Quantitative Chemistry (BOM13) – Revision Checklist

I can…	Lesson	Revised
State the law of conservation of mass.	BOM13 LE4	
Explain why mass is conserved during a chemical reaction.	BOM13 LE4	
Explain why chemical equations must be balanced.	BOM13 LE4	
Balance symbol equations.	BOM13 LE4	
Use multipliers correctly in front of formulae.	BOM13 LE3	
Use subscripts correctly within formulae.	BOM13 LE3	
Calculate the relative formula mass (Mr) of a compound.	BOM13 LE3	
Explain how relative formula mass links to balanced equations.	BOM13 LE3	
Show that total relative formula mass is conserved in a balanced equation.	BOM13 LE3	
Calculate percentage by mass of an element in a compound.	BOM13 LE3	
Explain apparent changes in mass in reactions involving gases.	BOM13 LE4	
Explain mass changes in non-enclosed systems using balanced equations.	BOM13 LE4	
Explain observed mass changes using the particle model.	BOM13 LE4	
State why all measurements have uncertainty.	BOM13 LE2	
Represent the distribution of repeated results.	BOM13 LE2	
Estimate uncertainty from experimental data.	BOM13 LE2	
Calculate the mean of a set of results.	BOM13 LE2	
Use a range of results as a measure of uncertainty.	BOM13 LE2	
(HT) Define the mole.	BOM13 LE6	
(HT) Relate molar mass to relative formula mass.	BOM13 LE6	
(HT) State the meaning of the Avogadro constant.	BOM13 LE6	
(HT) Use the Avogadro constant in calculations.	BOM13 LE6	
(HT) Calculate the number of moles from a given mass.	BOM13 LE6	
(HT) Calculate the mass from a given number of moles.	BOM13 LE6	
(HT) Convert between mass and moles using relative formula mass.	BOM13 LE6	
(HT) Interpret balanced symbol equations in terms of moles.	BOM13 LE6	
(HT) Use mole ratios from balanced equations.	BOM13 LE7	
(HT) Calculate masses of reactants from balanced equations.	BOM13 LE7	
(HT) Calculate masses of products from balanced equations.	BOM13 LE7	
(HT) Calculate reacting masses given the mass of one substance.	BOM13 LE7	
(HT) Determine balancing numbers from reacting mass data.	BOM13 LE9	
(HT) Balance equations using mole calculations from mass data.	BOM13 LE9	
Change the subject of a mathematical equation when required.	BOM13 LE9	
(HT) Define the term limiting reactant.	BOM13 LE8	
(HT) Identify the limiting reactant in a reaction.	BOM13 LE8	
(HT) Explain how a limiting reactant affects the amount of product formed.	BOM13 LE8	
(HT) Calculate the amount of product formed when a reactant is limiting.	BOM13 LE8	
Define concentration in terms of mass per volume.	BOM13 LE5	
State appropriate units for concentration.	BOM13 LE5	
Calculate the mass of solute in a given volume of solution.	BOM13 LE5	
(HT) Explain the relationship between mass of solute, volume and concentration.	BOM13 LE5	
(HT) Rearrange concentration equations to change the subject.	BOM13 LE5	