**Separate Science – Biology Paper 1 – Higher tier**

* **Cell Biology**
  + Parts of cells and their functions
  + Comparing different types of cells
  + Light and electron microscopes
  + Preparing and looking at cell slides
  + Calculating magnification
  + Osmosis RP
  + SA:V and exchange surfaces
  + Mitosis and the cell cycle
* **Organisation**
  + Enzymes involved in digestion
  + Food tests
  + Plant organs and tissues
  + Transpiration and translocation
* **Communicable diseases**
  + Animal and plant diseases
  + Vaccination
  + mAbs
  + Plant diseases (communicable and non-communicable)

**Separate Science – Chemistry Paper 1 – Higher tier**

**Revision list**

* **Atomic structure & the periodic table**
  + Metals and non-metals, G1 and G0
  + Properties of different groups
  + Dot and cross diagrams
  + Isotopes
* **Bonding, structure and properties of matter**
  + Ions and ionic bonding
  + Giant covalent structures, metallic bonding and fullerenes
* **Quantitative Chemistry**
  + Moles and concentration calculations
  + Titration calculations
  + Molar gas calculations
* **Chemical changes** 
  + Reactivity of metals & extracting them
  + Displacement reactions and ionic equations
  + pH
  + RP – Making salts
  + RP – Electrolysis
* **Energy changes**
  + RP – Endo and exothermic reactions
  + Reaction profiles
  + Chemical cells

**Separate Science – Physics Paper 1 – Higher tier**

* **Energy**
  + Ek, Ee, Ep calculations
  + Changes in energy stores
  + Power
  + Efficiency
  + Global energy resources
  + RP- Thermal conductivity
  + SHC calculations
* **Electricity**
  + Circuit symbols
  + Electricity calculations involving current, resistance, potential difference and power
  + Series and parallel circuits
  + National grid
  + Static electricity
* **Particle model of matter**
  + RP – Density
  + SLH investigation

**Separate Science – Biology Paper 1 – Foundation tier**

* **Cell Biology**
  + Parts of cells and their functions
  + Comparing different types of cells
  + Light and electron microscopes
  + Preparing and looking at cell slides
  + Calculating magnification
  + Osmosis RP
  + SA:V and exchange surfaces
  + Mitosis and the cell cycle
  + Stem cells
* **Organisation**
  + Organ systems
  + Enzymes involved in digestion
  + Food tests
  + Plant organs and tissues
  + Transpiration and translocation
* **Communicable diseases**
  + Animal and plant diseases
  + Vaccination
  + Drug testing
  + Plant defences
* **Bioenergetics**
  + Photosynthesis and limiting factors

**Separate Science – Physics Paper 1 – Foundation tier**

**Revision list**

* **Energy**
  + Ek, Ee, Ep calculations
  + Changes in energy stores
  + Power
  + Global energy resources
  + RP- Thermal conductivity
  + SHC calculations
* **Electricity**
  + Circuit symbols and circuit diagrams
  + Electricity calculations involving power, charge, current and potential difference.
  + National grid
  + Static electricity and electric fields
* **Particle model of matter**
  + RP – Density
  + SLH investigation
  + Gas pressure and Boyle’s law

**Separate Science – Chemistry Paper 1 – Foundation tier**

* **Atomic structure & the periodic table**
  + Metals and non-metals
  + Properties of different groups
  + Structure of an atom
  + Dot and cross diagrams
  + Isotopes
  + Elements, compounds and mixtures
  + Separation techniques
  + Early periodic tables vs modern one
* **Bonding, structure and properties of matter**
  + Ions and ionic bonding
  + Different forms of carbon (allotropes)
  + Nanoparticles
* **Quantitative Chemistry**
  + Relative formula mass
  + Titrations
  + Surface area to volume ratio
  + Atom economy
* **Chemical changes** 
  + Reactivity of metals
  + pH
  + Metals and acids
  + RP – Electrolysis
* **Energy changes**
  + RP – Endo and exothermic reactions
  + Reaction profiles