Name of teacher: ......................................... Name of School: **......................................................**

Year: **2023** TERM: **1 & 2**

Class/Stream: **FORM ONE** 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** |
| Using chemistry skills and knowledge in daily life. | To explain the concept of chemistry in daily life. | J  ANUAR  Y | 3 | 1. INTRODUCTION TO CHEMISTRY | 1.  The concept of Chemistry | 2 | * To guide students to   discuss the meaning of chemistry.   * To guide students to   discuss how materials and objects are made by application of chemistry e.g. soap, petrol, ethanol etc. | * To explain the   concept of chemistry.   * To name the   substance made by applying chemical methods. | * Wall   charts & pictures showing different chemical activities & industrial chemical process.  Detergents, soft, drinks medicine etc. |  | * To give   the meaning of chemistry.   * To   mention any other four objects made by application of chemistry.   * In groups   to mention area where chemistry is applied. |  |
| 2.  The importance of chemistry in life. | 2 | * To guide students to   discuss how chemistry is applied in industrial and at home.   * To guide students to   discuss the importance of chemistry in daily life by giving examples on production of drugs and medicine, soap fertilizer and alcohol. | * To mention area   where chemistry is applied.   * To state the   importance of chemistry in daily life, by giving examples. | * Wall   charts & pictures of industrials, chemical hospital, pharmacy, domestic, kitchen, fertilizer, insect sides, hard drinks. |
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| Working safely in a chemistry laboratory. | Carrying out chemistry activities safely and efficiently. | FEBRUARY | 4 & 1 | 2. LABORATORY TECHNIQUESE AND SAFETY | 1.  Rules and safety precautions in chemistry laboratory. | 4 | 1. To guide students to   discuss every laboratory rule and establish its importance.   1. To guide students to   discuss the laboratory safety measures. | 1. To prepare a list of   ten safety rules in chemistry laboratory.   1. To explain the   safety measure to a chemistry laboratory. | * Chemistry laboratory manual. * Wall charts of written laboratory rules. * Wall charts showing safety measure for a chemistry laboratory. | i) Chemistry for secondary schools, form1&2, Oxford. ii) O-level CHEMISTRY Form 2, BEN.  İİİ) O-level CHEMISTRY Form 2 Interactive CD, BEN. iv)You tube( for video clips) | * To mention and   explain the safety measure needed to avoid accidents in chemistry laboratory. |  |
| 1 |  | 2.  First aid and first aid kit. | 4 | 1. To guide students to discuss activities which are likely to accidents in a chemistry laboratory. 2. To guide students to name every item found in a first aid kit.   iii) To guide students to  stimulate a mock use of each item in a first aid kit. | 1. To identify   possible causes of accidents in chemistry laboratory.   1. To name the items   found in a first aid kit.   1. To   demonstrate how each first aid kit item is used.  iv) To use the  first aid kit to provide first aid to an accident victim. | * Wall chart pictures showing possible laboratory accidents. * First aid kit containing all of its items. | * How   many  possible causes of accidents I a chemistry laboratory.   * Name all   The items found in a first aid kit.   * Demonstrate how   you can provide First aid. |
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|  |  |  |  |  | 3.  Basic chemistry laboratory apparatus with their uses. | 6 | 1. To guide students to   names of different pieces of apparatuses used in chemistry laboratory.   1. To summarize the   names of pieces apparatuses used in chemistry laboratory.   1. To guide students to categorize laboratory apparatus into apparatus for;  * holding * taking measurements;   volume and temperature   * heating purposes  1. To guide students to practice the uses of apparatus for measuring;  * volume of liquids   + volume of gases   + masses of solids   + temperature | 1. To name the different 2. pieces of   apparatuses used in chemistry laboratory.   1. To copy the   summary.   1. To categorize   chemistry laboratory apparatus according to their uses.   1. To use apparatus   to measure volume, mass and temperature. |  |  | * List   names of  apparatuses used in a chemistry laboratory.   * Categorize   chemistry apparatus according to their uses. |  |
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| Treating and purifying water with environmental consideration. | To purify and use water while conserving the environment. | FEBRUARY | 2 |  | 4. Warning signs | 6 | 1. To guide students to   draw a simple diagram of the following warning signs;   * + Toxic   + Harmful   + Irritant   + Explosive   + Corrosive   + Oxidant  1. To guide students to   discuss the meaning of different warning signs. | 1. To draw and   label the basic chemistry warning signs.   1. To explain the   meaning of different warning signs. | * Oxidant   KMnO4, H2O2,   * Irritant;   H2SO4   * Explosive * Corrosive; H2SO4 | i) Chemistry for secondary schools, form1&2, Oxford. ii) O-level CHEMISTRY Form 2, BEN.  İİİ) O-level CHEMISTRY Form 2 Interactive CD, BEN. iv)You tube( for video clips) | Draw and label the basic chemistry warning signs. |  |
| 2 | 3. HEAT SOURCES AND FLAMES | 1.  Heat sources | 4 | To discuss with students about how to use the following heat sources in a chemistry laboratory;   * + candle   + spirit burner   + corrosive burner (kibatari)   + charcoal burner  1. To discuss with students about how Bunsen burner works. | i) To discuss with  teacher about how to use the heat sources in a chemistry laboratory.  To explain how a Bunsen burner works. | * + Candle   + Spirit   burner   * + Kerosene burner (kibatari)   + Charcoal burner   + Bunsen burner | * + Identify   different kind of heat sources that can be used in chemistry laboratory.   * Explain   the working function of a Bunsen burner. |
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| Applying the scientific procedures in carrying out investigations in chemistry |  | FEBRUARY | 3 |  | 2.  Types of flames | 04 | 1. To guide students to   use different types of burners to produce luminous and non-luminous flames.   1. To guide students to   discuss how different flames are used.   * + flame test of elements   + production of light   + production of heat | 1. To produce   luminous and non-luminous flames from different fuel burns.   1. To state the uses   of different types of flames. | * + Spirit burner   + Kerosene burner (kibatari)   + Charcoal burner   + Bunsen burner   + Kerosene fuel |  | * + Produce   luminous and non-luminous flames from different burners. |  |
| 4 | 4.  THE SCIENTIFIC PROCEDURES | 1. Significance of the scientific procedures. | 02 | 1. To guide students to   discuss about the measuring of the scientific procedures.   1. To discuss with   students about how the scientific procedures are used in carrying out systematic investigations. | To explain the concept of scientific procedure. | * Wall   charts showing the steps of scientific procedures.   * Picture   of chemists working in laboratory |  | * Explain   the concept of chemists.   * Explain   the importance of scientific procedures. |
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|  |  |  |  |  | 2.  The main steps of scientific procedures. | 01 | 1. To discuss with   students about the following steps of scientific procedures;   * Observation of the   scientific  phenomena.   * Statement of the   problem.   * Formation of   hypothesis.   * Observation and   collection of  data.   * Data analysis and   interpretation.   * Making inference and   conclusion. | * To describe   each step of scientific procedures. | - Wall  charts showing the steps of scientific procedures. |  | * Describe   each step of scientific procedures. |  |
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| Dealing with nature and properties of matter. | Explaining the nature and properties of matter. | A  P R  I L | 1 |  | 3. Application of the scientific procedures. | 4 | To supervise the students’ projects. | To apply the scientific procedure in carrying out a project on a chemistry problem. |  | i) Chemistry for secondary schools, form1&2, Oxford.  ii) O-level CHEMISTRY Form 2, BEN.  İİİ) O-level CHEMISTRY Form 2 Interactive CD, BEN.  iv)You tube( for video clips) | Apply the scientific procedure in carrying out a project on a chemistry investigation. |  |
| 2-5 | 5. MATTER | 1.  Concept of matter. | 2 | To guide students to discuss the meaning and definition of matter. | To explain the concept of matter. | Solid, liquid and gases. | Explain the meaning of matter with examples. |
|  | 2. States of matter. |  | i) To guide students to  apply the kinetic nature of matter to explain the existence of matter in three states; solids, liquids and gases.   1. To guide students to   demonstrate the change of matter from one state to another.   1. To discuss with   students the advantages of changing one state of matter to another.  Distillation to form pure  components of a mixture.   * + Evaporation of dry things.   formation of ice in refrigerator   1. Melting of metal to form alloy. | 1. To describe the three states of matter. 2. To explain the importance of changing one state of matter to another. |  | Demonstrate how you can change one state of matter to another and explain their importance. |
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| Differentiate physical from chemical properties of matter. |  |  |  |  | 2. Physical and chemical changes. | 12 | 1. To discuss with   students about the meaning and characteristics of physical change.   1. To guide students to   carry out experiments on physical change, to include;   * melting of ice * boiling of water * condensation of steam * formation of ice * magnetization of iron * sublimation of solid   iodine   * grinding of chalk * dissolving sugar or salt   in water   * evaporation  1. To guide students to   carry out the following chemical changes;   * decomposition of solid carbonate * burning of any fuel | 1. To describe the   characteristics of physical change.   1. To carry out   experiments on physical changes of matter.   1. To describe the   characteristics of chemical changes.   1. To carry out   experiments on chemical changes. | * sugar * table   salt   * heat source * kettle * chalk * pestle and mortal * magnet * solid iodine * water * ice * Pb(NO3) solution, CuSO4 solution, Zn metal, CuCO3, * Acids * candle * Aluminium foil * Magnesium ribbon |  | * Describe   characteristics of physical change.   * Describe   the characteristics of chemical changes. |  |
| 3rd | **MIDTERM TESTS** | | | | | | | |
| 4th | **MIDTERM BREAK** | | | | | | | |
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|  |  | APRIL | 1 |  | 4. Elements and symbols. | 6 | 1. To guide students to   discuss the meaning of an element as compared to other substances.   1. To discuss with   students on how to use alphabetical letters and their combinations to form the symbols of elements.   1. To guide students on   how to use the periodic table to differentiate metals from non-metals. | 1. To explain the   meaning of element.   1. To assign names and symbols to;    * Monoatomic elements. eg: Al, K, etc.    * Polyatomic elements; O2, Cl2, N2.    * Special elements   which carry Latin names; Na, Fe, Ag, etc   1. To assign names   and symbols to chemical compounds.   1. To differentiate   metals elements from non-metals. | * Copper * sodium * zinc * Aluminium * iron * sulphur * hydrogen * periodic table. |  | * With   examples explain the meaning of element.  - Assign names and symbols to different elements. |  |
| 2 |  | 5. Compounds and mixtures. | 09 | 1. Leading students to   discuss the impossibility of destroying or creating energy.   1. Guiding students to   perform experiments on the conservation of energy from one form to another and to discuss the results obtained. | 1. Discussing the   impossibility of destroying or creating energy.(law of conservation of energy)   1. Performing experiments on the conservation of energy from one form to another and to discuss the results. | Wall charts showing energy change, voltaic cell, electric cell, bar magnets, iron fillings, water, source of heat, Cu foil, H2SO4(1M), lamp bulb, beaker, Mg ribbon, Abrasive paper, Fe fillings. | 1. Ability   to explain the law of conservation of energy.   1. Ability   to performing experiments on the conservation of energy from one form to another. |
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|  |  | A P R I L | 5 |  |  |  | * To guide students to demonstrate the changes of mater from one state to another. | * To explain the importance of changing one state of matter to another. |  |  | * Demonstrate how you can change one state to another and their importance. |  |
|  | Differentiate physical from chemical properties of matter. | MA Y | 2 |  |  |  | * To discuss with students the advantage of changing one states of matter to another. * E.g   - Distillation of form pure components of mixtures.  - Evaporation of dry things  - Formation of ice in refrigerators.  - Melting metal to form alloys. |
| 3 |  | 3.  Physical and chemical changes. | 12 | * To discuss with students about the meaning and characteristics of physical change. * To guide student to carry out the experiments on physical change and to include * Melting of ice * Boiling of water * Condensation of steem * Formation of ice. | * To describe the characteristics of a physical change. * To carry out experiments on physical changes of matter. | * Sugar * Table salt * Heat source * Kettle * Chalk * Pesth and mortar * Magnet solid iodine |  | * Describe the characteristics of physical change. |
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|  |  |  |  |  |  |  | * Magnetization of iron * Sublimation of solid iodine * Grinding of chalk * Dissolving sugar or salt in water * Evaporation * To guide students to carry out the following chemical changes   -Decomposition of solid carbonate  -Burning of and fuel | * To describe the characteristics of chemical change. * To carry out experiments on chemical change. | * Water * Ice * Pb(No3)solution * Cuso4 solution * Zu metal * CaCo3 * Candle * Aluminium foil * Magnesium ribbon * Acids. |  | * Describe the characteristics of chemical change. |  |
| **1 – 06- 2013 – TERMINAL EXAMINATION** | | | | | | | | | | | | |
|  |  | J  U  L  Y | 4-5 |  | 4.  Elements and Symbols | 6 | * To guide students to discuss the meaning of an element as compared to other substances. | * To explain the   meaning of elements.   * To assign names   and symbols to  - Mono atomic elements e.g Al, K, Na, Cu, pb etc.   * Polyatomic   elements e.g O2, Cl3, N2, S8, P4   * Special elements   K, Na, Fe, Ag, An, Hg, Pb, Sn, Sb, Cu which carry latin names |  |  | * With example explain the meaning of element. |  |
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| Applying a different methods to separate mixtures into pure components. |  |  |  |  |  |  | * To discuss with students   on how to use alpha be trial letters and their combinations to form the symbols of elements. | * To assign names   had symbols to chemical elements. | ‘’ |  | * Assign   names and symbols to differentiate element. |  |
|  | * To guide students on   how to use the periodic table to differentiate metals elements from non-metals elements. | * To differentiate   metals elements and non-metals elements. | ‘’ |  | * Explain   the meaning and give example of compounds and mixtures. |
| AUGUS  T | 1-3 | 5.  Compounds and mixtures. | 9 | * To guide students to   discuss the differences between compounds and mixtures by referring to their characteristics properties. | * To differentiate   between compounds and mixtures by referring to their characteristics properties. | ‘’ |  |  |
|  | * To guide students to   prepare binary compound such as iron II sulphide (Fes) from a mixture of solid iron fillings and awarded sulphur by heating. | * To prepare a binary compound. | ‘’ |  | * Prepare   bring using Fe and Sulphur powder. |
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|  |  | AUGUS  T | 4-5  2-3 |  |  |  | * To discuss with students about the properties of compounds in compassion to the properties of its constitute elements. | * To compare the   properties of a compound with those of its constituents elements. | ‘’ |  | * Compare   the properties of compound with those of its constituent element. |  |
|  | * To discuss with students   the meaning of mixtures and its examples. | * To explain the   meaning of mixture with example. |  |  |  |
|  | * To discuss with students   about properties of solutions suspension, and emulsions. | * To classify   mixtures into solutions, suspensions, and emulsions. | ‘’ |  | * Clarify a   mixtures into solutions, suspensions an emulsions. |
| S  E  P  T  E  M  B  E  R | 5.  Separation of mixture | 12 | * To discuss with students   about the procedures for carrying out the following separation   * Decantation * Filtration * Evaporation * Simple distillation * Fractural distillation * sublimation * Chromatography * Layer separation * Solvent extractric | * To carry out the different methods used to separate mixture. | * Colour flower * Kerosene * Water * Black ink * Ethanol * iodine * Crystal sugar * clay soil * Toluene * Filter paper * Heat * Source * Funnel; |  |  |
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|  |  |  |  |  |  |  | * To guide students to discuss the importance of obtaining separate components of the mixtures. | * To explain the significance of separating different mixtures. |  |  | * To explain   common methods of separating mixture. |  |
| **MID – TERM EXAMINATION** | | | | | | | | | | | | |
|  |  | OC  TOB  E  R | 2 | AIR COMBUSTION, RUSTING AND FIRE FIGHTGING | 1.  Composition of air. | 2 | * To guide students to discuss the proportions of different gases in air. | * To name the gases present in air and their proportions. | * Walls   /Charts showing composition of air. |  | * Names   the gases present in air and their proportion. |  |
| * To facilitate students to   demonstrate the presence of the following gases in air.  - Carbon dioxide  -Oxygen | * To demonstrate   the presence of different gases in air. | * Line write * Phosphorus * Bell jar * Water * Trough * Candle |  | * Carry out   experiment to demonstrate the presence of oxygen in air.   * Determining   a proportion of oxygen in air. |
| * To facilitate student to carry out an experiment to determine the percentage of oxygen in air. | * To determine the percentage of oxygen in air experimentally. |  |  |
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|  |  |  | 3 | 2. COMBUSTION |  | 3 | * To discuss with students   the meaning and significance of combustion in real life. | * To explain the   meaning of combustion and their significance in real life. | Piece Of Paper Candle Charcoal Kerosene Spirit. |  | * Explain   the meaning of combustion? |  |
| * To guide students to   determine the product of complete combustion of the following substance in air.   * Kerosene, charcoal,   paper   * Candle, spirit | * To demonstrate   the combustion of different substances in air and analyse the products. |  | * Analyse   the product obtained when different substance burned in air. |
| * To discuss with student   the application of combustion in real life for explain to mobile   * Burners to get heat and light. | * To describe of   application of combustion if real life. |  | * Describe   the application of combustion in real life. |
| 4 - 5 | 3.  Fire fighting | 6 | * To discuss with students   about the fire caused by   * Petroleum products * Electricity * Wood and charcoal * Paper. | * To classify the types of fires according to their causes. | * Kerosene * Spirit * Paper * Charcoal * Match   box   * Sand   bucket   * Waterless * Foam fire   extinguisher   * Soda acid * Fire   extinguisher. | * Classify types of fire according to their sources. |
|  |  | * To discuss with students   about the reasons why specific types of fires should be extinguished by specific types of fire extinguisher. | * To identify different types of fire extinguishers used different types of fire. |
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|  |  |  |  |  |  |  | * To lead discussion about the parts played by fuel and oxygen in a fire. | * To state the   components needed to start fire. |  |  |  |  |
|  | * To discuss with students   about the classification of fire extinguishers into:  Soda – acid type  Foam type  Water types  Blanket types. | * To classify   extinguishers according to the chemicals they contain. | * Asbestos * Blanket * Soda-acid * Fire   extinguisher   * Foam fire   Extinguisher.  Sand bucket. | * State the   chemical present in different extinguisher. |
|  | * To guide students to   prepare a small fire carefully e.g. Burning a small paper or a candle, and extinguish it. | * To prepare a small   fire extinguisher of the soda-acid types and use to extinguish a small fire. |
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|  |  | NOV  EMB  E  R | 1&2 |  | 4.  Rusting | 6 | * To discuss with students   about the meaning of rusting and economic importance. | * To explain the concept of rusting. | * Iron filing * Steel/wool * water * cotton * mol * Grease * Petroleum * Jelly * Heat * Source * Mg ribbon * HCl solution |  | * Explain   with example the meaning of rusting.   * Carry out   Experiment to demonstrate condition necessary for rusting. |  |
|  | * To guide students to   design an experiment to demonstrate the eruditions necessary for iron to rust. | * To demonstrate   the erudition necessary for iron to rust. |  |
|  | * Summarize and discuss   the experimental findings. | * To carry out   experiments on different methods of preventing iron from rusting. |  |
| ANNUAL EXAMINATIONS. | | | | | | | | | | | | |