**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 : INTRODUCTION TO CHEMISTRY**

**SUB- TOPIC : 1. career prospect in chemistry**

1. **Application of chemistry**

**PERIOD: 1**

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

**DURATION: 40 minutes**

**CLASS: SS2**

**NUMBER IN CLASS: 5**

**AVERAGE AGE: 14 years**

**SEX: mixed**

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

1. List and explain the career prospect in chemistry.
2. State the application of chemistry.
3. Explain the application stated above.

**RATIONALE:** The students should understand career prospect in chemistry and application of chemicals.

**PREVIOUS KNOWLEGDE:** The student can state careers in chemistry.

**INSTRUCTIONAL MATERIALS:** A chart showing the adverse effects of chemicals.

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

**LESSON DEVELOPMENT**

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| **STAGES/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 listed career prospect in chemistry. | The students pay attention. | To keep them focus for better understanding. |
| **STEP 2** | The teacher ask the students to explain the careers listed above. | The students explains the careers listed above. | To encourage critical thinking. |
| **STEP 3** | The teacher explains the application of chemistry. | The students pay attention. | To keep them focus for better understanding. |
| **BOARD SUMMARY** | **CAREER PROSPECT IN CHEMISTRY**   1. Extractive industry - chemists, mining engineer and geologists. 2. Forestry - scientist engaged in research to preserve and improve forests and forestry products. 3. Agriculture - agriculture scientist, chemists, biochemists, physiologists engage in research to improve the quality and yield of crops and livestock and advice farmers.   **APPLICATION / USES OF CHEMISTRY**  Chemistry has contributed greatly in providing our basic needs and improving the quality of our life. Areas which chemistry are applied include; Food Industry- Chemicals can play a significant role in the manufacturing and preservation of food. Food additives, for example, can extend the shelf life of foods; others- such as colours, can enhance the appeal of foods. Flavourings are used to improve the taste of food. As a source of nourishment, food supplements are employed. Examples of Chemicals in Food  1. Esters, which are flavouring agents, are chemical molecules created when alcohol and carboxylic acid combine chemically. 2. Alcohol is a hydrocarbon derivative that is organic in nature. 3. Ethyl Butanoate gives pineapple its flavour. 4. Vinegar is largely made up of acetic acid. 5. By combining different alcohols with different acids, new or diverse flavours can be created.   **2.Agriculture -**  Chemical analysis- analyses the ratios of soil components and the degree of availability of these components for planting or cropping, aids agriculture by assisting in the selection of suitable soil for planting a specific crop.  Chemistry has provided the world with essential fertilisers, herbicides, insecticides, and fungicides to aid in the production of healthy and nutritious crops, fruits, and vegetables. Urea, calcium super phosphates, ammonium sulphate, and sodium nitrate are all significant fertilisers.  Farms must be highly systematic in determining which strategies to use to make the most optimal use of their resources. To feed the globe, modern farming techniques rely on a wide range of chemical agents. 3.Soaps and Cleaners Soaps are created from natural animal fats and vegetable oils that have undergone a saponification process. Soaps are one sort of cleaner, but there are many more that employ different substances and procedures to remove filth from various uses.  Body gels, fabric softeners, laundry detergents, bathroom tile solutions, and all-purpose cleaning solutions would not exist without the chemistry involved in making specialized soaps and cleansers. Synthetic sulphates have made it possible for us to use a new generation of gentler cleaning products for our bodies and homes. Green chemistry has enabled us to generate numerous discoveries in developing healthier, ecologically friendly solutions. 4.Colourants - Minerals or petroleum are used to make the most common colours and pigments used in industry.  Colourants enable us to make items such as clothing more vibrant. Laser dyes, inkjet printing, photodynamic therapy, and surgery are a few of the various uses for dyes and pigments. Each of these applications uses dyes or pigments created specifically for the purpose. 5.Medicines - Medicines are chemical compounds with healing properties that can be extracted from natural sources or prepared in laboratories. Chemistry is important in both medicine and pharmacy because it helps to understand the nature of hormone and enzyme functions as well as the role of medicine in the human body.  Let’s have a look at some of the most important medications in chemistry-  Analgesics are pain relievers that are used to treat a variety of ailments.  Tranquilizers are medications that are used to treat mental illnesses. Take, for instance, tension.  Antiseptics are used to destroy or prevent the growth of microorganisms on the skin, wounds, and cuts.  Disinfectants are chemicals that kill microorganisms but are not suitable for human consumption.  Antibiotics are chemical molecules produced by some microorganisms that can be employed to kill infection-causing microorganisms.  Antacids are substances used to eliminate excess acid from the stomach and increase the pH to a healthy level. 6.Textiles Textiles may undergo a variety of chemical and non-chemical treatments during the manufacturing process, including preparation and pre-treatment, dyeing, printing, and fabric refining.  Textiles and clothing contain a wide range of chemicals. Some are used to provide a product with a specific effect, such as biocides to prevent mould from forming on shoes, dyes to give clothing their distinct colours, and water repellents to make outdoor wear more practical. Special chemicals are sometimes used to keep the clothes from becoming wrinkled or mildew during long periods of transit. To fight foul odour, some clothing and shoes include bacteria-killing chemicals. Oils and greases, starch, sulphonated oils, waxes, and certain surfactants can all be found in textiles. | The students ask question for clarification. | To create room for slow learners. |
| **EVALUATION** | The teacher evaluates the students with the following questions;   1. List at least 5 careers in chemistry. 2. Explain any three. 3. State at least 3 application of chemistry. | 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** | With a chart explain scientific method. | The students did their assignment and submit for marking and correction. | To encourage the students to study at home. |



15TH SEPTEMBER, 2023

APPROVED!

Deputy Head Instructor Admin