

C1 - Atomic structure and the periodic table

C1 - Atomic structure and the periodic table

C2 - Bonding, structure, and the properties of matter

C3 - Quantitative chemistry

C4 - Chemical changes

C5 - Energy changes

C6 - The rate and extent of chemical change

C7 - Organic chemistry

C8 - Chemical analysis

C9 - Chemistry of the atmosphere

C10 - Using resources

Elements and compounds

Atoms and formulae

Purification

Model of the atom

Subatomic particles

The periodic table

Development of the periodic table

Metals and non-metals

Group 0

Group 1

Group 7

Reaction trends

Transition metals

TRIPLE HIGHER

C2 - Bonding, structure and the properties of matter

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Types of bonding

Ionic bonding

Covalent bonding

Metallic bonding

Properties of bonding

3 states of matter

Properties of ionic compounds

Properties of covalent molecules (Small and Giant)

Metals and alloys

Graphene, fullerene and polymers

Nanoparticles and orders of magnitude

TRIPLE HIGHER

C3 - Quantitative chemistry

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Conservation of mass

Balanced equations

Relative formula mass (RFM)

Concentration of solutions

Moles

Amounts in equations

Limiting reactants

Percentage yield and atom economy

Volumes of gases

Titration

TRIPLE HIGHER

C4 - Chemical Changes

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Reactivity

Reactivity series

Oxidation and reduction

Reactions of metals, metal oxides and metal carbonates with acids

pH scale and neutralisation

Strong and weak acids

Electrolysis

Electrolysis of molten ionic compounds

Electrolysis of aqueous ionic compounds

Electrolysis of aluminium oxide

TRIPLE HIGHER

C5 - Energy Changes

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- C6 - The rate and extent of chemical change
- C7 - Organic chemistry
- C8 - Chemical analysis
- C9 - Chemistry of the atmosphere
- C10 - Using resources

Temperature changes of reactions

Endo- and exothermic reactions

Reaction profiles

Energy changes of reactions

Cells

Cells and batteries

Fuel cells

TRIPLE HIGHER

C6 - The rate and extent of chemical change

C1 - Atomic structure and the periodic table

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C6 - The rate and extent of chemical change

C7 - Organic chemistry

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C10 - Using resources

Rates

Measuring and calculating rates

Limiting reactants and molar masses

Factors affecting rates

Collision theory

Reversible reactions

Reversible reactions and energy

Equilibrium

TRIPLE HIGHER

C7 - Hydrocarbons

C1 - Atomic structure and the periodic table

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C7 - Organic chemistry

C8 - Chemical analysis

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C10 - Using resources

Crude oil

Crude oil, hydrocarbons and alkanes

Fractional distillation

Combustion

Intermolecular forces

Functional groups and polymerisation

Alkenes and their reactions

Alcohols and carboxylic acids

Addition and condensation polymerisation

Natural polymers

TRIPLE HIGHER

C8 - Chemical analysis

- C1 - Atomic structure and the periodic table
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- C7 - Organic chemistry

C8 - Chemical analysis

- C9 - Chemistry of the atmosphere
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Purity and separation techniques

Pure substances

Formulations

Chromatography

Tests

Tests for gases

Flame tests

Metal hydroxides

Ion testing

Instrumental methods

TRIPLE HIGHER

C9 - Chemistry of the atmosphere

C1 - Atomic structure and the periodic table

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C6 - The rate and extent of chemical change

C7 - Organic chemistry

C8 - Chemical analysis

C9 - Chemistry of the atmosphere

C10 - Using resources

The Earth's early atmosphere

Gases in the atmosphere

The Earth's early atmosphere and how its changed

Climate change

Greenhouses gases

Global climate change

Carbon footprint and reducing it

Atmospheric pollutants

TRIPLE HIGHER

C10 - Using resources

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Earth's resources

Sustainable development

Life Cycle Assessments

Reduce, Reuse, Recycle

Water

Potable water

Waste water treatment

Metals

Metal extraction

Preventing corrosion

Alloys

Ceramics and polymers

Ammonia

Haber process

NPK fertilisers

TRIPLE HIGHER