| Prior Learning |  | AQA Spec | Title | Content |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Lesson Number |  |  |  |  | Assessment/ Homework |
| Original | WSFG |  |  |  |  |
| 1 and 2 | 1 and 2 | 4.3.1.1 | Conservation of mass and balanced equations | - Explore ideas about the conservation of mass. <br> - Consider what the numbers in equations stand for. <br> - Write balanced symbol equations. |  |
| 3 | 2 | 4.3.1.2 | Relative formula mass | - Identify the relative atomic mass of an element <br> - Use relative atomic masses to calculate relative formula masses. |  |
| 4 | 3 | 4.3.1.3 | Mass changes when gases are in reactions | - Find out how mass can be gained or lost during a reaction <br> - Find the mass of carbon dioxide released per gram of copper carbonate decomposed <br> - Interpret data and graph skills practice <br> - Maths skills: change the subject of an equation <br> - Carry out multistep equations |  |


| 6 | 5 | 4.3.2.1 | Moles | - Describe what is meant by the term moles. <br> - Avogadro's constant <br> - Calculate number of moles <br> - Calculate the mass of a given number of moles of a substance | Assessment (15 marks) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | 6 | 4.3.2.2 <br> Higher <br> tier <br> only | Amounts of substances in equations | - Predict the mass of reactant or product that will be produced from a given balanced equation |  |
| 8 | 7 | 4.3.2.3 <br> 4.3.2.4 <br> Higher <br> tier <br> only | Using moles to balance equations | - Convert masses in grams to amounts in moles <br> - Use moles to balances equations | Assessment 2: Online Quiz |
| 9 | 8 | 4.3.2.5 <br> Higher <br> tier <br> only | Concentration of solutions | - Calculate the concentration of substances using mass of solute <br> - Re-arrange equation to calculate mass from the concentration <br> - Calculate concentration from moles |  |
| End of chapter test |  |  |  |  |  |
| Where we will use these ideas again |  |  |  |  |  |


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| $\begin{aligned} & \hline 10 \\ & \text { TRIPLE } \end{aligned}$ | 9 | 4.3.4 | Using concentration s of solutions (Titrations) | - Describe how to carry out titrations. <br> - Calculate concentrations in titrations in $\mathrm{mol} / \mathrm{dm}^{3}$ and in $\mathrm{g} / \mathrm{dm}^{3}$. <br> - Explain how the concentration of a solution in $\mathrm{mol} / \mathrm{dm}^{3}$ is related to the mass of the mass of the solute and the volume of the solution. |  |
| $11$ <br> TRIPLE | 10 | 4.4.25 | Required practical: Finding the reacting volumes of acid and alkali by titration | - Use an acid to neutralise a known volume of alkali. <br> - Use a burette to determine the volume of an acid needed. <br> - Use the results to determine the concentration of an alkali. |  |
| $\begin{aligned} & 12 \\ & \text { TRIPLE } \end{aligned}$ | 11 | 4.3.3.1 | Key concept: Percentage yield | - Calculate the percentage yield from the actual yield. <br> - Identify the balanced equation needed for calculating yields. <br> - Calculate theoretical product amounts from reactant amounts. |  |


| 13 <br> TRIPLE | $\mathbf{1 2}$ | 4.3 .3 .2 | Atom <br> economy | $\bullet$ <br> • Identify the balanced equation of a reaction. <br> Calculate the atom economy of a reaction to <br> form a product. <br> Explain why a particular reaction pathway is <br> chosen. |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 14 |  |  |  |  |  |
| TRIPLE | 13 | 4.3 .5 | Amounts of <br> substance in <br> volumes of <br> gases | • Explain that the same amount of any gas <br> occupies the same volume at room temperature <br> and pressure (rtp). <br> - Calculate the volume of a gas at rtp from its <br> mass and relative formula mass. <br> - Calculate the volumes of gases from a <br> balanced equation and a given volume of a <br> reactant or product. |  |

