**EMERALD ROYAL INTERNATIONAL SCHOOL, MPAPE ABUJA**

**LESSON PLAN AND NOTE FOR WEEK 5 ENDING 2ND JUNE, 2023**

**TERM: THIRD**

**WEEK : 5**

**DATE: 29TH MAY- 2ND JUNE, 2023**

**SUBJECT : CHEMISTRY**

**TOPIC : CARBON AND ITS COMPOUNDS**

**SUB- TOPIC : 1. Trioxocarbonates (iv)**

1. **Properties of trioxocarbonates (iv)**
2. **Preparation of trioxocarbonates (iv)**

**PERIOD: 1ST**

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

**DURATION:**  **40 minutes**

**CLASS: SS1**

**NUMBER IN CLASS: 7**

**AVERAGE AGE: 14 years**

**SEX: mixed**

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

1. Explain trioxocarbonates(iv)
2. State the properties of trioxocarbonates(iv)
3. Explain the properties of trioxocarbonates(iv)

**RATIONALE:** The students should understand the properties and preparation of trioxocarbonates (iv).

**PREVIOUS KNOWLEGDE:** The student have been taught oxides of carbon.

**INSTRUCTIONAL MATERIALS:** A chart showing the apparatus for preparation of trioxocarbonates(iv).

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

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| **STEPS** | **TEACHER’S ACTIVITIES** | **STUDENTS’ ACTIVITIES** | **LEARNING POINTS** |
| **INTRODUCTION** | The teacher introduces the lesson by reviewing the previous lesson. | The students were active. | To arouse the students interest. |
| **PRESENTATION**  **STEP 1** | The teacher explains trioxocarbonates(iv). | The students pay attention. | To keep them focus for better understanding. |
| **STEP 2** | The teacher asks the students to state the properties of trioxocarbonates(iv). | The students state the trioxocarbonates(iv). | To encourage critical thinking. |
| **STEP 3** | The teacher explains the preparation of trioxocarbonates(iv). | The students pay attention. | To keep them focus for better understanding. |
| **BOARD SUMMARY** | **TRIOXOCARBONATES(IV)**  Trioxocarbonates(iv) are formed naturally when carbon (iv) oxide dissolved in water, react with free metals, metallic oxide or other dissolved salts. Trioxocarbonates(iv) are usually found as natural ores or deposits.  **PROPERTIES OF TRIOXOCARBONATE(IV)**   1. Action of heat - with the exception of sodium patassium and barium trioxocarbonates(iv) all the other trioxocarbonates(iv) decomposes non heating to liberate carbon(iv)oxide.   Znco3------- Zno3 + CO2  2Ag2CO3 ------- 4Ag +2CO2 + H2O   1. Reaction with dilute acid - all trioxocarbonates(iv) reacts with dilute acid to form carbon (iv), water and salt.   Na2CO3 + H2SO4 --------Na2SO4 + H20 + CO2.   1. Solubility - most metallic trioxocarbonates(iv) are insoluble in water.the trioxocarbonate (iv) of the alkali metals and ammonium trioxocarbonates(iv) are soluble. When the soluble trioxocarbonate(iv)dissolve in water they become hydrolyzed and form the corresponding hydroxide,   NaCO3 +2H2O ----2Naoh + H2CO3.  The hydroxide produced ionized completely in solution while the trioxocarbonate (iv) acid is only partially ionized.  **PREPARATION OF SOLUBLE TRIOXOCARBONATES(IV)**  Of all the common trioxocarbonates(iv) only sodium, potassium and ammonium trioxocarbonates(iv) are soluble in water. They are prepared in the laboratory by bubbling carbon(iv) oxide through a solution of the corresponding alkali.  2KOH +CO2 ----- K2CO3 + H2O.  Since sodium and potassium trioxocarbonates(iv)are not decomposed by heating , they can also be prepared by heating the corresponding hydrogen trioxocarbonates(iv)  **PREPARATION OF INSOLUBLETRIOXOCARBONATES(IV)**  The insoluble metallic trioxocarbonates(iv) can be prepared as precipitates by adding a solution of sodium trioxocarbonates(iv) or sodium hydrogen trioxocarbonate (iv) to a solution of the corresponding metal salt.  Calcl2 +NaCO3 ------ CaCO3 + 2NaCL  When preparing the trioxocarbonates(iv) of the less electropositive metals like copper, sodium hydrogen trioxocarbonates(iv) is used instead of sodium trioxocarbonate(iv). this is because with the latter, the basic trioxocarbonates(iv). cu(OH)2 and MgCO3. Mg(OH)2.4H2O are precipitated. Aluminium trioxocarbonates(iv) does not exist. | The students ask question for clarification. | To create room for slow learners. |
| **EVALUATION** | The teacher evaluates the students with the following questions;   1. Explain the trioxocarbonates(iv). 2. List 3 properties of trioxocarbonates(iv) and explain any 2. 3. Explain the preparation of soluble and insoluble trioxocarbonates. | The students attempt the questions. | To ascertain their level of understanding. |
| **CONCLUSION** | The teacher concludes by copying note on the board. She checks and marks the notes. | The students copy the note into their note books. | For future use. |
| **HOME WORK** | Draw and explain the carbon cycle. | The students did your assignment and submit for marking and correction. | To encourage the students to study at home. |



9/5/2023

Principal Head Instuctor