



## Science: Curriculum Overview

### Year 7

*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	Energy	Energy Stores Energy Circus Energy Transfers and Conservation of Energy Efficiency Thermal Energy Power Using Energy Fossil Fuels Renewable Energy	End of topic Tests
	Forces	Speed Distance and Time Distance time graphs Analysing distance time graphs Types of forces and the Newton Balanced or unbalanced forces Friction and drag Stretching or squashing Turning moments Pressure in fluids Pressure in solids – stress	
	Waves - Sound	Wave properties Longitudinal and transverse What causes sound Frequency and pitch Amplitude and loudness	
Chemistry: one term	Changing state (6 lessons)	How to safely use a Bunsen Burner; Particles; The three states of matter; Dissolving, melting, boiling, condensing, freezing and evaporating; Use particle theory to explain diffusion and the gas pressure.	End of topic tests
	Solutions (10 lessons)	Dissolving as a physical change; Solvent, solute, solution, soluble, insoluble and saturated with respect to solutions; Temperature and solubility; Solubility and solvents; Distillation, chromatography and pure substances; Filtration	
	Acids and alkalis (8 lessons)	Acids; Using indicators to identify acidic, alkaline and neutral solutions; Bases, acids and alkalis; Using indicators to identify different strengths of acidic, alkaline and neutral solutions; The pH scale; Neutralisation and its uses	
	Simple chemical reactions (7 lessons)	Burning as a chemical reaction; Fires need fuel, oxygen and heat to burn. Also covers aspects of fire safety; Word equations; Combustion; Hydrocarbons; Carbon dioxide, a gas which turns limewater cloudy; What makes a good fuel and the environmental effects of burning; Compounds	

Biology: one term	Cells	How to use a microscope Animal and Plant cells Specialist cells Unicellular organisms	Homework  Microscope and cells test
	Body Systems	Body organisation Body systems Skeleton Muscles and joints	Body systems test
	Puberty and reproduction. (Animal and Plant reproduction)	Menstruation Fertilisation Gestation Flower structure Seed and fruit formation Dispersal	Animal and Plant reproduction test
	Variation	Genetics Natural and artificial selection Adaptations	
	Ecology	Food chains and webs Competition	MC test
Rocks: Summer Term	Structure of the Earth	What makes up the structure of the Earth and the composition of the Atmosphere	
	Sedimentary Rocks	What sedimentary and metamorphic rocks are and how rocks are changed from one form to another, different types of weathering of rocks	
	Igneous and Metamorphic Rocks	Uses of different types of rocks and how they are formed.	
	The Rock Cycle	How different types of rock are formed from each other.	
	Research the effect of humans on the Earth	The carbon cycle, how have humans affected the levels of Carbon Dioxide, why should we recycle?	