**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 : IONIC THEORY**

**SUB- TOPIC : 1. terms used in electrolytes.**

**2.Similarity between conductor and electrolyte.**

**3. differences between conductors and electrolyte.**

**PERIOD: 1ST**

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

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

**CLASS: SS2**

**NUMBER IN CLASS:**  **3**

**AVERAGE AGE: 14 years**

**SEX: mixed**

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

1.Explain terms used in electrolysis.

2.state the similarity between conductors and electrolyte.

3.state the differences between conductors and electrolyte.

**RATIONALE:** The students should understand the similarity and differences between conductors and electrolyte.

**PREVIOUS KNOWLEGDE:** The student have been taught ionic theory.

**INSTRUCTIONAL MATERIALS:** A chart showing terms used in electrolysis.

**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 the terms used in the study of electrolysis. | The students pay attention. | To keep them focus for better understanding. |
| **STEP 2** | The teacher asks the students to state the similarity between conductor and electrolytes. | The students stater the similarity between conductors and electrolyte. | To encourage critical thinking. |
| **STEP 3** | The teacher states the differences between conductors and electrolytes. | The students pay attention. | To keep them focus for better understanding. |
| **BOARD SUMMARY** | **Definition of Terms**  • Anode: it is the electrode at which oxidation occurs and electrons leave the electrolyte. In an electrolytic cell,  the anode is positive while in an electrochemical cell, the anode is negative.  • Cathode: it is the electrode at which reduction occurs and electrons enter the electrolyte. In an electrolytic  cell, the cathode is negative while in an electrochemical cell, the cathode is positive.  • Electrolyte: An electrolyte is defined as a compound which when in solution or molten state conducts an  electric current and is decomposed by it. They are ionic compounds (electrovalent compounds); that is why  they ionize (dissociate) in solution or molten state to give positive and negative ions which are mobile.  Consequently, electrolytes conduct electricity. Electrolytes vary in the degree to which they conduct  electricity. Strong electrolytes such as salts conduct large amount of current while weak electrolyte such as  ethanoic acid carry small amount of current since the acid only ionize partially in solution. Generally,  examples of electrolytes are all salts, acids, and alkalis. Specifically, they include NaCl solution, Magnesium  Chloride solution, solution of HCl, NaOH, H2SO4, etc  • Non-electrolytes: They are substances that do not conduct electricity either in solution or in molten state.  They are covalent and are mainly organic compounds. Examples of non-electrolytes are urea, ethanol,  benzene, trichloromethane, cane sugar, ether, tetrachloromethane, etc. Because they are covalent compounds,  they do not ionize; hence, they do not conduct electricity.  • Electrolysis is the chemical decomposition of a compound due to the passage of direct current through a  solution or molten state of the electrolyte.  **Similarity:**  Both conductors and electrolytes carry electric current.  **Differences:**  conductors and  Electrolytes  Conductor - They are metallic solids or liquid.  Electrolyte They are electrovalent compound in molten or  aqueous (solution) state.  Conductors Conduct electricity by movement of  electrons.  Electrolytes Conduct electricity by movement of ions in  solution.  Conductors Do not decompose in the process  Decompose in the process  Electrolytic cell  Electrochemical cellElectrical energy is converted to chemical  energy.  Chemical energy is converted to electrical energy.  Cathode electrode is negatively charged.  The anode electrode is negatively charged.  **NOTE:** Strong electrolytes ionize completely in water while weak electrolytes ionize partially in water. In simple  terms, strong electrolytes dissolve in water completely while weak electrolytes dissolve in water partially.  Electrolytic Cell: It is the assembly of two electrodes in an electrolyte connected to a cell or battery, and it is used  for the electrolysis of a substance. | 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 following; 2. Anode 3. Cathode 4. Conductors 5. State at least 3 differences between conductors and electrolytes. | 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 note. | The students copy the note into their note books. | For future use. |
| **HOME WORK** | State 5 examples of conductors and 5 examples of electrolytes. | The students did their assignment and submit for marking and correction. | To encourage the students to study at home. |



10/5/2023

Principal Head Instuctor