**CHEMISTRY SCHEMES OF WORK**

**FORM ONE 2016**

**TERM I**

**REFERENCES:**

1. Secondary Chemistry Students Book 1 By KLB (2nd Edition)
2. Secondary Chemistry Students Book 2 By KLB (2nd Edition)
3. Comprehensive Secondary Chemistry Book 1 and 2 (CSC)
4. Principles of Chemistry Form 1 and 2 By P. Muchiri and V.W. Maina (POC)
5. Explore Chemistry Form 1 and 2 (Revised Syllabus), By Longman Kenya

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| **WK** | **LSN** | **TOPIC/S-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| 1-4 | 1-5 | **REPORTING** |  |
| 5 | 1&2 | Introduction to Chemistry | **By the end of the lesson the learner should be able to:-**Recall the subjects and topics taught in primary level scienceName the branches in science Define chemistryExplain its role in society | DiscussionNotes takingExplaining the role of chemistry in society and careers related to chemistry | Flowchart on braches of chemistryPictures and charts on applications and chemical processes | KLB BK 1 Pg 1-2CSC BK 1 Pg 1-2Explore BK 1 Pg 1-2POC Pg 1-2 |  |
|  | 3 | MatterStates of matterProperties of matterConductors and non-conductors | **By the end of the lesson the learner should be able to:-**State the three states of matter State and explain the properties of matterDefine the terms conductor and non-conductorGive examples of conductors and non-conductors | DiscussionNotes taking | Water in a beakerBalloonPieces of wood | KLB BK 1 Pg 1-2CSC BK 1 Pg 1-2Explore BK 1 Pg 3-4POC Pg 2-7, 9 |  |
|  | 4&5 | MixturesDrug and drug abuse | **By the end of the lesson the learner should be able to:-**Define mixtureState the properties of mixturesDefine drug and drug abuseGive examples of drugs commonly abused and their effects | Question answer methodDiscussionNotes taking | Maize, beansSand, waterChart on different types of drugs | KLB BK 1 Pg 2CSC BK 1 Pg 2Explore BK 1 Pg 4-5POC Pg 7-12 |  |
| 6 | 1&2 | Chemistry LaboratoryApparatus used for studying chemistry | **By the end of the lesson the learner should be able to:-**Define the term laboratory and state its functions | DiscussionDemonstration of some apparatusNotes taking | Chemistry laboratory apparatus | KLB BK 1 Pg 3CSC BK 1 Pg Explore BK 1 Pg 7POC Pg 14 |  |
|  | 3 | The Bunsen Burner | **By the end of the lesson the learner should be able to:-**Name the parts and functions of the Bunsen BurnerName the parts of the luminous flameName the parts of a non-luminous flame | DiscussionDrawing parts of the Bunsen burnerDrawing parts of luminous and non-luminous flame | Bunsen burnerChart showing parts of the Bunsen burner | KLB BK 1 Pg 3-9CSC BK 1 Pg Explore BK 1 Pg 11-13POC Pg 14-21 |  |
|  | 4&5 | Apparatus for MeasuringVolumeTemperatureMassTime | **By the end of the lesson the learner should be able to:-**Name and draw some chemistry laboratory apparatus | DiscussionDrawing apparatus | Chemistry laboratory apparatusThermometer | KLB BK 1 Pg 9-12CSC BK 1 Pg Explore BK 1 Pg 7-10POC Pg 23-31 |  |
| 7 | 1&2 | Other Apparatus and their uses | **By the end of the lesson the learner should be able to:-**State the uses of different types of apparatus used in the chemistry laboratory | Discussion Motes takingQuestion answer method | GlasswareSpatulaDeflagrating spoonCrucibleWire gauze | KLB BK 1 Pg 12-13CSC BK 1 Pg Explore BK 1 Pg 7-10POC Pg 31-34 |  |
|  | 3 | Chemistry Laboratory and Safety Rules | **By the end of the lesson the learner should be able to:-**List atleast five laboratory rules | Discussion Motes takingQuestion answer method | School laboratory rulesChart on safety rules | KLB BK 1 Pg 14-15Explore BK 1 Pg 5-6POC Pg 34-36 |  |
|  | 4&5 | Simple Classification of SubstancesSeparation of mixtures | **By the end of the lesson the learner should be able to:-**Define the term mixtureClassify mixtures into miscible and immiscible liquidsList several methods of separating mixtures | Observation and discussionDemonstration of separation of several mixtures | Sugar/sandWater/paraffin | KLB BK 1 Pg 17CSC BK 1 Pg Explore BK 1 Pg 15-17POC Pg 37-41 |  |
| 8 | 1&2 | Separation of Soluble and Insoluble Mixtures | **By the end of the lesson the learner should be able to:-**Define soluble and insoluble solidsExplain how a soluble solid can be separated from an insoluble solid | DiscussionNotes taking | Beaker, Sand/saltConical flaskFilter paperSeparating funnelEvaporating dish | KLB BK 1 Pg 18CSC BK 1 Pg Explore BK 1 Pg 17POC Pg 41 |  |
|  | 3 | Solid liquid mixtureDecantation and filtration | **By the end of the lesson the learner should be able to:-**Separate immiscible liquids using the appropriate methods | Carrying out experiment to separate mixturesClass discussionDrawing | ParaffinSea waterTap waterFlasks | KLB BK 1 Pg 18Explore BK 1 Pg 17-20POC Pg 41-45 |  |
|  | 4&5 | CrystallizationSublimation | **By the end of the lesson the learner should be able to:-**Define the term crystallizationPrepare copper (II) sulphate crystals or sodium chloride | Demonstration on crystallizationDiscussion on preparation of copper (II) sulphate | BeakerSodium chlorideStirring rodWaterCopper (II) sulphate | KLB BK 1 Pg 23CSC BK 1 Pg Explore BK 1 Pg 20-21POC Pg 47-51 |  |
| 9 | 1&2 | Application of Crystallization | **By the end of the lesson the learner should be able to:-**Define a saturated solutionExplain how salt is formed in Lake Magadi | DiscussionNotes takingExplain salt formation in Lake Magadi | Salt, stirring rodBeaker, waterBurnerChart on salt formation in lake Magadi | KLB BK 1 Pg 24CSC BK 1 Pg Explore BK 1 Pg 29-30POC Pg 50 |  |
|  | 3 | Sublimation | **By the end of the lesson the learner should be able to:-**Define sublimationGive examples of salts that sublimeExplain how one can separate a salt that sublimes from salts which do not sublime | *© Education Plus Agencies*Defining sublimationDemonstration on sublimation | NH4ClNaClBurnerSandIodineBoiling tubesTest tube holder | KLB BK 1 Pg 25CSC BK 1 Pg Explore BK 1 Pg 25-26POC Pg 61-63 |  |
|  | 4&5 | Liquid-Liquid MixtureFractional Distillation | **By the end of the lesson the learner should be able to:-**Name the parts and the functions of distillation apparatusAssemble distillation apparatusExplain stages of fractional distillationDifferentiate between simple and fractional distillationExplain atleast two applications of fractional distillation | Demonstration on fractional distillationDrawing diagrams of fractional distillationDiscussionNotes taking | Round bottomed flaskCondenserBurnerThermometerEthanolWaterFractional column | KLB BK 1 Pg 28-30CSC BK 1 Pg Explore BK 1 Pg 21-25POC Pg 51-56 |  |
| 10 | 1&2 | Chromatography and Solvent Extraction  | **By the end of the lesson the learner should be able to:-**Define chromatographyDemonstrate the process of chromatographyExplain how chromatography is used | Carrying out experiments to show chromatographyDiscussionNotes taking | Filter paper, FunnelEthanol, PropanoneFlowersDropper, InkChart | KLB BK 1 Pg 30-33CSC BK 1 Pg Explore BK 1 Pg 26-29POC Pg 58-61 |  |
|  | 3 | Application of chromatography and solvent extractionRemoval of stains | **By the end of the lesson the learner should be able to:-**Give one application of chromatographyExplain how oil can be extracted from nutsIdentify how stains can be removed from fabrics | DiscussionExplaining how oil can be extracted from nutsNotes takingDemonstration on stain removal | Pestle, mortarNut seedsPropanone, White paperStains of blood, fats, washing sodaParaffin, ammonia | KLB BK 1 Pg 30-33CSC BK 1 Pg Explore BK 1 Pg 29-30POC Pg 61 |  |
|  | 4&5 | Evaporation and Condensation | **By the end of the lesson the learner should be able to:-**Define evaporation and condensationExplain the steps involved in evaporation and condensationAssemble distillation apparatus | Class discussionDrawing diagrams on distillation apparatus | ThermometerLietig condenserFlasks | KLB BK 1 Pg CSC BK 1 Pg Explore BK 1 Pg POC Pg 45-47 |  |
| 11 | 1&2 | Use of a separating funnel | **By the end of the lesson the learner should be able to:-**Use a separating funnel to separate immiscible liquidsGive examples of immiscible liquids | Question answer methodDemonstration using a separating funnelDiscussion | Separating funnelWaterParaffin | KLB BK 1 Pg CSC BK 1 Pg Explore BK 1 Pg POC Pg 57-59 |  |
|  | 3 | Criteria for Purity | **By the end of the lesson the learner should be able to:-**Determine the melting point for iceDetermine the boiling point of water | Discussion on melting and boiling pointCarry out experiments to show the melting and boiling point of substances | ThermometerSolid iceWaterBurnerBeaker | KLB BK 1 Pg 43CSC BK 1 Pg Explore BK 1 Pg 30-32POC Pg 69 |  |
|  | 4&5 | Criteria for Purity | **By the end of the lesson the learner should be able to:-**Explain the effects of impurities on melting and boiling points | DiscussionDemonstration on effects of impurities on melting and boiling points | ThermometerSolid ice, waterBurner, BeakerNaCl | KLB BK 1 Pg Explore BK 1 Pg 30-32POC Pg 71-75 |  |
| 12 | 1&2 | Effects of heat on substances | **By the end of the lesson the learner should be able to:-**Name the three states of matterState the kinetic theory of matterExplain the properties of the three states of matter | DiscussionQuestion answer methodExplaining the properties of the states of matter | Chart showing properties of the three states of matter | KLB BK 1 Pg 35-36CSC BK 1 Pg Explore BK 1 Pg 34-35POC Pg 76-78 |  |
|  | 3 | Effects of heat on substances | **By the end of the lesson the learner should be able to:-**Investigate what happens when ice is heated to boiling pointUse a graph to illustrate changes of state of matter and temperature | Carrying out an experiment to investigate the effects of heat on iceObservationDiscussion | BeakerThermometerTripod standWire gauzeBurnerIce cubes | KLB BK 1 Pg 39-42CSC BK 1 Pg Explore BK 1 Pg 36POC Pg 78-80 |  |
|  | 4&5 | Effects of heat on substances | **By the end of the lesson the learner should be able to:-**Explain the melting and boiling points in terms of kinetic theory | DiscussionNotes taking | Chart on properties of matter in each stateIllustrative graph on melting and boiling point | KLB BK 1 Pg 37CSC BK 1 Pg Explore BK 1 Pg 37POC Pg 80-85 |  |
| 13 | 1&2 | Permanent and Temporary Changes | **By the end of the lesson the learner should be able to:-**Define permanent changeDefine temporary change Distinguish between permanent and temporary changes | DiscussionQuestion answer methodNotes takingCarrying out experiment on chemical and temporary changes | BurnerIceNH4ClMg metalCu metalCarbon | KLB BK 1 Pg 43-48CSC BK 1 Pg Explore BK 1 Pg 37-39POC Pg 85-96 |  |
|  | 3 | Elements, atoms, molecules and compounds | **By the end of the lesson the learner should be able to:-**Define an element, atom, molecule and a compoundGive at least 3 examples of eachState the symbols of common elements | DiscussionIdentifying and writing chemical symbols of common elementsNotes taking | Charts on the definitions | KLB BK 1 Pg 48CSC BK 1 Pg Explore BK 1 Pg 39-42POC Pg 96-104 |  |
|  | 4&5 | Symbols of ElementsWord Equations | **By the end of the lesson the learner should be able to:-**Name at least five elementsGive the symbols of at least 5 elements using Latin or English namesGive simple word equations of chemical processes | Naming and wring correct symbols of elementsWriting variety of simple word equations | The periodic tableChart on word equations | KLB BK 1 Pg 49-51CSC BK 1 Pg Explore BK 1 Pg 42-45POC Pg 104-107 |  |
| 14-15 | 1-5 | **REVISION AND END OF TERM EXAMINATION****CLOSING FOR APRIL HOLIDAY** |  |

**CHEMISTRY SCHEMES OF WORK**

**FORM ONE 2016**

**TERM II**

**REFERENCES:**

1. Secondary Chemistry Students Book 1 By KLB (2nd Edition)
2. Secondary Chemistry Students Book 2 By KLB (2nd Edition)
3. Comprehensive Secondary Chemistry Book 1 and 2 (CSC)
4. Principles of Chemistry Form 1 and 2 By P. Muchiri and V.W. Maina (POC)
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| **WK** | **LSN** | **TOPIC/S-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| 1 | 1-5 | **OPENING FOR TERM TWO, REVISION AND CAT 1** |  |
| 2 | 1&2 | Structure of the atom and the periodic tableStructure of the atom | **By the end of the lesson the learner should be able to:-**Define an atomName the sub atomic particlesDescribe the structure of the atomDraw the structure of the atomState the location of the sub atomic particles in an atomState the properties of the sub atomic particles | Explain the meaning of atom Draw the structure of the atomDefine proton, neutron and electron | Chart on models of atomThe periodic tableImprovised model of the atom | KLB BK 2 Pg CSC BK 2 Pg 1-4Explore BK 2 Pg 3-8 |  |
|  | 3 | Atomic Number and Atomic Mass | **By the end of the lesson the learner should be able to:-**Define atomic number and atomic massDo simple calculations involving mass number and atomic mass | DiscussionNotes takingCalculations | Chart | KLB BK 2 Pg 2-3CSC BK 2 Pg 6-8Explore BK 2 Pg 9-10 |  |
|  | 4&5 | Isotopes | **By the end of the lesson the learner should be able to:-**Define isotopesList some elements which exhibit isotopy | Question answer methodNotes taking | Chart | KLB BK 2 Pg 4CSC BK 2 Pg 8-9Explore BK 2 Pg 10-12 |  |
| 3 | 1&2 | Energy Level and Electron Arrangement | **By the end of the lesson the learner should be able to:-**Describe the energy levels Write the electron arrangement of the first 20 elements of the periodic table | Describing the structure of the atom | Chart on the model of the atomPeriodic tableModel of atomsNotes taking | KLB BK 2 Pg 4-7CSC BK 2 Pg 4Explore BK 2 Pg  |  |
|  | 3 | Development of the periodic table | **By the end of the lesson the learner should be able to:-**Build the periodic table for the first 20 elementsExplain the position of an element in the periodic table in terms of electron arrangementPosition and element in the periodic table | Class discussionNotes taking | Manilla paperPlasticineRulerFelt pen | KLB BK 2 Pg CSC BK 2 Pg 11-12Explore BK 2 Pg 13-17 |  |
|  | 4&5 | Relative atomic mass and isotopes | **By the end of the lesson the learner should be able to:-**Define relative atomic massCalculate the RAM from atomic compositions | DiscussionNotes takingCalculation |  | KLB BK 2 Pg 10CSC BK 2 Pg 9-11Explore BK 2 Pg  |  |
| 4 | 1&2 | Valency and Ion formationOxidation numbers | **By the end of the lesson the learner should be able to:-**Define valency and oxidation numbersDescribe formation of simple ions (cations and anions)Define ionization energy and electron affinityWrite electron arrangement of ions formed from atomsPredict type of ion formed from the arrangement of an atom | DiscussionNotes takingDrawing ions | Chart on ions | KLB BK 2 Pg 12-15CSC BK 2 Pg 13-20Explore BK 2 Pg 19-24 |  |
|  | 3 | Chemical formula | **By the end of the lesson the learner should be able to:-**State names and formulae of common radicalsDerive the formulae of simple compounds from valencies of elements and radicals | DiscussionNotes takingQuestion answer method |  | KLB BK 2 Pg 16-19CSC BK 2 Pg 21-22Explore BK 2 Pg 25-26 |  |
|  | 4&5 | Chemical formula | **By the end of the lesson the learner should be able to:-**Write simple balance equations | DiscussionNotes taking |  | KLB BK 2 Pg 20-24CSC BK 2 Pg 23-24Explore BK 2 Pg 26 |  |
| 5 | 1&2 | Acids, Bases and Indicators | **By the end of the lesson the learner should be able to:-**Name acidic substances Name the acids in these substances | Listing organic and mineral acidsClass discussionDemonstration | OrangesLemonsSour milkVinegar | KLB BK 2 Pg 55CSC BK 2 Pg Explore BK 2 Pg 48POC Pg 112 |  |
|  | 3 | Bases | **By the end of the lesson the learner should be able to:-**Name basic substancesName bases in these substances | Listing of basic substancesNotes taking | NaOHNH4OHCaOBeakerwater | KLB BK 2 Pg 55-56CSC BK 2 Pg Explore BK 2 Pg 49POC Pg 113 |  |
|  | 4&5 | IndicatorsPlant extracts | **By the end of the lesson the learner should be able to:-**Prepare plant extracts as indicatorsUse the extracts as acid-base indicatorsState the advantages and disadvantages of the extracts as indicators | Class experiment on the extraction of juice from flowersUsing extracts as indicatorsNotes taking | MortarPestleFlower petalsPropanoneEthanolWater | KLB BK 2 Pg 56-57CSC BK 2 Pg Explore BK 2 Pg 49-50POC Pg 114-115 |  |
| 6 | 1&2 | Commercial indicators | **By the end of the lesson the learner should be able to:-**State the colour of commercial indicators in acids and basesState the advantages of commercial indicators over the flower extracts | Class discussionClass demonstrationNotes taking | Methyl/orangePhenolphthaleinHClNaOH | KLB BK 2 Pg 57-58CSC BK 2 Pg Explore BK 2 Pg 50-52POC Pg 116-119 |  |
|  | 3 | Universal indicator and PH scale | **By the end of the lesson the learner should be able to:-**Define universal indicator and PH scaleClassify solutions into acids, bases or neutral | Determine the PH of solutions using universal indicators and the PH chartNotes taking | PH chart, Universal indicator, Dropper, Ethanoic acid, Lemon juice, Dil. H2SO4Soap solutionWater | KLB BK 2 Pg 58-60CSC BK 2 Pg Explore BK 2 Pg 52-54POC Pg 119-121 |  |
|  | 4&5 | Properties of acids and bases | **By the end of the lesson the learner should be able to:-**Define neutralizationWrite word equations involving neutralizationIdentify products | Class discussionTeacher demonstrationNotes taking | Dilute NaOHDilute HClUniversal indicatorPH chart | KLB BK 2 Pg 121CSC BK 2 Pg Explore BK 2 Pg 54POC Pg 121 |  |
| 7 | 1&2 | Reaction of acids with metals | **By the end of the lesson the learner should be able to:-**State the products of acid-metal reactionsWrite word equations for acid-metal reactionsDescribe the test fro hydrogen gas | Teacher demonstrationClass discussionNotes taking | Mg ribbonIron filingsDilute HClTest tubes | KLB BK 2 Pg 61-62CSC BK 2 Pg Explore BK 2 Pg 55POC Pg 123 |  |
|  | 3 | Reaction of acids with carbonates and hydrogen carbonates | **By the end of the lesson the learner should be able to:-**State the products of the reactions of acids and CO32- and HCO3-Write word equationsDescribe the test for carbon (IV) oxide | DiscussionNotes takingTeacher demonstration on the test for CO2 | Dilute HClCaCO3Lime waterTest tubesDelivery tubes | KLB BK 2 Pg 63-65CSC BK 2 Pg Explore BK 2 Pg 56-58POC Pg 124 |  |
|  | 4&5 | Simple properties of bases | **By the end of the lesson the learner should be able to:-**Name basic hydroxides and oxidesDistinguish between basic oxides and alkalis | Class discussionTeacher demonstration | Test tubesZnOCaONaOHWater  | KLB BK 2 Pg 67-68CSC BK 2 Pg Explore BK 2 Pg 58POC Pg 128 |  |
| 8 | 1&2 | Uses of acids and bases | **By the end of the lesson the learner should be able to:-**List uses of acidsList uses of bases | Class discussionNotes taking | Chart on applications of bases and acids | KLB BK 2 Pg 69Explore BK 2 Pg 59-60POC Pg 129-130 |  |
|  | 3 | Air and CombustionActive part of airPercentage composition of air | **By the end of the lesson the learner should be able to:-**List constituents of airCalculate the percentage composition by volume of oxygen from experimental resultsState the approximate amount of oxygen in air | Class discussionClass experimentNotes taking | TroughBeehive standWaterCandleSyringeMatch box | KLB BK 2 Pg 72-76CSC BK 2 Pg Explore BK 2 Pg 62POC Pg 133 |  |
|  | 4&5 | Burning substances in airOxidationBasic and acidic oxides | **By the end of the lesson the learner should be able to:-**Explain the change in mass when Mg burns in airDefine oxidation as chemical addition of oxygen to a substanceClassify oxides as basic or acidic | DiscussionNotes takingTeacher demonstration | Mg ribbonPair of tongsNa, CuO, SulphurWaterLitmus | KLB BK 2 Pg 77-79CSC BK 2 Pg Explore BK 2 Pg 68POC Pg 134-139 |  |
| 9 | 1&2 | Pollution | **By the end of the lesson the learner should be able to:-**Define pollutionState pollution effects due to burning of substances in airDescribe green house effects, acid rain and other effects of air pollution | Class discussionNotes taking | ChartsPeriodicals from UNEP, NEMA | KLB BK 2 Pg 98CSC BK 2 Pg Explore BK 2 Pg 80POC Pg 146 |  |
|  | 3 | Rusting | **By the end of the lesson the learner should be able to:-**Investigate conditions necessary for rustingState the composition of rust | Class experimentClass discussion | Test tubes, Cotton wool, Nails, Oil, Sand paper, Water, Source of heat, NaCl | KLB BK 2 Pg 82-84CSC BK 2 Pg Explore BK 2 Pg 70-71POC Pg 139-142 |  |
|  | 4&5 | Prevention of rusting | **By the end of the lesson the learner should be able to:-**State the advantages and disadvantages of rustingState and explain methods of preventing rusting | Class discussionNotes taking |  | KLB BK 2 Pg 84CSC BK 2 Pg Explore BK 2 Pg 72POC Pg 142-144 |  |
| 10 | 1&2 | Preparation, drying and collection of gases in the laboratory | **By the end of the lesson the learner should be able to:-**Name common drying agents of gases in the laboratoryState the criteria for choosing the appropriate drying agent for a given gas | DiscussionNotes takingClass demonstration | Gas jarsDelivery tubesCaCl2Concentrated H2SO4 | KLB BK 2 Pg 144CSC BK 2 Pg Explore BK 2 Pg 73POC Pg  |  |
|  | 3 | Preparation of Oxygen Gas | **By the end of the lesson the learner should be able to:-**Describe the preparation of oxygen gasDescribe the test for oxygen gas | Teacher demonstration on preparation of oxygen gasNotes taking | H2O, MnO2, B.H shelfsGas jars, SplintMatch box | KLB BK 2 Pg 84-88Explore BK 2 Pg 73-74POC Pg 148-151 |  |
|  | 4&5 | Industrial preparation of oxygen | **By the end of the lesson the learner should be able to:-**Explain how oxygen is distilled from liquid air by fractional distillation | Discussion on preparation of oxygen by fractional distillation | Flow chart | KLB BK 2 Pg 81CSC BK 2 Pg Explore BK 2 Pg 69-70POC Pg 163 |  |
| 11 | 1&2 | Competition for combined oxygen | **By the end of the lesson the learner should be able to:-**List metals in order of their reactivity with oxygenDefine oxidation and reductionWrite simple chemical and word equations | DiscussionNotes takingWriting word equations | Charts | KLB BK 2 Pg 92CSC BK 2 Pg Explore BK 2 Pg 77-78POC Pg 157-160 |  |
|  | 3 | Application of reactivity series of metals | **By the end of the lesson the learner should be able to:-**Define oreRelate reduction to extraction of metals | DiscussionNotes takingWrite word equations | Chart showing reactivity series | KLB BK 2 Pg 97Explore BK 2 Pg 79-80POC Pg 160-162 |  |
|  | 4&5 | Uses of Oxygen | **By the end of the lesson the learner should be able to:-**Give at least three uses of oxygen | Explaining uses of oxygen |  | KLB BK 2 Pg 98  |  |
| 12 | 1-5 | Revision | **By the end of the lesson the learner should be able to:-**Identify and explain concepts learnt | Answering questionsDoing revision exercisesClass discussion | Answering questions |  |  |
| 13&14 | 1-5 | **REVISION****END TERM EXAMS****CLOSING FOR AUGUST HOLIDAY** |  |

**CHEMISTRY SCHEMES OF WORK**

**FORM ONE 2016A**

**TERM III**

**REFERENCES:**

1. Secondary Chemistry Students Book 1 By KLB (2nd Edition)
2. Secondary Chemistry Students Book 2 By KLB (2nd Edition)
3. Comprehensive Secondary Chemistry Book 1 and 2 (CSC)
4. Principles of Chemistry Form 1 and 2 By P. Muchiri and V.W. Maina (POC)
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| **WK** | **LSN** | **TOPIC/S-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| 1 | 1-5 | **OPENING FOR TERM TWO, REVISION AND CAT 1** |  |
| 2 | 1&2 | Water And HydrogenSources of water | **By the end of the lesson the learner should be able to:-**State sources of waterExplain the importance of waterState the sources of water pollution | DiscussionNotes taking | ChartsPhotographs showing polluted rivers | KLB BK 1 Pg 101CSC BK 1 Pg Explore BK 2 Pg 85POC Pg 167-168 |  |
|  | 3 | Water as a product of burning organic matter | **By the end of the lesson the learner should be able to:-**Collect and test the products of burning candleDefine a hydrocarbonDescribe the chemical test for water | Carrying out an experiment on a burning candle and collect products formedObservationDiscussion | Candle, beaker, test tubes, anhydrous CuSO4, Ca(OH)2, ice cold water, funnel, delivery tube | KLB BK 1 Pg 101CSC BK 1 Pg Explore BK 1 Pg 86POC Pg 170-171 |  |
|  | 4&5 | Water and an oxide of hydrogen | **By the end of the lesson the learner should be able to:-**Describe an experiment to show that water contains hydrogen Test for the purity of water | Teacher demonstrationQuestion answer method |  | KLB BK 1 Pg 101CSC BK 1 Pg Explore BK 1 Pg POC Pg 171-173 |  |
| 3 | 1&2 | Reaction of metals with cold water | **By the end of the lesson the learner should be able to:-**Explain observations when metals react with cold waterState the products of reactions of cold water with different metals | Carrying out experiments to show reaction of water with metalsDiscussion | Sodium, calcium, magnesium, cold water, trough, water, splints, gas jar, funnel | KLB BK 1 Pg 102-105CSC BK 1 Pg 73-75Explore BK 1 Pg 87-89POC Pg 174-177 |  |
|  | 3 | Reaction of metals with cold water | **By the end of the lesson the learner should be able to:-**Write word equations when metals react with cold water | Carrying out experiments to show reaction of water with metalsDiscussion | Sodium, calcium, magnesium, cold water, trough, water, splints, gas jar, funnel | KLB BK 1 Pg 102-105CSC BK 1 Pg 73-75Explore BK 1 Pg 87-89POC Pg 174-177 |  |
|  | 4&5 | Reaction of metals with steam | **By the end of the lesson the learner should be able to:-**Explain the observations when metals react with steamState the products of reactions of steam with different metalsWrite word equations when metals react with steam | Carrying out experiments to show reaction of steam with metalsDiscussion | Magnesium ribbon, boiling tube, trough, gas jar, delivery tube | KLB BK 1 Pg 105-107CSC BK 1 Pg 75-76Explore BK 1 Pg 90POC Pg 177-180 |  |
| 4 | 1&2 | Reactivity series of metals with water | **By the end of the lesson the learner should be able to:-**Arrange metals in order of their reactivity with water in ascending order | DiscussionDrawing summary table showing reactivity series | Chart | KLB BK 1 Pg 108CSC BK 1 Pg 77Explore BK 1 Pg 91 |  |
|  | 3 | HydrogenLaboratory preparation of hydrogen gas | **By the end of the lesson the learner should be able to:-**Assemble the apparatus used to prepare hydrogen gas in the laboratoryGive the chemical test for hydrogen gas | Teacher demonstration on the preparation and test for hydrogen gasDiscussionNotes taking | Flat bottomed flask, thistle funnel, cork, delivery tube, trough, gas jar, splint, water, zinc granules, Dil. HCl | KLB BK 1 Pg 108-111CSC BK 1 Pg 78-79Explore BK 1 Pg 93POC Pg 181-183 |  |
|  | 4&5 | Properties of Hydrogen Gas | **By the end of the lesson the learner should be able to:-**Give at least three physical and chemical properties of hydrogen gas | Class discussionNotes taking |  | KLB BK 1 Pg 108-111CSC BK 1 Pg 78-79Explore BK 1 Pg 93POC Pg 181-183 |  |
| 5 | 1&2 | Chemical properties of hydrogen gas | **By the end of the lesson the learner should be able to:-**Investigate the reduction property of hydrogen gas | Class discussionTeacher demonstrationDrawing | Hydrogen generator, source of heat, CuO, anhydrous CuSO4, combustion tube | KLB BK 1 Pg 114CSC BK 1 Pg 81-82Explore BK 1 Pg 94-95POC Pg 183-188 |  |
|  | 3 | Oxidation and Reduction | **By the end of the lesson the learner should be able to:-**Define oxidation, reduction and redox in terms of hydrogenExplain using equations how hydrogen is a reducing agentUse equations to explain redox | Defining oxidation and reductionWriting equationsClass discussion |  | KLB BK 1 Pg 113CSC BK 1 Pg 78-79Explore BK 1 Pg 96 |  |
|  | 4&5 | Uses of Hydrogen | **By the end of the lesson the learner should be able to:-**Explain at least three uses of hydrogen | Discussion on uses of hydrogenNotes taking | Chart | KLB BK 1 Pg 115CSC BK 1 Pg 82-83Explore BK 1 Pg 97POC Pg 189-192 |  |
| 6 | 1-5 | ProjectIdentification of common pollutants of water from local sources and suggest their control | **By the end of the lesson the learner should be able to:-**Identify the common water pollutantsSuggest their control measures | Discussion  |  |  |  |
| 7&8 |  | **REVISION****END YEAR EXAMS****CLOSING FOR DECEMBER HOLIDAYS** |  |