*Securing Life Chances for **ALL***

Curriculum Overview: Triple Science

Exam Board: AQA

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
10 B	**Bioenergetics** ○ Photosynthesis ○ Rate of photosynthesis ○ Uses of glucose from photosynthesis ○ Required Practical: Factors affecting photosynthesis in aquatic plants	**Bioenergetics 2** ○ Aerobic respiration ○ Anaerobic respiration ○ Response to exercise ○ Metabolism	**Infection & Response** ○ Communicable diseases ○ Viral diseases ○ Bacterial diseases ○ Fungal diseases ○ Protist diseases ○ Human defence systems ○ Vaccinations	**Infection & Response 2** ○ Antibiotics & painkillers ○ Discovery & development of drugs ○ Monoclonal antibodies (Biology only) ○ Plant disease (Biology only) ○ RP Culturing micro-organisms	**Ecology Part 1** ○ Adaptations, interdependence and competition ○ Biotic and abiotic factors ○ Adaptations ○ Organisation of an ecosystem ○ How materials are cycled	**Ecology Part 2** ○ Decomposition (Biology only) ○ Impact of environmental change (Biology only ○ Biodiversity ○ Trophic levels (Biology only) ○ Waste management ○ Land use and deforestation
10 C	**Quantitative Chemistry 1** ○ Conservation of mass ○ Balancing chemical equations ○ Relative formula mass ○ Mass changes in reactions ○ Chemical Measurement ○ Moles ○ Amount of substance in equations	**Quantitative Chemistry 2** ○ Using moles to balance equations ○ Limiting reactants ○ Yield & Atom economy (Chemistry only) ○ Using concentrations of solutions (Chemistry only) ○ Volumes of gases (Chemistry only)	**Chemical Changes** ○ Reactivity of metals ○ Reactivity series ○ Oxidation & Reduction ○ Neutralisation & pH scale ○ Reactions of acids ○ Titrations (Chemistry only) ○ Electrolysis and half equations	**Energy Changes** ○ Exothermic and endothermic reactions ○ Reaction profile diagrams ○ Energy change of reactions ○ Chemical cells & fuel cells (Chemistry only)	**Rate of Chemical Change** ○ Calculating rates of reaction ○ Factors affecting rate of reaction ○ Collision theory & activation energy	**Rate of Chemical Change** ○ Catalysts ○ Reversible reactions ○ Equilibrium ○ Effect of temperature, concentration & pressure on equilibrium
10 P	**Electricity Part 1** ○ Current, potential difference & resistance ○ Resistors ○ Series & parallel circuits ○ Domestic uses and safety ○ Static electricity (Physics only)	**Electricity Part 2** ○ Energy transfers ○ The National Grid ○ Static electricity (Physics only) ○ Electrical fields (Physics only)	**Atomic Structure Part 1** ○ Atoms and isotopes ○ The structure of an atom ○ Mass number, atomic number and isotopes ○ Development of the model of the atom	**Atomic Structure Part 2** ○ Radioactive decay and nuclear radiation ○ Nuclear equations ○ Half lives ○ Hazards & uses of radioactive emissions (physics only) ○ Nuclear fission & fusion	**Forces Part 1** ○ Scalar and vector quantities ○ Forces and their interactions ○ Resultant forces ○ Work done & energy transfer ○ Forces & elasticity	**Forces Part 2** ○ Moments, levers & gears (physics only) ○ Pressure & pressure differences (physics only) ○ Forces and motion ○ Momentum
11 B	**Homeostasis & Response 1** ○ Homeostasis ○ The human nervous system ○ The brain (Biology only) ○ The eye (Biology only)	**Homeostasis & Response 2** ○ Body temperature control (Biology only) ○ Hormonal co-ordination in humans ○ Plant hormones (Biology only)	**Inheritance & Evolution 1** ○ Sexual & Asexual reproduction ○ DNA structure (Biology only) ○ Genetic inheritance ○ Inherited disorders ○ Sex determination ○ Variation	**Inheritance & Evolution 2** ○ Evolution ○ Selective breeding ○ Genetic engineering ○ Cloning (Biology only) ○ Theory of evolution (Biology only) ○ Classification of organisms	**Exams** ○ GCSE exams	**Exams** ○ GCSE exams
11 C	**Organic Chemistry** ○ Carbon compounds as fuels and feedstock ○ Reactions of alkenes and alcohols (chemistry only) ○ Polymers & polymerisation (chemistry only)	**Chemical Analysis** ○ Purity, formulations & chromatography ○ Identification of common gases ○ Identification of ions (Chem only)	**Chemistry of the Atmosphere** ○ Composition of Earth's atmosphere. ○ Greenhouse gasses. ○ Carbon dioxide and methane ○ Atmospheric pollutants & sources	**Using Resources** ○ Using Earth's resources ○ Sustainable development ○ Potable water ○ Wastewater treatment ○ Life cycle assessments ○ Using materials (Chem only) ○ The Haber process (Chem only)	**Exams** ○ GCSE exams	**Exams** ○ GCSE exams
11 P	**Waves 1** ○ Waves in air, fluids and solids ○ Sound waves (Physics only) ○ Waves for detection and exploration (Physics only)	**Waves 2** ○ Electromagnetic waves ○ Lenses (Physics only) ○ Black body radiation (Physics only)	**Magnetism & Electromagnetism** ○ Permanent & induced magnetism ○ Magnetic forces & fields ○ The motor effect ○ Loudspeakers (Physics only) ○ Induced potential, transformers and the National Grid	**Space Physics** ○ The solar system, stability of orbital motions and satellites ○ National and artificial satellites ○ Red Shift ○ Life cycle of a star	**Exams** ○ GCSE exams	**Exams** ○ GCSE exams

B = Biology | C = Chemistry | P = Physics