

تفريغ المحاضرة الأولى

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Chapter (1)

(1-1) HOW ELECTRONS ARE ARRANGED IN ATOMS

-What will you find inside atoms?

You will find a dense part which is called (nucleus) and around it (electrons).

-What will you find in the nucleus?

1.protons

2.neutrons

-What is the size of this nucleus with respect of the atom? It is very small.

***THE ATOMIC NUMBER:** the number of protons and it is equal to the electrons -neutral atom-

***THE ATOMIC WEIGHT:** the sum of protons and neutrons.

WHAT WE WOULD DEAL WITH (THE NUMBER OF ELECTRONS)
....because electrons make chemical bonds.

Electrons are found in certain regions around nucleus -ORBITALS-like (s,p,d,f).

The electron configuration of the carbon: $1s^2 2s^2 2p^2$

-**SHELLS**: ascertain type of orbitals we put them in the same categories(n)

SHELL NUMBER	S	P	D	TOTAL NUMBER OF ELECTRONS
1	1	0	0	2
2	1	3	0	8
3	1	3	5	18



The electrons in the outer most shells, some of these are involved in the formation of bonds.

=if we look to the periodic table we will observe that the number of the valence is the group number usually.

***THE NOBLE GASES DO NOT LIKE TO FORM BONDS.WHY?**

The orbitals are filled with electrons.

(1-2) IONIC AND CAVALENT BONDING.

-IONIC BOND: electron moves(completely) from one atom to another.