

## CURRICULUM MAP: Science Year 7 Long Term Plan 2022 - 2023

**EXAM BOARD: Pearson (exploring science) – 25% Working Scientifically; 25% Biology, 25% Physics and 25% Chemistry**



Throughout Year 7, students will study four Biology, four Chemistry and four Physics units. Each group will rotate through the four different topics switching subject at the end of each school term. All units include planning investigations, recording and analysing data, drawing graphs, writing conclusions and evaluations. Students will apply their maths skills in Science lessons whilst also partaking in a range of practical activities in each unit, focusing on science-specific investigation skills. Students will regularly review content and knowledge throughout their studies. The Year 7 curriculum is designed to be engaging, contextual and assessable to all students and builds the foundations for later study of the sciences, covering key concepts of all three science disciplines which are revisited in more detail at GCSE level.

	Autumn Term 1 Weeks: 7	Autumn Term 2 Weeks: 7	Spring Term 1 Weeks: 6	Spring Term 2 Weeks: 6	Summer Term 1 Weeks: 6	Summer Term 2 Weeks: 7
Key concepts	Chemistry	Chemistry	Biology	Biology	Physics	Physics
Themes	<p><b>Introduction to science</b>  <b>Mixtures and separating</b> – types of mixtures, solutions, heating safely, evaporation, chromatography, distillation, safe drinking water  <b>Acids and alkalis</b> – Hazard and risk, indicators, the pH scale, neutralisation and its use in daily life, danger at home  <b>The Particle model</b> -states of matter, changes of state, Brownian motion, diffusion, air pressure density, acids and alkalis, indicators.  <b>Atoms, elements and molecules</b> – the air we breathe, elements in the earth, metals and non-metals, making compounds, chemical reactions, the problems with elements</p>		<p><b>Cells, tissues, organs and systems</b> - Life processes, organs in plants and humans, plant and animal tissues, using a microscope, plant and animal cells, organ systems and transplants  <b>Sexual reproduction in animals</b> – different animals reproducing sexually, reproductive organs, pregnancy, gestation and birth, puberty and growing up, the work of zoos and endangered species  <b>Muscles and bones</b> – Fitness, muscles and breathing, muscles and blood, the skeleton, muscles and moving, drugs, drugs and sport  <b>Variation</b> – Exploring the world, what is variation, adaptation, effects of the environment, effects on the environment, transfers in food chains,</p>		<p><b>Energy</b> – energy and energy changes, energy from food, energy transfers and stores, fuels, other energy resources, using energy resources, making changes  <b>Current electricity</b> – discovering electricity, switches and current, modelling circuits, series and parallel circuits, changing the current in a circuit, using electricity, a world without electricity  <b>Forces</b> – Different types of forces, springs, friction, pressure, balanced and unbalanced forces  <b>Sound</b> – making sounds, moving sound (sound waves), detecting sound, using sound, comparing sound waves, animals making noises</p>	

<b>Writing Whole school literacy focus</b>	Scientific writing: Writing a method, planning for hazards and risks, writing effective titles and captions, making comparisons, writing hypotheses.		Conventions in scientific writing, writing a scientific method, how to make notes, writing scientific questions, building sentences, paragraphs		Summarising, using tables, making notes, remembering and recall skills	
<b>Spiritual, Moral, Social and Cultural theme (SMSC) Fundamental British Values (FBV)</b>	Spiritual & Social through presentations and practical work	Spiritual & Social through presentations and practical work	Spiritual & Social through presentations and practical work	Spiritual & Social through presentations and practical work	Spiritual & Social through presentations and practical work	Spiritual & Social through presentations and practical work
<b>Key Assessment Focuses, Suggested Assessments and Feedback Week</b>	Online end of topic tests with instant feedback Summative end of term Chemistry test taken at foundation, intermediate or higher level. Students must achieve 50% to be working at the expected level		Online end of topic tests with instant feedback Summative end of term Biology test taken at foundation, intermediate or higher level. Students must achieve 50% to be working at the expected level		Online end of topic tests with instant feedback Summative end of term Physics test taken at foundation, intermediate or higher level. Students must achieve 50% to be working at the expected level	

<b>Special Events</b>				Science Fair	Science Week	
-----------------------	--	--	--	--------------	--------------	--