

<h1>Year 10</h1> <h2>Combined Science</h2>			
1	<ul style="list-style-type: none"> CB1 identify sub-cellular components of cells, describe the importance of enzymes in plant and animal cells & describe how substances move in and out of cells. C1, describe atomic structure, patterns in the periodic table, ionic and covalent bonding & how to identify properties of substances, make simple chemical calculations P2, recall, calculate and describe velocity, acceleration and the laws of motion, and describe how to stop a vehicle 	<ul style="list-style-type: none"> CB1 describe sub-cellular components of cells, explain the importance of enzymes in eukaryotic cells & explain how substances move in and out of cells. C1, explain atomic structure & isotopes, patterns in the periodic table, ionic and covalent bonding & properties of ionic & covalent substances, make complex chemical calculations P2, recall, calculate and explain velocity, acceleration, momentum, circular motion and the laws of motion, and explain how to stop a vehicle 	<ul style="list-style-type: none"> CB1, compare the functioning of sub-cellular components, explain the importance of enzymes in all cells & explain how molecules move within and between cells. C1, explain atomic structure & isotopes & calculate RAM, predict electron configurations in the periodic table, ionic and covalent bonding & deduce properties of ionic & covalent substances, make chemical calculations using the mole. P2, recall, calculate, manipulate and explain velocity, acceleration, momentum, and the laws of motion, and explain how to stop a vehicle
2	<ul style="list-style-type: none"> CB2, describe the process of mitosis, describe how cells become specialised & describe the nervous system C2a, describe the arrangement, movement & energy of particles during changes of state P3, recall, calculate and describe ΔGPE, KE, efficiency, the conservation of energy, energy resources 	<ul style="list-style-type: none"> CB2, explain the importance of mitosis, explain the importance of stem cells & explain the structure of the reflex arc C2a, explain the arrangement, movement & energy of particles during changes of state, describe how to identify a pure and mixed substance; P3, recall, calculate and explain ΔGPE, KE, efficiency, the conservation of energy, energy changes, energy resources 	<ul style="list-style-type: none"> CB2, explain the importance of mitosis & asexual reproduction, the importance of stem cells & the functioning of the nervous system C2a, predict the state of a substance from data and explain how to identify a pure and mixed substance using melting points P3, recall, calculate, manipulate and explain ΔGPE, KE, efficiency, the conservation of energy, energy changes and how efficiency can be increased
3	<ul style="list-style-type: none"> CB3 describe the structure of gametes, DNA, mutations and present data on variation, and describe simple genetic problems C2b, identify ways to separate and purify substances P4, define calculate and describe wave speed and the nature of waves 	<ul style="list-style-type: none"> CB3 describe the production of gametes, DNA, gene mutations interpret data on genetic variation and attempt complex genetic problems C2b, describe and explain ways to separate and purify substances P4, define, calculate and explain wave speed & refraction and the nature of waves 	<ul style="list-style-type: none"> CB3, describe & explain the process of meiosis, the functioning of DNA, gene mutations, and interpret data on genetic variation and complex genetic problems C2b, suggest ways to separate and purify unknown substances P4, define, calculate, manipulate and explain wave speed & refraction and the nature of waves
4	<ul style="list-style-type: none"> CB4, describe the process of human evolution via natural selection and how it can be investigated, describe how to classify species, how selectively breed and how genetically modify individuals C3, describe the reactions of acids, the solubility of common salts and the process of electrolysis P5, recall and describe the properties of the electromagnetic spectrum and describe some uses of EM radiation and some dangers 	<ul style="list-style-type: none"> CB4, explain the process of human evolution via natural selection and how it can be investigated, explain how to classify species, how selectively breed and how genetically modify individuals C3, explain the reactions of acids & describe the pH scale, explain the solubility of common salts and explain the products of electrolysis reactions P5, recall and explain the properties of the electromagnetic spectrum and explain some uses of EM radiation and some dangers 	<ul style="list-style-type: none"> CB4, review the process of human evolution via natural selection & classification and how they can be investigated, explain how to improve the genetics of agricultural products C3, explain the reactions of acids & explain the pH scale and the nature of acids, make predictions using the solubility of common salts and explain the products of electrolysis reactions in terms of REDOX P5, recall and explain all properties of the electromagnetic spectrum and explain all uses of EM radiation and all dangers,
5	<ul style="list-style-type: none"> CB5, describe how some diseases can be identified, spread, and prevented, describe the role of modern medicine in health care C4, describe how to extraction metals, and the reactivity series, and the Haber process P6, recall the structure of an atom, describe the process of decay & radiation detection methods, the dangers of ionising radiation and the nature of half-life 	<ul style="list-style-type: none"> CB5, explain how some diseases can be identified, spread, and prevented, explain the role of antibiotics & describe the role of immune system C4, explain how to extraction some metals and the role of the reactivity series, explain dynamic equilibrium in context of the Haber process P6, explain the structure of an atom, explain the process of decay & radiation detection methods, the dangers of ionising radiation and the nature of half-life 	<ul style="list-style-type: none"> CB5, explain how some non-communicable & communicable diseases can be identified, treated and prevented, explain the role of antibiotics, vaccines & the role of immune system C4, explain how to extraction many metals and the role of the reactivity series in terms of REDOX, make predictions on reversible reactions and equilibria P6, explain the structure of an atom, explain the process of decay & radiation detection methods, the dangers of ionising radiation, calculate half-life