**EMERALD ROYAL INT’L SCHOOL**

**LESSON PLAN/NOTE FOR WEEK 2 ENDING: 12TH MAY, 2023**

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| **Term** | 3rd |
| **Week** | 2 |
| **Date** | 8/05/2023 |
| **Class** | SSS 2 |
| **Subject** | Physics |
| **Topic** | Electric field 1 |
| **Sub-topic** | Electric circuit |
| **Period** | 1 and 2 |
| **Time** | 10:30-11:50 |
| **Duration** | 80minutes |
| **Number in class** | 2 |
| **Average age** | 14years |
| **Sex** | Mixed |
| **Specific objectives** | By the end of the lesson, the students should be able to:   1. Explain an electric circuit 2. Explain the types of electric circuit 3. State and explain some component of the electric circuit. |
| **Rationale** | To enable the students understand the concepts of an electric circuit. |
| **Previous knowledge** | Students should have been taught on electric potential difference |
| **Instructional aid** | One guide sheet for each student, a cell, an ammeter, a voltmeter, a science notebook and a science textbook. |
| **Reference** | * M.W. Anyakoha. New school physics for secondary schools. Africana first publishers PLC. page 74-88 * P.N. Okeke. Macmillan Senior Secondary Physics. Pearson. Page 44-57 |

**LESSON DEVELOPMENT**

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| **STEPS** | **TEACHER’S ACTIVITIES** | **STUDENTS’ ACTIVITIES** | **LEARNING POINTS** |
| **Introduction** | The teacher introduces the lesson by explaining that potential difference between any two points in an electric field is defined as the work done in moving a positive charge of 1 coulomb from one point in the electric field to another. | The students differentiates between potential difference and electromotive force. | To give the students a rudimentary understanding of electric field. |
| **Step I** | *Electric circuit*  An electric circuit is the path provided for the flow of an electric current. The circuit consists of the source of electric current e.g battery connected through a conductor (e.g a wire) to a load e.g an electric bulb, and a key or a switch. The switch serves to complete (close) or break (open) the circuit. | Begin to develop an idea of what a an electric circuit means. | To ensure proper understanding of the lesson. |
| **Step II** | *Types of electric circuit*   1. *Close circuit:* A closed circuit is the circuit in which there is no gap (key closed) along the conducting path. In such a circuit the current flows through an external resistor (or load) and the bulb lights up. 2. *Open circuit*: An open circuit is a circuit with a gap or opening (key open) in the conducting path. In such a circuit, the battery maintains no current in an external resistor (or load) and the bulb does not light up. 3. *A short circuit:* A short circuit is a closed circuit which has no load on it. | The students listen attentively the teacher’s explanation. | To ensure that all the students are carried along. |
| **Step III** | *Component of an electric circuit*  The following components of an electric circuit are of particular interest   1. *The ammeter:* An ammeter is a device used to measure the flow of current. The ammeter must always be connected in a circuit in such a way that the current it measures flow directly through it. 2. *The voltmeter:* The voltmeter is a device which measures the potential difference between (or across) two points along a conductor and must be connected in parallel or across with these two points. 3. *The switch: T*he switch or key is the component of the circuit by which the circuit is completed or broken and the current is made to flow or stop flowing respectively. 4. *The resistor:* A resistor is a component which is specially designed to provided a known amount of resistance in a circuit. Resistance can be defined as the opposition to the flow of charges or current. It unit is the ohm*.* | The students listen attentively to the teacher’s explanation. | Consolidate acquired knowledge on electric circuit. |
| **Summary** | Potential difference is the work done in moving a charge from one point to another in an electric circuit.  Electric circuit is the path created for the flow of electric current. The different types of electric circuits are;   1. Closed circuit 2. Open circuit 3. Short circuit.   Some important component of the electric circuit includes;   1. The cell 2. The ammeter 3. The volt meter 4. The resistor 5. Capacitor and 6. The earth | The students listen attentively to the teacher’s explanation. | For reference purpose. |
| **Evaluation** | The teacher evaluates the students by giving the students the following classwork.   1. Why are resistors important in an electric circuit? 2. Explain the series and parallel connection of the resistor. | The students answer the question in their science notebook. | To ascertain the students level of understanding of the lesson. |
| **Conclusion** | The teacher makes correction of the classwork. | The students copy the correction in their exercise books. | For reference purpose |
| **Assignment (Homework)** | The teacher gives the students the following assignments.   1. The resistors of resistance 1Ω, 2Ω and 4Ω are connected in series. Find the equivalent resistance of the combination. 2. If three resistors 2Ω, 3Ω, and 5Ω are connected in parallel in a circuit, calculate the equivalent resistance of the combination. | The students copy the questions into their exercise books. | To encourage critical thinking of students at home. |



20/7/2023

Principal Head Instuctor