

Reactions

Metals and non-metals



Use experimental results to suggest an order of reactivity of various metals.

1 Know	2 Apply
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Ideas

- K1

 Metals and non-metals react with oxygen to form oxides which are either bases or acids.
- K2

 Metals can be arranged as a reactivity series in order of how readily they react with other substances.
- K3

 Some metals react with acids to produce salts and hydrogen.

Facts

- K4

 Iron, nickel and cobalt are magnetic elements.
- K5

 Mercury is a metal that is liquid at room temperature.
- K6

 Bromine is a non-metal that is liquid at room temperature.

Key words

- K7

Metals: Shiny, good conductors of electricity and heat, malleable and ductile, and usually solid at room temperature.
- K8

Non-metals: Dull, poor conductors of electricity and heat, brittle and usually solid or gaseous at room temperature.
- K9

Displacement: Reaction where a more reactive metal takes the place of a less reactive metal in a compound.
- K10

Oxidation: Reaction in which a substance combines with oxygen.

- A1

 Describe an oxidation, displacement, or metal-acid reaction with a word equation.
- A2

 Use particle diagrams to represent oxidation, displacement and metal-acid reactions.
- A3

 Identify an unknown element from its physical and chemical properties.
- A4

 Place an unfamiliar metal into the reactivity series based on information about its reactions.
- A5

- A6

K11

Reactivity: The tendency of a substance to undergo a chemical reaction.

3 Extend

E1

Deduce the physical or chemical changes a metal has undergone from its appearance.

E2

Justify the use of specific metals and non-metals for different applications, using data provided.

E3

Deduce a rule from data about which reactions will occur or not, based on the reactivity series.

E3

E4
