

	Statement	Guidance
1.1.U1	Atoms of different elements combine in fixed ratios to form compounds, which have different properties from their component elements	Balancing of equations should include a variety of types of reactions
1.1.U2	Mixtures contain more than one element and/or compound that are not chemically bonded together and so retain their individual properties.	Names of the changes of state—melting, freezing, vaporization (evaporation and boiling), condensation, sublimation and deposition—should be covered.
1.1.U3	Mixtures are either homogeneous or heterogeneous.	
1.2.U4	The mole is a fixed number of particles and refers to the amount, n , of substance.	
1.2.U5	Masses of atoms are compared on a scale relative to ^{12}C and are expressed as relative atomic mass (A_r) and relative formula/molecular mass (M_r).	
1.2.U6	Molar mass (M) has the units g mol^{-1}	
1.2.U7	The empirical formula and molecular formula of a compound give the simplest ratio and the actual number of atoms present in a molecule respectively	
1.3.U8	Reactants can be either limiting or excess	
1.3.U9	The experimental yield can be different from the theoretical yield.	
1.3.U10	Avogadro's law enables the mole ratio of reacting gases to be determined from volumes of the gases	
1.3.U11	The molar volume of an ideal gas is a constant at specified temperature and pressure	
1.3.U12	The molar concentration of a solution is determined by the amount of solute and the volume of solution.	Units of concentration to include: g dm^{-3} , mol dm^{-3} and parts per million (ppm)
1.3.U13	A standard solution is one of known concentration	The use of square brackets to denote molar concentration is required