DON BOSCO HIGH SCHOOL

LESSON 2 DIVERISITY IN THE LIVING WORLD

1. What is biodiversity?
Biodiversity is the variety of living organisms such as plants, animals, and microorganisms found on Earth.

2. Why is there diversity among living organisms?
There is diversity among living organisms because they live in different habitats and have different adaptations to survive.

3. What is a habitat?
A habitat is the natural place where an organism lives, grows, and reproduces.

4. Name the two main types of habitats.
The two main types of habitats are terrestrial habitats (land) and aquatic habitats (water).

5. What are adaptations?
Adaptations are special features or habits that help living organisms survive in their habitat.

6. Why are adaptations important?
Adaptations are important because they help organisms obtain food, protect themselves, reproduce, and survive in their surroundings.

7. What is leaf venation?
Leaf venation is the arrangement of veins and veinlets on the leaf blade.

8. What are the two types of leaf venation?
The two types of leaf venation are reticulate venation and parallel venation.

9. What is reticulate venation?
Reticulate venation is the arrangement of veins in the form of a network on the leaf. It is commonly found in dicot plants.

10. What is parallel venation?
Parallel venation is the arrangement of veins running parallel to one another from the base to the tip of the leaf. It is commonly found in monocot plants.

11. What is a herb?
A herb is a small plant with a soft, green, and tender stem.

12. Give two examples of herbs.
Mint and coriander are examples of herbs.

13. What is a shrub?
A shrub is a medium-sized plant with a hard, woody stem and many branches arising near the base.

14. Give two examples of shrubs.
Rose and hibiscus are examples of shrubs.

15. What is a tree?
A tree is a tall, woody plant with a thick trunk and branches arising high above the ground.

16. Give two examples of trees.
Mango and neem are examples of trees.

17. What is a climber?
A climber is a plant with a weak stem that needs support to grow upwards.

18. Give two examples of climbers.
Money plant and grapevine are examples of climbers.

19. What is a creeper?
A creeper is a plant with a weak stem that spreads along the ground.

20. Give two examples of creepers.
Pumpkin and watermelon are examples of creepers.

21. What is a root system?
The root system is the underground part of a plant that anchors it to the soil and absorbs water and minerals.

22. What are the two main types of root systems?
The two main types of root systems are tap root system and fibrous root system.

23. What is a tap root system?
A tap root system has one main root with smaller side roots growing from it.

24. Give two examples of plants with a tap root system.
Mustard and pea plants have a tap root system.

25. What is a fibrous root system?
A fibrous root system consists of many thin roots of almost equal size arising from the base of the stem.

26. Give two examples of plants with a fibrous root system.
Wheat and rice plants have a fibrous root system.

27. What are monocot plants?
Monocot plants are plants whose seeds contain one cotyledon. They usually have parallel venation and fibrous roots.

28. Give two examples of monocot plants.
Maize and rice are examples of monocot plants.

29. What are dicot plants?
Dicot plants are plants whose seeds contain two cotyledons. They usually have reticulate venation and a tap root system.

30. Give two examples of dicot plants.
Bean and pea are examples of dicot plants.

31. How can monocot and dicot plants be distinguished?
Monocot plants have one cotyledon, parallel venation, and fibrous roots, whereas dicot plants have two cotyledons, reticulate venation, and tap roots.

32. What are the adaptations of a fish?
A fish has a streamlined body, fins for swimming, gills for breathing in water, and scales that protect its body.

33. Why does a fish have a streamlined body?
A streamlined body helps the fish move easily through water.

34. How do fish breathe?
Fish breathe through gills, which absorb dissolved oxygen from water.

35. What are the adaptations of a camel?
A camel has a hump for storing fat, long legs, broad padded feet, long eyelashes, and closable nostrils to survive in the desert.

36. Why does a camel have broad padded feet?
Broad padded feet help the camel walk easily on loose desert sand without sinking.

37. Why does a camel have long eyelashes and closable nostrils?
Long eyelashes and closable nostrils protect the camel from blowing sand during sandstorms.

38. What are the adaptations of a cactus?
A cactus has leaves modified into spines, a thick green stem that stores water, and long roots to absorb water quickly.

39. Why are the leaves of a cactus modified into spines?
The leaves are modified into spines to reduce water loss through transpiration.

40. Why is the stem of a cactus thick and green?
The thick green stem stores water and carries out photosynthesis.

41. What are amphibians?
Amphibians are animals that can live both on land and in water.

42. Give two examples of amphibians.
Frog and toad are examples of amphibians.

43. Why are frogs called amphibians?
Frogs are called amphibians because they spend part of their life in water and part on land.

44. Name some terrestrial habitats.
Deserts, forests, mountains, and grasslands are examples of terrestrial habitats.

45. Name some aquatic habitats.
Ponds, lakes, rivers, seas, and oceans are examples of aquatic habitats.

46. How do plants adapt to their habitats?
Plants adapt to their habitats by developing special roots, stems, and leaves that help them survive in different environmental conditions.

47. Why do different plants have different types of roots?
Different plants have different types of roots because each root system is adapted to the plant's needs for support and absorption of water and minerals.

48. What is the relationship between leaf venation and root system?
Plants with reticulate venation usually have a tap root system, whereas plants with parallel venation usually have a fibrous root system.

49. Why is habitat important for living organisms?
A habitat is important because it provides food, water, air, shelter, and suitable conditions for survival.

50. Why should biodiversity be conserved?
Biodiversity should be conserved because it helps maintain ecological balance and ensures the survival of different species.