

Year 11: ASK Yourself!

Subject: Chemistry

Unit: 8 – Chemical Analysis

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
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	<p>To be able to carry out flame test procedures.</p> <p>To be able to calculate the masses of substances in a balanced symbol equation.</p> <p>To be able to make and record observations and measurements using a range of apparatus and methods.</p>	<p>To be able to calculate the masses of reactants and products from balanced symbol equations.</p> <p>To be able to change the subject of a mathematical equation.</p> <p>To be able to carry out experiments appropriately having due regard for the correct manipulation of apparatus, the accuracy of measurements and health and safety concerns.</p>	<p>To be able to calculate the number of moles in a given mass.</p> <p>To be able to calculate the volume of a gas at rtp from its mass and relative formula mass.</p> <p>To be able to apply knowledge of a range of techniques, instruments, apparatus and materials to select those most appropriate to the experiment.</p>	<p>To be able to interpret an instrumental result given appropriate data in chart or tabular form, using a reference set.</p> <p>To be able to calculate volumes of gases from a balanced equation and a given volume of a reactant or product.</p> <p>To be able to evaluate methods and suggest possible improvements and further investigations.</p>
K nowledge				
	<p>To be able to describe how to set up paper chromatography.</p> <p>To be able to identify the tests for carbonates.</p> <p>To be able to identify the colours of flames of ions.</p> <p>To be able to describe the measurement of</p>	<p>To be able to describe and explain processes of filtration, crystallisation and distillation.</p> <p>To be able to describe flame emission spectroscopy.</p> <p>To be able to relate mass, volume and concentration.</p>	<p>To be able to distinguish pure from impure samples.</p> <p>To be able to explain the tests for halides and sulfates.</p> <p>To be able to explain how to use sodium hydroxide to test for metal ions.</p>	<p>To be able to interpret chromatograms and calculate R_f values.</p> <p>To be able to identify anions and cations from the results of tests.</p> <p>To be able to explain the data provided by instrumental techniques.</p>

	<p>amounts of substances using the term moles. To be able to describe how to carry out titrations.</p>	<p>To be able to explain how the concentration of a solution in mol/dm³ is related to the mass of the solute and the volume of the solution.</p>	<p>To be able to identify the advantages of instrumental methods compared with the chemical tests. To be able to calculate the mass of a given number of moles. To be able to relate concentration in mol/dm³ to mass and volume.</p>	<p>To be able to explain how the concentration of a solution in mol/dm³ is related to the mass of the solute and the volume of the solution.</p>
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