

Science (Year 10)



Organic Chemistry

- Describe how crude oil was formed
- Describe the structure of alkanes
- Explain the properties fractions of crude oil
- Describe fractional distillation and cracking
- Combustion



Electricity

- Construct and draw circuits using symbols
- Describe rules for current and potential difference in circuits
- Apply $V=IR$ and rules to series and parallel circuits
- Mains electricity and the national grid



Mocks Paper 1 Biology, Chemistry & Physics

Exam Preparation

- Required practical's
- Command words
- Application questions

Waves

Compare transverse and longitudinal waves
Reflection of waves
Sound waves and the ear

Ecology

Communities
Interdependence
Discuss biotic and abiotic factors
Adaptations including extremophiles

Structure and Bonding

- Structure and properties of Ionic, covalent and metallic bonds
- Alloys and polymers

Quantitative Chemistry

- Conservation of mass
- Equations Amounts of substance



Energy

- Energy changes involving heating, work done by forces, work done when a current flows
- Efficiency

Radiation

- Describe types of radioactive decay



Bioenergetics

- Photosynthesis
- Investigating rate of photosynthesis
- Respiration in plants



Chemical changes

- Extraction of metals
- Reactions of metal compounds to make salts

Energy Changes

- Endothermic and exothermic
- Bond energy calculations



January Assessment

Particle model



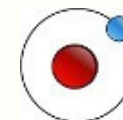
- Apply the particle model to changes of state and temperature
- Determine latent heat
- Determine the specific heat capacity by investigation

The atom

- Size and mass of the atom and subatomic particles
- How the atomic model has developed
- Isotopes & calculating A_r

Periodic table

- Metals/ non metals
- Comparing groups



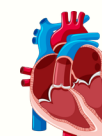
Cell biology

- Cell structure and functions
- Stem cells
- Mitosis
- Microscopy
- Transport



Organisation

- Digestive system
- Circulatory system
- Respiration
- Effect of exercise



Chemical analysis

- Pure substances, mixtures and formulations
- Chromatography method and analysis
- Gas tests