

Year 9: ASK Yourself!

Subject: Chemistry

Unit: 1 – Atomic Structure and the Periodic Table

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
S kills				
	Be working towards correctly drawing atom diagrams and working out the numbers of protons, electrons and neutrons. To safely use of a range of equipment to separate chemical mixtures.	Use SI units and the prefix nano. Be able to represent the electronic structures of the first 20 elements of the periodic table. Recognise expressions in standard form.	Visualise and represent 2D and 3D forms including two dimensional representations of 3D objects. Explain how testing a prediction can support or refute a new scientific idea.	To show an understanding of why and describe how scientific methods and theories develop over time.
K nowledge				
	To know and be able to suggest suitable separation techniques. To be able to recognise properties of elements and compounds. To be able to work out atomic structure. To know the basic structure of the periodic table.	To be able to work out atomic and ionic structures and know how electrons are arranged in an atom. To know how an ion forms. To know physical and chemical differences between metals and non-metals. To be able to relate each elements electron configuration to its position in the periodic table. To be able to write word equations.	To be able to explain what an isotope is. To be able to compare trends in groups 1 and 7. To be able to relate trends in the groups to number of electrons and size of atoms. To be able to review patterns in the periodic table. To be able to relate chemical properties to their electron structures. To be able to describe the reactions of the first three alkali metals with oxygen, chlorine and water.	Relate trends in reactivity in groups 1 and 7 to the way atoms form ions. To be able to write and balance symbol equations. To be able to compare properties and uses of transition metals with those of other metals. To know why transition metals form compounds of different colours.