



## Science: Curriculum Overview

### Year 8

*NB: Each class will study each of the sciences across the year but in a different order.*

Half Term	Topic studied	What will I learn?	How will I be assessed?
Physics: one term	Waves - Light Electricity & Magnetism Earth in space	Light rays and shadows Pinhole cameras Reflection Refraction Colour  Circuits Current and potential Difference Electricity practical booklet Resistance Static Magnetism Plotting a magnetic field Building an electromagnet Properties of an electromagnet  Gravity Moon and Satellites Solar System Sun stars and the galaxies Seasons Future of the universe	End of topic Test
Chemistry: one term	Energy in chemistry (5 lessons) The Periodic Table (5 lessons) Metals and reactivity (8 lessons) Chemical change (6 lessons)	That food contains chemical energy; How much energy a food has can be determined by burning the food; That chemical reactions give out (exothermic) or take in (endothermic) energy; What happens to the temperature of a substance when it is heated or cooled and be able to explain the shape of the curve using particles  The periodic table contains elements, which all have a unique symbol; Compounds can be represented using formulas; The value of the Periodic table; To be able to understand the tests for oxygen, hydrogen and carbon dioxide  Properties of metals; Some metals readily react with water; Know how to build up a reactivity series by using the reactivity of metals with water acid and displacement reactions; How electricity can be generated in chemical reactions  The difference between physical and chemical change; Signs of a physical change versus a chemical change; Know that no atoms are lost or made during a chemical reaction and that the mass of the products equals the mass of the reactants; How to make a salt by reacting a metal carbonate with an acid; How insoluble salts are made.	End of topic test

Biology: one term	Nutrition	Food groups and food tests; Balanced diet	End of topic tests: Nutrition and digestion.  Respiration and Healthy Living.  Photosynthesis
	Digestion	The digestive system; Enzymes	
	Respiration	Respiration; Respiratory system and gaseous exchange; Anaerobic respiration	
	Healthy Living	Exercise on rate of breathing and heart rate; Smoking; Drugs; Alcohol	
	Photosynthesis	Leaf structure; Photosynthesis practicals; Minerals	
	Classification	Classification	
Summer term: Inspiring Scientists	Scientists that GCSE sets are named after	The names and achievements of inspiring scientists	
Summer term: Investigation Skills	Variables, Values and Relationships	The different variables to consider when planning an experiment and how results can lead to relationships between variables	
	Independent and Dependent Variables	Identifying independent and dependent variables within different experiments	
	Control Variables	How to control variables to prevent them affecting an experiment	
	Planning an Investigation	What factors to consider when trying to investigate a variable and plan a method independently	