

		Curriculum				YT Clips	Further guidance
Summative Comment		Developing	Securing	Mastering	Excelling		
The Periodic table (part 2)	Substantive Knowledge	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 name group 1, 7 and 0 elements and describe their physical and chemical properties.	To be able to compare trends in groups 1 and 7. To be able to describe the reactions of the first three alkali metals with oxygen, chlorine and water. Explain how properties of group 1, 7 and 0 depend on outer shell of electrons of the atoms.	Relate trends in reactivity in groups 1 and 7 to the way atoms form ions. (Separates only) 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.	https://youtu.be/RUUA5Fau8wc	https://www.savemyexams.co.uk/gcse/chemistry-combined-science/aga/18/revision-notes/1-atomic-structure-the-periodic-table/1-2-the-periodic-table/1-2-1-arranging-the-elements/
The Periodic table (part 2)	Disciplinary Knowledge	Recognise expressions in standard form. Interpret numerical/graphical data relating to physical properties of group 1, 7 and 0.	To be able to write and balance symbol equations. Conduct investigations to determine trends in groups (reactions of group 1 metals with water, displacement reactions).	Predict possible reactions and probable reactivity of elements from their position in the periodic table.	Exemplify general properties of transition metals including Cr, Mn, Fe, Co, Ni, Cu.	https://youtu.be/RUUA5Fau8wc	https://www.savemyexams.co.uk/gcse/chemistry-combined-science/aga/18/revision-notes/1-atomic-structure-the-periodic-table/1-2-the-periodic-table/1-2-1-arranging-the-elements/
Chemistry Autumn Term Year 9		Curriculum Checkpoints: What do students know and what can they do?				YT Clips	Further guidance
Summative Comment		Developing	Securing	Mastering	Excelling		
Bonding	Substantive Knowledge	To know the three types of chemical bonds. Describe how the three types of bonding are different to each other. To know the three states of matter and how they transition between states.	To be able to clearly describe the difference between ionic, covalent and metallic bonding. To be able to describe properties of giant ionic, metallic and covalent structures. To be able to describe properties of diamond, graphite and polymers.	To be able to represent ionic and covalent bonding in dot and cross diagrams. To be able to explain properties of giant ionic, metallic and covalent structures. To be able to explain the structure and properties of diamond, graphite and polymers. To have an awareness of intermolecular forces.	To be able to work out the empirical formula of an ionic compound. To be able to explain how the bonding in diamond, graphite and polymers affect their properties. To be able to explain how intermolecular forces affect physical properties.	https://www.youtube.com/watch?v=Ku0oTu8ZWgk&list=PL9louNCPbCxXmFgikCM60SgIh-qOG_vIE	https://www.physicsandmathstutor.com/chemistry-revision/gcse-aga/bonding-structure-properties-of-matter/
Bonding	Disciplinary Knowledge	To be able to recognise substances as small molecules, polymers or giant structures from diagrams showing their bonding. To be able to calculate areas of triangles and rectangles. To be able to use ratios, fractions and percentages. To be able to use SI units.	To be able to visualise and represent 2D and 3D forms including 2D representations of 3D objects. To be able to calculate surface area and volumes of cubes. To be able to recognise and use expressions in standard form. To be able to draw and interpret graphs.	To be able to make orders of magnitude calculations and use prefixes and powers of ten for orders of magnitude. To be able to interconvert units. To be able to use an appropriate number of significant figures in calculations.	To be able to explain applications of science and make decisions based on evidence and arguments. To use a variety of models appropriately such as representational, spatial, descriptive, and mathematical to solve problems, make predictions and develop explanations.	https://www.youtube.com/watch?v=Sy0pbDD26D0	
Chemistry Autumn Term Year 9		Curriculum Checkpoints: What do students know and what can they do?				YT Clips	Further guidance

Summative Comment		Developing	Securing	Mastering	Excelling		
Atoms	Substantive Knowledge	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 element's 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 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 write and balance symbol equations. To be explain how the model of the atom has developed over time and evaluate the evidence.	https://www.youtube.com/watch?v=L3NEXz9jryc&list=PL9louNCPbCxULWXC09jt0PsuAbxYpw2_1	https://www.physicsandmathstutor.com/chemistry-revision/gcse-aqa/
Atoms	Disciplinary Knowledge	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	https://www.youtube.com/watch?v=XC1RxloV0Mo	