

Curriculum Overview

Science Year 9

	<u>HT1</u>	<u>HT2</u>	<u>HT3</u>	<u>HT4</u>	<u>HT5</u>	<u>HT6</u>
<u>Topic</u>	<u>Earth chemistry</u> <u>Dynamic earth</u> <u>Substances and properties</u> <u>Particles and structure</u> <u>Chemical reactions</u>	<u>Electricity and magnetism</u> <u>Sound, light and waves</u>	<u>Heredity and life cycles</u> <u>Organisms and their environments</u> <u>Organisms and their environments</u>	<u>Dynamic earth</u> <u>Particles and structure</u> <u>Chemical reactions</u>	<u>Electricity and magnetism</u> <u>Matter</u>	<u>Health and disease</u> <u>Organisms and their environments</u> <u>Variation</u>
<u>Knowledge</u>	<ul style="list-style-type: none"> • Chemical weathering • Physical weathering and erosion • Trends in physical properties • Atomic model • Periodic patterns 	<ul style="list-style-type: none"> • Making circuits • Electric current • Voltage • Static electricity • Waves on water and ropes • A wave model of sound 	<ul style="list-style-type: none"> • Sexual reproduction in humans • Contraception • Sexual and asexual reproduction in flowering plants • Food chains and food webs • Interdependence within ecosystems 	<ul style="list-style-type: none"> • Making rocks by pressure and cementing • Making fossil fuels • Trends in physical properties • Atomic model • Periodic patterns 	<ul style="list-style-type: none"> • Resistance • Parallel circuits • Floating, sinking and density • Pressure in fluids • Convection • Magnetic fields • Electromagnets 	<ul style="list-style-type: none"> • Pathogens • Biodiversity, conservation and sustainability • Explaining evolution

			<ul style="list-style-type: none"> Ecosystem components and dynamics 	<ul style="list-style-type: none"> Making rocks by pressure and cementing Making fossil fuels 		
Skills	<p><u>Sort elements using chemical data and relate this to their position in the periodic table.</u></p> <ul style="list-style-type: none"> Analyse patterns Discuss limitations Draw conclusions Present data Communicate ideas Construct Explanations 	<p><u>Compare and explain current flow in different parts of a parallel circuit:</u></p> <ul style="list-style-type: none"> Draw conclusions Present data Communicate ideas Construct explanations Devise questions Plan variables Test hypothesis 	<p><u>Use models to evaluate the features of various types of seed dispersal.</u></p> <ul style="list-style-type: none"> Discuss limitations Present data Communicate ideas Construct Explanations Critique claims Justify opinions Collect data Devise questions Plan variables 	<p><u>Investigate the contribution that natural and human chemical processes make to our carbon dioxide emissions.</u></p> <ul style="list-style-type: none"> Communicate ideas Construct Explanations Justify opinions Examine consequences Review theories 	<p><u>Explore the magnetic field pattern around different types or combinations of magnets</u></p> <ul style="list-style-type: none"> Present data Communicate ideas Construct explanations 	<p><u>Graph data relating to variation and explain how it may lead to the survival of a species.</u></p> <ul style="list-style-type: none"> Analyse patterns Discuss limitations Draw conclusions Present data Critique claims Justify opinions Examine consequences Review theories Interrogate sources

			<ul style="list-style-type: none"> • Test hypothesis 			
<p><u>Assessment Opportunities (F&S)</u></p>	<p>Retrieval practice starter Self and peer assessment of knowledge. <u>Mid term</u> assessment Earth Chemistry <u>End of topic tests.</u> - particles and structure</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. <u>Mid term</u> assessment Electricity and magnetism <u>End of topic tests.</u> - Sound, light and waves</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. <u>Mid term</u> assessment Reproduction <u>End of topic tests.</u> - Ecosystem</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. <u>Mid term</u> assessment - Dynamic earth <u>End of topic tests.</u> - Chemical reactions</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. <u>Mid term</u> assessment - Electricity and magnetism <u>End of topic tests.</u> - Matter</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. <u>Mid term</u> assessment Pathogens <u>End of topic tests.</u> - Biodiversity and evolution</p>

<u>CEIAG</u>	Research Scientist	Dietician	Farming crops	Medicine	Nursing	Forensic scientist
<u>Cultural Capital</u>						Brockholes nature reserve
<u>Cross-Curricular Links</u>	English-communicating in science	Maths: graph skills and rate calculations	Maths - graph skills	Motor vehicles	Maths - graph skills	Maths: process data from investigations.