

The Periodic Table of Elements

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1		2		Group								13	14	15	16	17	18						
1 +1		2 +2										1 H hydrogen 1	3 +3		4	5 -3	6 -2	7 -1	2 He helium 4				
Key proton (atomic) number atomic symbol name relative atomic mass																		5 B boron 11 13	6 C carbon 12	7 N nitrogen 14	8 O oxygen 16	9 F fluorine 19	10 Ne neon 20
11 Na sodium 23	12 Mg magnesium 24	3	4	5	6	7	8	9	10	11	12	13 Al aluminium 27	14 Si silicon 28	15 P phosphorus 31	16 S sulfur 32	17 Cl chlorine 35.5	18 Ar argon 40						
19 K potassium 39	20 Ca calcium 40	21 Sc scandium 45	22 Ti titanium 48	23 V vanadium 51	24 Cr chromium 52	25 Mn manganese 55	26 Fe iron 56	27 Co cobalt 59	28 Ni nickel 59	29 Cu copper 64	30 Zn zinc 65	31 Ga gallium 70	32 Ge germanium 73	33 As arsenic 75	34 Se selenium 79	35 Br bromine 80	36 Kr krypton 84						
37 Rb rubidium 85	38 Sr strontium 88	39 Y yttrium 89	40 Zr zirconium 91	41 Nb niobium 93	42 Mo molybdenum 96	43 Tc technetium —	44 Ru ruthenium 101	45 Rh rhodium 103	46 Pd palladium 106	47 Ag silver 108	48 Cd cadmium 112	49 In indium 115	50 Sn tin 119	51 Sb antimony 122	52 Te tellurium 128	53 I iodine 127	54 Xe xenon 131						
55 Cs caesium 133	56 Ba barium 137	57–71 lanthanoids	72 Hf hafnium 178	73 Ta tantalum 181	74 W tungsten 184	75 Re rhenium 186	76 Os osmium 190	77 Ir iridium 192	78 Pt platinum 195	79 Au gold 197	80 Hg mercury 201	81 Tl thallium 204	82 Pb lead 207	83 Bi bismuth 209	84 Po polonium —	85 At astatine —	86 Rn radon —						
87 Fr francium —	88 Ra radium —	89–103 actinoids	104 Rf rutherfordium —	105 Db dubnium —	106 Sg seaborgium —	107 Bh bohrium —	108 Hs hassium —	109 Mt meitnerium —	110 Ds darmstadtium —	111 Rg roentgenium —	112 Cn copernicium —	113 Nh nihonium —	114 Fl flerovium —	115 Mc moscovium —	116 Lv livermorium —	117 Ts tennessine —	118 Og oganesson —						

lanthanoids

57 La lanthanum 139	58 Ce cerium 140	59 Pr praseodymium 141	60 Nd neodymium 144	61 Pm promethium –	62 Sm samarium 150	63 Eu europium 152	64 Gd gadolinium 157	65 Tb terbium 159	66 Dy dysprosium 163	67 Ho holmium 165	68 Er erbium 167	69 Tm thulium 169	70 Yb ytterbium 173	71 Lu lutetium 175
89 Ac actinium –	90 Th thorium 232	91 Pa protactinium 231	92 U uranium 238	93 Np neptunium –	94 Pu plutonium –	95 Am americium –	96 Cm curium –	97 Bk berkelium –	98 Cf californium –	99 Es einsteinium –	100 Fm fermium –	101 Md mendelevium –	102 No nobelium –	103 Lr lawrencium –

actinoids

The volume of one mole of any gas is 24 dm³ at room temperature and pressure (r.t.p.).
The Avogadro constant, $L = 6.02 \times 10^{23} \text{ mol}^{-1}$.

Visit: <https://edtechsim.com/periodic-table/>.



Using the website, complete Activities 1 to 6. Highlight & annotate your notes on the Periodic Table.

Activity 1: Draw the metal-non-metal line Identify the following as being metals or non-metals: Li: metal Na: metal Ne: non-metal Mg: metal C: non-metal N: non-metal Al: metal Ar: non-metal	Activity 3: Give the charge if the substance is ionic Sodium ion: Na^+ Magnesium ion: Mg^{2+} Aluminium ion: Al^{3+} Nitride ion: N^{3-} Phosphide ion: P^{3-} Oxide ion: O^{2-} Potassium ion: K^+ Fluoride ion: F^-
Activity 2: List the number of valence electrons (Hint: look at group number) Li: 1 Na: 1 He: 2 Ne: 8 Mg: 2 C: 4 N: 5 Al: 3 I: 7	Activity 4: Highlight the diatomic molecules State the formula of the following gases: Oxygen: O_2 Hydrogen: H_2 Nitrogen: N_2 Chlorine: Cl_2 Fluorine: F_2 Bromine: Br_2 Iodine: I_2
Activity 5: List the most reactive Group 1 and Group 17 elements Most reactive Group 1 element: Francium Most reactive Group 17 element: Fluorine	Activity 6: State the two elements which are liquids at room temperature and pressure. Bromine Mercury