

Science KS4 Chemistry Learning Journey



Atmosphere & Earths Resources:
Early to modern atmosphere
Greenhouse effect
Atmospheric pollution

Assessment

Atmosphere & Earth's
Resources cont:
Earth's resources
LCS's
Potable Water
Sewage treatment

GCSE Exams: Triple or combined

Pure substances & Analysis
Pure substances
Formulations
Chromatography
Gas tests
Triple – ion tests & flame emission
spectroscopy

Crude Oil:
Fractional distillation
Fractions of crude oil
Alkanes & Alkenes
Triple- Alcohols, carboxylic acids,
polymerisation & polymers

Assessment

Rates of reaction:
Collision theory
Temperature & rate
Concentration
Surface area & Catalysts
Reversible reactions

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Masses in reactions cont:
Surface area
Graph skills
Triple: Percentage yield, atom
economy

Assessment

Exo & Endothermic
Theory
Energy Changes
Energy Profiles
Calculations (H & Triple)
Triple – Batteries and cells, fuel cells.

Masses in reactions:
Moles
Writing equations
Percentages by mass

Bonding cont.
Covalent giant structures
Metallic bonding & alloys
Triple – Polymers, ceramics &
composites, nanoparticles

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Oxidation & Reduction cont:
Acid reactions
Neutralisation
Titration (H & Triple)

Bonding & Properties:
Ionic structures
Ions & ionic bonding
Covalent bonding & Simple molecules

Oxidation & reduction
Reactivity series
Carbon reduction
Electrolysis

States of matter &
Separation techniques:
Atoms, elements &
compounds
Isotopes
Periodic table & groups

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