

Term	Week	Focus	Summary	Learning Outcomes
Term 1	1	Induction and Investigation Skills	Expectations HPL in Science Lab Safety	Summarise the key expectations in Science Apply your knowledge to identify dangers in the lab Construct a set of lab safety rules
	2	Induction and Investigation Skills	Detergent Investigation Detergent Analysis and Report Self Assessment of Report and Feedback	Use your knowledge to identify variables Choose the correct titles for a scientific table Collect results from a scientific investigation
	3	Explore the structure and bonding	Covalent Bonding Giant Covalent Structures Atoms into Ions	Use your knowledge to explain why atoms bond Outline the formation of a covalent bond Create bonding diagrams to show covalent bonds Use your knowledge to list examples of giant covalent structures Outline the formation of a giant covalent structure Summarise the properties of giant covalent structures Use your knowledge to describe how ions are formed Create diagrams showing the electron arrangement of ions Predict the ion formed by different atoms
	4	Explore the structure and bonding	Ionic Bonding Metallic Bonding Applications of Bonding	Use your knowledge to describe the type of elements that form an ionic bond Outline the formation of an ionic bond Construct dot and cross diagrams to show ionic bonds Apply your knowledge to describe the arrangement of atoms in a metal Create a diagram to describe the formation of metallic bonds Predict the properties of metallic structures Use your knowledge to describe the structure and bonding carbon nanotubes Summarise the important uses of carbon nanotubes in medicine Analyse the properties of a metal to determine a suitable use
	5	Explore the structure and bonding Investigation different chemical reactions	Structure and Bonding Retrieval Practise and Feedback Signs of a Chemical Reaction	Evaluate your knowledge of the structure and bonding topic Apply your knowledge to determine if a scenario is a chemical reaction or a physical change Summarise the different signs of a chemical reaction Conduct an experiment to demonstrate signs of a chemical reaction
	6	Investigation different chemical reactions	Representing a Chemical Reaction Effect of Surface Area Effect of Temperature	Write the molecular formula for simple substances Construct simple word equations that represent a chemical reaction Construct simple chemical equations that represent a chemical reaction Use your knowledge to describe the conditions required for a reaction to take place Summarise how changing surface area effects the rate of a chemical reaction Conduct an experiment to demonstrate the effect of surface area on reaction rate Apply your knowledge to describe the relationship between temperature and energy Summarise how changing temperature effects the rate of a chemical reaction Conduct an experiment to demonstrate the effect of temperature on reaction rate
	7	Investigation different chemical reactions	Reporting a Rate Investigation Effect of a Catalyst	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 the term catalyst Summarise how adding a catalyst effects the rate of a chemical reaction Compare the advantages of using a catalyst to changing other factors to increase the rate of a reaction
	8	Investigation different chemical reactions Explore and compare acids and alkalis	Chemical Reactions Retrieval Practise and Feedback The pH scale	Evaluate your knowledge of the chemical reactions topic Use your knowledge to describe what is shown on the pH Scale Summarise the different methods used for testing pH Interpret results to predict the pH of a solution
	9	Explore and compare acids and alkalis	Identifying Acids and Alkalies Concentration Neutralisation	Use your knowledge to describe the ions responsible for making a solution acid, alkali or neutral Write the molecular formula for simple acids and alkalis Calculate the RFM of simple acids and alkalis Use your knowledge to define the term concentration Connect the concentration of an acid to its pH Calculate the concentration of a solution using $n = c \times v$ Use your knowledge to state what is meant by neutralisation Conduct an experiment which would demonstrate a neutralisation reaction Predict if everyday substances are acid or alkali and give examples of real life neutralisation reactions
	10	Explore and compare acids and alkalis	Products of Neutralisation Acids and Alkalise Retrieval Practise and Feedback	Use your knowledge to name the salt produced in different neutralisation reactions Write simple chemical equations for neutralisation reactions Evaluate separation techniques to determine the best method for collect salts from water
	11	Investigate how Chemistry is used in the real world	Chemistry for Fuels Renewable Energy Chemistry and Farming	Evaluate your knowledge of the acids and alkalis topic Apply your knowledge to discuss the process of oil forming Summarise the process of combustion Evaluate the use of oil as a fuel Use your knowledge to describe the formation of bioethanol Construct the chemical equation for the formation of biofuel Evaluate the use of bioethanol and its impact on the environment and society Use your knowledge to discuss the structure and bonding of ammonia Summarise the process of making ammonia for use in fertilisers Justify why fertilisers are an important in the UAE and evaluate their use
	12	Investigate how Chemistry is used in the real world	Chemistry and Plastics Analytical Chemistry Real World Chemistry Retrieval and Feedback	Use your knowledge to define the term monomer and polymer Summarise the process of polymerisation and represent using an equation Debate the use of biodegradable and non-biodegradable plastics Use your knowledge to explain how paper chromatography works Conduct paper chromatography to separate coloured substances Interpret results of paper chromatography to compare and contrast different inks Evaluate your knowledge of the Real World Chemistry topic
	13	Revise key aspects of the Chemistry Unit	Revision will be created to cover different aspects of the Chemistry content to ensure learners have had the opportunity for retrieval practice. Teachers will create revision for their class based on their areas of development identified from the end of topic retrieval questions.	The success criteria explored for the Chemistry term will be reviewed
	14	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