Science KS3 Curriculum 2022 – 2023

	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY
YEAR 7											
	Science induction living organisms Reactions				Forces and motion Digestion states of matter				Ecology Space Materials		
	<u>science induction</u> lab safety , hazards, apparatus , measuring accurately ,bunsen burner, risk assessment and careers <u>Living organisms</u> Life processes , cells, microscopes, unicellular, multicellular , specialised cells, useful/ harmful microbes, growing bacteria, organisation and tissues, organs and organ systems, skeleton , muscles and puberty. <u>Reactions</u> Atoms , periodic table , reactivity series, physical and chemical reactions, acids and alkalis , neutralisation , combustion and decomposition , burning fuels.				<u>Forces and motion</u> Forces , balanced and unbalanced force/ moments, forces and change in movement, air and water resistance, friction core practical , movement and speed, distance- time graph, density practical , forces and elasticity, pressure <u>Digestion</u> Food groups and balanced diet , nutrition , malnutrition and obesity, energy requirements, human digestive system, absorption , bacteria and digestion , food test. <u>states of matter</u> Solids , liquids and gases,changing state , solutions, diffusion , mixtures, filtration, chromatography , distillation				<u>Ecology</u> Ecosystem, food chains , food webs, pyramids of biomass and number, populations , quadrats , extinction and biodiversity , plant structure and adaptations , leaves and photosynthesis , minerals from the soil <u>Space</u> The solar system, seasons , moon , gravity and weight , theories of the solar system <u>Materials</u> Resources, polymers, ceramics , composites , hydrocarbons and fuels , recycling	
YEAR 8											
	Atoms, Elements and compounds				Waves Genetics and evolution				Circulation and Respiration Energy		

	Electricity and electromagnets Reproduction	Reactions	The Earth's Atmosphere
	<u>Atoms, Elements and compounds</u> Atoms , elements and compounds , history of the periodic table ,chemical symbols and formulae, balancing equations , compounds and naming compounds , conservation of mass <u>Electricity and electromagnets</u> Static Electricity, Fields and charge , current, voltage, Series and Parallel circuits, Resistance , Electromagnets and Earth's magnetism. <u>Reproduction</u> Reproduction, Fertilisation , Menstruation, Pregnancy - health , gestation and birth , Plant reproduction.	<u>Waves</u> Water waves, light and reflection , refraction of light , how we see things , colour , sound , How sound travels , using sound and ultrasound. <u>Genetics and evolution</u> Classification, variation and species, chromosomes , genes and DNA, inheritance, Human genome Project , Natural selection and evolution , Antibiotic resistance , Selective breeding , Growing crops / farming problems <u>Reactions</u> Recap periodic table, metals in water, metal in acids , Reversible and Irreversible , Exothermic and endothermic reactions, catalysts , Properties of metals and non-metal oxides, Oxidation and reduction.	<u>Circulation and Respiration</u> Breathing system ,Respiration ,Exercise Smoking, Drugs , The heart , The circulatory system, Blood composition, Gas Exchange. <u>Energy</u> Energy stores , Energy transfers , conduction , convection, Radiation -insulation , Energy in the home, Sankey Diagrams, Renewable Energy. <u>The Earth's Atmosphere</u> The Earth, types of rocks, Weathering and erosion, The rock cycle, The atmosphere/ earth , climate change.
YEAR 9			
	Introduction to biology Introduction to chemistry The particle model	Exchange and transport Bonding Wave	Genetics States of matter The EM Spectrum
	<u>Introduction to biology</u> Plant and animal cells ,Microscopes, specialised	<u>Exchange and transport</u> Respiration , efficient transport and	<u>Genetics</u> DNA, DNA extraction, what determines your characteristics ? inheritance , genetic

	cells, bacteria. <u>Introduction to chemistry</u> The structure of the atom, atomic mass, isotopes, Electron configuration, History of the periodic table, Modern periodic table, Calculating Mr. <u>The particle model</u> Particles , Density ,Changes of state , Energy and energy calculation , investigating water, pressure.	exchange, the heart, the circulatory system, cardiovascular disease. <u>Bonding</u> Ions, ionic bonding , ionic formula , properties of ionic bonding , metals and metallic bonding , covalent bonding , simple molecular , giant covalent, bonding models. <u>Wave</u> Type of wave, wave calculations , ripple tank , reflection and refraction	diseases , Human genome project , mitosis and meiosis. <u>States of matter</u> States of matter, mixtures , filtration, crystallisation, distillation, obtaining pure drinking water, chromatography , investigating inks . <u>The EM Spectrum</u> Structure of the EM Spectrum Uses of the spectrum Dangers of the EM spectrum