

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

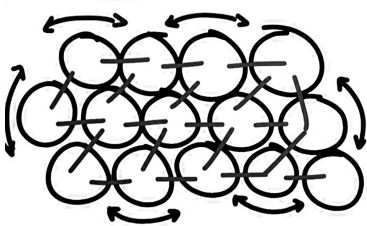
Shape : The way the particles interact, and

whether the particles move or stay in place

Visual for States of matter

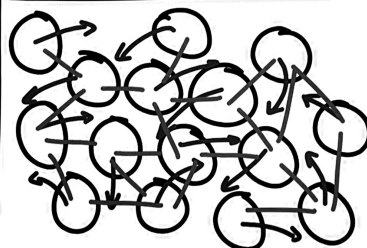
Solid

fixed Shape
Fixed volume



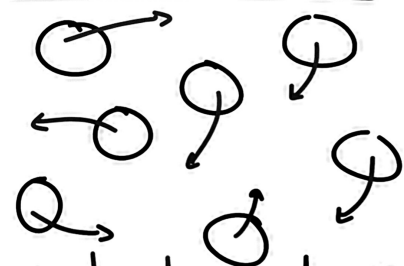
Liquid

variable Shape
Fixed volume



Gas

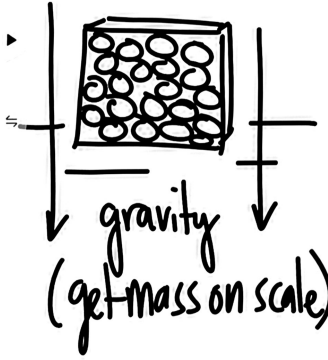
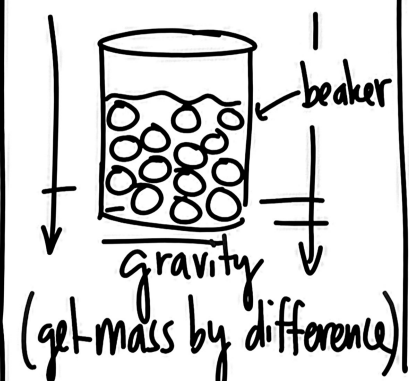
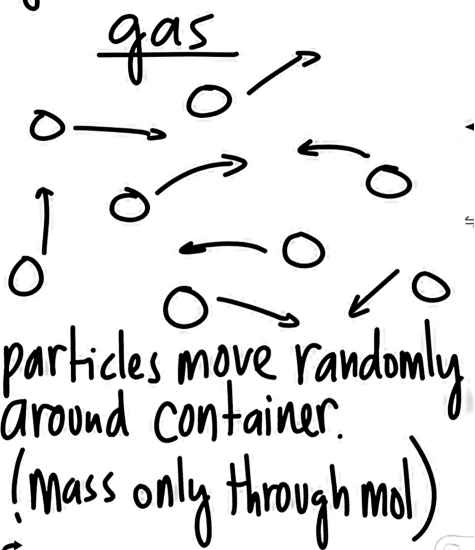
Variable Shape
Variable volume



no bonds random move.

Comparing Solid/Liquid to a gas

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<u>Solid</u>	<u>Liquid</u>	<u>gas</u>
		

Properties of a gas

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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.