

- Nuclear charge unchanged
- Nuclear attraction decrease

Melting Point

- Giant Metallic Structure - Strong metallic bond between delocalised electrons and positive ions
 - Strength dependent on: ionic radius size (strong: decrease) and net charge of positive ions (strong: increase)
- Giant Covalent Structure - strong covalent bond between atoms
- Simple Molecular Structure: weak intermolecular force between atoms / molecules
 - Strength depends on: relative molecular mass (strong: increase)

Exceptions (Ionisation Energy):

Alkali Metals (Group 1):

- are giant metallic structure
- Number of inner complete shell increases
- Ionic radius increases
- Strength of giant metallic bond decreases
- Melting point decreases down the group

Group 7 (Halogens)

- are simple molecular structure
- relative molecular mass increases
- Intermolecular force between atoms/ molecules increase
- Melting point increase down the group

Magnesium to Aluminium

	Electron Configuration	Electron Configuration
Aluminium	[Ne]3s ² 3p ¹	[↑] [↑] [↑] [↑] [↑]

- Valence electron is in the 3p sub-shell
- 3p sub-shell is at a higher energy level than 3s sub-shell