

SCIENCE CURRICULUM MAP PLAN

Year Group	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
7 Key ideas in each subject are introduced: cells, particles and forces. These are then extended and applied to wider context in a sequence of interleaved topics that allow rehearsal of ideas introduced earlier.	Working Scientifically Safety & hazards, scientific apparatus, scientific terminology, using a Bunsen burner, drawing graphs, identifying variables and experimental skills	7B1 Cells Plant & animal cells, observing cells, specialised cells, movement of substances (diffusion), unicellular organisms	7C1 Particles and their behaviour Particle model, states of matter, changes of states of matter, diffusion, gas pressure	7P1 Forces Squashing and stretching, drag and friction, forces at a distance and balanced forces	7B2 Structure and Function of Body systems Levels of organisation, gas exchange, breathing, skeleton, movement joints & movement muscles	7C2 Elements, Atoms and Compounds Elements & atoms, compounds & chemical formulae	7P2 Sound Waves, energy transfer, Loudness, pitch & detecting sound, echoes & ultrasound	7B3 Reproduction Reproductive organs, implantation, development of a foetus, the menstrual cycle, flowers & pollination, germination & seed dispersal	7C3 Reactions Chemical reactions, burning fuels, thermal decomposition, conservation of mass and endothermic & exothermic reactions	7P3 Light Light, reflection, refraction, the eye & the camera and colour	7C4 Acids and Alkalis Acids & alkalis, making salts and neutralisation	7P4 Space The solar system, the Earth & the moon
8 In the second year of KS3 topics are introduced that build upon multiple concepts learned across KS2 & KS3. In physics, more abstract concepts such as electricity and energy.	8P1 Electricity and Magnetism Charge, Current, Potential Difference, Circuits, Series & Parallel circuits, Resistance, Magnetic Fields, Electromagnets.	8C1 The Periodic Table Groups & Periods, Metals & Non-metals, Group 1, 7 and 0	8B1 Health and Lifestyle Nutrients, Food tests, Unhealthy diet, Digestive system, Drugs, Alcohol and Smoking	8C2 Separation Techniques Mixtures, solutions & solubility, Filtration and Distillation & Chromatography	8P2 Energy Food & Fuel, Energy Changes, Temperature, Conduction, Convection, Radiation, Energy Resources, Energy & Power, Work done & Machines	8B2 Ecosystems and Processes Photosynthesis, Leaf Structure, Plant Minerals, Chemosynthesis, Respiration & Food Chains	8C3 Metals and Acids Metals & Acids, Metals & oxygen, Metals & water, Metal displacement, metal extraction and Ceramics, polymers & composites	8P3 Motion and Pressure Speed and Motion, Speed and Motion Graphs, Pressure in Gases & Liquids, Pressure in Solids and Turning Forces	8B3 Adaptations and Inheritance Competition & Adaptation, Adapting to change, Variation, Inheritance, Natural Selection		8C4 The Earth The Earth & its atmosphere, the Rock Cycle, Sedimentary, Igneous & Metamorphic Rocks, the Carbon Cycle and Climate Change & Recycling.	

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9 Key ideas from Y7&8 are reviewed in a cyclical manner, building upon and extending prior knowledge, taking advantage of developments in student literacy and numeracy.	Working Scientifically	9B1&B2 Cells Plant, animal and bacterial cell structure, division, and transport	9C1&C2 Foundations of chemistry: The atom, electronic structure, development of models of the atom and the periodic table.	9P1 Energy Stores, work done, gravitational potential energy, kinetic energy, energy dissipation	9B3&B4 Tissues, organs, and systems In animals and plants	9C3 Bonding Dot and cross diagrams to show the structure of ionic and covalent compounds	9P2&P3 Electricity Circuit symbols, $V=IR$, $Q=It$	9B5 Communicable diseases Pathogens, prevention, role of the immune system	9C4 Metals and acids Reactions, pH, hydrogen ions	9P4 Density & changes of state Regular and irregular volumes, density	9B6 Photosynthesis and Respiration Words equations, uses of glucose, exercise	9C5 & 9C7 Reactions Endo/exothermic reactions, purity, and Chromatography	9P5 & 9P6 Forces & motion Scalars & vectors, $W=mg$, free body diagrams	9B7 Ecology Feeding relationships, predator-prey cycles	9C6 & 9C8 Carbon chemistry and the Earth's atmosphere Alkanes, global warming	9P7 & 9P8 Waves and electro-Magnetism Wave characteristics, electromagnetic spectrum, plot magnetic field
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