Curriculum Rationale and Overview

Subject: Chemistry **Year group: 7**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
National Curriculum context	The properties of different states of matter Change of state in terms of the particle model	A simple model of the atom Difference between elements and compounds Formulas for elements and compounds	**Biology and physics content taught in this term**	Defining acids and alkalis in terms of neutralisation reactions. Reactions of acids with metals and water	**Biology and physics content taught in this term**	Chemical reactions and the rearrangement of atoms Representing chemical reactions using formula and equations. Combustion, thermal decomposition, oxidation and displacement reactions.
Scheme of Learning Title:	Atomic structure and the periodic table: Particles	Bonding: Atoms, elements and compounds		Chemical Changes: Acids and alkalis		Chemical Changes/Energy Changes: Reactions
Content *What will students know?*	The difference between materials and substances. Particle arrangement, separation and movement in different states of matter. How to change a substances state of matter	What the periodic table tells you. The difference between an atom element and compound. Definitions of an atom, element and compound. Why the properties of compounds are different to the elements that they are made from.		Definitions of an acid, base and an alkali Predict the outcomes of a neutralisation reaction How to react acids and bases react to produce a salt.		Definitions of a chemical reaction, reactants and products. Describe an oxidation, combustion and thermal decomposition reaction. The difference between chemical and physical reactions.

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What will students understand?	The factors in the particle model that determines the properties of materials What is needed for a substance to change state and what happens to the atoms			The difference between concentrated and dilute solutions in terms of particles. How to reduce the hazards associated with using acids and bases.		That atoms can not be created or destroyed in chemical reactions. How to predict if a reaction is going to be an exothermic or endothermic reaction
What will students be able to do?	Use models to describe the state of a substance Predict the state of a substance using different types of data.	How to write and interpret chemical names. Write and interpret chemical formula How to identify elements and compounds based on their properties.		Identify a substance based on the colour of Universal Indicator. Explain the hazards associated with acids and bases.		How to work safely with scientific equipment. Calculate energy change Write simple formulas to represent chemical reactions.
How will they be formally assessed?	End of topic test: Describe the structure and energy of three states of matter.	End of topic test: Describe the difference between atoms, elements and compounds		End of topic test: Explain the difference in acids and alkalis.		End of topic test: Describe reactions as endothermic or exothermic