

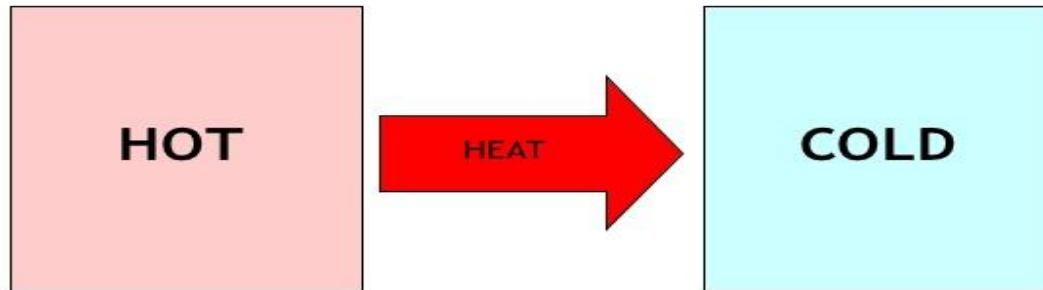
Matter

- Everything around us such air, water, plants, animals and the earth is all **matter**.



Matter can be defined as
anything which has mass
and volume.

But Light, Sound and Heat are not examples of matter, because they have no mass and no volume.



- Heat always moves from HOT to COLD.
hot → cold

There are 3 states of matter.

- 1. Solid (қатты дене)
(твёрдое)
- 2. Liquid (сұйық) (жидкость)
- 3. Gas (газ)

Solid

Has definite shape and volume



Liquid

- Has definite **volume** but not definite **shape**.
Takes the shape of container



Gas

Indefinite **shape** and volume. Fills up container.



Which substance has three states of matter?



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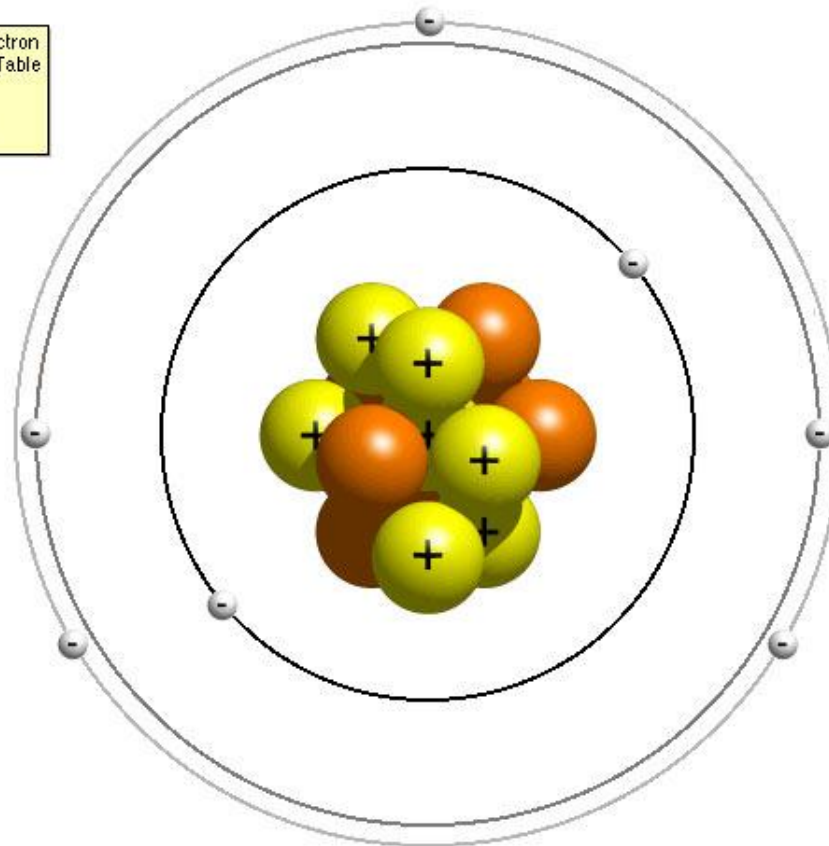
Gas has mass



ATOM

All matter is made up of atoms

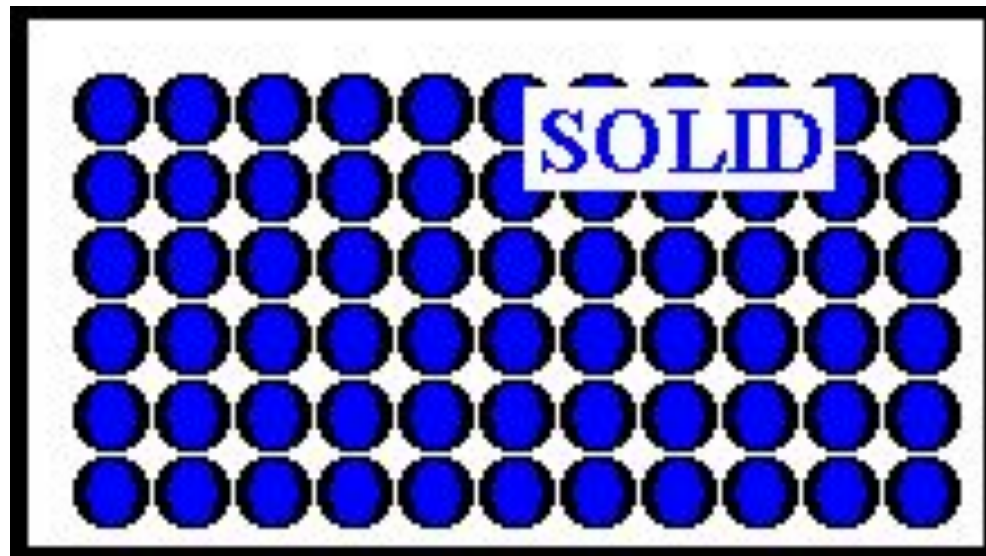
Nitrogen's Electron
Configuration Table
 $1s^2$
 $2s^2 2p^3$



- An atom consists of a nucleus and electrons.
- Electron is negatively charged. Nucleus contains *protons* and *neutrons*.
- Protons are positively charged

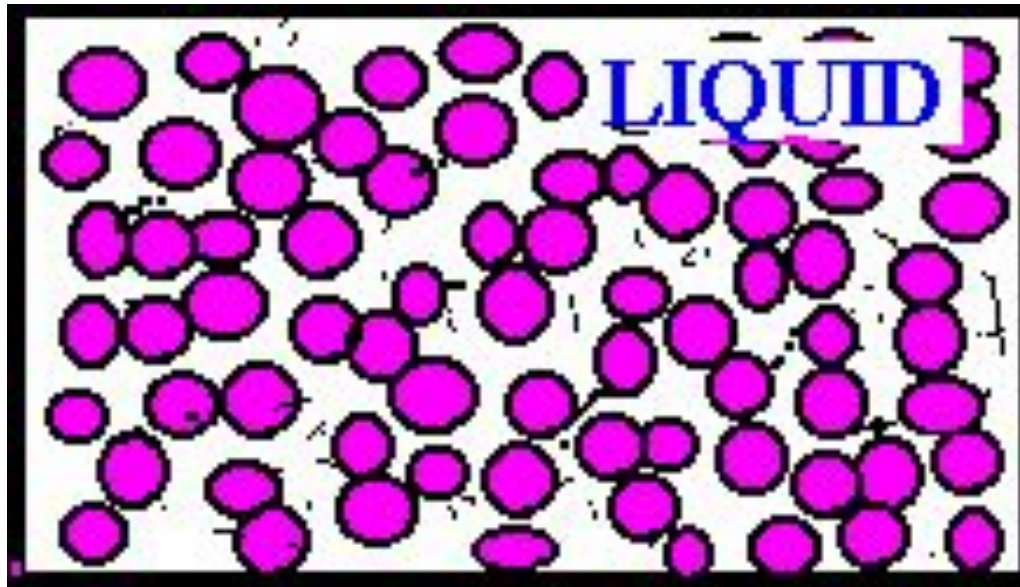
Particles in solid

Very close to each other and
held strongly. That's why
definite shape and volume



Particles in liquid

- Held not strong as in solid. Particles can **slide over each other**. That's why has not definite shape.

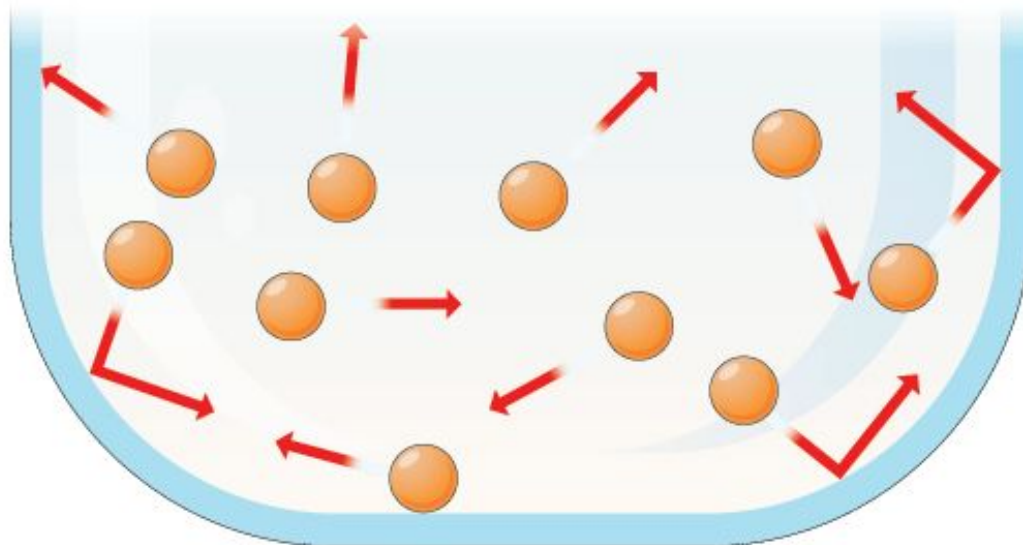


Slide over each other



Particles in gas

Forces between particles weak. They **can move easily**. That's why has not definite **shape** and **volume**



Compressed air



Solid



Liquid



Gas



Temperature

If speed of molecules is great, then the temperature is also great.



Task1. Sort all examples of matter according to their state.

Solid	Liquid	Gas

Water, oil, alcohol, air, oxygen, hydrogen, water vapor, a glass, a spoon, wood, paper, pencil

Task2. Fill in the blanks with appropriate words.

1. Matter can be defined as anything which has _____ and _____ in space.
2. Matter exists in three states: _____ , _____ and _____.
3. In _____, the particles are held strongly but not as tightly as in a solid.
4. One milliliter is equal to one _____ cubic meters.
5. The volume of liquids is generally measured in _____.
6. The volume of a regular object is found by multiplying the _____ of the object with its height.

Telegramm

Translate a Matter

1. Масса
2. Материя
3. Табиғат

The lesson is over, thank you.

Good bye!