

Year 8 Science

Learning Programme 3

The LORIC skill focus for his LP is: RESILIENCE The values for this LP are COMPASSION and HONESTY Respect - treat others how you would wish to be treated yourself. Justice - our College rules are fair and reasonable		Literacy Non-Negotiables: <ul style="list-style-type: none">Capital letters must be used at the start of sentences and for the first letter of proper nounsFull stops must be used at the end of a sentenceQuestion marks must be used at the end of a questionApostrophes should only be used for possession or omissionDays of the week and months must be spelled correctlyKey words must be spelled correctlyVocabulary to be taught using the Frayer model		
What will I be learning about in this Learning Programme? Students will learn that respiration is the chemical process that releases energy from glucose, both aerobically and anaerobically and why this energy is essential for movement, growth, and maintaining body temperature. They will also explore energy costs and transfers, including how energy in food is measured, how it is transferred through respiration for activities, and the concept of energy balance between intake and expenditure. Students will also learn about how electricity is generated and other types of energy resources. Where have I seen this learning before? At KS2 students will understand that animals and humans need food and oxygen to stay alive, that exercise makes you breathe faster, and that food provides energy for movement and growth. They also explore simple ideas about energy sources, such as sunlight for plants and electricity for devices, and learn how basic circuits work. What could I use it for? This knowledge can be used to understand and solve real-world problems and make informed decisions. For example, knowing how respiration works helps explain how exercise affects the body and why energy from food is essential for health and growth. Understanding energy costs and transfers allows us to calculate energy needs, design efficient systems, and reduce waste.				
In LP3.1, I will know:	05/01/26 - (WK 2)		Frayer Model Words	Homework
how to compare energy values of food and fuels. - IGNITION how to investigate the energy content of specific foods. how to analyse energy content of different foods and fuels.			Joules	Complete your weekly homework on https://spanxmaths.com/
In LP3.2, I will know:	12/01/26 - (WK 1)	Frayer Model Words	Homework	
how to describe the non-renewable energy resources. how to describe renewable energy resources. how to compare advantages and disadvantages of different energy resources.		Renewable Energy	Complete your weekly homework on https://spanxmaths.com/	
In LP3.3, I will know:	19/01/26 - (WK 2)	Frayer Model Words	Homework	
how to identify different energy stores. how to understand how energy can be transferred between different stores. how energy can be dissipated.		Power	Complete your weekly homework on https://spanxmaths.com/	
In LP3.4, I will know:	26/01/26 - (WK 1)	Frayer Model Words	Homework	
how to understand and calculate energy efficiency. how to analyse data comparing efficiencies of different energy resources. how to complete PRT task for comparing energy resources. Extended Task.		Efficiency	Complete your weekly homework on https://spanxmaths.com/	
In LP3.5, I will know:	02/02/26 - (WK 2)	Frayer Model Words	Homework	
how aerobic respiration occurs. how anaerobic respiration occurs. how to plan and carry out an investigation into the effects that exercise has on respiration.		Aerobic Respiration	Complete your weekly homework on https://spanxmaths.com/	
In LP3.6, I will know:	09/02/26 - (WK 1)	Frayer Model Words	Homework	
how to present data to show the effects that exercise has on the rate of respiration. how to plan an investigation into the effects of glucose concentration on fermentation. how to investigate how concentration of glucose affects rate of fermentation.		Oxygen Debt	Complete your weekly homework on https://spanxmaths.com/	
LP3 RLW, I will:	23/02/26 - (WK 2)	Frayer Model Words	Homework	
review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.		Fermentation	Complete your weekly homework on https://spanxmaths.com/	
In LP3.7, I will know:	02/03/26 - (WK 1)	Frayer Model Words	Homework	
how to explain the significance that biotechnology has on the food industry. how to effectively revise for LP3 assessment. how to complete PRT from LP3 assessment. Extended Task.		Biotechnology	Complete your weekly homework on https://spanxmaths.com/	
Resources to support learning: Kerboodle, Spax Science, BBC Bitesize				
FFET Award Challenge for this Learning Programme: You are a scientist working on a project that promotes sustainability on Earth. How can the use of different future biotechnologies help support human population growth.				

PRT Task 1

PRT Task 2