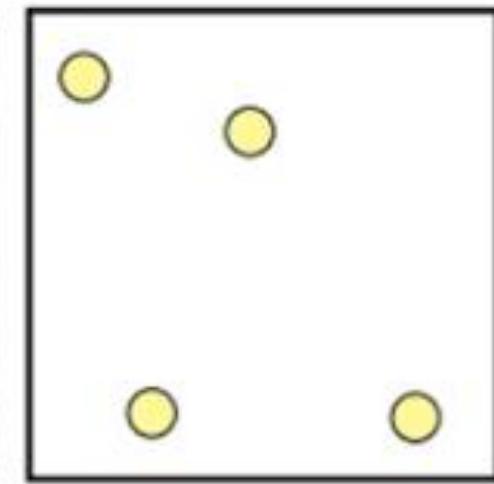
- Particles are moving rapidly.
- Particles are much further apart, no forces of attraction involve in between particles.
- The particles in a gas have high kinetic energy than solid and liquid.



solid



liquid



gas

