



Y9 – Chemistry – Quantative Chemistry - Knowledge Overview

Year group: 10		Unit: Quantitative Chemistry		
Week beginning:	Big question / concept:	Learning intentions:	Resources	
			Offline: S	Online including links on how to access these:
12 th and 19 th April 2021	How do chemists use the big numbers in their calculations?	<p>You should be able to;</p> <p>State the importance of the information found in the periodic table</p> <p>Identify the number of atoms in a compound, molecule</p> <p>Describe how to work out the relative formula mass of a substance</p> <p>Show how mass is conserved in a chemical reaction using atoms</p> <p>Write symbol equations from word equations</p> <p>Balance symbol equations</p> <p>Understand the use of the multipliers in equations in normal script before a formula and in subscript within a formula.</p>	<p>Please look at slide 13 and familiarize yourself with the part of the specification. Slide 14 shows you how to work the relative formula mass of compounds. You can now practice using slide 15, 16 and 18 and then finally check your response from slide 17 and 19.</p> <p>Make notes from slides 3-9 Answer the question from slide 10 and check your response from slide 11</p>	<p>You need to watch https://members.gcsepod.com/shared/podcasts/chapter/66711 and then this https://members.gcsepod.com/shared/podcasts/chapter/66773 once you have made notes on the above two videos you need to then watch the following lesson : https://classroom.thenational.academy/lessons/relative-formula-mass-ft-only-64r3cc?activity=video&step=1</p> <p>https://classroom.thenational.academy/lessons/balancing-equations-using-moles-ht-only-6gwkar?activity=video&step=1 First of all watch this video on GCSEpod, https://members.gcsepod.com/shared/podcasts/chapter/66777 once you have made notes on this then please could you watch the following lesson, https://classroom.thenational.academy/lessons/moles-and-avogadros-constant-ht-only-chj3jt?activity=video&step=1 and make notes as you go along.</p>

<p>26th April and 3rd May 2021</p>		<p>Identify how many atoms, moles, electrons etc in one mole</p> <p>Describe what a mole is</p> <p>Explain that the measurement of amounts in moles can apply to atoms, molecules, ions, electrons, formulae and equations,</p> <p>for example, that in one mole of carbon (C) the number of atoms is the same as the number of molecules in one mole of carbon dioxide (CO₂).</p>	<p>Make notes from slide, 21 and 22, which is the specification. Then read slide 26 and 27. You need to summarize the information on these slides. Once you are confident, please have a go at slide 23 and 24. Check your responses on slide 25.</p>	
<p>10th May 2021</p>		<p>You should be able to;</p> <p>Calculate the masses of substances shown in a balanced symbol equation</p> <p>Calculate the masses of reactants and products from the balanced symbol equation and the mass of a given reactant or product.</p> <p>Balance the chemical equation using moles</p>	<p>Make notes from slide 26 and 27. You need to summarize the information on these slides. Once you are confident, please have a go at slide 29-32 Check your responses on slide 33-36.</p> <p>Make notes from slide 38. You need to summarize the information on these slides.</p>	<p>Please start by watching: https://members.gcsepod.com/shared/podcasts/chapter/66841 and then finish off by watching https://classroom.thenational.academy/lessons/reacting-masses-and-yield-gcse-chemistry-c4wkge?activity=video&step=1 and make notes each step of the way. You can then finish off by watching the following video. https://www.youtube.com/watch?v=6KRcO3e36ZU</p>

17th May 2021		<p>You should be able to;</p> <p>Define the term limiting reactant.</p> <p>Link the limiting reactant to the number of moles.</p> <p>Link the limiting reactant to the masses in grams.</p> <p>Explain the meaning of concentration and the unit grams per dm³</p> <p>Be able to convert cm³ into dm³.</p> <p>Use the equation: $C = m / v$ to calculate the concentration of a solution. Rearrange the equation: $C = m / v$ to make mass the subject.</p>	<p>Read slide 39 and make notes from 40. Have a go at question 41 and check your response on page 42.</p> <p>Read through slides 44-46 You can then attempt questions from 47, 48 and 49 Please check your responses using slide 50 and 51</p>	<p>Start off by watching the following video; https://classroom.thenational.academy/lessons/limiting-reactants-6mup4c as you go through the video you need to make sure you are making notes.</p> <p>Please watch the following video on concentration, volume and moles. https://classroom.thenational.academy/lessons/concentration-6rr6cc and then watch the following: https://members.gcsepod.com/shared/podcasts/title/10958/66779</p>
24 th May 2021		<p>Calculate percentage yield</p> <p>Calculate atom economy</p>	<p>Make notes from slide 53-55. You need to summarize the information on these slides.</p> <p>Once you are confident, please have a go at slide 56-59 Check your responses on slide 60-62.</p>	<p>Please watch the following video on atom economy https://classroom.thenational.academy/lessons/atom-economy-6mt3ac</p>