

C2 Topic 2 Revision tracker

CHEMISTRY

Learning objectives I can:	I can do this very well	I can do this quite well	I need to do more work on this
2.1 Demonstrate an understanding that atoms of different elements can combine to form compounds by the formation of new chemical bonds			
2.2 Describe how ionic bonds are formed by the transfer of electrons to produce cations and anions			
2.3 Describe an ion as an atom or group of atoms with a positive or negative charge			
2.4 Describe the formation of sodium ions, Na ⁺ , and chloride ions, Cl ⁻ , and hence the formation of ions in other ionic compounds from their atoms, limited to compounds of elements in groups 1, 2, 6 and 7			
HSW 11 Present information using scientific conventions and symbols			
2.5 Demonstrate an understanding of the use of the endings '-ide' and '-ate' in the names of compounds			
2.6 Deduce the formulae of ionic compounds (including oxides, hydroxides, halides, nitrates, carbonates and sulfates) given the formulae of the constituent ions			
H 2.7 Describe the structure of ionic compounds as a lattice structure: a consisting of a regular arrangement of ions b held together by strong electrostatic forces (ionic bonds) between oppositely charged ions			
2.8 Describe H and explain the properties of ionic substances including sodium chloride and magnesium oxide, limited to: a melting points and boiling points b their ability to conduct electricity as solids, when molten and in aqueous solution			
HSW 12 Describe the benefits, drawbacks and risks of using new scientific and technological developments			
2.9 Recall the general rules which describe the solubility of common types of substances in water: a all common sodium, potassium and ammonium salts are soluble b all nitrates are soluble c common chlorides are soluble except those of silver and lead d common sulfates are soluble except those of lead, barium and calcium e common carbonates and hydroxides are insoluble except those of sodium, potassium and ammonium			
2.10 Demonstrate an understanding that insoluble salts can be formed as precipitates by the reaction of suitable reagents in solution			
HSW 10 Use qualitative and quantitative approaches when presenting scientific ideas and arguments, and recording observations			
2.11 Demonstrate an understanding of the method needed to prepare a pure, dry sample of an insoluble salt			
2.12 Prepare an insoluble salt by precipitation			
2.13 Use solubility rules to predict whether a precipitate is formed when named solutions are mixed together and to name the precipitate			
2.14 Recall that the insoluble salt, barium sulfate, is given as a a it is opaque to X-rays b it is safe to use as, although barium salts are toxic, its insolubility prevents it entering the blood			
HSW 5 Plan to test a scientific idea, answer a scientific question or solve a scientific problem			
2.15 Describe tests to show the following ions are present in solids or solutions: a Na ⁺ , K ⁺ , Ca ²⁺ , Cu ²⁺ using flame tests b CO ₃ ²⁻ using dilute acid and identifying the carbon dioxide evolved c SO ₄ ²⁻ using dilute hydrochloric acid and barium chloride solution d Cl ⁻ using dilute nitric acid and silver nitrate solution			
2.16 Recall that chemists use spectroscopy to detect the presence of very small amounts of elements and that this led to the discovery of new elements, including rubidium and caesium			
HSW 2 Describe how data is used by scientists to provide evidence that increases our scientific understanding			