What are the typical properties of metals?	What happens in terms of electrons when metals and non-metals react?
Are metal oxides alkaline or acidic? Are non-metal oxides alkaline or acidic?	What is a covalent bond?
What is an ionic bond?	How many electrons can each shell hold?
How can we tell the group number by looking at the electronic structure (configuration)?	How can we tell the period number by looking at the electronic structure (configuration)?

Metals lose electrons, non-metals gain electrons	Shiny, malleable, ductile, high melting and boiling points, good conductors of heat and electricity
When two non-metal atoms share a pair of electrons	Metal oxides are alkaline, non-metal oxides are acidic
The first (inner) shell holds 2 electrons, the rest hold 8 electrons	The electrostatic attraction between two oppositely charged ions in an ionic compound
The period number is the number of shells which have electrons in	The group number is the number of electrons in the outer shell

How are positive and negative ions formed	Why do elements in the same group have similar chemical properties?
Why do ionic compounds conduct electricity as solutions or liquids but not as solids?	Why do ionic compounds have high melting and boiling points?
Why do simple covalent molecules have low melting and boiling points?	Why do giant covalent molecules have high melting and boiling points?
What is metallic bonding?	Why do metals conduct electricity?

They have the same number of electrons in the outer shell	Negative ions –when an atom gains one or more electrons Positive ions—when an atom loses one or more electrons
Strong electrostatic forces of attraction between oppositely charged ions	The ions need to be able to move, they cannot move past each other in solids
Many strong covalent bonds which require a lot of energy to overcome	Weak intermolecular forces which don't require much energy to overcome
Electrons are delocalised	Electrostatic forces of attraction between positive metal ions and delocalised electrons