YEAR 9 (A- F) – CHEMISTRY

WEEK 29 (14th March to 18th March)

Work Sent to the students through Group email/ Google classroom
Topic:– SC7b – Allotropes of Carbon

Resources: Text book, Worksheet, Boardworks, GCSE science free lesson video, powerpoint.

Date	Lesson	Topic	Mode of Teaching	
14th March Sunday **(girls)**	6	**Learning Objective :** • Recall that graphite and diamond are different forms of carbon and that they are examples of covalent, giant molecular substances. • Describe the structures of graphite and diamond **Success Criteria:** • Define the term allotropy • Understand that graphite and diamond are allotropes and made from the element carbon • Describe the basic differences between covalent, simple molecules and giant covalent structures. • Compare the similarities and differences between the structures of diamond and graphite. • Explain the structure and bonding in diamond and graphite.	**Zoom**	PPT / Video on Allotropes of Carbon
15th March Monday **(boys)**	7			
15th March Monday **(girls)**	5	**Learning Objective :** **ASSESSMENT ON COVALENT BONDS and MOLECULAR COMPOUNDS** **Success Criteria:** • Do the assessment	**GC**	
15th March Monday **(boys)**	8			
15th March Monday **(girls)**	6	**Learning Objective :** • Explain, in terms of structure and bonding, why graphite is used to make electrodes and as a lubricant, whereas diamond is used in cutting tools • Explain the properties of fullerenes including C60 and graphene in terms of their structures and bonding **Success Criteria:** • Suggest some uses of diamond and graphite. • Predict the properties of diamond and graphite behind the uses. • Compare the similarities and differences between the structures of C60 and graphene. • Explain the structure and bonding in C60 and graphene. • Explain the properties of fullerenes and graphene in terms of their structure and bonding.	**Zoom**	Worksheet SC7b
17th March Wednesday – **(boys)**	1			

YEAR 10 A/D/E–CHEMISTRY (girls)

WEEK 29 (14th March to 18th March)

Work Sent to the students through Google classroom

Topic: Oxidation and reduction, Life cycle assessment and recycling
Resources: Text book, Worksheet, power point.

Date	Lesson	Topic	Mode of Teaching	
14/3/2021 Sunday	3	**Learning Objective:** 1.Explain oxidation as the gain of oxygen and reduction as the loss of oxygen. 2.Recall that the extraction of metals involves reduction of ores. 3.Explain how a metal's relative resistance to oxidation is related to its position in the reactivity series. **Learning Outcome:** •Explain which substance has been oxidised and which substance has been reduced in a reaction. •Explain why reactions occurring at the electrodes during electrolysis are redox reactions. •Explain how the position of a metal in the reactivity series is related to its resistance to oxidation.	**Zoom**	Teacher uses powerpoint presentatio n to explain the extraction of metals.
17/3/2021 Wednesday	3	**Learning Objective:** Assessment **Learning Outcome:** • State the advantages and disadvantages of recycling a metal. • Describe a process where a material or product is recycled for a different use. • Evaluate data from a life cycle assessment of a material or product.	**Zoom**	Teacher uses powerpoint presentation t explain Life cycle assessment a recycling
18/3/2021 Thursday	2 3	**Learning Objective: ASSESSMENT** Apply the knowledge and understanding of the concepts of reactivity, ores and electroplating to answer the questions in the assessment. **Learning Outcome:** Students will be able to recall the concepts learned and apply their knowledge and understanding to answer the questions, in the assessment. **Learning Objective:** To answer the questions, on oxidation and reduction in the worksheet. **Learning outcome:** Students will be able to reinforce the concepts learned in the previous lesson by answering the questions in the worksheet.	**Zoom** **GC**	Teacher will conduct the assessment through Google classroom an monitor the students on Zoom. Instruction will be given in the Google classroom to complete the Worksheet.

Home work:Solve S1,S2 and E1 question :SC11c(Pg91)

YEAR 10 B/C/F–CHEMISTRY (Boys)

WEEK 29 (14th March to 18th March)

Work Sent to the students through Google classroom

Topic: Oxidation and reduction, Life cycle assessment and recycling
Resources: Text book, Worksheet, power point.

Date	Lesson	Topic	Mode of Teaching	
14/3/2021 Sunday	0	**Learning Objective:** 1.Explain oxidation as the gain of oxygen and reduction as the loss of oxygen. 2.Recall that the extraction of metals involves reduction of ores. 3.Explain how a metal's relative resistance to oxidation is related to its position in the reactivity series. **Learning Outcome:** •Explain which substance has been oxidised and which substance has been reduced in a reaction. •Explain why reactions occurring at the electrodes during electrolysis are redox reactions. •Explain how the position of a metal in the reactivity series is related to its resistance to oxidation.	**Google Meet**	Teacher uses powerpoint presentation to explain the extraction of metals.
15/3/2021 Monday	1&2	**Learning Objective:** 1.Evaluate the advantages of recycling metals, including economic implications and how recycling can preserve both the environment and the supply of valuable raw materials. 2. Describe the four stages in carrying out a life cycle assessment (LCA) of a material or product. **Learning Outcome:** • State the advantages and disadvantages of recycling a metal. • Describe a process where a material or product is recycled for a different use. • Evaluate data from a life cycle assessment of a material or product.	**Google Meet**	Teacher uses powerpoint presentation to explain Life cycle assessment and recycling
17/3/2021 Wednesday	4	**Learning Objective:** Apply the knowledge and understanding of the concepts of reactivity, ores and electroplating to answer the questions in the assessment. **Learning outcome:** Students will be able to recall the concepts learned and apply their knowledge and understanding to answer the questions, in the assessment. .	**Google Meet**	Teacher will conduct the assessment through Google classroom and monitor the students on GM

Home work:Solve S1,S2 and E1 question :SC11c(Pg91)

YEAR 11 A/D/E – CHEMISTRY (Girls)

WEEK 29 (14th March to 18th March)

Work Sent to the students through Zoom Learning Platform / Google classroom

Topic:– Revision of calculations

Resources: Text book,Worksheet, Boardworks powerpoint

Date	Topic	
14.03.21 Sunday 8th period **Mode of Teaching**: Zoom	**Learning Objective:** Use Avogadro's law to calculate volumes of gases involved in a gaseous reaction, given the relevant equation **Learning outcome:** Calculate relevant gas volumes for **some** gases from balanced chemical equations.	Teacher uses past paper questions.
15.03.21 Monday 4th period **Mode of Teaching:** Zoom	**Learning Objective:** Carry out simple calculations using the results of titrations to calculate an unknown concentration of a solution or an unknown volume of solution required **Learning outcome:** Understand the use of titration method to find the concentration of a solution.	Teacher uses past paper questions.

YEAR 11 B/C/F – CHEMISTRY (Boys)

WEEK 29 (14th March to 18th March)

Work Sent to the students through Zoom Learning Platform / Google classroom

Topic:– Revision of calculations

Resources: Text book,Worksheet, Boardworks powerpoint

Date	Topic	
14.03.21 Sunday 1st Period **Mode of Teaching:** Zoom	**Learning Objective:** Carry out simple calculations using the results of titrations to calculate an unknown concentration of a solution or an unknown volume of solution required **Learning outcome:** Understand the use of titration method to find the concentration of a solution.	Teacher uses past paper questions.
14.03.21 Sunday 2nd Period **Mode of Teaching:** Zoom	**Learning Objective:** Use Avogadro's law to calculate volumes of gases involved in a gaseous reaction, given the relevant equation **Learning outcome:** Calculate relevant gas volumes for **some** gases from balanced chemical equations.	Teacher uses past paper questions.
15.03.21 Monday 3rd Period **Mode of Teaching:** Zoom	**Learning Objective:** Calculate masses of reactants and products from balanced equations, given the mass of one substance **Learning outcome:** Calculate the masses of individual products from a given mass of a reactant and the balanced symbol equation.	Teacher uses past paper questions.

16.03.21 Tuesday 7th Period **Mode of Teaching:** Zoom	**Learning Objective:** Deduce a the empirical formula of a compound from the formula of its molecule b the molecular formula of a compound from its empirical formula and its relative molecular mass **Learning outcome:** Find molecular formula from a empirical formula.	Teacher uses past paper questions.

YEAR 11 G/H–CHEMISTRY (IGCSE)

WEEK 29 (14th March to 18th March)

Work Sent to the students through Zoom Learning Platform / Google classroom

Topic:– Revision of Calculations
Resources: Text book, Worksheet, IGCSE science free lesson video, power point.

Date	Topic	
14.03.2021 Sunday 6th period **Mode of Teaching**: GC	**Learning Objective:** Carry out simple calculations using the results of titrations to calculate an unknown concentration of a solution or an unknown volume of solution required **Learning outcome:** Understand the use of titration method to find the concentration of a solution.	Teacher uses past paper questions.
15.03.2021 Monday 5th period **Mode of Teaching**: Zoom/ Google Meet	**Learning Objective:** Use Avogadro's law to calculate volumes of gases involved in a gaseous reaction, given the relevant equation **Learning outcome:** Calculate relevant gas volumes for **some** gases from balanced chemical equations.	Teacher uses past paper questions.
16.03.2021 Tuesday 1st period & 2nd period **Mode of Teaching**: Zoom/ Google Meet	**Learning Objective:** Calculate masses of reactants and products from balanced equations, given the mass of one substance **Learning outcome:** Calculate the masses of individual products from a given mass of a reactant and the balanced symbol equation.	Teacher uses past paper questions.
	Learning Objective: Deduce a the empirical formula of a compound from the formula of its molecule b the molecular formula of a compound from its empirical formula and its relative molecular mass **Learning outcome:** Find molecular formula from a empirical formula.	Teacher uses past paper questions.

YEAR 12 D/G– CHEMISTRY

WEEK 29 (14th March to 18th March)

Work Sent to the students through Zoom Learning Platform / Google classroom

Topic 5 – CALCULATIONS

Resources: Text book, Worksheet, Video, Board works, power point

Date	Topic	
16.03,21 Tuesday 8 **12D** 15.03.21 Monday 6 **12G** **Mode of Teaching –** Zoom	**Learning Objective:** Overall calculations using past paper questions. **Learning Outcome: students will be able to:** **Solve questions based on titration and back titration** Calculate the measurement uncertainties and errors in burette, pipette and weighing balance. Identify the sources of errors in titration procedures and calculating energy changes of a reaction.	Teacher uses power point to show various steps of calculations. Lesson will be developed with many examples.
15.03.21 Monday 7- **12G** 17.03.21 Wednesday 7- **12D** **Mode of Teaching –** ZOOM	**Learning Objective:** Overall calculations using past paper questions. Apply to large-scale industrial production – economic viability of process depends on cost and percentage yield of product. **Learning Outcome: students will be able to:** Be able to calculate percentage yields and percentage atom economies using chemical equations and experimental results molar mass of the desired product Atom economy of a reaction = × 100% sum of the molar masses of all products	Teacher uses power point presentation and videos to explain the concept of information analysis analysis. Teacher uses worksheet that based on various types of calculations.
17.03.21 Wednesday **8- 12D** **1-12G** **Mode of Teaching –** zoom	**Learning Objective** Overall calculations using past paper questions. **Learning Outcome: students will be able to:** Apply the cumulative concept of calculations , Select the correct steps to solve the given problems and suggest improvents in the lab procedure for various types of calculations. Identify problems and suggest the improvements.	Teacher uses questions from various past papers. Teacher uses worksheet that exam style questions from text book.

HOMEWORK: Solve exam style questions from given work sheet.

YEAR 12 G /D – CHEMISTRY

WEEK 29 (14th March to 18th March)

Work Sent to the students through Zoom Learning Platform / Google classroom
Topic:– Organic chemistry
Resources: Text book, Worksheet file, video, power point presentations.

Date	**Topic**	**Mode of Teaching**	
15.3.2021 Monday 3 **12D** 16.3.2021 Tuesday 1 **12G**	**Learning Objective:** To reinforce nomenclature of organic compounds like alkanes, alkenes, halogenoalkanes, alcohols, aldehydes, ketones and carboxylic acids using IUPAC nomenclature. **Learning outcome:** • Write the names of organic compounds with different functional groups based on the general rules. • Represent molecules like alkanes ,alkenes, alcohols, halogenoalkanes using the different formulae.	Zoom	Teacher uses powerpoint presentation that contains the rules for naming organic compounds.
16.3.2021 Tuesday 2 **12G** 7 **12D**	**Learning Objective:** 1.Explain what isomerism is and how it arises 2. Explain the difference between structural isomerism and stereoisomerism. 3.Explain E-Z isomerism (geometric/cis-trans isomerism) in terms of restricted rotation around a C=C double bond and the nature of the substituents on the carbon atoms **Learning outcome:** •Explain the existence of structural isomers using alkanes (up to C_5) as examples. •Draw the structural formula for the cis, trans isomers of butene, pentene. •Predict the properties of cis, trans isomers.	Zoom	Teacher uses powerpoint presentation to explain structural and stereo isomerism. .
17.3.2021 Wednesday 2 **12G** 18.3.2021 Thursday **7 12D**	**Learning Objective:** To answer the questions, on nomenclature of organic compounds ,in the worksheet. **Learning outcome:** Students will be able to reinforce the concepts learned in the previous lesson by answering the questions in the worksheet.	GC	Instruction will be given in the Google classroom to complete the Worksheet.

HOMEWORK: Solve textbook questions (pg174)

YEAR 13 A /B –CHEMISTRY

WEEK 29 (14th March to 18th March)

Topic: further organic chemistry.

Topic 19B: Nuclear magnetic resonance (NMR) IR, MS and CHROMATOGRAPHY.

Work sent to the students through Google classroom / Zoom Learning Platform

Resources: Text book, Worksheets, video, power point presentations.

Date	Topic	
17.03.2021 Sunday **1-13A** **4-13B** **Mode of Teaching –** Zoom	**Lesson Objective:** Revise the methods of separation - Crystallization , recrystallisation, distillation and fractional distillation: Presentation by students based on the research work done by the students. **Success Criteria: students will be able to:** Presentation will be followed by question/answers session, and applications of these techniques to improve the practical work. Teacher will discuss about the implementation of knowledge based on exam technique to solve past paper questions. **Lesson Objective:** **Chromatograghy, TLC,GLC,HPLC.**	Student's uses power point presentation that contains interactive questions.
Sunday 14.03.2021 **2-13 A** 16.03.2021 Tuesday **2-13B** **Mode of Teaching –** Zoom	Presentation by students based on the research work done by the students. **Success Criteria: students will be able to:** Presentation will be followed by question/answers session, and applications of these techniques to improve the practical work. Teacher will discuss about the implementation of knowledge based on exam technique to solve past paper questions.	Students uses power point presentation that contains interactive questions. Students solve the past paper file questions.
Wednesday 17.03.21 **4- 13A** **2-13B** **Mode of Teaching –** Zoom	**Lesson Objective:** **Solvent extraction ,dehydrating and drying** Presentation by students based on the research work done by the students. **Success Criteria: students will be able to:** Presentation will be followed by question/answers session, and applications of these techniques to improve the practical work. Teacher will discuss about the implementation of knowledge based on exam technique to solve past paper questions.	students uses power point presentation that contains interactive questions.

Homework : Solve worksheet file questions and text book.

YEAR 13 A/B – CHEMISTRY

WEEK 29 (14th March to 18th March)

Work Sent to the students through Zoom Learning Platform / Google classroom
Topic:– Revision of transition metal compounds & Further kinetics
Resources: Text book, Worksheet, Video , Board works , power point

Date	**Topic**	
14.03.21 Sunday 5 ,8 **13B** 17.03.21 Wednesday 5 , 6 **13A** **Mode of Teaching –** Zoom	**Learning Objective:** Revise the topic further energetics **Learning Outcome:** • Can solve problems related to enthalpy , entropy and free energy. • Predict whether a reaction is feasible or not at a given temperature.	Teacher and student uses past papers to reinforce the concept of further energetic.
14.03.21 Sunday 3 1**3A** 9.03.21 Tuesday 1 **13B** **Mode of Teaching –** Zoom	**Learning Objective:** Revise the topic further kinetics. **Learning Outcome:** Determine rate equation. Finding order with respect to reactants involved in a reaction. Draw graph for rate and concentration.	Teacher and student uses past papers to reinforce the concept of further kinetics.

HOMEWORK: Worksheet in GC