

The Periodic Table of the Elements

140 Ce Cerium 58	141 Pr Praseodymium 59	144 Nd Neodymium 60	Pm Promethium 61	150 Sm Samarium 62	152 Eu Europium 63	157 Gd Gadolinium 64	159 Tb Terbium 65	162 Dy Dysprosium 66	165 Ho Holmium 67	167 Er Erbium 68	169 Tm Thulium 69	173 Yb Ytterbium 70	175 Lu Lutetium 71
232 Th Thorium 90	Pa Protactinium 91	238 U Uranium 92	Np Neptunium 93	Pu Plutonium 94	Am Americium 95	Cm Curium 96	Bk Berkelium 97	Cf Californium 98	Es Einsteinium 99	Fm Fermium 100	Md Mendelevium 101	No Nobelium 102	Lr Lawrencium 103

Key

a
X
b

a = relative atomic mass
X = atomic symbol
b = proton (atomic) number

- Elements placed on the periodic table according to increasing atomic number
- Groups: Elements with the same outermost electrons are placed on the same group
- Elements with similar chemical properties are placed in the same group

Period

- Represents elements in the horizontal manner
- There are seven periods
- Period 1: contain 2 elements, hydrogen and helium
- Period 2: contain 8 elements
- Period 3: contain 8 elements
- Period 4: contain 18 elements
- Period 5: contain 18 elements
- Period 6: contain 18 elements

→ Period 7: contain 3 Elements

Elements are placed according to number of electron shells they have

→ Elements with one electronic shell are placed in Period 1

→ Elements with 5 electron shell are placed in period 5. etc

Properties of elements in a period

Left

→ Right
of the periodic table

of Periodic table

1. Metallic nature decrease
more metallic

less metallic

2. Electronegativity increase
less tendency to attract
a pair of electrons

more tendency
to attract a
pair of electrons

3. Atomic number increases

4. The number of shells remain the same in a Period
5. Valence electrons (electrons in the outermost shell) increases from left to right
- Valence electrons
- Elements with valence electrons 1, 2 and 3 are metals
- Elements with valence electrons 4, 5, 6 and 7 are non metals