

Year 8 Key Stage 3 Science 2023-2024

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 also to go on to further career success.

Term	Topic	Knowledge and Skills	Assessments	Careers	SMSC	SRE/ British Values	Literacy	Character Virtues
Autumn 1								
	Chemical Reactions	Chemical reactions - investigate a phenomenon that relies on an exothermic or endothermic reaction; investigate the changes in mass for chemical and physical processes.	Lessons start with retrieval questions. End of topic assessment Pupils encouraged to reflect and amend work as required.	Careers related to the Chemical industry, everyday chemical use.	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. Tassomai usage.	Performance (Teamwork, Confidence) Intellectual (Reflection, Critical Thinking).
	Speed, Pressure & Density	Calculating speed and representing data as a distance time graph. Calculating pressure and making links between how specific items make use of pressure to serve a particular function, for	Lessons start with retrieval questions. End of topic assessment Pupils encouraged to reflect and amend work as required.	Careers related to the application of forces in a range of scenarios, e.g. athletics, diving etc.	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. Tassomai usage.	Performance (Teamwork, Confidence) Intellectual (Critical thinking, reflection).

		example snow shoes.						
Half term 23 rd October -27 th October								
AUTUMN 2								
	Breathing & Respiration	The respiratory system and how it functions to include how breathing takes place and respiration.	<p>Lessons start with retrieval questions.</p> <p>End of topic assessment Pupils encouraged to reflect and amend work as required.</p>	Careers related to medical and sports disciplines.	<p>Maintaining a healthy lifestyle including the implications of smoking / vaping.</p> <p>Spiritual (Learning about themselves)</p>	Lifestyle choices, peer pressure.	Key words, reading, comprehension and homework tasks. Tassomai usage.	<p>Moral (Self-discipline),</p> <p>Performance (Teamwork), Intellectual (Reflection).</p>
	Heat Transfer	The process of convection and conduction and ways in which to reduce energy transfer.	<p>Lessons start with retrieval questions.</p> <p>End of topic assessment Pupils encouraged to reflect and amend work as required.</p>	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. Tassomai usage.	Performance (Teamwork, Confidence).
	Electromagnets	Explore the magnetic field pattern around different types or combinations of magnets. The structure of electromagnets and how their	<p>Lessons start with retrieval questions.</p> <p>End of topic assessment Pupils encouraged to reflect and</p>	Careers and everyday uses of magnets, such as cranes and speakers.	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. Tassomai usage.	<p>Performance (Teamwork, confidence).</p> <p>Intellectual (Reflection).</p>

		strength can be increased.	amend work as required.					
	Photosynthesis	The process of photosynthesis and how leaves are adapted to maximise the reaction. The rate at which the reaction occurs and how products of the reaction are moved throughout the plant.	Lessons start with retrieval questions. End of topic assessment Pupils encouraged to reflect and amend work as required.	Careers relating to Biology, e.g. ecology.	Moral (Deforestation). 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. Tassomai usage.	Performance (Teamwork, Confidence) Intellectual (Critical thinking, reflection).
End of Term 18 th December-1 st January 2024								
SPRING 1								
	Digestive System	The organs of the digestive system and how each organ assists with the breakdown of food.	Lessons start with retrieval questions. End of topic assessment Pupils encouraged to reflect and amend work as required.	Links to medicinal careers.	Spiritual - learning about oneself.	The need for rules to make a happy, safe and secure environment to live and work.	Key words, reading, comprehension and homework tasks. Tassomai usage.	Moral (self-discipline) Intellectual (teamwork, focus, critical thinking).
	Light	Transverse wave properties to include electromagnetic spectrum with a particular focus on light, e.g.	Lessons start with retrieval questions. End of topic assessment	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. Tassomai usage.	Intellectual (teamwork, focus, reflection) Performance (teamwork, confidence).

		reflection and refraction.	Pupils encouraged to reflect and amend work as required.					
Half term 12 th February -16 th February								
SPRING 2								
	Static	The structure of the atom and how static electricity is caused by the movement of atoms,	Lessons start with retrieval questions. End of topic assessment Pupils encouraged to reflect and amend work as required.	Careers relating to electricity / energy supply.	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. Tassomai usage.	Intellectual (critical thinking, reflection) Performance (teamwork, confidence)
	Muscular & Skeletal Systems	The structure and function of the skeletal system using the role of muscles.	Lessons start with retrieval questions. End of topic assessment Pupils encouraged to reflect and amend work as required.	Careers relating to sport, exercise and medicine.	Spiritual - learning about oneself.	The need for rules to make a happy, safe and secure environment to live and work.	Key words, reading, comprehension and homework tasks. Tassomai usage.	Intellectual (critical thinking, reflection) Performance (teamwork, confidence)
End of Term 29 th March- 12 th April								
SUMMER 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 particular characteristics. A culture built upon freedom and equality,	Key words, reading, comprehension and homework tasks. Tassomai usage.	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.	where everyone 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.		
	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. Tassomai usage.	Intellectual (critical thinking, reflection) Civic (social justice) Performance (teamwork, confidence).

Half Term 27th May-31st May

Summer 2

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. Tassomai usage.

Intellectual (critical thinking, reflection)
Performance (teamwork, confidence).