

Subject Name:	Science
Curriculum Intent Statement	
<p>As Science teachers, it is our intent is to provide a science curriculum, which will develop scientific knowledge, skills and conceptual understanding through the disciplines of Biology, Chemistry and Physics. Our teaching of science must encourage students to be scientifically literate, think critically about the world, so that in their futures they will recognise the impact of science on their everyday lives.</p>	
Autumn Term 1	
Chemistry - Particles <ul style="list-style-type: none"> • Solids, liquids and gases • Changes of state • Melting and boiling points • Expansion and contraction • Diffusion 	<ul style="list-style-type: none"> • Osmosis • Active transport • Atoms and elements • Compounds and mixtures • Symbols and formulae • Atomic structure
Autumn Term 2	
Chemistry – Types of reaction <ul style="list-style-type: none"> • Physical and chemical reactions • Solubility • Rates of dissolving • Solubility curves • Filtration • Crystallisation 	<ul style="list-style-type: none"> • Simple distillation • Chromatography • Acids and alkalis • Indicators • Ionisation of acids (EXT) • Neutralisation • Word and symbol equations
Spring Term 1	
Crime and Punishment <ul style="list-style-type: none"> • Physics - Forces: • Identifying forces • Measuring forces • Balanced and unbalanced forces • Newton's law • Hooke's Law • Friction • Streamlining • Moments 	<ul style="list-style-type: none"> • Life day • Speed calculations • Distance Time graphs • Gravity, mass and weight • Solar system • Day and Night • Seasons • Galaxies and universe • Light Year

Spring Term 2	
Energy <ul style="list-style-type: none"> • Different types of energy stores • Energy transfers • Sankey diagrams (EXT) • Efficiency calculations • Conduction, convection and radiation 	<ul style="list-style-type: none"> • Preventing heat loss- practical skills • Renewable and non-renewable • Renewables- advantages and disadvantages • Nuclear energy • Calculations: power and energy costs
Summer Term 1	
Independence and cells <ul style="list-style-type: none"> • Living things: MRS NERG • 5 Kingdoms and classes • Classification and keys • Food chains • Food webs • Pyramids of numbers • Pyramids of biomass (EXT) • Environment and habitats • Competition 	<ul style="list-style-type: none"> • Sampling techniques (EXT) • Animal cells • Plant cells • Prokaryotic vs eukaryotic • Microscopes • Microscope calculations (EXT) • Specialised cells • Stem cells • Cells, tissues, organs, systems
Summer Term 2	
Reproduction <ul style="list-style-type: none"> • Male and female reproductive organs in humans and plants • Gametes – humans and plants • Fertilisation in humans • Pregnancy and gestation (EXT) • Menstrual cycle (EXT) • Genetic and environmental variation • Genetic cross diagrams (EXT) 	<ul style="list-style-type: none"> • Genetic diseases and sexual determination (EXT) • Adaptation • Natural Selection • Selective Breeding • Endangered species and extinction • Biodiversity (EXT) • Extremophiles (EXT)