Year 9: ASK Yourself!

Subject: Chemistry
Unit: 4 – Chemical Changes

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
Skills				
	To be able to use the pH scale to identify acidic or alkaline solutions. To be able to identify that metals react with oxygen to form metal oxides. To be able to identify substances oxidised or reduced by gain or loss of oxygen.	To be able to use experimental results of displacement reactions to confirm the reactivity series. To be able to explain weak and strong acids by the degree of ionisation.	To be able to use the reactivity series to predict displacement reactions. To be able to deduce an order of reactivity of metals based on experimental results. To be able to write ionic equations for displacement reactions. To be able to use half equations to describe oxidation and reduction. To be able to use apparatus to electrolyse aqueous solutions in the laboratory.	To be able to predict the products of the electrolysis of aqueous solutions. To be able to predict the products of the electrolysis of aqueous solutions containing a single ionic compound. To be able to interpret or evaluate information on specific metal extraction processes. To be able to derive a formula for a salt from its ions.
Knowledge				
	To be able to identify that metals react with oxygen to form metal oxides. To be able to describe how to make salts from metals and acids. To be able to describe how to make pure, dry samples of soluble salts. describe the use of universal	To be able to describe the reactions, if any, of metals with water or dilute acids to place these metals in order of reactivity. To be able to explain reduction and oxidation by loss or gain of oxygen.	To be able to explain how extraction methods depend on metal reactivity. To be able to explain the terms dilute and concentrated as the amounts of substances dissolved. To be able to explain why	To be able to write full balanced symbol equations for making salts. To be able to explain how to name a salt. To be able to identify reactions at electrodes during electrolysis. To be able to explain which metals (or hydrogen) are

	indicator to measure pH.	To be able to explain how the reactivity is related to the tendency of the metal to form its positive ion. To be able to describe neutralisation through the effect on hydrogen ions and pH.	electrolytes need to be molten to conduct electricity. To be able to explain why some metals need to be extracted by electrolysis. To be able to explain the electrolysis of copper sulfate using inert electrodes.	formed at the cathode in preference. To be able to represent reactions at electrodes by half equations.