

## Definitions and Concepts for AQA Chemistry GCSE

### Topic 10 - Using Resources

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*Definitions in **bold** are for higher tier only*

*Definitions marked by '\*' are for separate sciences only*

*Definitions have been taken, or modified from the [AQA Specification for GCSE Chemistry, 8462, Version 1.1 04 October 2019](#).*

\***Alloy**: A metal compound made by combining two or more metals together. This process is carried out to give greater strength or resistance to corrosion.

**Bioleaching**: Bioleaching uses bacteria to produce leachate solutions that contain metal compounds.

\***Borosilicate glass**: Glass made from sand and boron trioxide. It melts at higher temperatures than soda-lime glass.

\***Composite**: Most composites are made of two materials, a matrix or binder surrounding and binding together fibres or fragments of the other material, which is called the reinforcement.

\***Corrosion**: Corrosion is the destruction of materials by chemical reactions with substances in the environment, e.g. rusting.

**Desalination**: The process of removing salt from seawater.

**Displacement**: A chemical reaction in which a more reactive element displaces a less reactive element from its compound.

**Electrolysis**: The splitting up of an ionic compound using electricity. The electric current is passed through a substance causing chemical reactions at the electrodes and the decomposition of the materials.

\***Electroplating**: Electroplating is the process of coating a metal with a thin layer of another metal by electrolysis to improve the metal's corrosion resistance.

**Finite resources**: A non-renewable resource that cannot be readily replaced by natural means at a quick enough pace to keep up with consumption.



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

**Ground water:** Water held underground in the soil and crevices in rock.

**Life cycle assessment (LCA):** Life cycle assessments are carried out to assess the environmental impact of products in each of these stages: extracting and processing raw materials, manufacturing and packaging, use and operation during its lifetime, disposal at the end of its useful life.

**\*NPK fertilisers:** Fertilisers which contain compounds of nitrogen, phosphorus and potassium. The fertilisers improve agricultural productivity.

**Ore:** A rock from which metal can be extracted.

**Phytomining:** Phytomining uses plants to absorb metal compounds from the soil. The plants are harvested and then burned to produce ash that contains the metal compounds.

**Potable water:** Water that is safe to drink.

**Raw materials:** The basic material from which a product is made.

**Renewable resources:** A natural resource which can be used repeatedly and will not run out due to being naturally replenished.

**\*Sacrificial protection:** The protection of iron or steel against corrosion by using a more reactive metal. Zinc is often used as a sacrificial metal.

**\*Soda-lime glass:** Glass made by heating a mixture of sand, sodium carbonate and limestone.

**Sterilisation:** The process used to remove bacteria or living microorganisms from something. Used during the treatment of water.

**Sustainable development:** Development that meets the needs of current generations without compromising the ability of future generations to meet their own needs.

**\*The Haber process:** The process used to manufacture ammonia from hydrogen and nitrogen gas.

**Thermosetting polymers:** Polymers which do not melt when heated.

**Thermosoftening polymers:** Polymers which melt when heated and can be remoulded into different shapes.

