



# THE 5 TYPES OF STRUCTURE

	Monatomic	Simple molecular	Giant covalent	Ionic	Metallic
Substances	Group 0 elements	Elements: H <sub>2</sub> O <sub>2</sub> N <sub>2</sub> F <sub>2</sub> Cl <sub>2</sub> Br <sub>2</sub> I <sub>2</sub> S <sub>8</sub> P <sub>4</sub>  Compounds: non-metal with non-metal	Elements: Si, diamond, graphite  Compounds: SiO <sub>2</sub>	Compounds: metal with non-metal	Elements: metals
What the structure is	Individual atoms with very weak forces between them	Individual molecules with weak forces between them (atoms within molecules are joined by covalent bonds)	Lattice structure in which all atoms are joined to others by covalent bonds	Lattice structure of positive and negatively charged ions (ions are held together by attraction between the + and - ions (this +/- attraction is known as an ionic bond, though it is just an electrostatic attractive force))	Lattice structure of metal ions with outer shell electrons free to move through the structure
The formula	Just the symbol e.g. Ar	e.g. H <sub>2</sub> O each molecule contains 1 O and 2H atoms	e.g. SiO <sub>2</sub> ratio of Si:O atoms is 1:2 through the structure	e.g. MgCl <sub>2</sub> ratio of Mg <sup>2+</sup> :Cl <sup>-</sup> ions is 1:2 through the structure	Just the symbol e.g. Fe
Melting and boiling points					
Conductivity					
Solubility in water					
Solid					
Liquid					
Gas					