The CHEMISTRY LEARNING JOURNEY

YEAR 13

- D- block
- Shapes of complex ions
- Stereoisomerism in complex ions
- Ligands
- Redox

Revision

Transition Elements

Test

Revision

A Level Exams

- Redox reactions
- Titrations
- Electrode potential
- Storage & fuel cells

- Lattice
- Enthalpy change of sol
- Entropy
- Free energy

- Buffers
- Buffers in the body
- Neutralisation

Mock Exam

Redox and Electrode Potentials

Enthalpy and Entropy

Buffers and Neutralisation

Test

Chromatography and Spectroscopy

Organic Synthesis

Mock Exam

- Chromatography
- NMR
- Combined techniques

- Carbon-carbon
- Further practical techniques
- Synthetic routes

- Amines, amino acids and amides
- Chirality
- Condensation polymers

Amines, Amino Acids and Polymers

Acids, Bases and pH

- Benzene
- Phenols
- Disubstitution & directing groups

- Carbonyl compounds
- Aldehydes & ketones
- Carboxylic acids

Aromatic Chemistry

Carbonyls and Carboxylic Acids

Test

Organic Synthesis

Equilibrium

- Bronsted-Lowry
- pH scale
- Ka-dissociation
- Weak acids
- Strong bases

- Kc
- Kp
- Controlling position of equilibrium

Mock exam

Revision

- Practical techniques
- Synthesis routes

- Chemistry of haloalkane
- Organhalogens

- Properties of alcohols
- Reactions of alcohols

Test

Organic Synthesis

Haloalkanes

Test

Spectroscopy

Alcohols

Reaction Rates and Equilibrium

- Mass spec
- Infrared spec

- Reaction rates
- Catalysts
- Boltzmann
- Equilibrium
- Equilibrium constants

- Enthalpy changes
- Bond enthalpies
- Hess' law
- Enthalpy cycles

- Nomenclature
- Isomerism
- Intro mechanisms

Basic Concepts of Organic Chemistry

Test

Enthalpy

Alkenes

Reactivity Trends

Alkanes

- Group 2
- Halogens
- Qualitative analysis

- Properties of alkanes
- Reactions of alkanes

- Properties of alkenes
- Stereoisomerism
- Reactions of alkenes
- Electrophilic additions
- Polymerisation

Mock Exam

- Acid & bases
- Neutralisation
- Titrations
- Redox

- Amount of substance
- Mole
- Determining formulae
- Volumes
- Reacting masses

- Atomic structure
- Isotopes
- RFM
- Formulae & equations

Acids and Redox

Periodicity

Test

Amount of Substance

Atoms, Ions and Compounds

YEAR 12

welcome

Shapes of Molecules and Intermolecular Forces

Electrons and Bonding

- Periodic table
- Ionisation
- Periodic trends

- Shapes
- Electronegativity
- Polarity
- Intermolecular forces
- Hydrogen bonding

- Electron structure
- Ionic bonding
- Covalent bonding

To develop Knowledgeable, Skillful, Inquisitive Scientists