**EMERALD ROYAL INTERNATIONAL SCHOOL, MPAPE ABUJA**

**LESSON PLAN AND NOTE FOR WEEK 1 ENDING 15TH SEPTEMBER, 2023**

**TERM: FIRST**

**WEEK : 1**

**DATE: 11TH - 15TH SEPTEMBER, 2023**

**SUBJECT : CHEMISTRY**

**TOPIC : ALKANOL**

**SUB- TOPIC : 1.functional group for alkanol.**

1. **types of alkanol.**

**3. preparation of alkanol.**

**PERIOD: 1ST**

**TIME : 8: 10 - 8 :50**

**DURATION: 40 minutes**

**CLASS: SS2**

**NUMBER IN CLASS:**  3

**AVERAGE AGE: 15 years**

**SEX: mixed**

**LEARNING OBJECTIVES: By the end of the lesson, the students should be able to;**

1. State the functional group of the alkanol.
2. State and explain the types of alkanol.
3. Explain the preparation of alkanol.

**RATIONALE:** The students should understand types and preparation of alkanol.

**PREVIOUS KNOWLEGDE:** The student can state some functional group of alkanol.

**INSTRUCTIONAL MATERIALS:** A chart showing the members of the alkanol group.

**REFERENCE MATERIALS:** New school Chemistry for Senior Secondary Schools by Osei Yaw Ababio .

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| **STAGES/STEPS** | **TEACHER’S ACTIVITIES** | **STUDENTS’ ACTIVITIES** | **LEARNING POINTS** |
| **INTRODUCTION** | The teacher introduces the lesson by writing the scheme of work on the board. | The students were active. | To arouse the students interest. |
| **PRESENTATION**  **STEP 1** | The teacher writes and explain the functional group of the alkanol. | The students pay attention. | To keep them focus for better understanding. |
| **STEP 2** | The teacher asks the students to state the types of alkanol. | The students state the types of alkanol. | To encourage critical thinking. |
| **STEP 3** | The teacher explains states and explain the ways of preparing alkanols. | The students pay attention. | To keep them focus for better understanding. |
| **BOARD SUMMARY** | **Alkanol (CnH2n+2)**  The alkanols are a homologous series of organic compounds  with functional group of -OH. Examples are methanol, ethanol, propanol, butanol, pentanol etc. General formula is  **CnH2n+1OH or ROH**, where R is an alkyl group. The name of each homologue is derived by dropping the ending -e of the corresponding alkane and replacing it -ol.  The simplest member of the series is methanol, CH3OHalso known as wood spirit because it was produced by the destructive distillation of wood in the early days. It is poisonous and can cause blindness if it is consumed. Ethanol C2H5OH, is the second member of the series and by far the most important. It is simply referred to as alcohol.  **STRUCTURAL FORMULA AND IUPAC NAME OF SOME COMMOM MEMBERS OF THE ALKANOL SERIES.**  CH3OH- Methanol  CH3CH2OH- Ethanol  CH3(CH2)2OH - Propan-1–ol  CH3CHOHCH3 - propan-2-ol  CH3(CH2)3OH - Butan-1-ol  **Classification -** There are two classes of alkanol based on:  (a) the number of alkyl groups attached to the carbon carrying  the -OH groups per molecule, i.e. according to the number of  substituted hydrogen in the alpha carbon. This class of  alkanol is further classified into:   1. Primary alkanol e.g. CH3OH 2. Secondary alkanol CH3CH2OH 3. Tertiary alkanol CH3CHOHCH3   (b) the number of –OH attached to the molecule   1. Monohydric alkanols = One – OH groups. 2. Dihydric alkanol =Two – OH groups. e.g ethane 1, 2,   diol(H3C-OH-H2C-OH)   1. Trihydric alkanols = Three – OH groups.e .g Propane 1, 2, 3   triol(H2C-OH-HC-OH-H2-OH)   1. Polyhydric alkanols = Many – OH groups. | The students ask question for clarification. | To create room for slow learners. |
| **EVALUATION** | The teacher evaluates the students with the following questions;   1. State the functional group and the molecular formula of alkanol. 2. Classify alkanol according to the number of -OH group. 3. Classify alkanol according to the number of alkyl group. | The students attempt the questions. | To ascertain their level of understanding. |
| **CONCLUSION** | The teacher concludes by copying note on the board. | The students copy the note into their note books. | For future use. |
| **HOME WORK** | 1. What is the general formula of alkanols. 2. State the formula of propanol and indicate the alkyl group. | The students did their assignment and submit for marking and correction. | To encourage the students to study at home. |

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**15th September, 2023**

**DEPUTY HEAD INSTRUCTOR ADMIN**

**NB: Approved!**