**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