

Term	Date	Focus	Summary	Learning Outcomes	
Term 2	02/01/23	Chemistry: Atoms into Ions	Revising Atoms Electron Arrangement	Use your knowledge to describe the subatomic particles found in an atom including location, mass and charge Analyse the mass and atomic number to determine the number of each particle in different atoms Construct a diagram to show the electrostatic forces occurring in an atom Apply your knowledge to describe the relationship between group number and number of outer electrons Construct diagrams to show the arrangement of electrons in an atom Justify why the size of an atom increases as the number of electrons increases	
	09/01/23	Chemistry: Atoms into Ions	Atoms into Ions Reactivity	Use your knowledge to explain why atoms form ions Predict the type of ion formed from the position on the Periodic Table Construct diagrams to show the arrangement of electrons in an atom Apply your knowledge to detail the observations made when alkali metals react with water Compare the electron arrangement of the alkali metals Derive the relationship between electron arrangement and reactivity	
	16/01/23	Chemistry: Atoms into Ions Chemistry: Organic Molecules	Atoms into Ions Retrieval Fossil Fuels Fractional Distillation	Evaluate your knowledge of the Atoms into Ions topic Use your knowledge to summarise the formation of fossil fuels Analyse the structure of the molecules found in fossil fuels Justify why fossil fuels can be classified as non-renewable Apply your knowledge to name the two processes involved in fractional distillation Determine the relationship between the size of the molecule and boiling point Debate the usefulness of the different products formed as a result of fractional distillation	
	23/01/23	Chemistry: Organic Molecules	Alkanes Alkenes Plastics	Use your knowledge to name alkanes containing up to eight carbons Analyse the name to determine the molecular formulae of the alkanes and their general formula Construct displayed formula for different alkanes Apply your knowledge to explain the formation of alkenes from alkanes Write the names, construct the molecular formulae of the alkenes and their general formula Construct displayed formula for different alkenes Use your knowledge to define the terms monomer and polymer Construct a diagram to demonstrate the formation of a plastic and name the process Debate the use of biodegradable plastics	
	30/01/23	Chemistry: Organic Molecules	Renewable Energy Organic Molecules Retrieval	Use your knowledge to discuss the disadvantages of using fossil fuels Analyse the use of bioethanol as an alternative energy source Compare and contrast different renewable energy sources Evaluate your knowledge of the Organic Molecules topic	
	06/02/23	Chemistry- Chemical Reactions	Combustion Calculating Energy Change	Use your knowledge to define the term combustion Compare complete and incomplete combustion of hydrocarbons Construct the chemical equations for the complete and incomplete combustion of hydrocarbons Use your knowledge to write the equation used to calculate energy change (Q) Calculate the energy change based on given results Evaluate the best fuel by calculating the mass of fuel needed ($n=m/M_r$) to release a specific amount of energy	
	13/02/23	School Break Half Term February			
	20/02/23	Chemistry- Chemical Reactions	Reporting an Energy Investigation Neutralisation	Apply your knowledge to determine the variables for an investigation Construct a table and/or graph to present your results Evaluate your results to write a valid conclusion supported by evidence Use your knowledge to define neutralisation Analyse the reactants to name the salt formed as a result of a neutralisation Construct chemical equations for different neutralisation reactions	
	27/02/23	Chemistry- Chemical Reactions Chemistry: Rate of Reactions	Chemical Reactions Retrieval Collision Theory Effect of Temperature and Surface Area	Use your knowledge to list signs of a chemical reaction Justify why some reactions may be unsuccessful Create a diagram which demonstrates the principles of collision theory Apply your knowledge to describe the relationship between surface area and rate of a reaction Interpret the results of an investigation to conclude the relationship between temperature and rate Justify your conclusions using collision theory to explain your observations	
	06/03/23	Chemistry: Rate of Reaction	Effect of Concentration Reporting a Rate Investigation	Use your knowledge to compare the particles in a solution of high and low concentration Calculate the concentration of a given solution ($n = cv$) Predict the relationship between concentration and rate of reaction using collision theory Apply your knowledge to determine the variables for an investigation Construct a table and/or graph to present your results Evaluate your results to write a valid conclusion supported by evidence	
	13/03/23	Chemistry: Rate of Reaction	Rates of Reaction and Industry Rate of Reaction Retrieval	Use your knowledge to explain why catalysts are commonly used in industry Analyse the use of high temperatures and determine any disadvantages when this method is used to increase yield Interpret data to calculate the percentage increase in profit for a given reaction under different conditions Evaluate your knowledge of the Rate of Reaction topic	
	20/03/23	Chemistry Synoptic and Feedback Week	Chemistry Synoptic Feedback and Actions	The success criteria explored for the Chemistry term will be assessed Evaluate your knowledge of the Chemistry content explored Determine the skill (Recall, Application, HSW, Maths) that is your area of strength and area of development to inform focus for next term Analyse your performance for each of the HPL Skills to determine your area of strength and area of development to inform focus for next term.	