SCHEME OF WORK CHEMISTRY FORM 2 2022

TERM I ENDARASHA BOYS

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/T ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| **2** |  |  |  | By the end of the lesson, the learner should be able to: |  |  |  |  |
|  | 1 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Atomic and mass numbers. | Name the subatomic particles in an atom. Define atomic number and mass number of an atom.  Represent atomic and mass numbers symbolically. | Exposition on new concepts;  Probing questions; Brief discussion. | text book | K.L.B. BOOK II  PP. 1-3 |
|  | 2 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | First twenty elements of the periodic table. | By the end of the lesson, the learner should be able to:  List the first twenty elements of the periodic table.  Write chemical symbols of the first twenty elements of the periodic table. | Expository approach: referring to the periodic table, teacher exposes the first twenty elements.  Writing down a list of first twenty elements of the periodic table. | Periodic table. | K.L.B. BOOK II  PP. 1-3 |  |
|  | 3 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Isotopes. Electronic configuration. | By the end of the lesson, the learner should be able to:  Define isotopes. Give examples of isotopes.  Represent isotopes symbolically.  Define an energy level. Describe electronic configuration in an atom. | Exposition of definition and examples of isotopes.  Giving examples of isotopes.  Exposition ? teacher exposes new concepts about electronic configuration.  Written exercise. | Periodic table. | K.L.B. BOOK II  P. 4  PP. 5-8 |  |
|  | 4 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Electronic configuration in diagrams. Periods of the periodic table. | By the end of the lesson, the learner should be able to:  Represent electronic configuration diagrammatically.  Identify elements of the same period. | Supervised practice; Written exercise.  Exposition ? Definition of a period.  Q/A: Examples of elements of the same period. | text book Periodic table. | K.L.B. BOOK II PP. 5-8 |  |

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| **3** | 1 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Groups of the periodic table. | By the end of the lesson, the learner should be able to:  Identify elements of the same period. | Exposition ? definition of a group.  Q/A: examples of elements of the same group. | Periodic table. | K.L.B. BOOK IIP. 9 |  |
| 1 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Groups of the periodic table. | By the end of the lesson, the learner should be able to:  Identify elements of the same period. | Exposition ? definition of a group.  Q/A: examples of elements of the same group. | Periodic table. | K.L.B. BOOK IIP. 9 |  |
| 2 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | R.M.M. and isotopes. | By the end of the lesson, the learner should be able to:  Calculate R.M.M. from isotopic composition. | Supervised practice involving calculation of RMM from isotopic composition. | text book | K.L.B. BOOK IIPP. 11- 13 |  |
| 3 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Positive ions and ion formation. | By the end of the lesson, the learner should be able to:  To define an ion and a cation. | Teacher gives examples of stable atoms.  Guided discovery that metals need to lose one, two or three electrons to attain stability.  Examples of positive ions. | text book | K.L.B. BOOK IIPP 14-15 |  |
| 4 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Positive ions representation. | By the end of the lesson, the learner should be able to:  To represent formation of positive ions symbolically. | Diagrammatic representation of cations. | Chart ion model. | K.L.B. BOOK IIP 16 |  |
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| **4** | 1 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Negative ions and ion formation. | By the end of the lesson, the learner should be able to:  To define an anion.  To describe formation of negative ions symbolically. | Teacher gives examples of stable atoms.  Guided discovery of formation of negative ions.  Diagrammatic representation of anions. | Chart ion model. | K.L.B. BOOK IIP 17 |  |
| 1 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Negative ions and ion formation. | By the end of the lesson, the learner should be able to:  To define an anion.  To describe formation of negative ions symbolically. | Teacher gives examples of stable atoms.  Guided discovery of formation of negative ions.  Diagrammatic representation of anions. | Chart ion model. | K.L.B. BOOK IIP 17 |  |
| 2 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Valencies of metals. | By the end of the lesson, the learner should be able to:  Recall valencies of metals among the first twenty elements in the periodic table. | Q/A to review previous lesson;  Exposition; Guided discovery. | Periodic table. | K.L.B. BOOK IIP 17 |  |
| 3 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Valencie of non-metals. | By the end of the lesson, the learner should be able to:  Recall valencies of non- metals among the first twenty elements in the periodic table. | Q/A to review previous lesson;  Exposition; Guided discovery. | Periodic table. | K.L.B. BOOK IIP 17 |  |
| 4 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Valencies of radicals. | By the end of the lesson, the learner should be able to:  Define a radical. Recall the valencies of common radicals. | Exposition ? teacher defines a radical, gives examples of radicals and exposes their valencies. Students draw a table of radicals and their valencies. | text book | K.L.B. BOOK IIP 18 |  |
| **5** | MID TERM EXAMS AND BREAK | | | | | | | |

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| **6** | 1 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Oxidation number. | By the end of the lesson, the learner should be able to:  Define oxidation number.  Predict oxidation numbers from position of elements in the periodic table. | Q/A: Valencies. Expose oxidation numbers of common ions.  Students complete a table of ions and their oxidation numbers. | The periodic table. | K.L.B. BOOK IIvP 18 |  |
| 2 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Electronic configuration, ion formed, valency and oxidation number | By the end of the lesson, the learner should be able to:  Relate electronic configuration, ion formed, valency and oxidation number of different elements. | Written exercise; Exercise review. | text book | K.L.B. BOOK IIP 18 |  |
| 3 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Chemical formulae of compounds. - Elements of equal valencies. | By the end of the lesson, the learner should be able to:  To derive the formulae of some compounds involving elements of equal valencies. | Discuss formation of compounds such as NaCl, MgO. | text book | K.L.B. BOOK IIPP 19-20 |  |
| 4 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Chemical formulae of compounds. - Elements of unequal valencies. | By the end of the lesson, the learner should be able to:  To derive the formulae of some compounds involving elements of unequal valencies. | Discuss formation of compounds such as MgCl2  Al (NO3)3 | text book | K.L.B. BOOK IIPP 19-20 |  |
| **7** | 1 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Chemical formulae of compounds. - Elements of variable valencies. | By the end of the lesson, the learner should be able to:  To derive the formulae of some compounds involving elements of variable valencies. | Discuss formation of compounds such as  -Copper (I) Oxide.  -Copper (II) Oxide.  -Iron (II) Sulphate.  -Iron (III) Sulphate. | text book | K.L.B. BOOK IIP 20 |  |
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|  | 2 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Chemical equations. | By the end of the lesson, the learner should be able to:  To identify components of chemical equations. | Review word equations; Exposition of new concepts with probing questions;  Brief discussion. | text book | K.L.B. BOOK IIPP 21-23 |  |
| 3 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE | Balanced chemical equations. | By the end of the lesson, the learner should be able to:  To balance chemical equations correctly. | Exposition; Supervised practice. | text book | K.L.B. BOOK IIPP 24-25 |  |
| 4 | THE STRUCTURE OF THE ATOM & THE PERIODIC TABLE CHEMICAL FAMILIES | Balanced chemical equations. (contd) Alkali metals. Atomic and ionic radii of alkali metals | By the end of the lesson, the learner should be able to:  To balance chemical equations correctly. Identify alkali metals. State changes in atomic and ionic radii of alkali metals. | Supervised practice; Written exercise.  Q/A to reviews elements of group I and their electronic configuration. Examine a table of elements, their symbols and atomic & ionic radii.  Discussion & making deductions from the table. | text book The periodic | K.L.B. BOOK IIPP 25-8 |  |
| **8** | 1 | CHEMICAL FAMILIES | Ionisation energy of alkali metals. | By the end of the lesson, the learner should be able to:  State changes in number of energy levels and ionisation energy of alkali metals. | Examine a table of elements, number of energy levels and their ionization energy.  Discuss the trend deduced from the table. | text book | K.L.B. BOOK II |  |
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|  | 2 | CHEMICAL FAMILIES | Physical properties of alkali metals. | By the end of the lesson, the learner should be able to:  State and explain trends in physical properties of alkali metals. | Examine a table showing comparative physical properties of Li, Na, and K.  Q/A: Teacher asks probing questions as students refer to the table for answers.  Detailed discussion on physical properties of alkali metals. | Chart ? comparative properties of Li, Na, K. | K.L.B. BOOK IIPP 30-31 |  |
| 2 | CHEMICAL FAMILIES | Physical properties of alkali metals. | By the end of the lesson, the learner should be able to:  State and explain trends in physical properties of alkali metals. | Examine a table showing comparative physical properties of Li, Na, and K.  Q/A: Teacher asks probing questions as students refer to the table for answers.  Detailed discussion on physical properties of alkali metals. | Chart ? comparative properties of Li, Na, K. | K.L.B. BOOK IIPP 30-31 |  |
| 3 | CHEMICAL FAMILIES | Chemical properties of alkali metals. | By the end of the lesson, the learner should be able to:  To describe reaction of alkali metals with water. | Q/A: Review reaction of metals with water.  Writing down chemical equations for the reactions.  Deduce and discuss the order of reactivity down the group. | text book | K.L.B. BOOK IIP. 32 |  |
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|  | 4 | CHEMICAL FAMILIES | Reaction of alkali metals with chlorine gas. | By the end of the lesson, the learner should be able to:  To write balanced equations for reaction of alkali metals with chlorine gas. | Teacher demonstration- reaction of sodium with chlorine in a fume chamber.  Q/A: Students to predict a similar reaction between potassium and chlorine.  Word and balanced chemical equations for various reactions. | Sodium, chlorine. | K.L.B. BOOK IIP. 33 |  |
| **9** | 1 | CHEMICAL FAMILIES | Compounds of alkali metals. | By the end of the lesson, the learner should be able to:  Write chemical formulae for compounds of alkali metals.  Explain formation of hydroxides, oxides and chlorides of alkali metals. | Exercise: Completing a table of hydroxides, oxides and chlorides of alkali metals.  Discuss combination of ions of alkali metals with anions. | text book | K.L.B. BOOK II pp 33 |  |
| 2 | CHEMICAL FAMILIES | Uses of alkali metals. | By the end of the lesson, the learner should be able to:  State uses of alkali metals. | Descriptive approach: Teacher elucidates uses of alkali metals. | text book | K.L.B. BOOK II pp 34 |  |
| 3 | CHEMICAL FAMILIES | Alkaline Earth metals Atomic and ionic radii of alkaline earth metals. | By the end of the lesson, the learner should be able to:  Identify alkaline earth metals.  State changes in atomic and ionic radii of alkaline earth metals. | Q/A: Elements of group I and their electron configuration.  Examine a table of elements, their symbols and atomic & ionic radii.  Make deductions from the table. | Some alkaline earth metals. | K.L.B. BOOK II pp 34 |  |
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|  | 4 | CHEMICAL FAMILIES | Physical properties of alkaline earth metals.  Electrical properties of alkaline earth metals. | By the end of the lesson, the learner should be able to:  State and explain trends in physical properties of alkaline earth metals.  To describe electrical properties of alkaline earth metals. | Examine a table showing comparative physical properties of Be, Mg, Ca.  Q/A: Teacher asks probing questions as students refer to the table for answers.  Detailed discussion of physical properties of alkaline earth metals. Teacher demonstration:  -  To show alkaline metals are good conductors of electric charge. | Some alkaline earth metals.  Alkaline earth metals. | K.L.B. BOOK II P. 35 |  |
| **10** | END OF TERM EXAMS | | | | | | | |