Science KS4 Chemistry Learning Journey

Springwood High School

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

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

PPE 2

Exam lead in

GCSE Exams: Triple or combined

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

Crude Oil:
Alkanes & Alkenes
Triple- Alcohols, carboxylic acids, polymerisation & polymers

PPE

Rates of reaction recap
Crude oil
Fractional distillation

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

PPE

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

Health check

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

Masses in reactions:
Moles
Writing equations
Percentages by mass

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

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

Health check

Bonding & Properties cont.
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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West Norfolk Academies Trust