Combined Science Paper 2 Revision list

Biology paper 2:

- Homeostasis
- Structure and function of the nervous system
- Reflex actions
- Reaction times (RP)

- Hormonal control
- Controlling blood glucose levels
- Treating diabetes
- Human reproduction
- The menstrual cycle
- Artificial control of fertility
- Infertility treatments

- Types of reproduction
- Cell division in sexual reproduction
- DNA and the genome
- Inheritance (Punnet squares)
- Inherited disorders
- Sex determination
- Screening for disorders

- Variation
- Evolution by natural selection
- Selective breeding
- Genetic engineering
- Ethics of genetic technology

- Evidence for evolution
- Fossils and extinction
- Antibiotic resistance
- Classification

- Communities
- Organisms in their environment
- Distribution of organisms (RP)
- Competition in animals and plants
- Adaptations for survival
- Animal adaptations
- Plant adaptations

- Feeding relationships
- Material recycling
- Carbon cycle

- Human population problems
- Land and water pollution
- Air pollution
- Deforestation and peat destruction
- Global warming
- Maintaining biodiversity

Chemistry paper 2:

- Measuring rates of reaction
- Collision theory
- Factors affecting rates of reaction – Temp, concentration, surface area, catalysts (RP)
- Reversible reactions and energy changes
- Dynamic equilibrium

- Crude oil
- Hydrocarbons
- Fractional distillation of crude oil
- Burning fuels
- Cracking alkanes

- Pure substances
- Chromatography (RP)
- Testing for gases

- History of our atmosphere
- How the atmosphere has changed
- Greenhouse gases and climate change
- Other pollutants – sulphur dioxide etc.

- Finite and renewable resources
- Potable water (RP)
- Treating wastewater
- Extracting metals from ores (copper)
- Life cycle assessments
- Reduce, reuse and recycle

Physics paper 2:

- Scalar and vectors
- Contact and non-contact forces
- Gravity and weight
- Resultant force
- Work done and energy transferred
- Centre of mass
- Parallelogram of forces
- Resolution of forces

- Distance-time graphs – Draw and analyse
- Velocity-time graphs - Draw and analyse

- F=ma (RP)
- Falling objects
- Newton's three laws of motion
- Forces and breaking
- Reaction times – thinking/stopping times
- Stretching and compressing (Hooke's law) (RP)

- Types of wave
- Measuring waves (frequency, speed etc.) (RP)
- Electromagnetic waves
- Properties of waves (refraction etc.)
- Infrared radiation (absorption/emission) (RP)
- Uses of EM waves - communication
- Uses of high frequency EM waves & hazards

- Magnetism and magnetic fields
- Electromagnets