KS3 Curriculum Overview

	Links to KS2	Classification of materials as solids, liquids and gases. An awareness of contact and non-contact forces. Names of some forces. Knowledge of organisms. Parts of plants. Thermal energy transfer is taught as part of properties of materials. Life cycle of plants and animals. Knowledge of parts of the digestive system and circulatory system. Properties of liquids. Concept of solutions. Separation of solutions. Classification systems. Classifying living things. Adaptations of plants and animals. Food chains.					
Intent	**Statement of Intent**	The aim of the science curriculum is to equip the pupils with the scientific literacy skills to make informed decisions about their future, to promote a love of science that will see them continue their scientific education, be curious about the world around them and have the knowledge and skills to question concepts and communicate ideas.					
	Timeline	**Term 1 - 7 Weeks**	**Term 2 - 7 Weeks**	**Term 3 - 7 Weeks**	**Term 4 - 6 Weeks**	**Term 5 - 5 Weeks**	**Term 6 - 6 Weeks**
Implementation (Year 7)	**Year 7 Overview**	Observe, describe, explain and investigate scientific phenomena. To introduce and build confidence in 5 key ideas of KS3 science (cells, forces, energy, particles and interdependence). To develop scientific investigative methodology and safe practical working.					
	SOW	**Skills** **Organisation** **Atoms** **Energy**		**Biological Systems** **Solutions, Compounds, and mixtures** **Astronomy**		**Ecology and Feeding** **Acids and Alkalis** **Electromagneticsm**	
	Assessment Type & Unit Focus	**Skills**: Lab safety, Planning an investigation, Presenting data Analysing data, Drawing Conclusions **Organisation:** Characteristics of life, Organisational hierarchy. **Atoms**: Solids, liquids and gases, Changing state, Diffusion, Pressure. **Energy**: Energy stores, energy pathways and devices that transform energy. Methods of thermal energy transfer and insulation. Assessment is by progress checks with MAC at the end of each unit and a summary assessment of the three units. Practical skills are assessed throughout.		**Biological Systems**: Understand the workings of the human body **Solutions, Compounds and mixtures**: Separation techniques used in chemistry **Astronomy:** Phases of the Moon, Seasonal changes, Relative positions of the planets and their conditions compared to Earth Assessment is by progress checks with MAC at the end of each unit and a summary assessment of the three units. Practical skills are assessed throughout.		**Ecology and feeding**: An introduction to ecology **A&A**: Name some common acids and alkalis and classify solutions as acidic, alkaline or neutral, using indicators and pH values. Describe what happens to the pH of a solution when it is neutralised. Describe some everyday uses of acids, alkalis and neutralisation **Elctromagneticsm**: Describe magnetic fields of permenant and induced magnets. Explore the uses of electromagnets. Assessment is by progress checks with MAC at the end of each unit and a summary assessment of the three units. Practical skills are assessed throughout.	
Implementation (Year 8)	**Year 8 Overview**	Observe, describe, explain and investigate scientific phenomena. To develop and build confidence in 5 key ideas of KS3 science (cells, forces, energy, particles and interdependence). To develop scientific investigative methodology and safe practical working.					
	SOW	**Reproduction** **Chemical Reactions** **Electricity**		**Health and Diseases** **Periodic Table** **Light and Sound**		**Inheritance and Variation** **Environmental Chemistry** **Forces**	
	Assessment Type & Unit Focus	**Reproduction:** Plant and animal reproduction, Sex cells, Pregnancy and birth, Menstrual cycle. **Chemical Reactions:** Chemical equations, Combustion, Rates of reaction, Energy in reactions. **Electricity**: Identify and construct series and parallel circuits, Understand the term voltage, current and resistance, Describe static electricity, Investigate electromagnetism. Assessment is by progress checks with MAC at the end of each unit and a summary assessment of the three units. Practical skills are assessed throughout.		**Health & Disease:** Fitness, Diet, Breathing, Growing and investigating bacteria cultures, Microbes, Defence against disease. **Periodic Table:** history of the periodic table and the properites of organisation. **Light & Sound**: Investigating shadows, Reflection, Refraction, Colour, The Eye, Properties of sound, The Ear, Noise and ultrasound. Assessment is by progress checks with MAC at the end of each unit and a summary assessment of the three units. Practical skills are assessed throughout.		**Inheritance & Variation**: Classification, Inherited and environmental variation, The human influence on variation, GM, GE, Cloning. **Environmental Chemistry**: Weathering, ozone, history of the atmosphere. **Forces**: Contact, non-contact forces, How forces change motion, Link between particles & forces. Assessment is by progress checks with MAC at the end of each unit and a summary assessment of the three units. Practical skills are assessed throughout.	
	Topic Texts	Comprehension tasks are contained within each each topic that provides context to the topic being studied					
Impact	**Year Tracking**	Data from end of topic assessments are collected by the Science department Tracking for whole school assesment is completed as per the school diary.					
	Literacy, Oracy, and Numeracy links	Literacy and oracy tasks are embedded within each topic and are designed to build confidence with the key words for the topic. Numeracy is developed throughout the course by a range of methods including the calculation of means, the calculation of percentages, recording data in tables, presenting data graphically and looking for patterns in the data. Primary data is collected through a range of instruments.					
	How It Is Used / Skills Set Developed / Outcomes	Every unit contains suites of practicals for all classes to complete. This develops skills in planning investigations, using scientific equipment safely, collecting and recoring data, presenting data graphically, analysing the results and presenting a conclusion. Further practical work is completed during most topics					
	Links to Higher Education	KS3 provides the bedrock for the GCSE Science courses, which in turn leads on to a wide variety of Scientific courses and KS5 and in Higher Education.					
	Careers in the Curriculum	Career links to each topic are available that highlight a range of industries that rely on an understaning of the subject content.					