

Blue Pathway								
Purple Pathway								
Orange Pathway								
	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	Step 11	Step 12
AO1 Remember	Explain the difference between atoms, elements & compounds	Describe how metal oxides & non-metal oxides react with water	Name compounds from their formula. Define ions	Explain pattern of electrons for 1 st 20 elements	Describe differences in atomic models	Describe the order of reactivity & explain displacement of the halogens	Explain introduction of new atomic model	Explain how predictions are made of "unknown" elements
	Describe how elements with similar properties are grouped.	Describe different models of the atom	Explain early models of atom.	Describe differences between plum pudding & nuclear models	Explain order of elements in modern Periodic Table (proton number)		Explain how transition metals affects the structure of Periodic Table, how they become ions & why they are useful as catalysts	Explain how Mendeleev was able to predict undiscovered elements
	Describe reactivity patterns for Groups 1 and 7	Describe Mendeleev's development of Periodic Table	Explain how metals and non-metals react with water.	Link position of elements in Periodic Table to electron arrangement, type & properties	Describe how metal & non-metals reactions result in acidic or alkaline solutions	Explain relative reactivity of transition metals		
AO2 Application	Link properties of metals and non-metals to their uses	Describe unreactivity of noble gases	Explain the link between boiling point & mass of noble gases	Calculate numbers of sub-atomic particles in atoms, ions & isotopes	Link group number and electron structure to explain the patterns of reactivity for Group 1 and Group 7	Predict the properties of "unknown" elements from their position	Predict displacement of halogens	Explain the trend of reactivity in terms of electronic structure
		Represent compounds using chemical formulae					Calculate the RAM of an element given the percentage of its isotopes & percentage abundance	
	Identify elements in a compound	Use word and symbol equations	Complete data tables to show numbers of sub-atomic particles	Use state symbols in equations (s), (l), (g) & (aq)		Compare properties of elements & compounds also metals & non-metals	Use balanced equations to describe reactions	
AO3 Analyse and Evaluate	Evaluate basic information to develop simple arguments and explanations.	Write reasoned explanations of a conclusion based on the experimental data	Compare isotopes	Compare the properties of transition metals with Group 1 metals	Evaluate the reliability of methods in detail	Relate differences between isotopes	Suggest detailed improvement to methods where reliability may be a concern	Critically evaluate and refine methodologies, and judge the validity of scientific conclusions
		Consistently draw conclusions consistent with the available evidence	Evaluate information to develop arguments and explanations.					
AO3 Experimental Procedures	Describe how to separate mixtures	Explain how separation techniques for mixtures work	Explain different separation techniques and how they are used	Plan an experiment and explain the importance of repeat readings	Suggest how chromatograms show pure/impure substances	Plan valid and reliable experimental methods to test a hypothesis.	Explain accuracy, precision, resolution and reliability	Use all the correct scientific language throughout.
			Correctly use an appropriate number of decimal places					