

# Long Term Plan Year 8 2020-21

## Temperance Term

<b>W/C</b>	7th September	14th September	21st September	28th September	5th October	12th October	19th October	<b>HALF TERM</b>
Topic	<b>Healthy Lifestyle (B2.1)</b>			<b>Electricity and Magnetism (P2.1)</b>				
	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.			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.				
Challenge	Explain that different people require different amounts of energy, using energy calculations and data to support explanations			Explain how magnets can be used. Predict and explain the effect of changes on the strength of different electromagnets				
Assessment	End of Unit exams			End of Unit exams				
<b>W/C</b>	2nd November	9th November	16th November	23rd November	30th November	7th December	<b>CHRISTMAS</b>	
Topic	<b>The Changing Environment (B2.2 and B2.3)</b>							
	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	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 exams							

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## Justice Term

W/C	4 <sup>th</sup> January	11 <sup>th</sup> January	18 <sup>st</sup> January	25 <sup>th</sup> January	1st February	8 <sup>th</sup> February	HALF TERM
Topic	<b>The Earth and Its Elements (C2.4 and C2.1)</b>						
	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.  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.						
Challenge	Use data to discuss the relative benefits and drawbacks of recycling materials.  Determine word equations to represent displacement reactions.						
Assessment	End of unit exams						
W/C	22 <sup>nd</sup> February	1 <sup>st</sup> March	8 <sup>th</sup> March	15 <sup>th</sup> March	22 <sup>nd</sup> March	29 <sup>th</sup> March	EASTER
Topic	<b>Movement and Energy (P2.2 and P2.3)</b>						
	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  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.						
Challenge	Calculate pressure in multistep problems, compare pressure in different situations  Calculate and compare energy costs in different scenarios; explain how conservation of energy applies in one example						
Assessment	End of unit exams						

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## Courage Term

<b>W/C</b>	19 <sup>th</sup> April	26 <sup>th</sup> April	3rd May	10 <sup>th</sup> May	17 <sup>th</sup> May	24 <sup>th</sup> May	<b>HALF TERM</b>
Topic	<b>Products and Purity (C2.2 and C2.3)</b>						
	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. Use a range of separating techniques and identify solutes, solvents and solutions.						
Challenge	Calculate molecular formulas from given information.						
Assessment	End of unit exams						
<b>W/C</b>	7 <sup>th</sup> June	14 <sup>th</sup> June	21 <sup>st</sup> June	28 <sup>th</sup> June	5 <sup>th</sup> July	12 <sup>th</sup> July	<b>SUMMER</b>
Topic	<b>Detection (C3.3)</b>						
	<b>KS3 Exams</b>	Describe how scientific evidence can help solve crimes. Use the reactivity series to predict whether metals will react with oxygen and water vapour in the air or soil.					
Challenge		Relate the reactivity series of metals with water or dilute acids to the tendency of the metal to form its positive ion.					
Assessment		End of unit exams					