

	Giant metallic	Giant covalent
Appearance	Shiny	Dull. Graphite is an exception. It is shiny.
Physical properties	High density, ductile and malleable	Low density and brittle
Electrical conductivity	Good conductor because of free electrons	Insulators: diamond and silicon Conductor: Graphite has free
Melting and boiling points	High because of force of attraction between positive ion and free electrons	High because of strong covalent bonds
Solubility in water	Insoluble	Insoluble

Arranged in order of increasing **atomic number**. The vertical columns are called **groups**. Number of groups: 18. All elements of a group have similar chemical properties. The rows of the periodic table are called **periods**.

The periodic table can be divided into four blocks:

s-block: outermost electrons in s sub-shell

p-block: outermost electrons in p sub-shell

d-block: outermost electrons in d sub-shell

Across a period from left to right, the atomic radius **decreases**, due to:

- increase in the number of protons
- Increase in the force of attraction

