Metals

IGCSE Chemistry · Vocabulary in context

Word	Example
metals /'metlz/	**Metals** form positive ions.
non-metals /nɒn 'metlz/	**Non-metals** often form negative ions.
thermal conductivity /'θɜ:ml kɒndək'tɪvɪti/	Copper has a high **thermal conductivity**.
electrical conductivity /ɪ'lektrɪkl kɒndək'tɪvɪti/	Copper has a high **electrical conductivity**.
malleability /ˌmælə'bɪlɪti/	The **malleability** of metals lets them be hammered into shape.
ductility /dʌk'tɪlɪti/	**Ductility** lets copper be pulled into wire.
brittle /'brɪtl/	Non-metals are often **brittle**: they break easily.
melting point /'meltɪŋ pɔɪnt/	The **melting point** of ice is 0 °C. 0 °C
boiling point /'bɔɪlɪŋ pɔɪnt/	The **boiling point** of water is 100 °C. 100 °C
acids /'æsɪdz/	**Acids** turn blue litmus red.
salt /sɒlt/	Sodium chloride is a **salt**.
hydrogen /'haɪdrədʒn/	**Hydrogen** gas burns with a squeaky pop.
steam /sti:m/	Magnesium reacts with **steam** to make hydrogen.
oxygen /'ɒksɪdʒn/	Things burn faster in pure **oxygen**.

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oxide /'ɒksaɪd/	Magnesium **oxide** forms when magnesium burns.
aluminium /ˌæljʊ'mɪnɪəm/	**Aluminium** is light and does not rust.
density /'densɪti/	Iron has a higher **density** than wood, so it sinks in water.
corrosion /kə'rəʊʒn/	**Corrosion** slowly eats away the metal.
copper /'kɒpə/	Pure **copper** forms on the cathode.
alloy /'ælɔɪ/	Brass is an **alloy** containing copper and zinc.
mixture /'mɪkstʃə/	Air is a **mixture** of gases.
brass /bræs/	**Brass** is a mix of copper and zinc.
zinc /zɪŋk/	**Zinc** is used to coat iron so it does not rust.
stainless steel /'steɪnləs sti:l/	Knives and forks are made of **stainless steel**.
iron /'aɪən/	**Iron** rusts when it meets water and oxygen.
chromium /'krəʊmɪəm/	**Chromium** makes steel shiny and stops it rusting.
nickel /'nɪkl/	**Nickel** is used as a catalyst.
carbon /'kɑ:bən/	All living things contain **carbon**.
atoms /'ætəmz/	Everything is made of tiny **atoms**.
layers /'leɪəz/	The TCP/IP model has four **layers**. TCP/IP

Word	Example
reactivity series /rɪəkˈtɪvɪti ˈsɪəriːz/	The **reactivity series** lists metals from most to least reactive.
potassium /pəˈtæsɪəm/	**Potassium** reacts with water and burns with a lilac flame.
sodium /ˈsəʊdɪəm/	**Sodium** melts into a ball when it reacts with water.
calcium /ˈkælsɪəm/	**Calcium** reacts with water to give hydrogen gas.
magnesium /mægˈniːzɪəm/	**Magnesium** burns with a bright white flame.
ions /ˈaɪɒnz/	Water molecules surround the **ions** as they dissolve.
displacement reaction /dɪˈspleɪsmənt rɪˈækʃn/	In a **displacement reaction**, chlorine pushes bromine out of a compound.
oxide layer /ˈɒksaɪd ˈleɪə/	Aluminium has a thin **oxide layer** that protects it.
rusting /ˈrʌstɪŋ/	**Rusting** needs both water and oxygen.
rust /rʌst/	**Rust** is the brown flakes that form on iron.
barrier methods /ˈbærɪə ˈmeθədz/	Paint and oil are **barrier methods** that keep water away from iron.
galvanising /ˈgælvənaɪzɪŋ/	**Galvanising** coats iron with zinc.
sacrificial protection /ˌsækrɪˈfɪʃl prəˈtekʃn/	In **sacrificial protection**, a more reactive metal corrodes instead of the iron.
electrons /ɪˈlektrɒnz/	**Electrons** move around the nucleus.
ore /ɔː/	An **ore** is a rock that contains a metal.

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electrolysis /ɪlekˈtrɒləsɪs/	**Electrolysis** of brine makes chlorine.
hematite /ˈhemətaɪt/	**Hematite** is an iron ore.
blast furnace /blæst ˈfɜːnɪs/	Iron is made in a **blast furnace**.
carbon dioxide /ˈkɑːbən daɪˈɒksaɪd/	We breathe out **carbon dioxide**.
carbon monoxide /ˈkɑːbən mʌˈnɒksaɪd/	**Carbon monoxide** is a poisonous gas with no smell.
reduction /rɪˈdʌkʃn/	**Reduction** is the gain of electrons.
limestone /ˈlaɪmstəʊn/	**Limestone** is added to the blast furnace to remove sand.
calcium oxide /ˈkælsɪəm ˈɒksaɪd/	**Calcium oxide** forms when limestone is heated.
slag /slæg/	**Slag** floats on top of the molten iron.
bauxite /ˈbɔːksaɪt/	**Bauxite** is aluminium ore.
cryolite /ˈkraɪəlaɪt/	**Cryolite** lowers the melting point, which saves energy.
cathode /ˈkæθəʊd/	Electrons leave the hot **cathode**.
anode /ˈænəʊd/	The **anode** is the positive electrode.
effervescence /ˌefəˈvesəns/	**Effervescence** means lots of bubbles of gas.