**EMERALD ROYAL INTERNATIONAL SCHOOL, MPAPE ABUJA**

**LESSON PLAN AND NOTE FOR WEEK 3 ENDING 29TH SEPTEMBER, 2023**

**TERM: FIRST**

**WEEK**: **3**

**DATE** : **25TH- 29TH SEPTEMBER, 2023.**

**SUBJECT:** **BIOLOGY**

**CLASS : SS 1**

**TOPIC :**  **CLASSIFICATION OF LIVING THING**

**SUB - TOPIC: 1. kingdom fungi**

1. **Characteristics and examples of phyla fungi**
2. **Characteristics and examples of kingdom plantae.**

**PERIOD : 7th**

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

**DURATION : 40 minutes**

**AVERAGE AGE : 15 years**

**SEX:** **mixed**

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

1. State the characteristics of kingdom fungi.
2. State examples of kingdom fungi.
3. State the phyla, characteristics and examples of kingdom plantae.

**RATIONALE:** the students should understand the phyla, characteristics and examples of kingdom fungi and plantae.

**PREVIOUS KNOWLEDGE:** The students have been taught kingdom Monera.

**INSTRUCTIONAL MATERIALS:** chart showing the phyla, characteristics and examples of kingdom fungi and plantae.

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

**LESSON DEVELOPMENT**

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| **STAGES** | **TEACHER’S ACTIVITIES** | **STUDENTS’**  **ACTIVITIES** | **LEARNING POINT** |
| **INTRODUCTION** | The teacher introduces the lesson by reviewing the previous lesson. | The students were attentive. | To arouse the students interest. |
| **PRESENTATION**  **STEP 1** | The teacher states the characteristics of kingdom plantae. | The students pay attention. | To keep them focus. |
| **STEP 2** | The teacher asks the students to state the examples of fungi. | The students state the examples of fungi. | To encourage critical thinking. |
| **STEP 3** | The teacher explains the phyla, characteristics and examples of kingdom phyla. | The students were active. | To keep them focus. |
| **BOARD SUMMARY** | **KINGDOM: FUNGI** The fungi were for a long time classified with the plants. They however differ from plants in the composition of their cell walls. Most of their cell walls are made up of chitin rather than cellulose.  **Charactersitics** i. They are eukaryotes (i.e cells with membrane) ii. Some are unicellar e.g yeast while others are multicellular e.g mushroom iii. They have no true roots, stems and leaves. iv. They are non-green plants i.e they lack chlorophyll. v. They are mainly saprophytes while others are parasites. vi. They store excess food in form of glycogen vii. The vegetative body parts are made up of fine and delicate threads called hyphae. viii. They reproduce asexually by formation of spores and some sexually by conjugation. ix. Examples of fungi are bread mould, rhizopus, mushroom, mucor, mildews, yeast and toad stools. x. They are mainly found in moist environments.  Draw the diagram of Rhizopus, mushroom from your textbook. **KINGDOM: PLANTAE**  The plant kingdom considered of three main divisions (Phyla). These are: (a) Thallophyta e.g Green, brown, red algae (b) Bryophyta e.g Liverworts and Mosses (c) Tracheophyta e.g vascular plants  **Thallophyta** This group can be further be subdivided into three groupings. These are: i. Rhodophyta (Red algae) ii. Chlorophyta (Green algae) iii. Phaecophyta (Brown algae)  **Charactersitics of Thallophyta** i. These are simple microscopic plants ii. Some are unicellar, e.g Chlamydomonas, while others are multicellular, e.g Spirogyra. iii. These are simple aquatic plants iv. They have cellular cell walls. v. Algae are mainly autotrophic plants, i.e they can synthesize their own food vi. Algae are filamentous and the cells are not differentiated into tissues vii. Examples are the single free living algae like Chlamydomonas or in form of filaments, e.g spirogyra or in colonies e.g volvox.  Drwa a volvox, spirogyra from your textbook.  **Characteristics of Bryophyta** i. They are complex, multicellular green plants ii. Their cells are differentiated into tissues iii. They lack true roots, stems and leaves but have structures resembling roots, stems and leaves. iv. They are non-vascular plants v. They are usually found growing in moist places vi. Some Bryophyta are terrestrial while others are aquatic vii. Examples are mosses and Liverworts. Tracheophyta This division is made up of vascular plants. This division is grouped into two sub-divisions which include: (a) Pteridophyta (b) Spermatophyta  **Charactersitics of Pteridophyta** i. They are multicellular and vascular green plants ii. They are non-flowering plants. iii. They have true roots, stems and leaves iv. They have mainly terrestrial plants while few aquatic v. They are non-seed producing plants vi. Example is the ferns and it includes dryoptens, felimas and water ferns.  Draw a fern from your text book.  **Charactersitics of Spermatophyta** i. They are multicellular, seed producing flowering plants ii. They are vascular plants and have well developed vascular tissues iii. They have true roots, stems and leaves iv. They reproduce sexually and do not need water for reproduction v. They are mainly terrestial green plants. **Spermatophyta can be divided into** **two major classes**. These are Gymnosperms and Angiosperms   1. **Gymnosperms** **Charactersitics** i. These are plants with naked seeds ii. They do not bear flowers iii. They have true roots, stems and leaves iv. The seeds are borne on special structures called cones. v. They are vascular green plants vi. Examples are pine and cycads, gingkos and conifers.   Draw a pine tree from your text book.  **(b) Angiosperms** **Charactersitics** i. They are the most complex green flowering plants ii. They are vascular plants iii. They have well developed and complete flowers iv. They are seed plants with seeds enclosed in the fruit. v. They are mainly terrestial plants.  **Divisions of Angiosperms** Angiosperms can be subdivided into three classes according to the number of seed leaves (cotyledons). These are; i. Dicotyledonous plants ii. Monocotyledonous plants  **Dicotyledonous plants** **Charactersitics** i. They bear seeds which have two seeds leaves or cotyledons ii. The vascular bundles of each item are arranged in a regular pattern iii. Their floral parts exist in groups of four or five. iv. The leaves have veins arranged in branched network v. Examples are mango, orange, cowpea, groundnut, balsam plant etc.  Draw balsam plant from your textbook.  **Monocotyledonous plants** **Charactersitics** i. They bear seeds which have only one seed leaf ii. The vascular bundles of the stem are scattered iii. Their floral parts exist in groups of three or multiples of three iv. Their leaves have veins running parallel to one another. v. Examples are maize plants, rice, oil palm and guinea grass. **Modifications of leaves** The leaves of some plants are modified for various purposes. Such modifications are: i. For food storage: e.g Onion, Garlic ii. Leaf tendrils e.g Gloriosa iii. Leaf spines e.g Cactus, Optimal, Euphorbia iv. Leafhooks e.g Bignonia v. Vegetative propagation e.g Bryophyllum vi. Animal traps e.g Venus flytrap, Nepenthes or pitcher plants. Uticularia or Bladderworts, Sundew, Butterwort, Pinguicula. vii. Protective scale leaves e.g Onions, shallots canna. | The students ask questions for further clarification. | To create room for slow learners. |
| **Evaluation** | The teacher evaluates the students with the following questions:   1. State at least 5 characteristics of kingdom plantae. 2. State 3 examples of kingdom fungi. 3. State the phyla that makes up the kingdom plantae and state 3 characteristics of each phyla. 4. State 2 examples of each phyla. | 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. Write at least 5 differences between monocotyledonous and dicotyledonous plants. 2. Write at least 5 differences between the spermatophytes and Bryophytes. | The students did and submit their assignment for marking and correction. | To encourage the students to study at home. |

**29th September, 2023**

**DEPUTY HEAD INSTRUCTOR ADMIN**

**NB: Approved!**