

Year 7

Year 7 science focuses on introducing key scientific concepts which form the building blocks needed for years 8 to 11.
In year 7 we introduce enquiry skills required to explore the practical side of science.

	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
Topic	Working Scientifically 1	CSI Rastrick	States of matter & separating mixtures	Movement and Cells	Sound and light
Theme	Working scientifically	Working scientifically	Matter and the periodic table 1	Organisms 1	Electromagnetism 2
Overview	In this topic students will use the scientific skills they have developed to investigate a gruesome crime committed in the RHS science department.	In this topic the students will be introduced to the enquiry skills students use to plan experiments and investigations. The students will learn how to correctly use common scientific equipment safely and correctly as well as	In this topic students will use scientific investigations to gain a better understanding of the material world. Students will then explore the various techniques used to separate mixtures	In this topic students will explore the way in which the human body is supported and can move. The students will use microscopes to delve into the unseen world of cells and the transport of substances.	In this topic students consider the similarities and difference between sound and light. Students will analyse wave patterns and relate these to the properties of the waves.

Knowledge overview	Topic 7	Topic 8	Topic 9	Topic 10	Topic 11
Topic	Organisation in an ecosystem	The Earth as a planet	Energy resources	Variation and reproduction	Simple chemical reactions
Theme	Ecosystems 1	Earth's resources 1	Energy and Particles 1	Genes and Evolution 1	Chemical reactions 1
Overview	In this topic students will look at the levels of organisation in an ecosystem from plants to apex predators. They will use data to help them understand the complex relationships which form between organisms.	In this topic students will explore the idea that the Earth is a rocky planet. They will review theories of how the Earth behaves geologically and devise models to represent the changes which occur.	In this topic students will consider how energy is constantly being transferred between different stores. Students will use both algebraic equations and graphical representation to display these transfers as well as apply the correct units for each quantity.	In this topic students will identify the difference between organisms and use data collection and representation techniques to highlight the variation found.	In this topic students will use a variety of experimental techniques to conduct simple chemical reactions. Students will pay close attention to the hazards of using dangerous substances and will consider the associated risks.

Knowledge overview	Topic 12	Topic 13
Topic	Objects in motion	Electrical circuits
Theme	Forces and motion 1	Electromagnetism 1
Overview	In this topic students will develop an understanding of how motion can be both calculated and represented graphically using distance-time graphs.	In this topic students will be introduced to simple electrical circuits. They will use evaluate models used to describe the concepts and will use algebraic equations to calculate quantities.