

ELEMENTS, COMPOUNDS, SYMBOLS AND FORMULAE

SUBJECT-CHEMISTRY

CHAPTER NO- 4

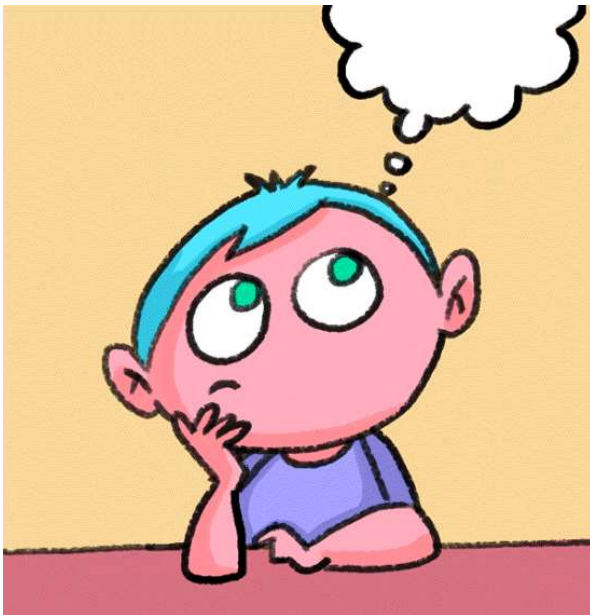
Symbols of Elements ,Common Elements In the nature

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

period	group 1*	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1 H																	2 He
2	3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
3	11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
4	19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
5	37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
6	55 Cs	56 Ba	57 La	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
7	87 Fr	88 Ra	89 Ac	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112 Cn	113 Nh	114 Fl	115 Mc	116 Lv	117 Ts	118 Og
lanthanoid series 6	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu				
actinoid series 7	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr				

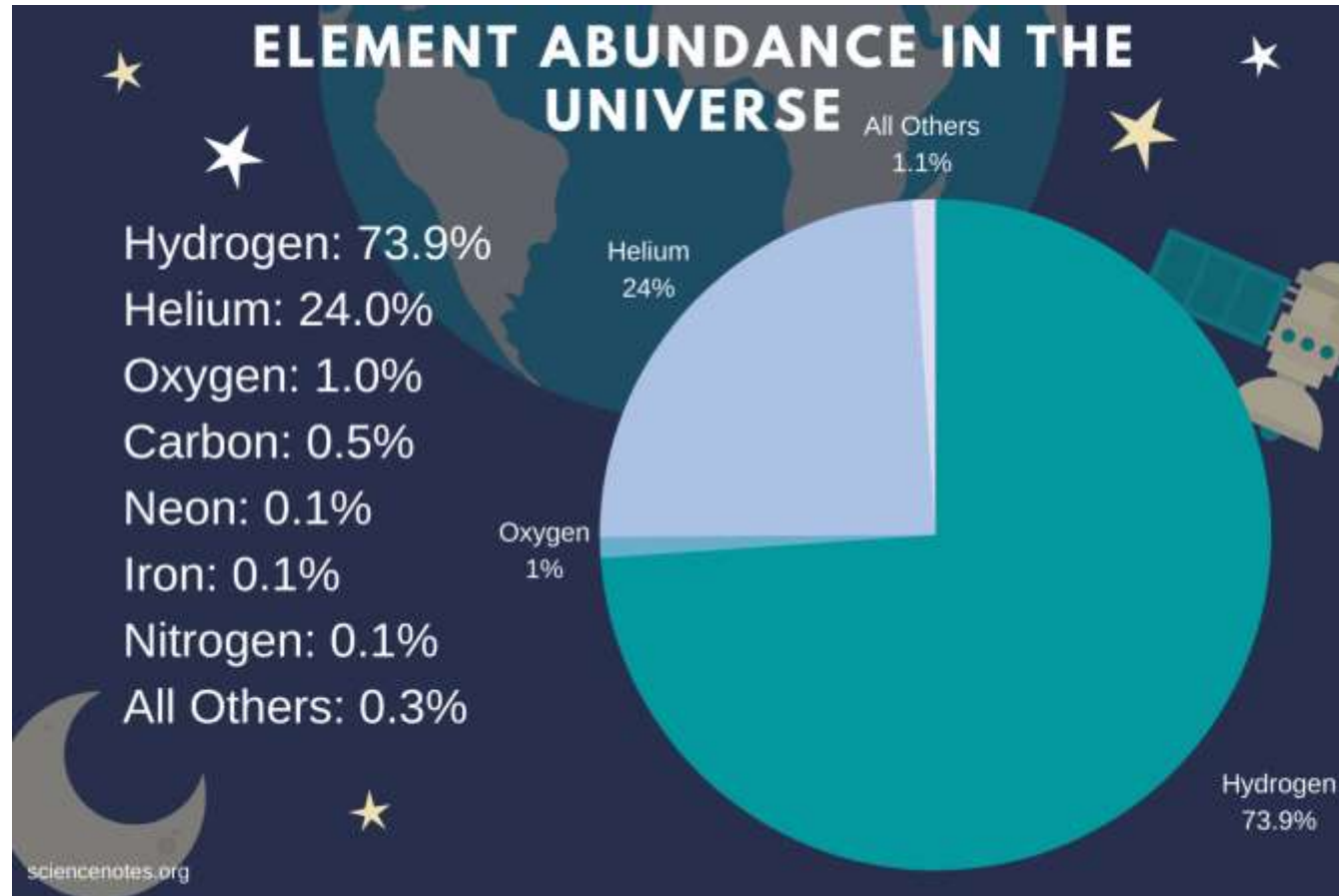
*Numbering system adopted by the International Union of Pure and Applied Chemistry (IUPAC).

© Encyclopædia Britannica, Inc.

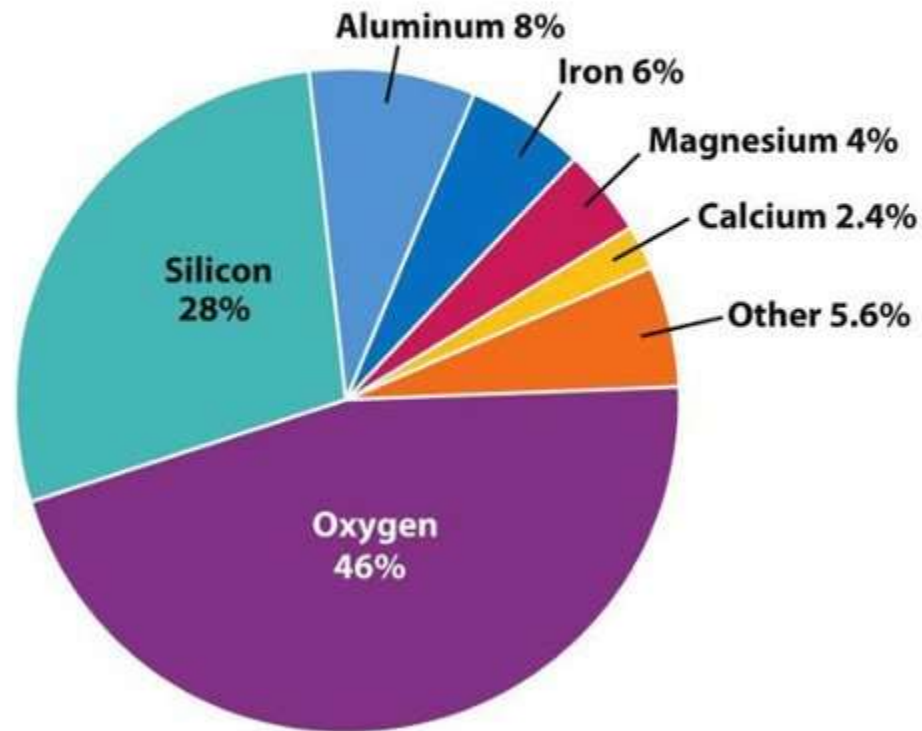
- **The vertical columns on the periodic table are called groups** or families because of their similar chemical behavior. All the members of a family of elements have the same number of valence electrons and similar chemical properties.
- **The horizontal rows on the periodic table are called periods.**

	Group 1	Group 2											Group 3	Group 4	Group 5	Group 6	Group 7	Group 0	
Period 1																			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	Tl	Pb	Bi	Po	At		Rn
Period 7	Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg								

COMMON ELEMENTS IN NATURE



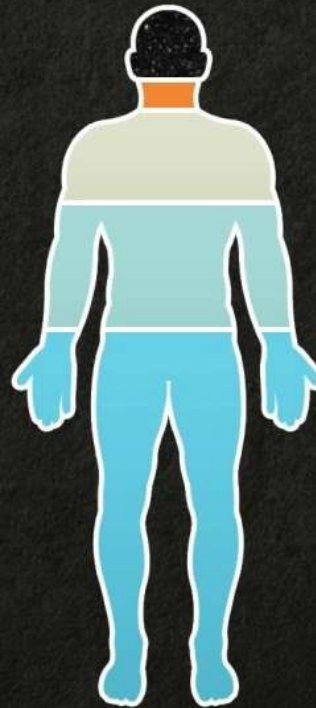
Elemental Composition of the Earth's Crust



Elements Of The HUMAN BODY

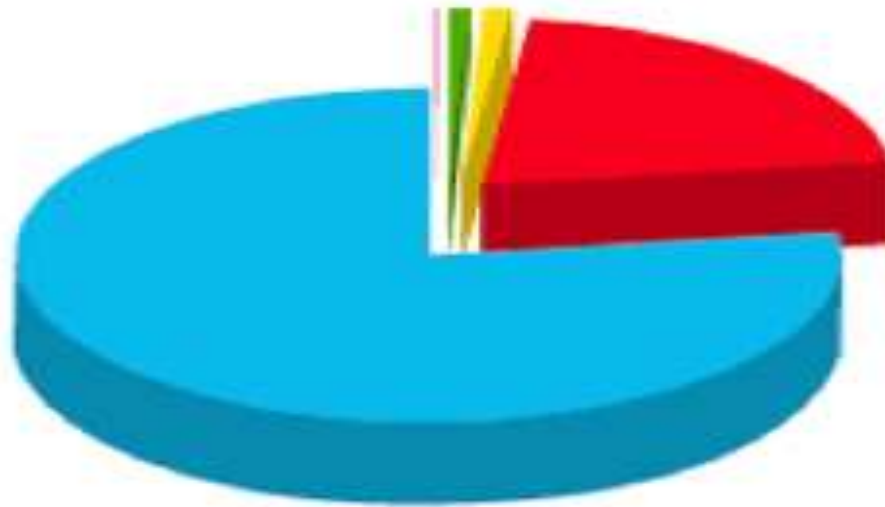
3%
Nitrogen






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