Definitions and Concepts for CAIE Chemistry IGCSE

Topic 9 - The Periodic Table

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*Definitions in **bold** are for extended supplement only*

Definitions have been taken, or modified from the CAIE Specification for GCSE Chemistry, 0971, Version 1 September 2020

Alkali metals: The elements in Group 1 of the periodic table. They are typically soft and have relatively low melting points.

Group (periodic table): The columns of the periodic table represent different groups of elements. Elements in the same group have similar chemical properties.

Halides: The ions formed by halogen atoms when they gain an electron. They have a 1- charge. E.g. Cl-, Br- and I-.

Halogens: The elements in Group 7 of the periodic table. The halogens gain an electron to form halide ions with a 1- charge. Down the group the halogens get more reactive and have higher melting and boiling points.

Metallic character: The tendency to lose an electron. Increases as you move down a group as the increased shielding and atomic radius makes the electron easier to be removed.

Noble gases: The elements in Group 0 of the periodic table. They have a stable full outer shell of electrons which makes them very unreactive. Argon is used in lamps and helium used in balloons since they provide an inert atmosphere.

Non-metallic character: The tendency to gain an electron. Increases from left to right across the period because there is an increased nuclear charge with a similar atomic radius so the electrons are more easily gained.

Period (periodic table): The rows of the periodic table representing different periods of elements. Elements in the same period have the same number of electron shells.

Periodic table: Table of elements arranged in order of increasing atomic number and such that elements with similar properties are in the same column (group).

Transition element: A metal found between Groups 2 and 3 of the periodic table. Typical properties include high melting points, high densities, form coloured compounds and catalytic activity. **Transition elements have variable oxidation states.**