Science KS4 Chemistry Learning Journey

Topic 9: Atmosphere
Early to modern atmosphere
Greenhouse effect
Atmospheric pollution

Assessment

Topic 10: Earth's Resources
Earth's resources
LCS's
Potable Water & Sewage Treatment

GCSE Exams: Triple or combined

Topic 8: Pure substances & Analysis
Pure substances & Formulations
Chromatography
Gas tests
Triple – ion tests & spectroscopy

Topic 7: Crude Oil:
Fractional distillation
Alkanes & Alkenes
Triple- Organic compounds & polymers

Assessment

Topic 6: Rates of reaction:
Concentration
Surface area & Catalysts
Reversible reactions

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Topic 3: Surface area
Graph skills
Triple: Percentage yield, atom economy

Topic 5: Exo & Endothermic Theory
Energy Changes & Profiles
Bond Energy Calculations (H & Triple)
Triple – Batteries and cells, fuel cells.

Topic 6: Rates of reaction:
Collision theory
Temperature & rate

Topic 3: Masses in reactions:
Moles
Writing equations
Percentages by mass

Topic 2: Covalent giant structures
Metallic bonding & alloys
Triple – Polymers, ceramics & composites, nanoparticles

Assessment

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Topic 4: Acid reactions
Neutralisation
Titration (H & Triple)

Topic 2: Bonding & Properties:
Ionic structures
Ions & ionic bonding
Covalent bonding & Simple molecules

Topic 4: Oxidation & reduction
Reactivity series
Carbon reduction
Electrolysis

Topic 1: States of matter & Separation techniques:
Atoms, compounds & isotopes
Periodic table & groups

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West Norfolk Academies Trust