

YEAR 11

Elements, mixtures and compounds

Atomic theory
Periodic table
Percentage mass
Equations balancing
Bonding
RFM

Chemistry in our world - Additional content

Energy profiles
Rates of reaction
Conservation of mass
Crude oil/plastics
Formulations
LCA
Gas tests
Acids/bases
Concentration of solutions

REVISION AND COMMUNICATION

AQA GCSE Trilogy examinations



3.4.5 Water for drinking

Water waste treatment
GCSE Required Practical 13 water purification
potable water

3.4.4 Fuels and human impacts on the atmosphere

Combustion of fuels
Acid rain
Crude oil
Fractional distillation, cracking
Global warming, effects and solutions

3.4.3 Earth's atmosphere

Atmospheric composition and formation
Carbon cycle

3.4.2 Energy and rate of reaction

Exo/endothermic reactions
GCSE Required practical 11 rates of reaction
Energy profiles
Activation energy
Rates of reaction

3.4.1 Reactions of acids

ELC investigation assessment
Does concentration affect reaction rates?
Tests for hydrogen and carbon dioxide
Metal reactions with water and acid
GCSE Required practical's 8 making salts and 10 temperature changes
Neutralisation titration
ELC 3.3 Examination

YEAR 10

3.3.1 Atoms, elements and compounds

Periodic table
Isotopes
Groups 1, 7 and 0
Inside the atom
Metals and non-metals

3.3.2 How structure affects properties

States of matter
Carbon allotropes
ionic bonding
covalent bonding

3.3.3 Separating mixtures

GCSE Required Practical 12 chromatography
filtration and evaporation
fractional distillation
ELC investigation assessment
Do different black pens have different coloured ink?
Chromatography, RF values

3.3.4 Metals and alloys

alloys
metallic bonding
Displacement reactions
GCSE Required Practical 9 electrolysis
polymerisation
plastic pollution

YEAR 9

Chemical energy

exothermic reactions
endothermic reactions
electrolysis

Earth resources

smelting
recycling
KS3 assessment

Climate

Acid rain
Global warming
environmental issues
KS3 assessment

Types of reaction

Global warming
combustion
Thermal decomposition
Conservation of mass
KS3 assessment

Elements

boiling and melting points (brine)
properties of elements, compounds and mixtures

Periodic table

Alkali metals
Noble gases
Symbols and formula
Halogens

YEAR 8

Separating mixtures

Filtration/evaporation
simple distillation
chromatography

Earth

Igneous, sedimentary, metamorphic rock
Plate tectonics
volcanoes

Metals and non-metals

properties
reactivity series
reactions with oxygen and acid
KS3 assessment

Universe

Solar system
Phases of the moon
day, night and the seasons

Acids and alkalis

pH table
indicators
neutralisation
KS3 assessment

Particle model

states of matter
Atoms, molecules
Elements, compounds, mixtures

Laboratory rules

YEAR 7

Schemes of learning are designed to ensure students progress based on their security of understanding and readiness for the next stage. STRETCH and CHALLENGE is at the heart of our curriculum

Pupils should evaluate their results and identify further questions arising from them.

Topic tests and termly assessments are designed to assess knowledge and maximise progression.

Pupils should decide on the appropriate type of scientific enquiry to undertake to answer their own questions and develop a deeper understanding of factors to be taken into account when collecting, recording and processing data.

Pupils should develop their use of scientific vocabulary, including the use of scientific nomenclature and units and mathematical representations.

Pupils should understand that science is about working objectively, modifying explanations to take account of new evidence and ideas and subjecting results to peer review.

Chemistry is a branch of science that studies matter and the changes it undergoes.