

Definitions and Concepts for CAIE Chemistry IGCSE

Topic 9 - Metals

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

Definitions have been taken, or modified from the CAIE Cambridge IGCSE Chemistry 0620 syllabus for 2023, 2024 and 2025.

Alloys: A metal compound made by combining two or more metals together or a metal with another element. This process is carried out to give the material greater strength or resistance to corrosion.

Corrosion: The destruction of materials by chemical reactions with substances in the environment. For example, iron rusts when in the presence of oxygen and water. Aluminium is used in food containers due to its resistance to corrosion.

Ductile: Substances that are ductile can be stretched and pulled without breaking, e.g. a physical property of metals is its ductility

Electrolysis: The splitting up of an ionic compound using electricity. The electric current is passed through a substance causing chemical reactions at the electrodes which lead to the decomposition of the materials. Electrolysis is used for extracting metals from their ores if the metal is more reactive than carbon.

Galvanise: A process used to protect against corrosion by coating the metal with a protective layer of zinc.

Malleable: Substances that are malleable can be bent and shaped easily, e.g. metals are malleable.

Ore: A type of rock which contains metal compounds. The metals or metal compounds are present in sufficient amounts to make it worth extracting them.

Reactivity series: A series in which metals are arranged in order of their reactivity. This can be used to predict products from reactions.

Reduction with carbon: A process used to extract metals from their oxides when the metal is less reactive than carbon. The metal oxide is heated with carbon so that carbon reduces the metal oxide to the metallic element.

