CC3: **Atomic Structure** (Paper 1 & Paper 2)
CC4: **The Periodic Table** (Paper 1 & Paper 2)

Lesson	Objectives Tracker Sheet	Date covered	I know this well	I need to do more work on this
CC3a Structure of an atom	C1.1 Describe how the Dalton model of an atom has changed because of the discovery of subatomic particles.			
	C1.2 Describe the structure of an atom as a nucleus containing protons and neutrons, surrounded by electrons in shells			
	C1.3 Recall the relative charge and relative mass of: (a) a proton (b) a neutron (c) an electron			
	C1.4 Explain why atoms contain equal numbers of protons and electrons.			
	C1.5 Describe the nucleus of an atom as very small compared to the overall size of the atom.			
CC3b Atomic number and mass number	C1.6 Explain the differences between pure substances and a mixture.			
	C1.7 Interpret melting point data to distinguish between pure substances, which have a sharp melting point, and mixtures, which melt over a range of temperatures.			
	C1.8 Describe atoms of a given element as having the same number of protons in the nucleus and that this number is unique to that element.			
	C1.10 Calculate the numbers of protons, neutrons and electrons in atoms given the atomic number and the mass number.			
CC3c Isotopes	C1.9 Describe isotopes as different atoms of the same element containing the same number of protons but different numbers of neutrons in their nuclei.			
	C1.10 Calculate the numbers of protons, neutrons and electrons in atoms given the atomic number and the mass number.			
	C1.11 Explain how the existence of isotopes results in the relative atomic masses of some elements not being whole numbers.			

	C1.12 **[H]** Calculate the relative atomic mass of an element from the relative masses and abundances of its isotopes.			
CC4a Elements and the periodic table	C1.13 Describe how Mendeleev arranged the elements, known at that time, in a periodic table by using properties of these elements and their compounds.			
	C1.14 Describe how Mendeleev used his table to predict the existence and properties of some elements not then discovered.			
CC4b Atomic number and the periodic table	C1.15 Explain that Mendeleev thought he had arranged elements in order of increasing relative atomic mass but this was not always true because of the relative abundance of isotopes of some pairs of elements in the periodic table.			
	C1.16 Explain the meaning of atomic number of an element in terms of position in the periodic table and number of protons in the nucleus.			
	C1.17a Describe that in the periodic table elements are arranged in order of increasing atomic number, in rows called periods.			
	C1.17b Describe that in the periodic table elements with similar properties are placed in the same vertical columns called groups.			
	C1.18 Identify elements as metals or non-metal according to their position in the periodic table.			
	C1.19 Predict the electronic configurations of the first 20 elements in the periodic table as diagrams and in the form, for example, 2.8.1.			
	C1.20 Explain how the electronic configuration of an element is related to its position in the periodic table.			