

Key Stage 3 Science Map and Transition to GCSE

Year 7 Science Map – Key Stage 3

	Wk 1-4	Wk 5- 11	Assessment and Feedback Week	Wk 13-19	Assessment and Feedback Week	Wk 21-27	Assessment and Feedback Week	Wk 29-36	Assessment and Feedback Week	Wk 37 - 39
Biology	Introduction Safety in the lab and review of prior knowledge of HSW skills	Cells and microscopes Animal and plant cells and using a microscope		Gas Exchange Gas exchange in cells and breathing		Human Reproduction Male and female reproductive systems and development of the foetus		Interdependence Interdependence in food webs, populations, adaptations and sampling		Science projects embedding planning HSW skills
Chemistry		Particles Solid, liquid and gases, changes of state and diffusion		Solutions Soluble and insoluble substances, investigating effect of temperature on solubility and filtration		Mixtures and separation techniques Evaporation, distillation and chromatography		Chemical Reactions Chemical change, oxidation, acids and alkalis and neutralisation		
Physics		Energy Energy stores and transfers, renewable and non-renewable energy	Forces and Gravity Forces, gravity, weight and mass	Electricity Circuits, current, potential difference and resistance	Waves Waves, the wave equation and sound					

Year 8 Science Map – Key Stage 3

	Week 1-9	Assessment and Feedback Week	Week 11 - 18	Assessment and Feedback Week	Week 20 - 27	Assessment and Feedback Week	Week 29-36	Assessment and Feedback Week	Week 37-39
Biology	Photosynthesis and Leaves Photosynthesis, leaf and root structure, transpiration		Nutrition and Digestion Diet, food tests and digestion		Respiration Anaerobic and aerobic respiration, investigating fermentation		Inheritance, Variation and Osmosis Variation, selection, extinction, DNA and osmosis		Science projects embedding analysis and evaluation HSW skills
Chemistry	Elements and compounds Elements, atoms, atomic structure, compounds and word equations		Periodic Table Development of periodic table, group 1 and group 7		Energetics and Rates Exothermic and endothermic reactions, factors affecting the rate of reaction		Reactivity Reactions in terms of electron transfer, balancing equations and reactions of acids		
Physics	Forces and Motion Speed, distance time graphs, investigating motion on a ramp	Forces and Pressure Density, floating and sinking and pressure	Energy transfers Energy transfers, efficiency, conduction, convection, radiation and insulation	Waves – Light Light, transmission, absorption, reflection and refraction	Science projects embedding analysis and evaluation HSW skills				

Year 9 Science Map – Transition to GCSE

	Week 1-6	Assessment and Feedback Week	Week 8-14	Assessment and Feedback Week	Week 16-21	Assessment and Feedback Week	Week 23-29	Assessment and Feedback Week	Week 31-36	Week 38-39
Topics	<p>C1 – part 1 – Separating Mixtures and Atoms</p> <p>Filtration, simple and fractional distillation, crystallisation, chromatography, development of atomic models, electronic structures and isotopes</p> <p>HSW Booster – Physics themed</p> <p>Streamlining investigation, accuracy of results and oracy task</p>		<p>P1 - Energy – part 1</p> <p>Energy stores and systems, conservation and dissipation of energy, specific heat capacity and power</p> <p>C3 part 1 – Quantitative Chemistry</p> <p>Formulae, balanced equations, conservation of mass, formula mass and percentage by mass</p>		<p>B1 – Cell Biology – part 1 – cells and microscopes</p> <p>Cell organelles, Prokaryotic and eukaryotic cells, microscopy and magnification, diffusion, and osmosis</p> <p>HSW Booster – Biology themed</p> <p>Microscopy investigation, units, scale</p>		<p>C1 – part 2 – Atoms and the periodic table</p> <p>Development of the periodic table, reactions and reactivity of group 1 and group 7</p> <p>B1 part 2 – Cell Biology</p> <p>Stem cells, cell cycle and mitosis</p> <p>C2 – Part 1 – Types of bonding</p> <p>Ionic and covalent bonding and structures</p>		<p>P1 – Energy - part 2</p> <p>Heat transfers, investigating effectiveness of insulation, efficiency, evaluation of renewable and non-renewable energy resources</p> <p>HSW Booster – Chemistry themed</p> <p>Catalysts investigation, trends and patterns and presenting skills</p>	Consolidation