

CHEMISTRY



Quantitative Chemistry
Chemical measurements, balancing equations and half equations.

Electrolysis
Process of electrolysis, using electrolysis to extract metals, electrolysis of aqueous solutions, reactions of electrodes as half equations.

Quantitative Chemistry
Limiting reagents and concentration of solutions.



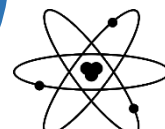
Reactions
Reactivity of metals, reactivity series, extraction of metals, oxidation and reduction. Reactions of acids, pH, making salts, reactions of acids.

Structure
States of matter, state symbols, properties of; ionic compounds, small molecules, metals, polymers, giant covalent structures.

Bonding
Chemical bonds, ionic, covalent and metallic bonding.

Human impact
greenhouse gases, global climate change, carbon footprint.

Earth's Atmosphere
Current atmosphere, early atmosphere, changes in oxygen and carbon dioxide levels.



YEAR 11

Chemical changes

Electrolysis

EXAM REVISION

FINAL GCSE EXAMS

Carbon compounds
Crude oil, alkanes and hydrocarbons, fractional distillation, cracking and alkenes.

Quantitative chemistry
Relative formula mass, moles and percentage by mass.

Energy changes
Exothermic and endothermic reactions, reaction profiles, investigating temperature change.

PERIODIC TABLE

Atomic structure and periodic table

Model of the atom
Symbols, relative atomic mass, isotopes, elements and compounds. Electronic structure and models of the atom.

Periodic table
Development of periodic table, metals and non metals. Groups 0, 1 and 7.

Quantitative Chemistry
Amount of substance in equations + using moles to balance equations.

Bonding structure and properties of matter



Analysis
Purity of substances, formulations, chromatography.

Using Earth's resources
Using resources, extracting metals and potable water.

Protecting resources
Waste water treatment, sustainability, recycling and life cycle assessments.

Rate of reaction
Calculating rates, factors affecting rate of reaction, collision theory, activation energy and catalysts.

Rate and extent of chemical change

Using resources

Chemical analysis

Atmosphere chemistry

Pollutants
Pollutants from fuels, effects of atmospheric pollutants.

Human impact
Global warming, climate, damage to Earth's resources.

Earth's resources
Extraction of metals using carbon, carbon recycling, recycling.

Earth 2

Types of reaction
combustion, thermal decomposition, uses of catalysts.



Energy
Exothermic and endothermic reactions..

Reactions 2

Materials
Properties of ceramics, polymers and composites.

The Periodic Table - physical and chemical periodicity, arrangement of the elements, predicting reactivity or properties.



Atoms, elements and compounds
chemical formula, what are reactions.

Matter 2

Space science
Suns and Galaxies, season, day and year length, light years.

Rocks - types of rocks and the rock cycle.

Metals/non-metals
Representation of chemical reactions. Types of reactions oxidation, displacement reactions.

Earth 1

Reactions 1

Pure substances
mixtures and dissolving, diffusion, separation techniques.



Matter-particles and separating techniques
particle model, gas pressure, changes of state.

Earth structure and Universe
Composition and structure of the Earth



INTRODUCTION TO SCIENCE

Health and Safety
in the Science Lab.

Using Bunsen burners safely



Working like a scientist - variables, COSHH symbols, equipment, handling data, investigation skills.

Matter 1



YEAR 7

KS3

