Name of teacher: Teacher.ac Name of School**: Teacher.ac Website**

Year:  TERM: **1st & 2nd**

Class/Stream: **FORM FOUR** Subject: **CHEMISTRY**

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| **COMPETENCE** | **GENERAL OBJECTIVES** | **MONTH** | **WEEK** | **MAIN TOPIC** | **SUB-TOPIC** | **PERIODS** | **TEACHING ACTIVITIES** | **LEARNING ACTIVITIES** | **T/L MATERIAS** | **REFERENCES** | **ASSESSMENT** | **REMARKS** |
| Students should develop competences on |  | JANUARY | 3 | NON METALS AND THEIR COMPOUNDS | General properties of non metal | 2 | -To guide students to discuss strong and weak oxidants as electron acceptor.-To guide the students to use gaseous Cl2 to demonstrate displacement reaction and discussing the oxidizing properties of chlorine. | To write equation shoeing how non metals gain electrons. | Periodic table |  | Ability to explain oxidizing property of non metal.-Ability to understand displacement reaction of non metal. |  |
|  | Chlorine | 4 | To demonstrate -The use of Cl2-Oxidizing property of Cl2-To write equations for the reactions above. | To write equation showing oxiding properties of Cl2 and state its uses. | Cl2 gas, dyes, SO2 H2S and FeCl2 |  | Ability to explain properties of Cl2. |
| 4 | HCL(Hydrogen chloride) | 6 | To guide the students to prepare HClg lab and to show how Heling reacts with metals, oxides, hydroxides and carbonates. | -To prepare HClg-To test solubility of HClg in water-To test the Ph of HCl and-Show how HClg reacts with NH3g | H2O, HClg pitscale lithrows paper NH3g, Ca, Mg, CaCO3 oxide and hydrogen. |  | Ability to prepare HClg and to explain its properties. |
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|  |  | **FEBRUARY** |  |  |  |  | Guiding the students to discuss the uses of HClg in qualitative and quantitative analysis. | To discuss the uses of HClg |  |  | Ability to explain uses of HClg. |  |
| 1&2 | SULPHUR | 10 | To guide the students to discuss the extoction to sulphur by the frasch process.* Oxidang and reducing properties of sulphur
* Uses of sulphur
 | To discuss the extraction of sulphur.-To discuss the properties of sulphur and to collect some common materials made from sulphur. | Wall chart showing extraction sulphur and uses of sulphur. |  | -Ability to explain the extraction of sulphur.-Ability to explain the properties of sulphur. |
| 2&3 |  | SO2 | 4 | Guiding the students to discuss the properties of SO2 ie acidic, reducing bleaching and oxidiang.To discuss with students the use and hazards of SO2 | To discuss the properties of SO2 and its uses of together with hazards of SO2 | SO2, NaOH, KMNO4 |  | Ability to state the properties and uses of SO2. |
| 3&4 |  | H2SO4 | 8 | To give student to use le charterlier’s principle to discuss the contact process of manufactures of H2SO4 | To use the principle to discuss the manufacturing of H2SO4 by contact process. | -Wall chart and picture showing the industrial manufacturing of H2SO4 |  | Ability to describe the contact process for the manufacture of H2SO4 |
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|  |  | MARCH | 1 |  | NITROGEN |  | * Guiding the students to prepare nitrogen gas in the lab.
* Assisting the student to explain the uses of nitrogen.
 | * To prepare Nitrogen gas and test it under the teacher guidance.
* To discuss in group the uses of nitrogen.
 | * Wall chart showing
* Uses of Nitrogen
 |  | * Ability of the student to prepare and tests nitrogen.
* To state uses of nitrogen.
 |  |
|  |  | AMONIA |  | * Guiding the students to prepare dry sample of Ammonia in the laboratory.
* Leading the students to discuss the properties of Ammonia.
* Guiding them to discuss the uses of Ammonia
 | * To prepare dry Ammonia under the teacher guidance.
* To state properties of Ammonia. Eg. Solubility.
* To discuss uses of Ammonia.
 | * Ca(OH)2
* NH4Cl
* Cao
* Litmus paper
* Conc HCl
* Wall chart and pictures showing preparation of ammonium fertilizers.
 |  | Ability to:-* Prepare
* State properties and
* Uses of Ammonia in daily life.
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| 2 | MID TERM EXAMINATIONS |
| 3 | MID TERM BREAK |
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|  |  | **MARCH** | 4 |  |  |  | To guide the students to discuss how ammonia is converted to fertilizer and nitric acid. | In groups to discuss the use of NH3 | Pictures and charts showing industrial preparation of NH3 fertilizer. |  | To be able to explain the uses of NH3 |  |
|  | Carbon | 4 | Guiding the students to discuss the presence of Carbon in, CO2, Carbonates shells, diamond, graphite.Teaching the students to discuss the diff and similarities in pry properties of carbon allotropes. | Under the guidance of the teachers to discuss the forms in which Carbon appears.To discuss the uses of Carbon allotropes. | Egg shells A carbonate pictures of diamond, coal and graphite allotropes of carbon. |  | To be able to explain the forms in which carbon occurs.To be able to explain the allotrope form of Carbon. |
| **APRIL** | 1 |
|  | CO2 | 4 | Guiding the students to prepare CO2g in the lab.Guiding the students to find out how CO2 reacts with NaOH, CaCO3, Ca(OH), Mg and H2OGuiding the students to discuss the uses of CO2 | -To prepare CO2 in the lab by dil acid on Carbohydrates and-Test the prepared gas.-To find art how CO2 reacts with NaOH, CaCO3, H2O, Mg.-To discuss the use of CO2 | CaCO3, HCl gas jar flask.CO2, Ca(H)2, H20, mgFire extinguisher fizzy drinksBaking powder |  | To be able to prepare and test (O2 of on) to state the properties of it.To be able to explain uses of CO2 |
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|  |  | **APRIL** | **2****&3** |  | Hydro carbon | 10 | -Teaching the students to discussi) meaning of  hydrocarbonsii) Structure of  hydrocarboniii) Classification of  Hydrocarboniv) Alkane, Alkene,  Alkyene.-Guiding the students to write condensed and open structures of the 1st five members of homologous series Alkane, Alkene, AlkyneGuiding the students to use model (opens condensed structure of alkane, alkene and alkyne to discuss the concept ot Isomerism.-To guide the students to discuss the structural formula of the isomeric of lower hydrocarbons. | To discuss the meaning, structure and classification of hydrocarbons.To write conclude and opens structure of the 1st five members of homologous series.To discuss the concept of isomerism using the model of hydrocarbon.To write the structural of all isomers of, Alkane, Alkene, Alkyne up to 5-C-atoms | Models of carbon and H.atomWall chart pictures and model illustrating isomerism. |  | To be able to identify 3 families of hydrocarbons.To be able to write homologous series of Alkane, Alkene and Alkyne.To be able to explain the concept of hydrocarbon.To be able to explain the concept of Isomerism. |  |
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|  |  | **APRIL** |  |  |  |  | To demonstrate the salvation native of Alkaline, and unsalvation nature of Alkene, AlkyneTo discuss how methane reacts with O2 and Cl2.Leads on discussion on how ethane reacts with H2, hydrogen halides and sulphuric acid. | Participating on demonstration.Participating on discussion. |  |  | To be able to differentiate saturated and unsaturated hydrocarbons. |  |
| **4** |  | ACOHOL | 6 | To lead discussion of the preparation of Ethanol in the lab.To lead discussion on general formation Cu H 2n + I OH | Participating on the discussion and prepare ethanol To write the structure members of alcohol series using the G.F up To 5 - C – atom | Glucose or sugar water -Yeast |  | To be able to prepare ethanolTo be able to write the homologous series of Alcohol. |
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|  |  | MAY | 1 |  | CARBOXUILIC ACID | 5 | To guide students for fine out sources of organic acids.To guide the students to find out what happens to different type of alcohol when exposed to one.To lead discussing on oxidation of ethanol to ethanoic acid.To guide them to write closed aid open structure of carboxylic.To lead discussion on pineapple among of carboxylic aid. | To demonstrate acidic nature of natural substances.To allow atmospheric oxidation of wine to form ethanoic acid.To write the open and condensed structure of carboxylic acid using G.F CuH 2n+i CooH To write open structure and systematic names of all isomers of carboxylic acid. | -Milk-Vinegar-Citrus fruits-Wine-Utmoss paperLucar brews-CH3COOH |  | To be able to identify natural source of organic acid.To be able to explain oxidations of alcohol to acid.To be able to write the structure of carboxylic.To be able to name the 1st is carboxylic acid members. |  |
|  | **2** | **MID TERM EXAMINATIONS** |
|  | **3** | **MID TERM BREAK** |