

ELEMENTS, COMPOUNDS, SYMBOLS AND FORMULAE

SUBJECT-CHEMISTRY

CHAPTER NO- 4

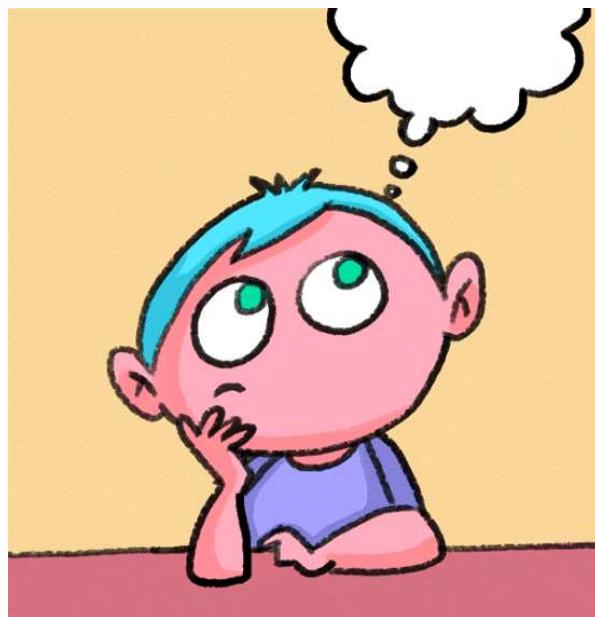
Symbols of Elements ,Common Elements In the nature

PERIOD-3

CHANGING YOUR TOMORROW

LEARNING OBJECTIVE

- Students will be able to
- Sensitize about the symbols of elements
- Know the examples of common elements in nature



WARM UP

- Recapitulation of the previous topic by asking following questions to the students
- Define elements
- How elements were formed?
- What do you mean by big bang?

SYMBOLS OF ELEMENTS

- Chemical symbols are the abbreviations used in chemistry for chemical elements, functional groups and chemical compounds.
- Element symbols for chemical elements normally consist of one or two letters from the Latin alphabet and are written with the first letter capitalised.

First Twenty Elements

1 H Hydrogen	2 He Helium	3 Li Lithium	4 Be Beryllium	5 B Boron
6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon
11 Na Sodium	12 Mg Magnesium	13 Al Aluminum	14 Si Silicon	15 P Phosphorus
16 S Sulfur	17 Cl Chlorine	18 Ar Argon	19 K Potassium	20 Ca Calcium

sciencenotes.org

SYMBOLS OF ELEMENTS

Periodic table of the elements

		Periodic table of the elements																																			
period	group	1 [*]		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18	
		H	Li	Be	Na	Mg	Al	Si	P	S	Cl	Ar	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	B	C	N	O	F	Ne							
1	1 [*]	H	Li	Be	Na	Mg	Al	Si	P	S	Cl	Ar	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	B	C	N	O	F	Ne							
2	3	Li	Be																						5	6	7	8	9	10	He						
3	11	Na	Mg																						13	14	15	16	17	18							
4	19	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	31	32										33	34	35	36	37	Kr							
5	37	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	49	50	51	52	53	54																		
6	55	Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	81	82	83	84	85	86																		
7	87	Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	113	114	115	116	117	118																		
lanthanoid series		58	59	60	61	62	63	64	65	66	67	68	69	70	71																						
		Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu																						
actinoid series		90	91	92	93	94	95	96	97	98	99	100	101	102	103																						
		Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr																						

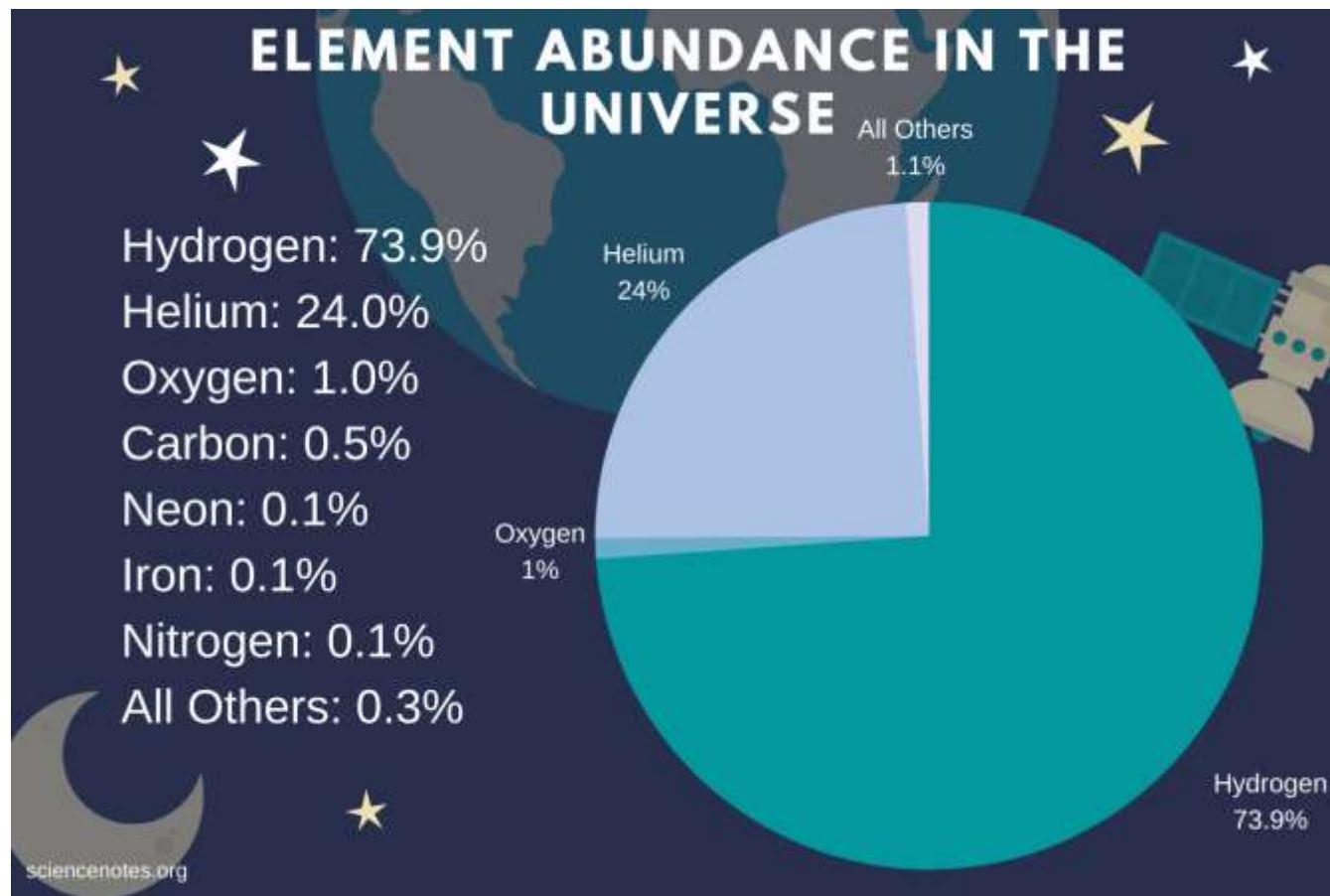
*Numbering system adopted by the International Union of Pure and Applied Chemistry (IUPAC).

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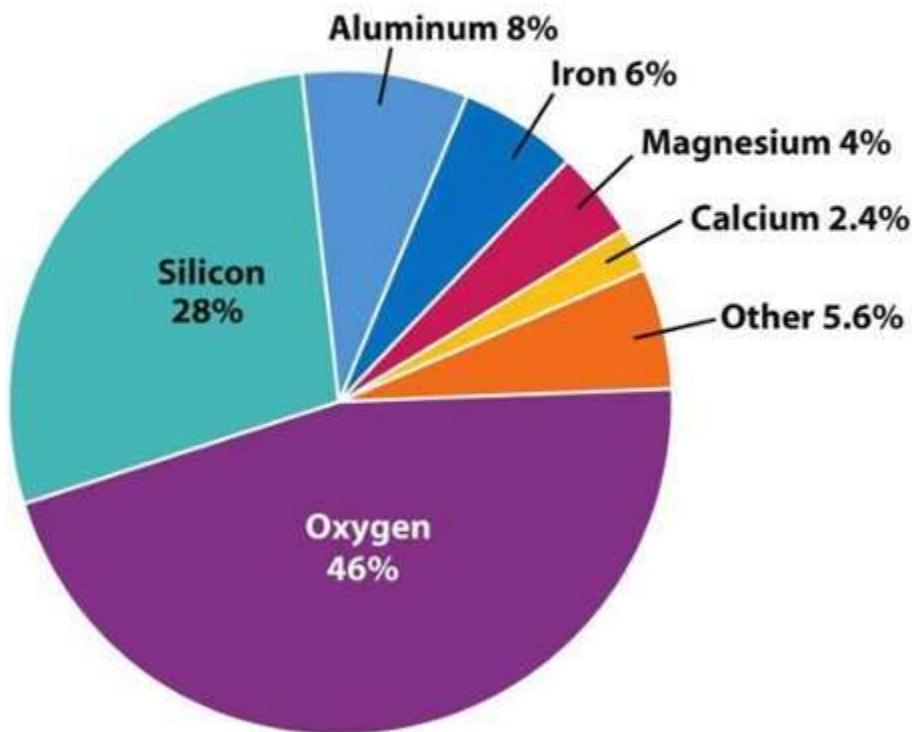
- **The vertical columns on the periodic table are called groups or families because of their similar chemical behavior. All the members of a family of elements have the same number of valence electrons and similar chemical properties.**
- **The horizontal rows on the periodic table are called periods.**

	Group 1		Group 2														Group 3		Group 4		Group 5		Group 6		Group 7		Group 0	
Period 1																	H								He			
Period 2	Li	Be															B	C	N	O	F					Ne		
Period 3	Na	Mg															Al	Si	P	S	Cl					Ar		
Period 4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn				Ga	Ge	As	Se	Br					Kr			
Period 5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd				In	Sn	Sb	Te	I					Xe			
Period 6	Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg				Ti	Pb	Bi	Po	At					Rn			
Period 7	Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg																	

COMMON ELEMENTS IN NATURE



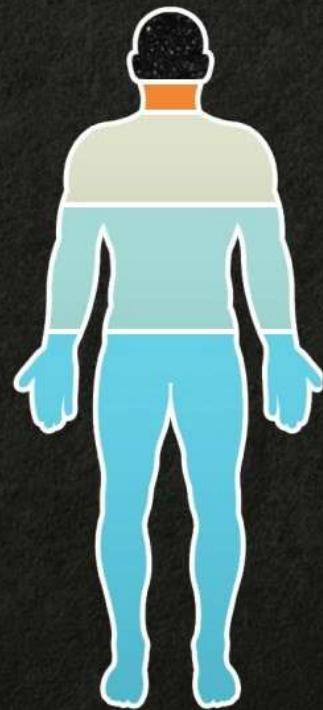
Elemental Composition of the Earth's Crust



Elements Of The **HUMAN BODY**

3%
Nitrogen

Carbon
18%



Hydrogen
10%
Oxygen
65%

Atmospheric composition



- Nitrogen (N_2), 78.09%
- Oxygen (O_2), 20.95%
- Argon (Ar), 0.93%
- Carbon dioxide (CO_2), 0.038%
- Minute traces of neon (Ne), helium (He), methane (CH_4), water vapor (H_2O), krypton (Kr), hydrogen (H), xenon (Xe), and ozone (O_3).

HOME ASSIGNMENT

Exercise-I Q 2

Draw the periodic table showing only first 20 elements(symbols)



THANKING YOU

ODM EDUCATIONAL
GROUP