Biology		
	Year 12	**Year 13**
Autumn 1	**Lifestyle, health and risk** Heart and circulatory system Chemistry of water Structure and function of blood vessels The cardiac cycle Atherosclerosis Calculation and perception of risk Blood pressure **Genes and health** Lung structure and function Structure of proteins Cell membranes Transport between cells Enzymes	**Statistics** Standard deviation Chi squared Student T-test Correlation coefficient **On the wild side** Photosynthesis Energy flow through ecosystems Evidence of climate change **Infection, immunity and forensics** Bacteria and viruses Non-specific immune response TB and HIV Specific immune response
Autumn 2	**Lifestyle, health and risk** Structure of carbohydrates Structure of lipids Structure of cholesterol Calculating energy budgets Genetic risk factors Antioxidants Treatments for CVD **Genes and health** Structure of DNA and RNA Protein synthesis DNA replication Monohybrid inheritance Genetic screening Ethics of genetic screening	**On the wild side** Evolution Speciation Carbon cycle **Infection, immunity and forensics** Protein synthesis Preventing infection Antibiotics

Spring 1	**Voice of the genome** Cell structure and ultrastructure Eukaryotic and prokaryotic cells Structure and function of RER and Golgi apparatus Fertilisation **Biodiversity and natural resources** The concept of a niche Adaptations Natural selection Using the Hardy Weinberg equation Biodiversity	**Run for your life** Joints Muscles Respiration Aerobic capacity Cardiac output Control of breathing **Grey matter** Neurons The reflex arc Resting potential Action potential Propagation Synapses Nervous and hormonal control
Spring 2	**Voice of the genome** Mitosis Meiosis Sex Linkage Stem cells Ethical issues surrounding stem cell use **Biodiversity and natural resources** Classification Measuring biodiversity Plant cell structure Structure of cellulose Transpiration Translocation	**Run for your life** Joints Muscles Respiration Aerobic capacity Cardiac output Control of breathing **Grey matter** The brain Brain imaging Visual development Habituation Animal testing Human genome project GMO's
Summe	**Voice of the genome** The role of the nucleus Gene expression Epigenetics Genotypes and phenotypes Genes and the environment	**Pre release article** Synoptic work on the whole course linked to the pre-release article from the exam board.

r 1	**Biodiversity and natural resources** Drugs trials The structure of seeds The role of zoos Reintroduction of captive animals The role of seed banks	
S u m m e r 2	**On the wild side** Biotic and abiotic factors How to conduct ecological sampling Succession **Infection, immunity and forensics** DNA profiling PCR Determining time of death	n/a