**EMERALD ROYAL INTERNATIONAL SCHOOL MPAPE, ABUJA**

**LESSON PLAN AND NOTE FOR WEEK 5 ENDING FRIDAY 9TH FEBRUARY 2024**

**TERM: SECOND**

**WEEK:**  **WEEK 5**

**DATE** :  **5TH - 9TH FEBRUARY, 2024**

**SUBJECT: BIOLOGY**

**TOPIC: MAMMALIAN TEETH**

**SUB - TOPIC: 1**. **dental formula and adaptation.**

1. **Definition of enzyme.**
2. **Characteristics and types of enzyme.**

**PERIOD : 7th**

**TIME : 12: 30 - 1:00**

**DURATION : 40 minutes**

**CLASS: SS1**

**NUMBER IN CLASS: 8**

**AVERAGE AGE : 14 years**

**SEX: mixed**

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

1. State the dental formula and its adaptation.
2. Define enzyme.
3. state the characteristics and types of enzyme.

**RATIONALE:** the students should understand dentition and characteristics of enzyme.

**PREVIOUS KNOWLEDGE:** The students can identify types of teeth.

**INSTRUCTIONAL MATERIALS:** chart showing the dental formula.

**Reference Material:** Essential Biology foe Senior Secondary School by M.C. Michael.

**LESSON DEVELOPMENT**

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| **STAGES** | **TEACHER’S ACTIVITIES** | **PUPILS ACTIVITIES** | **LEARNING POINT** |
| **INTRODUCTION** | The teacher introduces the lesson by reviewing the previous lesson. | The students pay attention. | To arouse the students interest. |
| **PRESENTATION**  **STEP 1** | The teacher defines and explains the dental formula. | The students pay attention. | To keep them focus. |
| **STEP 2** | The teacher asks the students to define enzyme. | The students defines enzymes. | To encourage critical thinking |
| **STEP 3** | The teacher explains the characteristics and types of enzyme. | The students pay attention. | To keep them focus. |
| **BOARD SUMMARY** | **DENTAL FORMULA AND ADAPTATION**  The dental formula refers to the number and types of the teeth present in the mouth of an animal. The number and type of teeth present in the jaw of an animal is the reflection of special adaptation of mammalian teeth for feeding. A formula expressing the number and kinds of teeth possessed by a mammal. A dental formula is usually written in the form of four ‘fractions’, one for each type of tooth, with the upper and lower lines describing the upper and lower jaws respectively. Different mammals have different dental formula depending on their diet. Examples are illustrated below:  Man………….2[ I=2/2, C=1/1, P=2/2, M=3/3] = 32. Dog ………….2[ I=3/3, C=1/1, P=4/4, M=2/3] = 42. Cow …………2[ I=0/3, C=0/1, P=3/3, M=3/3] = 32. Lion………… 2[ I=3/3, C=1/1, P=3/2, M=1/1] = 30. Rabbit …….. 2[I= 2/1, C= 0/0, P=3/2, M=3/3] =28. Sheep ……… 2[I=0/3, C=0/1, P= 3/3, M= 3/3] =32. Rat ……………2[I=1/1, C= 0/0, P=0/0, M=3/3] = 16   1. **Adaptation of mammalian teeth for feeding in an omnivorous example man.** 2. **The teeth of carnivorous example Dog.** 3. **Teeth of a herbivorous example Rabbit**   **ENZYME**  Enzyme is an organic catalyst proteinous in nature which promotes or speeds the chemical changes in living cells but are not themselves used up in the process.  **Types of enzymes**   1. **Intracellular enzyme -** They function inside the cells of living organisms. Examples are the enzyme that catalysed cell respiration inside the mitochondria. 2. **Extracellular enzyme -** they carry out their functions outside the cells. Examples are digestive enzyme.   **Characteristics of enzymes**   1. Enzymes are specific in action. 2. They remain chemically unchanged at the end of the reaction. 3. Their action is reversible. 4. They are required in small quantity. 5. They can function outside the body of the organism that produced them. 6. Enzyme act best over specific temperature range between 35 - 40 degree. 7. They act best at specific pH either acidic or alkalinity. 8. Enzymes are protein in nature. | The students ask questions for further clarification. | To create room for slow learners. |
| **Evaluation** | The teacher evaluates the students with the following questions;   1. Define dentition. 2. State and explain the types of dentition. 3. Explain the structure of the tooth. 4. State the formula adaptation of omnivorous, carnivorous and herbivorous. 5. Define enzyme and state at least 5 characteristics of enzyme. | The students attempt the questions. | To ascertain their level of understanding. |
| **Conclusion** | The teacher concludes by coping the note on the board. She checks and marks the note. | The students copy the note on the board. | For future use. |
| **Assignment** | 1. Draw the structure of a tooth and label fully. | The students did and submit their assignment for marking and correction. | To encourage the students to study at home. |



9th February, 2024

Deputy Head Instructor Admin

APPROVED!