Curriculum Map: Chemistry Year 8

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Content Declarative knowledge 'I Know'	Topic: Matter Define the key words element, compound, atom, molecule, and polymer Know the structure of a polymer, and some examples of natural and synthetic polymers Know that elements are sorted into groups and periods of the periodic table Know some trends in the groups and periods Know some properties and the reactivity of elements from groups 1, 7 and 0		Topic: Reactions Know the principle of conservation of mass Know the differences between physical and chemical changes Define the key words combustion and decomposition Know some real-life applications of endothermic and exothermic changes		Topic: Earth Know the composition of the air Know the key processes involved in the carbon cycle Know some causes of global warming Know some effects of global warming Know what an ore is and how metals can be extracted Know how materials can be recycled	
Skills Procedural Knowledge 'I know how to'	Know how to find information about an element on the periodic table Know how to use particle diagrams to represent atoms, elements, mixtures, and compounds Know how to name compounds using their chemical formulae Know how to use formulae to name elements		Know how to construct word equations with the reactants on the left and the products on the right, including for combustion reactions and thermal decomposition Know how to balance a symbol equation Know how to draw energy level diagrams to show endothermic and exothermic changes Know how to calculate the mass of a reactant/product using the law of conservation of mass Know how to calculate the energy change for a reaction		Know how to interpret time-temperature graphs for global warming Know how to use a diagram to show how carbon is recycled in the environment and living things	
Strategies Conditional Knowledge 'I know when to'	Deduce the elements present in a compound from its name Deduce the elements present, and the relative proportions of each element in a compound from its formula		Deduce from an energy level diagram whether a change is endothermic or exothermic Predict whether a chemical reaction will be exothermic or endothermic given data on bond strengths		Evaluate the evidence we have for global warming Evaluate the recycling of materials Justify the choice of extraction method for a metal, given data about reactivity. Suggest factors to take into account when deciding whether extraction of a metal is practical.	
Key Questions	What are atoms and elements? What are the patterns in the properties of elements? How can we use the Periodic Table to predict element properties?		What happens to the atoms in chemical reactions? How does mass change in chemical reactions? Why do chemical reactions transfer energy?		What causes climate change? How do we obtain the materials we need? How can we conserve the Earth's resources?	
Assessment topics	End of topic test (after 7 lessons of topic) and this will be re tested at the end of the term.		End of topic test (after 7 lessons of topic) and this will be re tested at the end of the term.		N/A	
Cross curricular links/Character Education	Food tech – chemical makeup of salt Technology – materials (polymers)		Biology – word equations for respiration and photosynthesis		Biology – composition of air	