

Year 11 Foundation Combined 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.

*Fridays - Will reteach or extend pupils on prior knowledge

Term	Topic	Knowledge and Skills	Assessments	Careers	SMSC	SRE/ British Values	Literacy	Character Virtues
Autumn 1								
4 th September	Waves	<p>Know how the properties of different waves make them suitable for their use in everyday life</p> <p>Dangers and hazards</p> <p>Waves carry energy from one place to another and can also carry information.</p> <p>RP- Standing wave and Ripple tank (See SOW for more detail)</p>	<p><u>Exit ticket for waves.</u> (15 marks)</p> <p>All complete <u>C1 paper from reteach</u> lessons the week. (70 marks)</p>	<p>Designing comfortable and safe structures such as bridges, houses and music performance halls requires an understanding of mechanical waves.</p>	<p>See both sides and how it can improve your life. Cultural</p>	<p>BV- Individual liberties: Pupils have the right to work independently and make choices in a safe environment. Curiosity</p>	<p>Disciplinary knowledge to identify the difference between explain, describe and compare. Subject terminology must be used accurately and appropriately.</p> <p>Waves key tier 3 and tier 2 words with pictures</p>	<p>Resilience teamwork</p>
11 th September								
18 th September								
25 th September	Chemical Analysis	<p>C2- Understand methods used in industry to identify what substances are made up of.</p>	<p>Knowledge retrieval</p> <p>Exit Ticket for Chemical Analysis - 15 marks</p>	<p>Topic linked to industry laboratory skills.</p> <p>Instrumental methods provide fast,</p>	<p>Spiritual- learning about scientific skills used to identify the world around them.</p> <p>Social- Working with others in a practical setting</p>	<p>BV- Democracy- pupils learn to work in groups and accept other's views</p>	<p>Tier 2 and Tier 3 words produced for topic</p> <p>Learning subject specific terminology</p>	<p>Wisdom, knowledge courage</p>
2 nd October								

		RP- Chromatography		sensitive and accurate means of analysing chemicals Forensic scientists and drug control scientists rely	and realise they may have different ideas	The rule of law- health and safety in a lab.	that should be included in scientific methods. Also writing in a logical way.	
9 th October	Electromagnetism and Magnetism	Electromagnetic effects are used in a wide variety of devices. That when current flows around a magnet it can produce movement.	Exit Ticket for Magnetism and Electromagnetism Complete Physics Paper 1	Engineers make use of the fact that a magnet moving in a coil can produce electric current. Using the Flemmings rule for the motor effect			Tier 2 and Tier 3 key terms to be printed and glued in books	Resilience Teamwork Focus
16 th October								
Half term 23 rd October -27 th October								
AUTUMN 2								
30 th October								
7 th November	Ecology	Describe and carry out field work using different sampling techniques. Calculate sample size. Interpret and analyse data from sampling. Look at how ecosystems interact. Explain the impact of humans on the population. Learn about the recycling of carbon,	Knowledge Retrieval Questions - Exit Ticket- Ecology Marked by teacher. Pupils correct, teacher input and pupils given similar questions to demonstrate progress. P1 Paper 2021- give pupils a	Look at the role of a conservationist and investigating more sustainable ways to live.	Moral- Social- Cultural - Understand there are cultural issues that need to be considered when dealing with sustainability.	BV- Mutual Respect and Tolerance- Pupils have a right to learn about other cultures and must accept these cultures will have different views. Knowing this as scientists we inform using evidence about sustainability	Subject and disciplinary key terms Sample Representative Sustainability Key tier 3 and tier 2 words with pictures	Wisdom Humanity Justice
13 th November								
20 th November								

		nitrogen(decay) and water	chance to demonstrate retention					
27 th November	Mocks (B1, C1 and P1)							
4 th December	The Earth's Resources	The Earth's Resources	Industries use the Earth's natural resources to manufacture useful products. In order to operate sustainably, chemists seek to minimise the use of limited resources, use of energy, waste and environmental impact in the manufacture of these products	Knowledge Retrieval Exit ticket - Chemical Resources	Industries learning to use natural resources in a sustainable way. Life cycle assessment RP: Making potable water Process of making waste water	Moral - Everyone entitled to water to survive.	Justice- Ensure water is produced in a way that is safe. Mutual Respect- When considering life cycle assessment of products	Tier 2 and Tier 3 words for topic to be glued into books
11 th December								
End of Term 18 th December-1 st January 2024								
SPRING 1								
2 nd January	Mocks (B2, C2, P2)							
8 th January								
15 th January	The Earth's Atmosphere	Earth's atmosphere is dynamic and forever changing. The causes of these changes are sometimes man-made and sometimes part of many natural cycles	Exit Ticket for The Earth's Atmosphere	Analysing the changes in atmosphere. Monitoring pollutant levels and causes. Data analysis	Moral	Individual Liberty Democracy Mutual respect. When considering human affect on the atmosphere	Tier 2 and tier 3 words for the topics to be printed and placed in books	Wisdom Humanity
22 nd January								
5 th February	Reteach based on assessment data							
Half term 12 th February -16 th February								

SPRING 2								
19 th February								
26 th February								
4 th March								
11 th March								
18 th March								
25 th March								
End of Term 29 th March- 12 th April								
SUMMER 1								
15 th April								
22 nd April								
29 th April								
6 th May	Actual Exams							
13 th May	Actual Exams							
20 th May	Actual Exams							
Half Term 27 th May-31 st May								
Summer 2								
3 rd June								
10 th June								
17 th June								
24 th June								
1 st July								
8 th July								
22 nd July								