

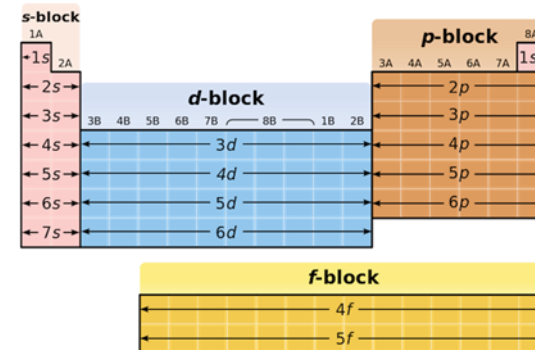
Periodicity knowledge organiser

1. Keywords

Periodicity	The quality or character of being periodic; the tendency to recur at intervals.
First ionisation energy	The energy needed to remove 1 electron from each atom in 1 mole of gaseous atoms. $M(g) \rightarrow M^+(g) + e^-$
Second ionisation energy:	The energy needed to remove 1 electron from each atom in 1 mole of gaseous +1 ions. $M^+(g) \rightarrow M^{2+}(g) + e^-$
Successive ionisation energies:	Removing each electron in turn from a mole of gaseous atoms. Provides evidence of energy levels and orbitals
Atomic radius	a measure of the size of its atoms, usually the mean or typical distance from the center of the nucleus to the boundary of the surrounding shells of electrons.

2. The periodic table.

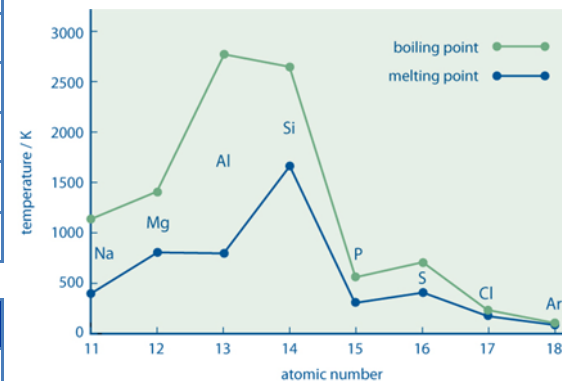
An element is classified as s, p, d or f block according to its position in the Periodic Table, which is determined by its proton number so on the nature of the orbital into which the last electron of the atom enters.



3. Melting and boiling point across period 3

Trends in melting and boiling point are explained based on the intermolecular forces between the molecules.

	Structure	MP/BP
Metal (Na, Mg, Al)	Electrostatic	Low
Semi Metal (Si)	Macromolecular	High
Non Metal (P ₄ , S ₈ , Cl ₂)	Small molecules substances	Low
Noble gas (Ar)	Monoatomic	Low



4. Atomic radius

The atomic radii are taken to be the half distance between the centres of a pair of atoms. Atomic radius decreases across each period and increases down a group

5. Ionisation energy

Ionisation energy increases across a period. Ionisation energy decreases going down a group.

