Year 11 Combined Science HIGHER 2023-2024

<u>Curriculum Intent</u> 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.

• 11W Thursday Week A and Week B are RETEACH lessons.

Term	Topic	Knowledge and Skills	Assessments	Careers	SMSC	SRE/ British Values	Literacy	Character Virtues
Autumn 1								
4 th September 11 th September 18 th September	Rates of Reaction	How to calculate rate of reaction	Knowledge Retrieval Exit ticket at the end of the topic. Pupils to correct, reteach and then demonstrate C1 2021 paper to check retention	Laboratory Drug production Production of all chemicals in industry and optimal conditions to reduce waste and maximise profit	Social- Working with others in a practical setting and realise they may have different ideas. Social- Working with others in a practical setting and realise they may have different ideas.	The rule of law- pharmaceuticals companies must be precise when preparing. It must say what the drug says. Regulations Mutual Respect	Tier 2 and tier 3 key words to be printed and placed in books. Encouraging specific language such as "increase the frequency of more successful collisions"	Teamwork Resilience
25 th September 2 nd October 9 th October	Waves	Know how the properties of different waves make them suitable for their use in everyday life Dangers and hazards Waves carry energy from one place to another and can	Exit ticket for waves. (15 marks) All complete C1 paper from reteach lessons the week. (70 marks)	Designing comfortable and safe structures such as bridges, houses and music performance halls requires an understanding of mechanical waves.	See both sides and how it can improve your life. Cultural	BV- Individual liberties: Pupils have the right to work independently and make choices in a safe environment. Curiosity	Disciplinary knowledge to identify the difference between explain, describe and compare. Subject terminology must be used accurately and appropriately.	Resilience teamwork

16 th October	Electromagnetism and Magnetism	also carry information. RP- Standing wave and Ripple tank (See SOW for more detail) 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 Fleming's rule for the motor effect			Waves key tier 3 and tier 2 words with pictures Tier 2 and Tier 3 key terms to be printed and glued in books	Resilience Teamwork Focus
		Half te	rm 23 rd October -27 ^t	^h October				
AUTUMN 2			<u>, </u>					
30 th October 7 th November 13 th November 20 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, nitrogen(decay) and water	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 chance to demonstrate retention	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

27 th				Mocks (B1, C	1 and P1)	<u> </u>	<u> </u>	
November								
4 th December 11 th December	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	Resilience Teamwork - for practical work and group work Critical Thinking
			18 th December-1	st January 2024				
SPRING 1								
2 nd January				Mocks (B2,	C2, P2)			
8 th January								
15 th January 22 nd January	The Earth's Atmosphere	Earth's atmosphere is dynamic and forever changing. The causes of these changes are sometimes manmade 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
5 th February	Reteach based on assessment data							
Half term 12 th February -16 th February								
SPRING 2								
19 th February	Reteach based on assessment data							

26 th								
February								
4 th March	-							
11 th March	-							
18 th March	-							
25 th March								
25" March		r. I . C	T 20th 44	10th 4				
End of Term 29 th March- 12 th April								
SUMMER 1	I a			I	1			
15 th April	Reteach based on assessment data							
22 nd April	assessment data							
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		Actual Exams						
10 th June		Actual Exams						
17 th June								
24 th June								
1st July								
8 th July								
22 nd July								