

# Chemistry Long Term Plan Year 10 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>Review</b>	<b>C2 - Bonding, structure, and the properties of matter</b>							
	Review of Y10 home learning	Students should be able to draw dot and cross diagrams for the molecules of hydrogen, chlorine, oxygen, nitrogen, hydrogen chloride, water, ammonia and methane, and represent the covalent bonds in small molecules, in the repeating units of polymers and in part of giant covalent structures, using a line to represent a single bond							
Challenge	Grade 7, 8, 9 challenge questions	Students should consider advantages and disadvantages of the applications of these nanoparticulate materials, but do not need to know specific examples or properties other than those specified.							
Assessment	Self assessment and in-class tests	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>C2 - Bonding, structure, and the properties of matter</b>								
	Describe how ionic compounds have regular structures (giant ionic lattices) in which there are strong electrostatic forces of attraction in all directions between oppositely charged ions. These compounds have high melting points and high boiling points because of the large amounts of energy needed to break the many strong bonds.								
Challenge	Students should be able to use the idea that intermolecular forces are weak compared with covalent bonds to explain the bulk properties of molecular substances.								
Assessment	End of Unit exams								

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## Justice Term

<b>W/C</b>	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	<b>HALF TERM</b>
Topic	<b>C3 – Quantitative Chemistry</b>						
	Describe how the structure of fullerenes is based on hexagonal rings of carbon atoms but they may also contain rings with five or seven carbon atoms. The first fullerene to be discovered was Buckminsterfullerene (C <sub>60</sub> ) which has a spherical shape.						
Challenge	Explain the effect of a limiting quantity of a reactant on the amount of products it is possible to obtain in terms of amounts in moles or masses in grams						
Assessment	Mid term and end of unit exams						
<b>W/C</b>	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	<b>EASTER</b>
Topic	<b>C4 – Chemical Changes</b>						
	Understand the use of the multipliers in equations in normal script before a formula and in subscript within a formula.						
Challenge	Explain any observed changes in mass in non-enclosed systems during a chemical reaction given the balanced symbol equation for the reaction and explain these changes in terms of the particle model.						
Assessment	Mid term and end of unit exams						

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## Courage Term

<b>W/C</b>	19 <sup>th</sup> April	26 <sup>th</sup> April	3 <sup>rd</sup> May	10 <sup>th</sup> May	17 <sup>th</sup> May	24 <sup>th</sup> May	<b>HALF TERM</b>
Topic	<b>C5 – Energy Changes</b>						
	Describe the effects of changing conditions on a system at equilibrium can be predicted using Le Chatelier’s Principle.						
Challenge	Interpret appropriate given data to predict the effect of a change in temperature on given reactions at equilibrium						
Assessment	Mid term and 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>C6 – The Rate and Extent of Chemical Change</b>						
	<b>Year 10 Mock Exams</b>	Recall how changing these factors affects the rate of chemical reactions					
Challenge		Explain why catalysts increase the rate of reaction by providing a different pathway for the reaction that has a lower activation energy.					
Assessment		End of unit exams					