YEAR 11 G/H–CHEMISTRY (IGCSE)

WEEK 8 (18th Oct to 22nd Oct)

Work Sent to the students through Google classroom/Zoom Learning Platform
Unit 3 – Topic: Reactivity Series
Resources: Text book, Worksheet, IGCSE science free lesson video, power point.

Date	**Lesson**	**Topic**	**Mode of Teaching**	
18.10.2020 Sunday	1 11**H** 6 **11G**	**Lesson Objective:** Understand how metals can be arranged in a reactivity series based on their reactions with: water, dilute hydrochloric or sulfuric acid **Learning Outcome**: Arrange the metals in the order of reactivity. Write word equations for the reaction. Write balanced symbol equation for the reaction.	**Google Meet /** **zoom**	Teacher uses power point presentation to explain the reactivity series.
19.10.2020 Monday	2 **11H** 5 **11G**	**Lesson Objective**: Understand how metals can be arranged in a reactivity series based on their displacement reactions between: • metals and metal oxides • metals and aqueous solutions of metal salts **Learning Outcome**: Arrange the metals in the order of reactivity. Deduce the relative reactivity of some metals, by their reactions with water, acids and salt solutions.	**Google Meet/** **zoom**	Teacher uses a PowerPoint presentation/video that contains interactive questions to find the order of reactivity of metals.

20.10.2020 Tuesday	3 **11H** 1 **11G**	**Lesson Objective:** Know the order of reactivity of these metals: potassium, sodium, lithium, calcium, magnesium, aluminum, zinc, iron, and copper, silver, gold. **Learning Outcome:** Deduce the relative reactivity of some metals, by their reactions with water, acids and salt solutions**.**	**Google Meet/** **zoom**	Teacher uses a PowerPoint presentation/ video to explain the effect of change in concentrations on the rate of reaction.
	4**11H** 2 **11G**	**Lesson Objective:** Know the conditions under which iron rusts **Learning Outcome**: Understand air/ oxygen and water as a condition for rusting.	**Google Meet/** **zoom**	Instruction will be given in the GC room to complete the textbook and worksheet questions.
22.10. 2020 Thursday	5 **11H** 4 **11G**	**ASSESSMENT 2** **Portion -** Ch. 20 Rates of Reaction **Learning Objective: (Assessment)** To be able to apply the knowledge and understanding of the concepts of rate of reactions and factors affecting equilibrium, to answer the questions in the assessment. **Learning Outcome:** Students will be able to recall the concepts learned in the previous lessons and apply their knowledge and understanding to answer the questions, in the assessment.	**Google Meet** **zoom**	Teacher will conduct the **assessment** through Google forms and monitor the students on Zoom.

YEAR 11 A/D/E – CHEMISTRY (GCSE)

WEEK 8 (18th October to 22nd October)

Work Sent to the students through Zoom Learning Platform / Google classroom
Topic:– SC16a: Chemical and fuel cells

Resources: Text book, Worksheet, Board works power point

Date	Topic	
18.10.20 Sunday 8th period **Mode of Teaching:** Zoom	**Learning Objective:** Recall that a chemical cell produces a voltage until one of the reactants is used up. **Learning Outcome:** Define cell as device that converts chemical energy to electrical energy. Explain that cell keeps on producing energy till reactants are present.	Teacher uses power point presentation with interactive questions on chemical cells.
19.10.20 Monday 4th period **Mode of Teaching:** Zoom	**Learning Objective:** Recall that in a hydrogen–oxygen fuel cell hydrogen and oxygen are used to produce a voltage and water is the only product **Learning Outcome:** Describe the use of hydrogen – oxygen fuel cell as alternative fuels. Describe **some** advantages and disadvantages of hydrogen – oxygen fuel.	Teacher uses power point presentation with interactive questions
21.10.20 Wednesday 8th period **Mode of Teaching:** Zoom	**Learning Objective: (Assessment)** To be able to apply the knowledge and understanding of the concepts of fertilisers, Haber Process, Dynamic Equilibrium and Factors affecting equilibrium, to answer the questions in the assessment. **Learning Outcome:** Students will be able to recall the concepts learned in the previous lessons and apply their knowledge and understanding to answer the questions, in the assessment.	Teacher will conduct the **assessment** through Google forms and monitor the students on Zoom.
22.10.20 Thursday 5th Period **Mode of Teaching:** Zoom	**Learning Objective:** Evaluate the strengths and weaknesses of fuel cells for given uses **Learning Outcome:** Analyses the use of fuel cell by giving its advantages and disadvantages.	Teacher uses power point presentation with interactive questions
22.10.20 Thursday 6th Period **Mode of Teaching:** GC	**Learning Objective:** To answer the questions, on Chemical and Fuel Cells, 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.	Worksheet assigned through GC. Instruction will be given in the GC to complete the worksheet.

HOMEWORK: Complete the textbook questions SC16a:Chemical and fuel cells - page 124 - 125

YEAR 11 B/C/F – CHEMISTRY (GCSE)

WEEK 8 (18th October to 22nd October)
Work Sent to the students through Zoom Learning Platform / Google classroom
Topic:– SC16a: Chemical and fuel cells

Resources: Text book, Worksheet, Board works power point

Date	Topic	
18.10.20 Sunday 1st Period **Mode of Teaching:** Zoom	**Learning Objective: (Assessment)** To be able to apply the knowledge and understanding of the concepts of fertilisers, Haber Process, Dynamic Equilibrium and Factors affecting equilibrium, to answer the questions in the assessment. **Learning Outcome:** Students will be able to recall the concepts learned in the previous lessons and apply their knowledge and understanding to answer the questions, in the assessment.	Teacher will conduct the **assessment** through Google forms and monitor the students on Zoom.
18.10.20 Sunday 2nd Period **Mode of Teaching:** Zoom	**Learning Objective:** Recall that a chemical cell produces a voltage until one of the reactants is used up. **Learning Outcome:** Define cell as device that converts chemical energy to electrical energy. Explain that cell keeps on producing energy till reactants are present.	Teacher uses power point presentation with interactive questions to understand the concept of chemical cell.
19.10.20 Monday 3rd Period **Mode of Teaching:** Zoom	**Learning Objective:** Recall that in a hydrogen–oxygen fuel cell hydrogen and oxygen are used to produce a voltage and water is the only product **Learning Outcome:** Describe the use of hydrogen – oxygen fuel cell as alternative fuels. Describe **some** advantages and disadvantages of hydrogen – oxygen fuel.	Teacher uses power point presentation with interactive questions
20.10.20 Tuesday 7th Period **Mode of Teaching:** Zoom	**Learning Objective:** Evaluate the strengths and weaknesses of fuel cells for given uses **Learning Outcome:** Analyses the use of fuel cell by giving its advantages and disadvantages.	Teacher uses power point presentation and uses textbook questions.
22.10.20 Thursday 4th Period **Mode of Teaching:** GC	**Learning Objective:** To answer the questions, on Chemical and Fuel Cells, 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.	Worksheet assigned through GC. Instruction will be given in the GC to complete the worksheet.

HOMEWORK: Complete the textb

YEAR 12 D/G– CHEMISTRY

WEEK 8 (18th Oct to 22nd October)

Work Sent to the students through Zoom Learning Platform / Google classroom
Topic 2 – Redox reactions : oxidation and reduction in terms of loss /gain of electrons .
Resources: Text book, Worksheet, Video , Board works , power point

Date	**Topic**	
20.10.20 Tuesday 8 **12D** 19.10.20 Monday 6 **12G** **Mode of Teaching –** Zoom	**Learning Objective:** .Know what is meant by the term 'oxidation number' 1.Rules for working out oxidation number 2. Determining oxidation number in compounds 3. Determining oxidation number in ions 4. Naming compounds and ions **Learning Outcome: students will be able to:** - calculate the oxidation number of elements in compounds and ions *-The use of oxidation numbers in peroxides and metal hydrides is expected.* -Understand oxidation and reduction in terms of -Explain oxidation and reduction in terms of electron transfer and changes in oxidation state. -apply Oxidation and reduction – idea of electron loss and gain – OILRIG	Teacher uses power point to show rules to calculate oxidation number. Instructions will be given to complete chapter questions.
19.10.20 Monday 7- **12G** 21.10.20 Wednesday 7- **12D** **Mode of Teaching –** ZOOM	**Learning Objective:** - oxidizing agents gain electrons - reducing agents lose electrons - indicate the oxidation number of an element in a compound or ion, using a Roman numeral -Write the formulae of the compound by writing the oxidation number. **Learning Outcome: students will be able to:** -recall that oxidizing agents gain electrons -Site some examples of oxidizing agents - explain how reduction occurs using the changes in the oxidation number. -recall reducing agents lose electrons -Site examples of reducing agents - explain how oxidation occurs using the changes in the oxidation number. - indicate the oxidation number of an element in a compound or ion, using a Roman numeral Use the idea of oxidation numbers for Eg– iron (III) chloride etc. -**Predict** the oxidation number of an element in a	Teacher uses power point presentation and videos to explain the concept of oxidation and reduction. Teacher uses worksheet that contains interactive questions, to explain redox concept based on OIL RIG

	compound. -Write the formulae of the compound by writing the oxidation number as and when required. -Understand that metals, in general, form positive ions by loss of electrons with an increase in oxidation number -Understand that non-metals, in general, form negative ions by gain of electrons with a decrease in oxidation number	
21.10.20 Wednesday **8- 12D** **1-12G** **Mode of Teaching –** GC	**Learning Objective:** Identification of oxidation/reduction Identification of oxidant /reductant in the given reactions. **Learning Outcome:** Solve the given work.	Worksheet assigned through GC. Instruction will be given in the GC to complete the worksheet.

HOMEWORK: Solve question number 1,2 and 3 page 77 of text book.

YEAR 12 D/G – CHEMISTRY

WEEK 8 (18th October to 22nd October)
Work Sent to the students through Zoom Learning Platform / Google classroom
Topic:– Energetics
Resources: Text book, Worksheet file, video, power point presentations.

Date	**Topic**	**Mode of Teaching**	
19.10.2020 Monday 3 **12D** 20.10.2020 Tuesday 1 **12G**	**Lesson Objective:** To reinforce the concepts such as structure of the atom, isotopes, mass spectrometry, atomic orbitals, electronic configuration, ionization energy, periodic table and periodicity. **Learning Outcome:** Students will be able to recall and apply the concepts learned by solving exam style questions.	Zoom	Teacher uses PowerPoint presentation to reinforce the concepts.
20.10.2020 Tuesday 2 **12G** 7 **12D**	**Learning Objective:** 1.Know that standard conditions are 100 kPa and a specified temperature, usually 298 K 2.Know that the enthalpy change is the heat energy change measured at constant pressure 3. Be able to define standard enthalpy change of a reaction.	Zoom	Teacher uses PowerPoint presentation that contains interactive questions to introduce

	Learning Outcome: • Define enthalpy change of reaction with balanced chemical equation • Compare and predict the need for enthalpy • change to be measured under standard conditions .		enthalpy change and standard enthalpy change of a reaction
21.10.2020 Wednesday 2 **12G** 22.10.2020 Thursday **7 12D**	**Learning Objective:** 1. Be able to construct and interpret enthalpy level diagrams showing an enthalpy change, including appropriate signs for exothermic and endothermic reactions. 2. Understand experiment to measure standard enthalpy change of combustion **Learning outcome:** • Predict the enthalpy level diagram for exothermic and endothermic reactions. • Predict the nature of reaction as exothermic and endothermic . • Predict the reaction profile from the given data. • Define enthalpy of combustion.	Zoom	Teacher uses PowerPoint presentation to explain the experimental determination of standard enthalpy change of combustion.

HOMEWORK: Complete the textbook questions on page 233 and 234

ook questions SC16a: Chemical and fuel cells - page 124 - 125