

Subject Long Term Plan Year 8 2019-20

Temperance Term

W/C	2nd September	9th September	16th September	23rd September	30th September	7th October	14th October	21st October					
Topic	First Aid			The Periodic Table			Health and Lifestyle						
	Introduction to science Understand Health and Safety and risk assessment including First Aid. Apparatus and How to use a Bunsen Burner			Predict the properties of an element, given its position on the Periodic Table. Explain how the position of an element can be used to suggest properties of elements. Compare predictions with evidence, and from reactions involving Group 1 elements.			Explain what makes a food a healthy option and how each nutrient contributes to a healthy, balanced diet. Explain why testing food for starch, lipids, sugar, and protein is important and the meaning of positive or negative results in terms of the food tests. and explain how each part of the digestive system works in sequence, including adaptations of the small intestine for its function.						
Challenge	Demonstrate and instruct others how to perform first aid..			Determine word equations to represent displacement reactions.			Explain that different people require different amounts of energy, using energy calculations and data to support explanations						
Assessment	End of unit assessment			End of unit assessment			End of unit assessment						
W/C	4th November		11th November		18th November		25th November		2nd December		9th December		
Topic	Separation techniques						Adaptation and Inheritance						
	Use the speed equation to explain unfamiliar situations. draw and analysed distance–time graphs for a range of journey. Explain gas pressure in different situations, compare some effects of atmospheric pressure, explain why an object will float or sink in terms of force or density. Calculate pressure in multistep problems, compare pressure in different situations, explaining the differences in pressure using scientific knowledge, apply the concept of moments to everyday situations.						Explain how competition or long-term environmental change can lead to evolutionary adaptation or extinction. Explain how variation gives rise to different species and explain how competition or long-term environmental change can lead to evolutionary adaptation or extinction. Explain that some variation is affected by both environmental and inherited factors and the causes of continuous and discontinuous variation, represent variation within a species using the appropriate type of graph.						
Challenge	Use calculations to explain situations involving moments						Explain how characteristics are inherited through and coded for by genes and how natural selection leads to evolution and explain some factors that may have led to extinction.						
Assessment	End of unit assessment						End of unit assessment						
HALF TERM												CHRISTMAS	

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Justice Term

W/C	6 th January	13 th January	20 th January	27 th January	3 rd February	10 th February	HALF TERM
Topic	Electricity and Magnetism			Metals and Acids			
	Explain, in terms of electrons, why something becomes charged. Compare a gravitational field and an electric field. Use a model to explain how current flows in a circuit. Explain the difference between potential difference and current. Explain why potential difference is measured in parallel. Predict the effect of changing the rating of a battery or bulb in a circuit. Explain why current and potential difference vary in series and parallel circuits. explain what factors affect the resistance of a resistor.			Use formula equations to show what happens when metals react in different acids. Explain the reactivity of metals according to how they react with oxygen.			
Challenge	Explain how magnets can be used. Predict and explain the effect of changes on the strength of different electromagnets			Calculate molecular formulas from given information.			
Assessment	End of unit assessment			End of unit assessment			
W/C	24 th February	2 nd March	9 th March	16 th March	23 rd March	30 th March	EASTER
Topic	Energy			The Earth			
	calculate energy requirements for various situations, considering diet and exercise. Compare energy transfers to energy conservation. explain, in terms of particles, how energy is transferred. Explain in detail the processes involved during heat transfers. Compare the advantages and disadvantages of using renewable and non-renewable energy resources. Explain how a range of resources generate electricity, drawing on scientific concepts. Compare the power consumption of different activities.			Describe the composition of the atmosphere in terms of abundance of components. Give a detailed explanation of the sedimentary rock cycle. Link properties of igneous and metamorphic rocks to their methods of formation. explain changes in the levels of carbon dioxide using stages of the carbon cycle. Discuss in detail the impacts of global warming, identifying primary and secondary problems.			
Challenge	calculate and compare energy costs in different scenarios; explain how conservation of energy applies in one example			Use data to discuss the relative benefits and drawbacks of recycling materials.			
Assessment	End of unit assessment			End of unit assessment			

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Courage Term

W/C	20 th April	27 th April	4 th May	11 th May	18 th May	HALF TERM
Topic	Motion and Pressure			Revision for exams		
	Use the speed equation to explain unfamiliar situations. draw and analysed distance–time graphs for a range of journey. Explain gas pressure in different situations, compare some effects of atmospheric pressure, explain why an object will float or sink in terms of force or density. , explaining the differences in pressure using scientific knowledge, apply the concept of moments to everyday situations. Use calculations to explain situations involving moments			Revise all topics for the upcoming exams		
Challenge	calculate pressure in multistep problems, compare pressure in different situations			Dependent upon the topic - Aim for the Challenge part of each lesson		
Assessment	End of unit assessment			Internal exams after half term		
W/C	1 st June	8 th June	15 th June	22 nd June	29 th June	6 th July
Topic	KS3 Internal Exams		Space			Egg drop challenge
	KS3 Internal Exams		use the speed of light to describe distances between astronomical objects. Describe the structure of the Universe in detail, in order of size and of distance away from the Earth. Explain how the properties and features of planets are linked to their place in the Solar System. Predict the effect of the Earth’s tilt on temperature and day-length.			Test and design a capsule to save an egg from cracking when dropped.
Challenge	KS3 Internal Exams		Explain why it is possible to see an eclipse on some of the planets in the Solar System but not others.			Use limited resources, do not use a parachute.
Assessment	KS3 Internal Exams		End of unit assessment			Peer assessment, self-assessment against success criteria