Personalised Learning Checklist

Subject: Science

Year group: 10

Dear Student,

During the academy closure you have been set a number of tasks. The list below is the learning you should have completed. Your teacher will use the list to check your progress during this time. It may be used for short quizzes, mini assessments or homework. Where there are gaps your lessons will focus on improving your knowledge and understanding.

CC9: Calculations involving masses

Lesson	Objective	My personal RAG rating (Red- do not understand, Amber- some understanding, Green- I am confident			Teacher RAG rating
Masses and Empirical Formulae	Calculate the relative formula mass of a substance from relative atomic masses.	RED	AMBER	GREEN	
	Calculate the empirical formula of a compound from the masses of the elements it contains.	RED	AMBER	GREEN	
	Explain the difference between an empirical formula and a molecular formula.	RED	AMBER	GREEN	
	Deduce the empirical formula from a molecular formula.	RED	AMBER	GREEN	
	Deduce the molecular formula for a compound from its empirical formula and its relative formula mass.	RED	AMBER	GREEN	
	Describe an experiment to determine the empirical formula for a compound.	RED	AMBER	GREEN	
Conservation of Mass	Explain the law of conservation of mass in a closed system.	RED	AMBER	GREEN	
	Explain the law of conservation of mass in a non-enclosed system.	RED	AMBER	GREEN	
	Calculate the mass of product formed from a given mass of reactant, using a balanced equation.	RED	AMBER	GREEN	
	Calculate the mass of a reactant needed to produce a given amount of product, using a balanced equation.	RED	AMBER	GREEN	
	Calculate the concentration of a solution in g dm^{-3}.	RED	AMBER	GREEN	
Moles (H)	H Describe what is meant by a mole of particles.	RED	AMBER	GREEN	
	H Calculate the number of moles of particles in a given mass of a certain substance and vice versa.	RED	AMBER	GREEN	
	H Calculate the number of particles in a given number of moles or mass of a substance and vice versa.	RED	AMBER	GREEN	
	H Explain that the mass of a product formed in a reaction is controlled by the mass of reactant that is not in excess.	RED	AMBER	GREEN	
	H Deduce the balanced equation for a reaction from the masses of reactants and/or products.	RED	AMBER	GREEN	