Year 8 Key Stage 3 Science 2026-2027

Curriculum Intent: We believe that students deserve a broad and ambitious Science curriculum that enriches in skill and knowledge, which ignites curiosity and prepares them well for future learning or employment. Our curriculum is sequenced to build upon prior knowledge learnt from KS1, KS2 and KS3 and firmly embed the precise learning points that pupils need to succeed in their qualification and to go on to further career success.

Term	Topic	Knowledge and Skills	Assessments	Careers	SMSC	SRE/ British Values	Literacy	Character Virtues
AUTUMN 1								
	Breathing & Respiration	The respiratory system and how it functions to include how breathing takes place and respiration.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Careers related to medical and sports disciplines.	Maintaining a healthy lifestyle including the implications of smoking / vaping. Spiritual (Learning about themselves)	Lifestyle choices, peer pressure.	Key words, reading, comprehension and homework tasks.	Moral (Self-discipline), Performance (Teamwork), Intellectual (Reflection).
	Energy	Identify energy stores and describe how energy is transferred between objects. Describe the term efficiency and calculate using the given equation. Also calculate power – the rate at which energy is transferred.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Physics relating to energy transfers, electrical energy production and transfer.	Spiritual – learning about the surrounding world.	The need for rules to make a happy, safe and secure environment to live and work.	Key words, reading, comprehension and homework tasks.	Intellectual: Critical thinking, focus Performance: Teamwork, confidence.
Half Term								

AUTUMN 2								
	Earth	The composition and structure of the atmosphere and earth, the rock cycle and formation of sedimentary, igneous and metamorphic rocks, the need to recycle, carbon cycle and humankind continuing to produce carbon dioxide and the impact on global climate.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Careers related to Link Earth Sciences, e.g., Geology.	Spiritual – learning about the surrounding world.	The need for rules to make a happy, safe and secure environment to live and work. A culture built upon freedom and equality, where everyone is aware of their rights and responsibilities.	Key words, reading, comprehension and homework tasks.	Intellectual (critical thinking, reflection) Civic (social justice) Performance (teamwork, confidence).
	Heat Transfer	The process of convection and conduction and ways in which to reduce energy transfer.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Careers relating to the choice of material for a particular purpose, Material Science	Moral (Use and positioning of renewable energy).	The need for rules to make a happy, safe and secure environment to live and work.	Key words, reading, comprehension and homework tasks.	Performance (Teamwork, Confidence).
Christmas Holiday								
SPRING 1								
	Variation	Review the evidence for theories about how particular species went extinct, model	Lessons start with retrieval questions. End of topic assessment.	Careers relating evolution and genetics.	Spiritual & Moral – respecting everyone's beliefs regarding	Inheritance of characteristics. A culture built upon freedom and equality, where everyone	Key words, reading, comprehension and homework tasks.	Performance (Teamwork, Confidence) Civic (Community Awareness)

		the inheritance of a specific trait and explore the variation in the offspring produced.	Pupils encouraged to reflect and amend work as required.		evolution / genetics Spiritual – learning about oneself.	is aware of their rights and responsibilities. Understanding that we all don't share the same beliefs and values. Respecting those values, ideas and beliefs of others whilst not imposing our own onto them.		
	Sound	Sound is caused by longitudinal waves, relate changes in the shape of an oscilloscope trace to changes in pitch and volume. Describe how the ears work.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Careers relating to communication.	Spiritual: Learning about the world around us.	The need for rules to make a happy, safe and secure environment to live and work.	Key words, reading, comprehension and homework tasks.	Performance: teamwork, confidence, Intellectual: critical thinking, reflection.
Half Term								
SPRING 2								
	Feeding Relationships	Energy transfer within an organism. Food chains and webs change a population of two organisms over time.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and	Careers relating to habitat conservation and ecology.	Spiritual: Learning about the world around us. Moral: human impact on the	A culture built upon freedom and equality, where everyone is aware of their rights and responsibilities.	Key words, reading, comprehension and homework tasks..	Performance: teamwork, confidence, motivation Intellectual: critical

			amend work as required.		environment / food supply			thinking, reflection.
	Light	Transverse wave properties to include electromagnetic spectrum with a particular focus on light, e.g., reflection and refraction.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Careers relating to medicine.	Spiritual – learning about surrounding world.	The need for rules to make a happy, safe and secure environment to live and work.	Key words, reading, comprehension and homework tasks.	Intellectual (teamwork, focus, reflection) Performance (teamwork, confidence).
Easter Holiday								
SUMMER 1								
	Space	The tilt of the Earth's axis affects the amount of solar energy absorbed by the Earth's surface. The sun is a star; there are billions of other stars in our galaxy and billions of galaxies. Interstellar distances are measured in light years.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Careers related to space – e.g. space travel and survival.	Spiritual – learning about the surrounding world.	The need for rules to make a happy, safe and secure environment to live and work.	Key words, reading, comprehension and homework tasks.	Intellectual (critical thinking, reflection) Performance (teamwork, confidence).
	Photosynthesis	The process of photosynthesis and how leaves are adapted to	Lessons start with retrieval questions. End of topic assessment.	Careers relating to Biology, e.g., ecology.	Moral (Deforestation).	The need for rules to make a happy, safe and secure	Key words, reading, comprehension and homework tasks.	Performance (Teamwork, Confidence) Intellectual

		maximise the reaction. The rate at which the reaction occurs and how products of the reaction are moved throughout the plant.	Pupils encouraged to reflect and amend work as required.			environment to live and work.		(Critical thinking, reflection).
Half Term								
Summer 2								
	Microbes	**Types of Microbes**: Learning about unicellular and microscopic organisms including bacteria, viruses, and fungi (such as yeast). **Harmful Microbes** Identifying microorganisms that cause infectious diseases in humans, animals, and plants. **Body Defences**: Exploring how the human body protects itself, alongside hygiene methods like handwashing and	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Careers relating to medicine.	Moral: identification and treatment of disease.		Key words, reading, comprehension and homework tasks.	Intellectual (critical thinking, reflection) Performance (teamwork, confidence).

		food safety to stop the spread of infection.						
	Science Skills	Key skills embedded to assist with the transition to KS4 Science.	Lessons start with retrieval questions. End of topic assessment. Pupils encouraged to reflect and amend work as required.	Skills relevant to a range of careers / applications.			Key words, reading, comprehension and homework tasks.	Intellectual (critical thinking, reflection) Performance (teamwork, confidence).