

Year 9 Science Curriculum Map

Overview	In Year 9, students will be completing their KS3 learning journey and start the KS4 topics after a KS3 test. The building on topics gradually by linking with the 10 big ideas, allows the students to see the world analytically, to explain phenomena and make predictions – all skills they need for their next stage of scientific learning.		
Year 9	Autumn 1	Autumn 2	Spring
Topic	Enquiry process: Electromagnets 2: <ol style="list-style-type: none"> 1. Magnetism 2. Electromagnets Waves 2 <ol style="list-style-type: none"> 1. Wave effects 2. Wave properties 	Reactions 2 <ol style="list-style-type: none"> 1. Types of reactions 2. Chemical energy Genes 2 <ol style="list-style-type: none"> 1. Evolution 2. Inheritance 	KS3 Revision for end of KS3 test.
Knowledge	Enquiry process: Using investigations to work in a particular way to carry out fair scientific investigations. Electromagnets; <ul style="list-style-type: none"> - Investigate ways of varying strength of an electromagnet - Explore the magnetic field pattern around different types or combinations of magnets Waves: <ul style="list-style-type: none"> - Relate the impact of different types of waves on living cells to their frequency and the energy carried by the wave - Use the wave model to explain observations of the reflection, absorption and transmission of waves 	Reactions: <ul style="list-style-type: none"> - Investigate changes in mass for chemical and physical processes - Investigate a phenomenon that relies on an exothermic or endothermic reaction Genes: <ul style="list-style-type: none"> - Review the evidence for theories about how a particular species went extinct - Model the inheritance of a specific trait and explore the variation in the offspring produced 	All topics from Year 7, 8 and 9 will be revised. Topics from Biology, Chemistry and Physics, along with How science works skills. Preparation using past questions for the end of KS3 test.
Skills	Communicate ideas • Construct explanations • Critique claims • Justify opinions Review theories • Interrogate sources Electromagnets: Analyse patterns, draw conclusions, present data, communicate ideas, construct explanations, collect data, devise questions, plan variables, test hypothesis, estimate risks.	Reactions: Analyse patterns, discuss limitations, draw conclusions, present data, communicate ideas, construct explanations, critique claims, collect data, devise questions, plan variables, test hypothesis, estimate risks.	

	Waves: Analyse patterns, draw conclusions, communicate ideas, construct explanations, justify opinions, examine consequences.	Genes: Draw conclusions, communicate ideas, construct explanations, critique claims, examine consequences, review theories, interrogate sources.	
Assessment		December - Test on electromagnets, waves, genes and reactions.	February – end of KS3 Exam.