

CLASS - VII
CHAPTER - 1

SUBJECT - CHEMISTRY
TEACHER - MOHINISHA THAKUR

Good morning to all the students!

Students this lesson is for class - VII for the subject of chemistry, Topic :- 'Matter' which is covered in chapter - 1 'Matter and its composition' starting on page no - 1 of your text - book titled - 'Concise Chemistry' by 'Selina Publication' and is being submitted to you on **8, April, 2024**

All students may now please open page no - 1 of your notebook in front of you.

If all students are ready then let us start with this chapter. All students may now please listen carefully.

Students you can see so many things around you of different shapes, colour and material. All these things are made of matter.

Matter :- Anything that has mass, occupies space and can be perceived by our senses. Like air cannot be touched or seen but you can feel it so it is also matter.

(P.T.O.)

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Matter has mass and occupies space:-

You can feel the mass of an object by holding it in your hands. If you put some marbles in a glass tumbler filled with some water, you can easily observe the change in mass. The water level in tumbler also increases because the marbles occupy space.

If you keep pouring water in a tumbler, it starts flowing out when it is filled because water poured earlier has already occupied the space in tumbler. The mass and space occupied by an inflated balloon is more than a deflated balloon. This proves that air is also matter.

The quantity of matter that a body contains is known as its mass.

The space occupied by a body is called its volume.

Students, next we will discuss the topic 'Composition of Matter'.

Composition of Matter:-

All the substances are made of matter and now we will find out what is matter made up of. If you take an iron nail and start breaking it into small pieces, you will get very small particles of iron which cannot be broken further. These small particles show all the properties of iron. In the same way if you

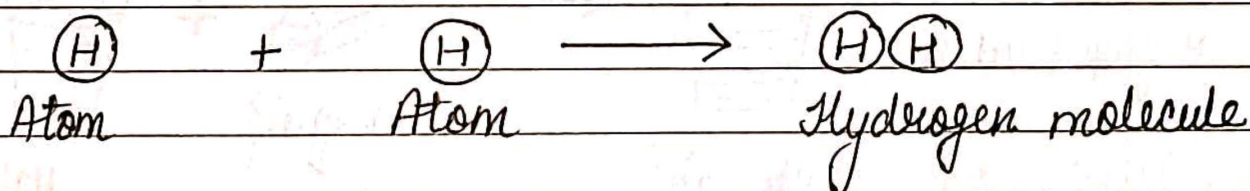
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Take a sheet of paper into small pieces, you will get very fine bits of paper which show the properties of paper. Thus, we can say that matter is made up of very tiny particles, these tiny particles are called atoms.

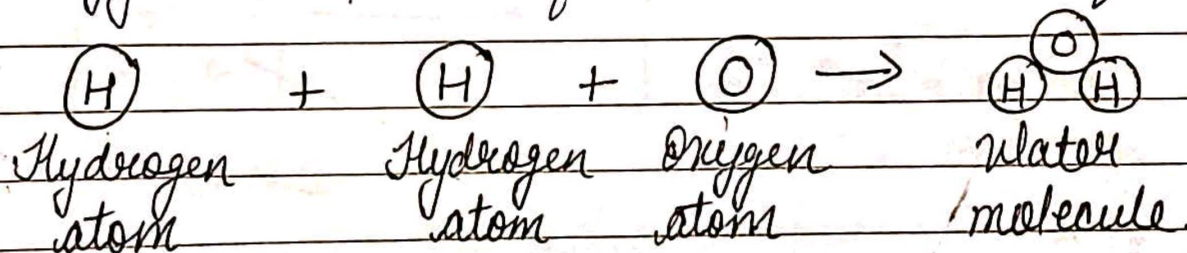
The atoms cannot exist independently so they combine with one another to form particles called molecules.

A molecule can be formed from atoms of same kind or atoms of different kinds.

Example :- Two atoms of hydrogen combine to form a molecule of hydrogen.



Two atoms of hydrogen and one atom of oxygen combine to form a molecule of water.

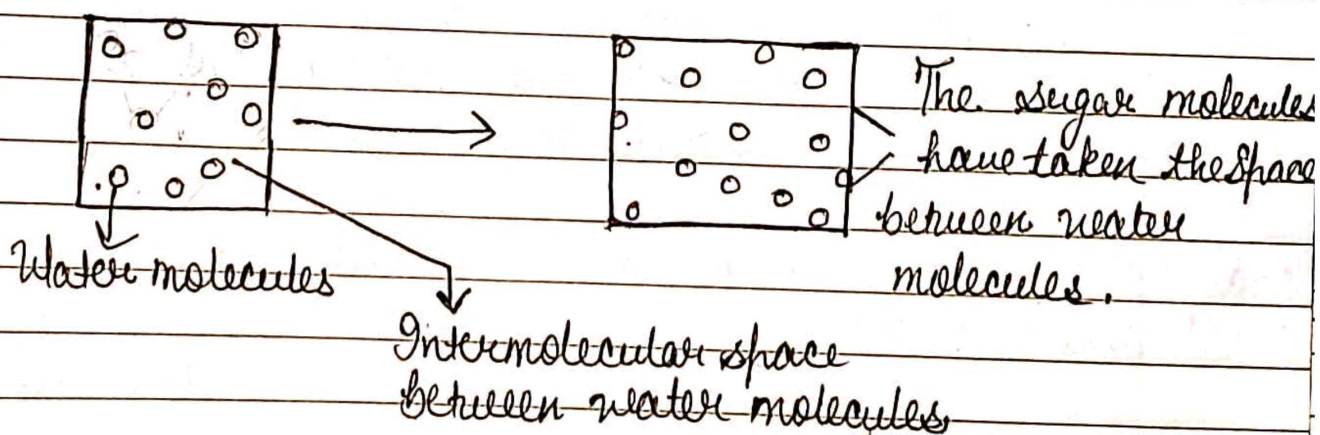
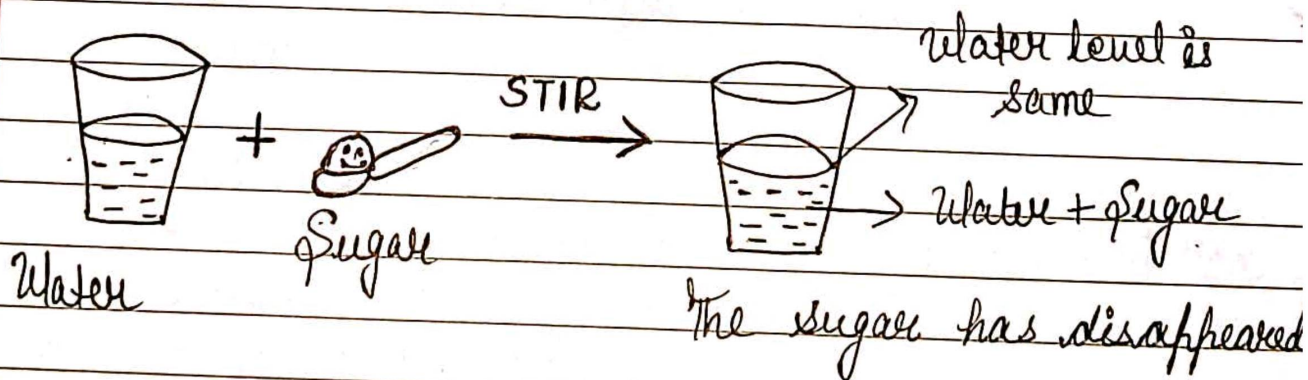


Students, now we will discuss the next topic of this chapter which is 'Characteristics of Particles of Matter'

Characteristics of Particles of Matter:-

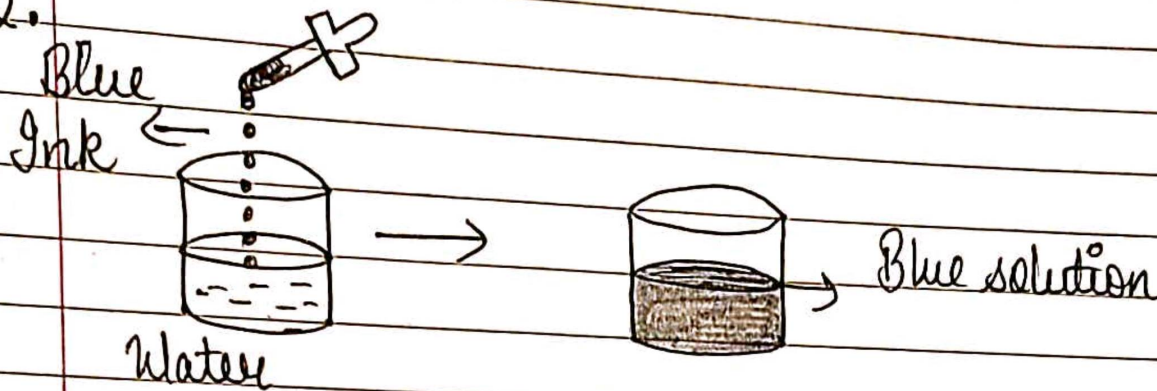
We have already studied that matter is made up of molecules. Now we will study about the arrangement and characteristics of molecules.

1. The particles of matter or molecules have spaces between them called intermolecular space.



The above activity shows that molecules have spaces between them.

2.



A few drops of ink makes the whole water blue. This is because the molecules of ink and water were continuously moving hitting each other. Therefore the blue ink particles were spread everywhere. The molecules are always moving randomly because they have kinetic energy. The kinetic energy always increases with increase in temperature.

3. The molecules in a matter are held together by a force of attraction which is also called intermolecular force of attraction. Try to break an iron scale and a piece of chalk. The chalk piece breaks but the iron scale does not. In both the cases you had to apply force. The intermolecular attraction can be strong or weak.

Now, I will give you three a very short Questions You will get a three minutes break to write the answers.

The Questions are:-

Q1:- Give two example of matter.

Q2:- Two atoms of hydrogen combine to form a

Q3:- Why does iron scale not break while hitting it?

I hope you all have written the answers by now. Let us check the answers now.

Ans1:- Book, air.

Ans2:- Molecule of hydrogen.

Ans3:- Because intermolecular attraction is strong.

Students, Now I am ending the lesson for today by giving 'Instructions'

INSTRUCTIONS:-

- 1) Read the chapter thoroughly followed by the summary
- 2) Revise all the topics which we have covered today and revise the topics again.

x (Thank You) x