CC9 Calculations involving masses

CC9a Masses and empirical formulae

Step	Learning outcome	Had a look	Nearly there	Nailed it!
8th	Calculate the relative formula mass of a substance from relative atomic masses.	☐	☐	☐
8th	Calculate the empirical formula of a compound from the masses of the elements it contains.	☐	☐	☐
8th	Explain the difference between an empirical formula and a molecular formula.	☐	☐	☐
7th	Deduce the empirical formula from a molecular formula.	☐	☐	☐
8th	Deduce the molecular formula for a compound from its empirical formula and its relative formula mass.	☐	☐	☐
7th	Describe an experiment to determine the empirical formula for a compound.	☐	☐	☐

CC9b Conservation of mass

Step	Learning outcome	Had a look	Nearly there	Nailed it!
6th	Explain the law of conservation of mass in a closed system.	☐	☐	☐
6th	Explain the law of conservation of mass in a non-enclosed system.	☐	☐	☐
8th	Calculate the mass of product formed from a given mass of reactant, using a balanced equation.	☐	☐	☐
8th	Calculate the mass of a reactant needed to produce a given amount of product, using a balanced equation.	☐	☐	☐
6th	Calculate the concentration of a solution in g dm^{-3}.	☐	☐	☐

CC9c Moles H

Step	Learning outcome	Had a look	Nearly there	Nailed it!
6th	H Describe what is meant by a mole of particles.	☐	☐	☐
8th	H Calculate the number of moles of particles in a given mass of a certain substance and vice versa.	☐	☐	☐
9th	H Calculate the number of particles in a given number of moles or mass of a substance and vice versa.	☐	☐	☐
7th	H Explain that the mass of a product formed in a reaction is controlled by the mass of reactant that is not in excess.	☐	☐	☐
9th	H Deduce the balanced equation for a reaction from the masses of reactants and/or products.	☐	☐	☐