

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic(s)	<ul style="list-style-type: none"> The periodic table Forces in action 	<ul style="list-style-type: none"> Organ systems Reactions 	<ul style="list-style-type: none"> Electrical Circuits Cellular chemical reactions 	<ul style="list-style-type: none"> Earth Reactions 	<ul style="list-style-type: none"> Energy in motion Genes 	<ul style="list-style-type: none"> Electromagnets
Topic Objectives	<p>The periodic table Explore the layout of the periodic table and how it is utilised by scientists in a range of scenarios.</p> <p>Forces in action Calculate resultant forces, explore speed calculations, understand and interpret distance time graphs, explore pressure and hydraulics, link appropriate forces to buoyancy.</p>	<p>Organ systems Recognise the key organs in the respiratory system and the digestive system and describe the role of the main digestive enzymes.</p> <p>Reactions Compare complete and incomplete combustion, understand thermal decomposition, distinguish between endothermic and exothermic reactions.</p>	<p>Electrical circuits Understand and use electrical components in circuits and explore voltage current and resistance.</p> <p>Cellular chemical reactions Write the symbol and word equations for Photosynthesis, understand where photosynthesis happens in a plant, label the cross section of a leaf structure and explain how cell specialisation helps the leaf photosynthesise, write the word and symbol equation for respiration and explain the purpose of respiration, compare aerobic and anaerobic respiration.</p>	<p>Earth Learn the reactivity series and understand how it can be used to the extract metals from their ores, explain how fossil fuels are created and the issues associated with them, explore combustion, and understand the carbon cycle.</p> <p>Wave properties Compare transverse waves and longitudinal waves and link to frequency and wavelength and explore properties of electromagnetic</p>	<p>Energy in motion Link types of energy to work done, investigate the impact of using different types of pulleys, investigate the different heat transfer methods and investigate the efficiency of different insulators.</p> <p>Genes Identify and explain the adaptations of planets and animals to be able to live in different climates, understand the theory of evolution and apply Darwin's theory to explain evolution, understand how genes are involved in the inheritance .</p>	<p>Electromagnets Investigate properties of permanent magnets and magnetism and link to understanding electromagnets.</p>
Acquired Knowledge/Skills	Using formula, number manipulation, graph work, HSW planning, using models reaffirm understanding.	Using formula, number manipulation, evaluate using data, HSW investigation.	Experimental techniques to enforce learning, HSW planning, linking properties to everyday scenarios.	Evaluation skills with link to climate change, HSW.	Use date to make predictions, use probability to predict outcomes, apply formula to support investigations	HSW investigations, comparison of processes and make links to everyday processes.
Assessments	<ul style="list-style-type: none"> The periodic table test Forces in action test 	<ul style="list-style-type: none"> Organ systems test Reactions test 	<ul style="list-style-type: none"> Electrical circuits test Cellular Chemical reactions test 	<ul style="list-style-type: none"> Earth test Reactions test 	<ul style="list-style-type: none"> Energy in motion test Genes test 	<ul style="list-style-type: none"> Electromagnets test