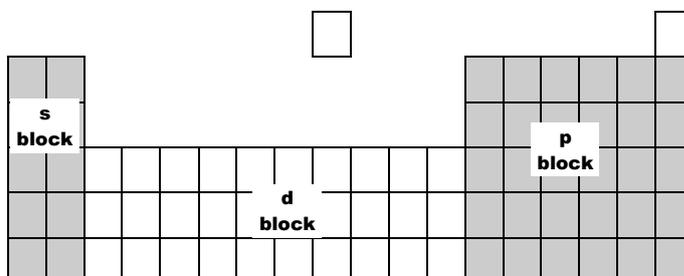




PERIODICITY

Classification of elements in s, p and d blocks

- Elements are classified as s, p or d block, according to which orbitals the **highest energy electrons** are in.



- 1) In which block are the following elements classified?

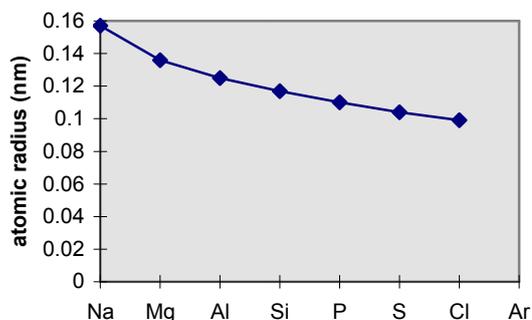
Element	C	Mg	He	Rb	Mo	Te	Fe	Cr	P	H	Cl
Block											

- 2) a) Give the electron configuration of silicon.
b) In which block is silicon classified?
c) Why is silicon classified in this block?
- 3) a) Give the electron configuration of vanadium.
b) In which block is vanadium classified?
c) Why is vanadium classified in this block?

Trends across Period 3

Periodicity = pattern in properties across a row which is repeated in each row

a) Atomic radius



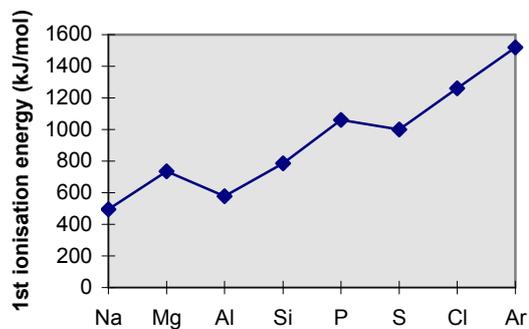
b) 1st ionisation energy

Enthalpy change to remove one electron from each atom in a mole of gaseous atoms.

General trend:

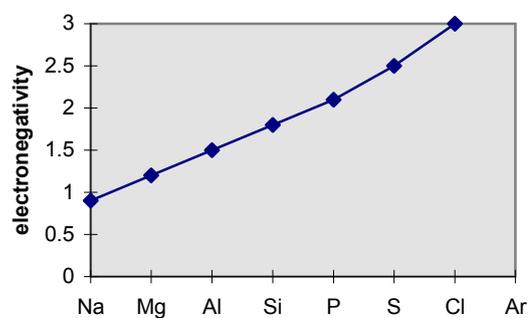
Group 2→3 dip:

Group 5→6 dip:



c) Electronegativity

Power of an atom to attract the two electrons in a covalent bond.



d) Melting and boiling point

