Subject: Science			
Exam board: AQA Combined Science Trilogy			
Year group	**Unit 1**	**Unit 2**	**Unit 3**
7	● Understand particle behaviour and state changes in matter ● Understand cell structure, specialisation, and transport mechanisms. ● Understand energy stores, transfers, resources, and efficiency concepts. ● Understand competition, adaptations, ecosystems, and feeding relationships. ● Understand wave properties, types, and behaviors at boundaries. ● Understand pure substances, mixtures, solutions, and separation techniques. ● Understand biological organization levels, skeletal system, and muscular system functions.	● Understand solar system structure, planetary motion, gravity, and Earth-Moon cycles. ● Understand nutrition components, food testing, digestive system function, and enzyme roles. ● Understand atomic structure, periodic table organization, and group properties. ● Understand static electricity, circuit components, electrical measurements, and series/parallel circuits. ● Understand variation, reproduction, puberty, reproductive systems, and menstrual cycles.	● Understand Earth's structure, rock types, formation processes, and the rock cycle. ● Understand forces, friction, gravity, weight, speed calculations ● Understand plant reproduction, pollination, seed structure, dispersal, and germination processes. ● Understand atoms, elements, compounds, mixtures, periodic table organization, and polymer properties. ● Understand temperature, heat transfer methods (conduction, convection, radiation), and thermal insulation principles. ● Understand magnetic poles, fields, permanent magnets, electromagnets, and their applications.

8	• Understand atomic structure and periodic table element patterns • Understand nutrition components and digestive system enzyme functions • Understand wave properties and electromagnetic spectrum energy transfer • Understand respiratory system gas exchange and drug effects • Understand magnetic fields and electromagnet applications in technology • Understand solar system structure and planetary motion mechanics • Understand element properties and chemical reactivity patterns	• Understand chemical equations and combustion reaction principles • Understand forces, motion, and material deformation relationships • Understand cellular respiration processes • Understand photosynthesis processes and plant mineral nutrition requirements • Understand thermal energy transfer mechanisms and insulation principles	• Understand pressure, forces, fluids, particle behavior, and floating/sinking • Understand energy changes, exothermic/endothermic reactions, and temperature effects • Understand atmosphere, greenhouse gases, global warming, and climate change • Understand DNA, inheritance, genes, variation, and Punnett squares. • Understand metal extraction, natural resources, recycling, and environmental impact. • Understand evolution, natural selection, extinction, biodiversity, and conservation
9	• Understand cell types, structures, division, specialization, and stem cells. • Structure of atoms, elements, compounds, separation, and atomic models • Energy stores, transfers, equations, efficiency, and heat loss. • Understand diffusion, osmosis, active transport: particle movement, concentration gradients, energy use, cell effects	• Understand how elements are organized by properties, groups, periods, and reactivity trends. • Understand how humans use renewable and non-renewable energy resources, their impacts, benefits, and challenges. • Understand how cells form tissues, tissues form organs, organs form systems, and how enzymes in digestion break down food efficiently under optimum conditions. • Understand how bonding and structure influence different properties of matter.	• Understand static electricity, circuit components, electrical measurements, and series/parallel circuits. • Understand how blood transports substances, heart and vessels pump and circulate blood, and lungs enable gas exchange. • Understand how power, energy, current, and voltage relate in circuits and how the national grid distributes electricity safely. • Understand how plants and algae photosynthesise, and how factors like light, temperature, and CO_2 affect the rate. • Understand how density, states of matter, and changes of state relate

			to particle behavior, energy transfer, and physical properties like temperature, pressure, and latent heat.
10	• Understand how pathogens cause infectious diseases • Understand how vaccines stimulate immune memory, antibiotics treat bacterial infections, and how new drugs are developed and tested safely. • Understand ion bonding, metal reactions, acid-base reactions, and pH concepts. • Understand how matter changes state, behaves in solids/liquids/gases, and relates density, temperature, and pressure. • Understand how health, disease types, causes, risk factors, and cancer development affect well-being.	• Understand how electrolysis uses electric current to decompose molten or aqueous ionic compounds • Understand how plants and algae photosynthesise, and how factors like light, temperature, and CO_2 affect the rate. • Understand how chemical reactions involve energy changes • Understand how atoms, isotopes, and radioactive decay affect matter. • Understand how mass, moles, and balanced equations describe chemical reactions.	• Understand how organisms adapt, compete, and depend on each other in ecosystems • Understand how chemical tests and chromatography identify pure substances and gases. • Understand the different types of waves and the relationship between frequency, wavelength and speed • Understand how electromagnetic waves differ, behave, and are applied practically. • Understand crude oil composition, fractional distillation, cracking, and hydrocarbons. • Understand sexual/asexual reproduction, meiosis, DNA, inheritance, disorders, sex determination.

11	● Understand the different types of waves and the relationship between frequency, wavelength and speed ● Understand how electromagnetic waves differ, behave, and are applied practically. ● Understand crude oil composition, fractional distillation, cracking, and hydrocarbons. ● Understand sexual/asexual reproduction, meiosis, DNA, inheritance, disorders, sex determination ● Understand how chemical tests and chromatography identify pure substances and gases. ● Understand classification; evolution and natural selection; fossils; selective breeding and genetic engineering. ● Understand how photosynthetic organisms start food chains, decomposers recycle nutrients, and the water cycle continuously moves water through ecosystems.	● Understand how homeostasis regulates internal conditions for optimal cell and enzyme function. ● Understand how the nervous system detects stimuli and coordinates rapid responses via neurons and reflex arcs. ● Understand how hormones control blood glucose, reproduction, and respond to changes through negative feedback mechanisms. ● Understand how magnetic fields and electric currents interact to produce forces and enable motor movement. ● Understand how human activities like deforestation, pollution, and waste impact biodiversity and ecosystem stability. ● Understand how Earth's resources are used, treated, and recycled to provide water, materials, and sustainable development.	● Review and Revision in advance of exams