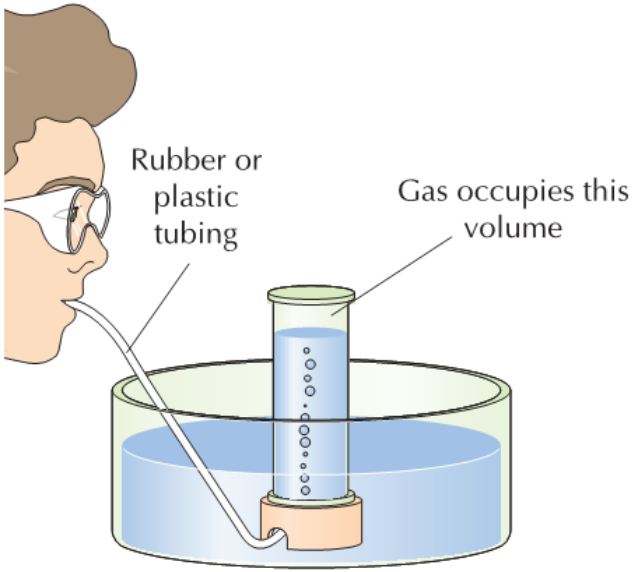
MATERIALS

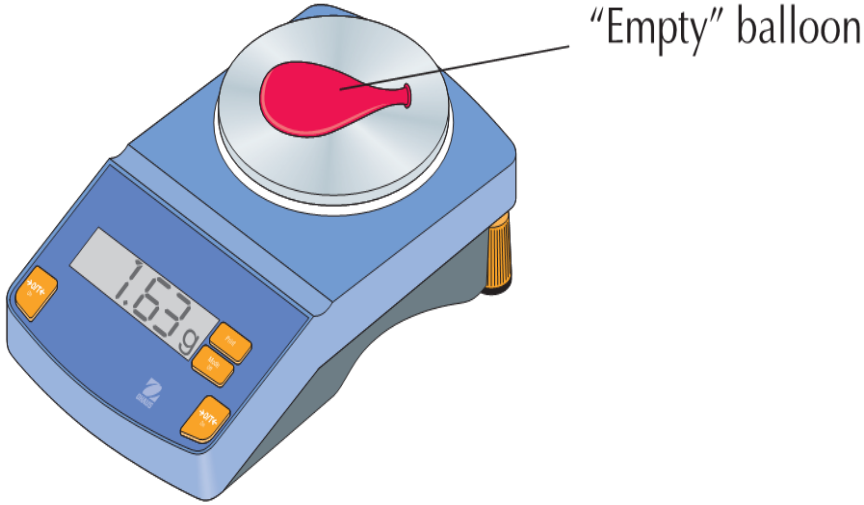
Matter is anything which occupies space and has mass.

We can test to see if **AIR** is matter.

Does it occupy space?

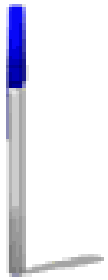


Does it have mass?



There are **3 types of matter**.

They all have different properties.



What can we say about these?

1. Solids
e.g. Pen

2. Liquids
e.g. water

3. Gases
e.g. Deodorant

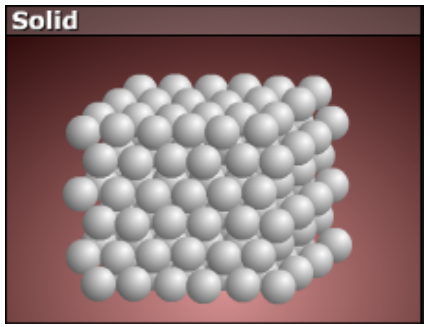
Properties of Solids, Liquids and Gases

SOLIDS	LIQUIDS	GASES
Definite Shape Do not flow	No definite shape Flow easily	No definite shape Diffuse to fill space
Definite Volume	Definite Volume	No Definite Volume
Hard to Compress	Hard to Compress	Easy to Compress

Particle Theory

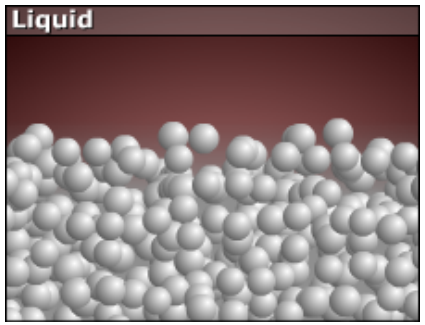
Solids

Are arranged in a regular way.
They are packed closely together.
There are Strong Forces holding them.



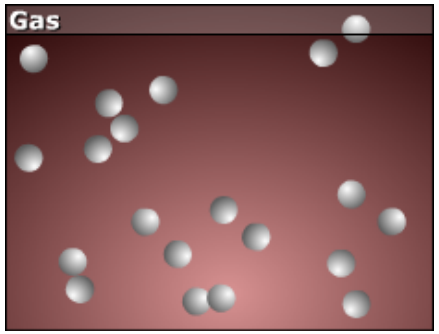
Liquids

Are not arranged in a regular way.
They can slide over each other in sheets.
There are weaker forces than a solid.

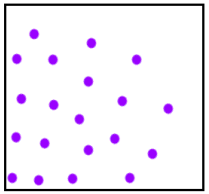


Gases

Are much farther apart than others.
They diffuse quickly into all available space.
There are weaker forces than a solid.

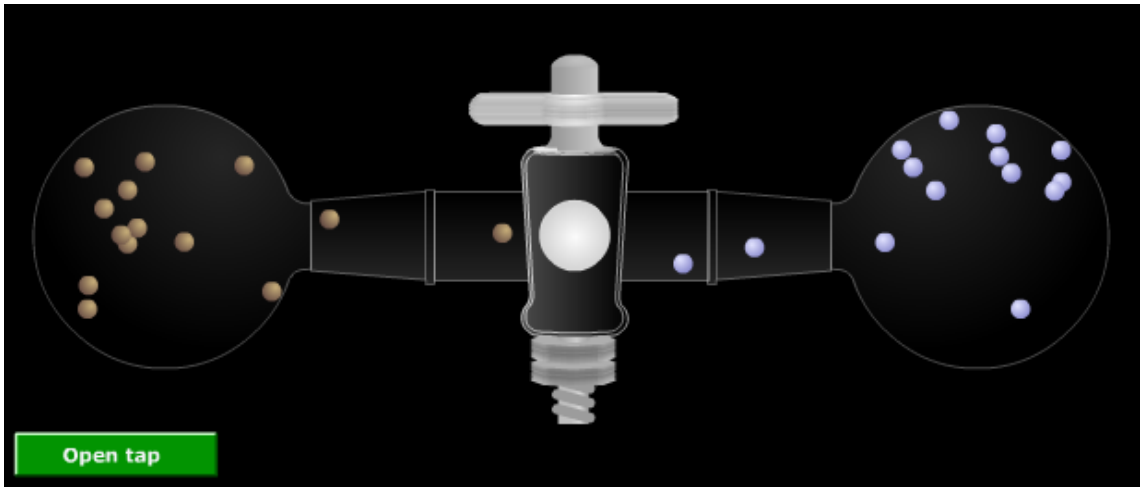


Diffusion



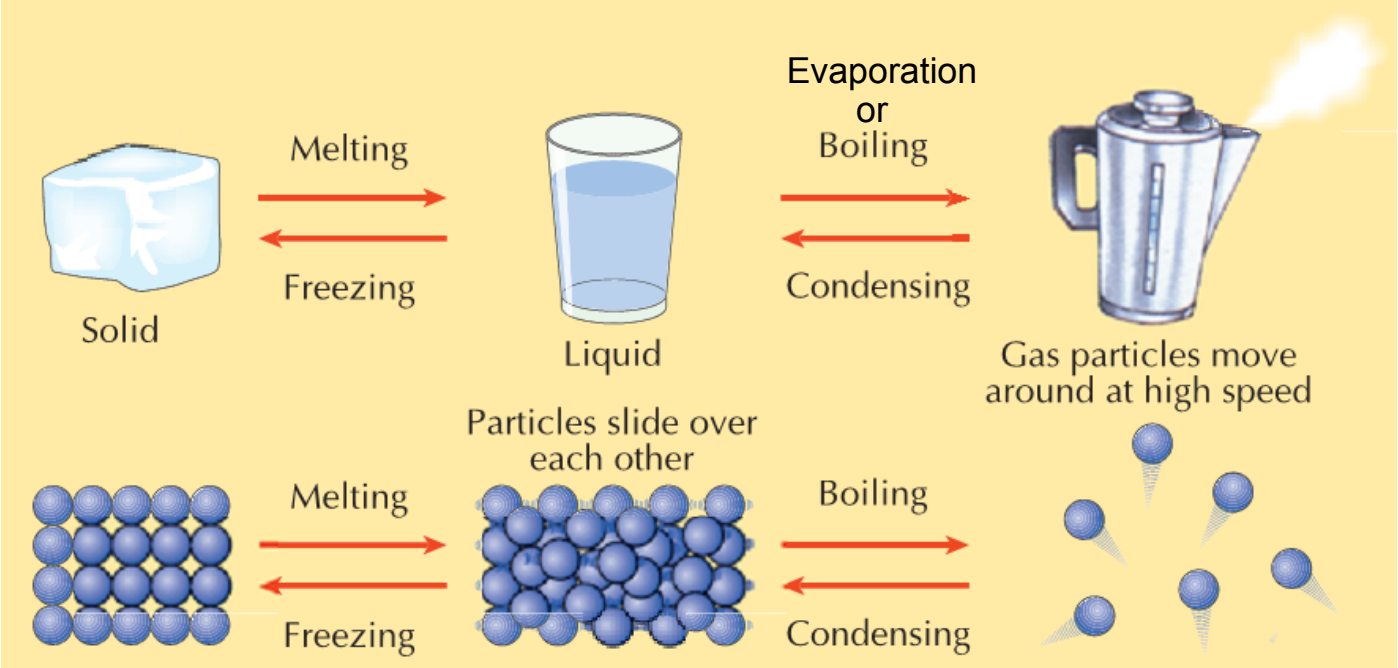
Diffusion is the quick movement of particles to fill up the available space.

Diffusion happens quickly with gases as the particles can move around.
Example: Deodorant
Diffusion also happens in liquids and solids but is slower as there is less movement of particles.Example: Ribena in water



Changes of State

When a solid melts into a liquid we call it a change of state.
Water is a great example as we can see it in all 3 states.

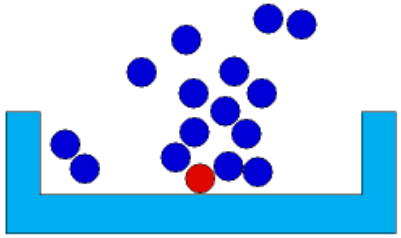


Melting

The Melting Point is the temperature at which a solid becomes a liquid.

Evaporation

Evaporation is the changing of a liquid to a gas.

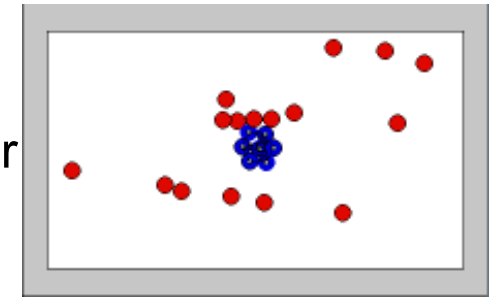


Boiling point

The boiling point of a liquid is the temperature at which a liquid changes to a gas **throughout** the liquid.

Condensation

Particles slow down and move closer to each other



Compression

Solids and Liquids have particles that are very close to each other.
The particles in a gas are further apart and can be squashed.
This means that gases can be compressed.