

Blue Pathway								
Purple Pathway								
Orange Pathway								
	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	Step 11	Step 12
AO1 Remember	Describe how fossil fuels & limestone are formed	Recall proportions of gases in the air	Describe & explain effects of acid rain	Describe the early atmosphere and processes that increased oxygen over time	Describe four effects of global climate change	Explain how the balance of gases in the atmosphere is maintained	Explain how levels of carbon dioxide decreased over time	Give reasons why actions on reduction of emissions may be limited
		Define carbon footprint	Explain that carbon footprint can be reduced & describe how emissions of carbon dioxide and methane can be reduced		Describe the products of combustion of fuels	Describe the effects of the products of combustion & their impact on the environment & health	Explain role of algae in atmosphere change	
	Describe the greenhouse gases & explain the greenhouse effect		Recall equation for photosynthesis	Explain greenhouse effect in terms of radiation interaction with atmosphere				
AO2 Application	Use word equations	Use word and symbol equations	Suggest methods to conserve resources and reduce emissions	Use state symbols in equations (s), (l), (g) & (aq)	Discuss the scale & risk of global climate change	Describe likely causes of changes in atmosphere over time	Discuss the implication of increasing greenhouse gases	Describe uncertainties in evidence base concerning climate change and environmental impact
	Sometimes use data to support evidence.	Use theories to make simple explanations of events.	Interpret data and use it to support evidence.	Link the importance of photosynthesis to atmospheric gases	Use theories to make detailed explanations of events.			
AO3 Analyse and Evaluate	Evaluate basic information to develop simple arguments and explanations.	Consistently draw conclusions consistent with the available evidence.	Evaluate information to develop arguments and explanations.	Evaluate data with reference to potential sources of random and systematic error.	Interpret/evaluate evidence about early atmosphere.	Evaluate information systematically to develop arguments and explanations.	Evaluate different theories about early atmosphere	Recognise the importance of peer review & of communicating results to a wide range of audiences
AO3 Experimental Procedures	Identify variables in an investigation	Explain the importance of sampling technique and control variables	Correctly use an appropriate number of decimal places	Plan an experiment and explain the importance of repeat readings	Make more complex and quantitative predictions using scientific knowledge and understanding	Plan valid and reliable experimental methods to test a hypothesis.	Explain accuracy, precision, resolution and reliability	Use all the correct scientific language throughout.