

Cellular Organisms

1 CHAPTER

How well do you know the cellular organisms? Take the quiz and find out. Give yourself 1 point for each correct answer.

1. Micro organisms were the _____ forms of life to develop on Earth.
 a. newest b. latest c. first d. largest
2. What element is essential for bacteria to survive?
 a. Nitrogen b. Sulphur c. Soil d. Liquid water
3. Unicellular organisms like bacteria grow in number by _____.
 a. cell division b. cell fusion c. fertilization d. fabrication
4. Name the giant unicellular organisms found throughout the world's oceans
 a. bacteria b. algae c. xenophyophores d. virus
5. Which of the following is a unicellular plant?
 a. Grass b. Fern c. Fungi d. Seed
6. The type of plant cells which can continue to conduct water in plants even after death.
 a. xylem b. phloem c. stomata d. none of the above
7. Which of the following cell organelles does NOT participate in cellular division?
 a. cytoplasm b. chromosomes c. ribosomes d. nucleus
8. The cell reproduction is controlled by the _____.
 a. endoplasmic reticulum b. mitochondrion c. centrosome d. nucleus
9. An animal cell differs from a plant cell (higher forms) due to the presence of
 a. chloroplasts b. centrioles c. plastids d. cell wall
10. The correct order of the following from the smallest to the largest is:
 a. cell, organ, tissue, organism b. organism, cell, tissue, system, organ
 c. cell, tissue, organ, system, organism d. organism, cell, tissue, organ, system



Botany

Look around you and you will find that there are plants of many types in your surrounding. You can see trees, grass, moss, ferns, flowers, shrubs and many more other types. There are plants all over our planet. Plants are classified in several different ways. Classification may be done according to its characteristics like growth on land or in water, green plants, plants bearing seeds or flowers, vascular plants etc. One common classification is based on seeds. Let's explore this category further.

Under this classification, plants are mainly classified into seeding and non-seeding types. Read the following descriptions given below about the various sub-divisions of plants and fill up the classification chart on your right. Please note that the descriptions are in random order.

Do You Know ?

The study of plants is called botany and the scientist who studies plants is a botanist.

Cryptogamia: This section of the plant kingdom includes all the plants that do not reproduce with the help of seeds.
Example: Algae, Bacteria and Moss.



Algae: Algae is a lower plant form that floats in water, or dwells in wet surroundings, and produces its own food. Sometimes it can also be found in soil, snow and ocean as well. They make their food with the help of the Sunlight. The difference between higher plants and algae is that plants have roots, stem, flowers where as algae looks very simple and has only one body part. It looks almost like moss or just a leaf.

Bryophyta: These are plants that are generally aquatic, and tend to be small and green. They are a combination of stout plants, flowerless spore-producing plants and moss. There are about 20,000 different types of bryophytes existing in the world and their sizes can vary from being invisible to almost a metre in length.

Phanerogamia: This section includes the higher plant forms, or those that produce seeds. They form the group with most number of different species, over 120,000 in number.



Pteridophyta: All those plants that are vascular in nature (having different tissues to transport water, minerals and other materials through the plant) and which cannot produce seeds come under pteridophyta.

Gymnospermae: The term comes from the Greek word which means 'naked seeds'. Here the seeds are not enclosed in an ovary at the time of growth like in other plants.

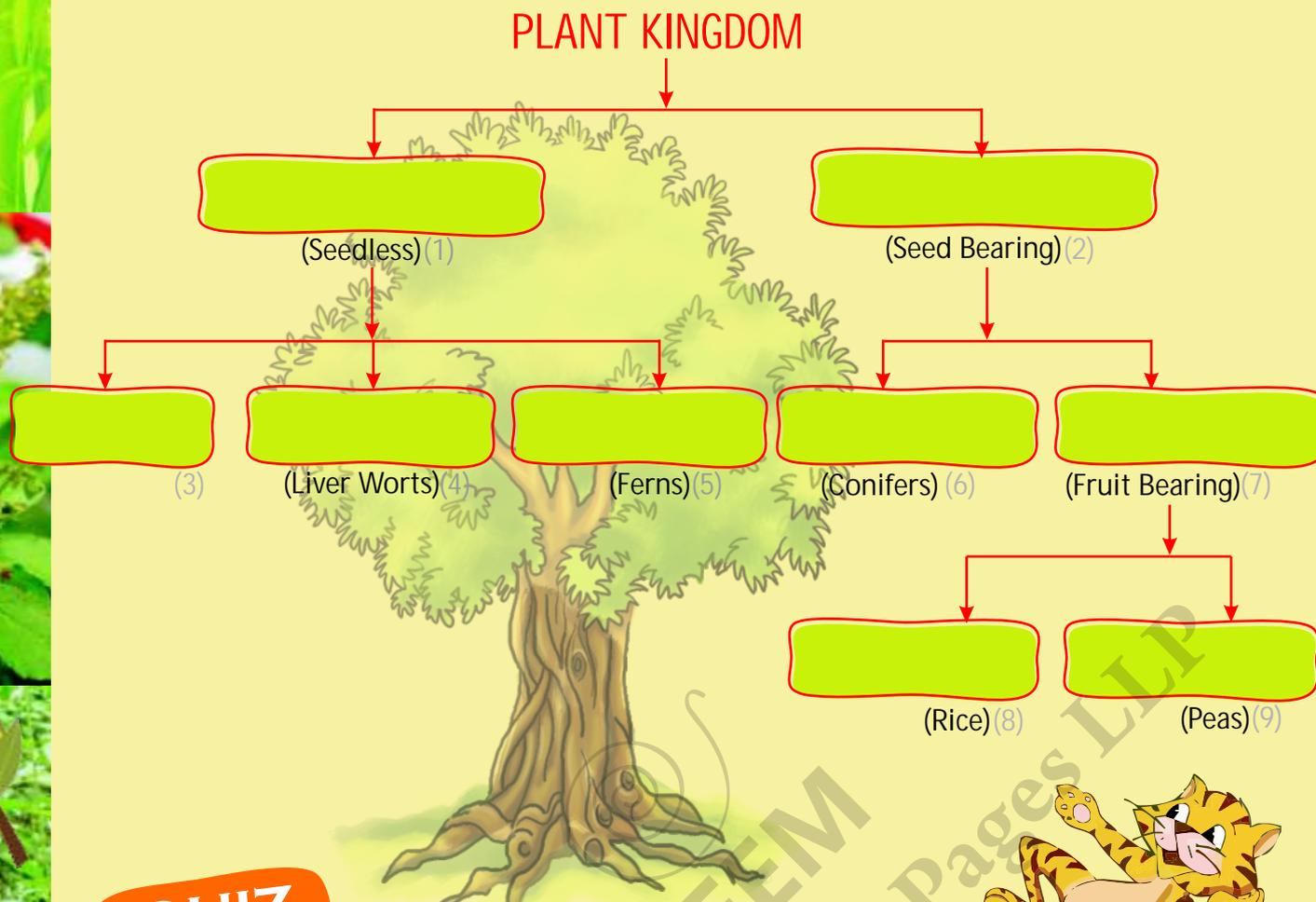
Angiospermae: Also known as Magnoliophyta, these are the most diverse group of land plants. Their main characteristic is the presence of flowers, and they are the exact opposites of Gymnospermae.

Monocots: The seeds produced by these plants have only one cotyledon (seed leaf). Also, the leaves have a parallel venation.

Dicots: The seeds produced by these plants have embryos with two cotyledons. Their leaves have a reticulate venation with a network of veins.



Classification of Plants



QUIZ

1. is a non-flowering plant. (Spirogyra / Conifer)
2. Mango plant would be . (Angiosperms / Gymnosperms)
3. Plants that have 'highways' for transporting water, minerals etc, inside their stems are called . (Vascular / Non-vascular)
4. Ferns have leaves, stems, and roots like flowering plants. (True / False)
5. Flowerless, seedless and vascular plants are called . (Bryophyta / Pteridophyta)
6. are called the amphibians of the plant kingdom. (Bryophyta / Pteridophyta)
7. Highly evolved plants that have reproductive organs aggregated in a flower are (Angiosperms / Gymnosperms)
8. The Rose plant would be an example of . (monocot / dicot)



Amazing Animals



Let's meet some amazing animals. Read about them and identify them.



This African buffalo is among the five most dangerous animals of Africa. It can stalk and kill human beings, tip a car or overturn a vehicle. It can also kill a lion even if unprovoked.

1.



Though it is a small furry mammal measuring up to 7 inches only, it is very poisonous. Upon being bitten by it, failing to take the antidote within twenty four hours can cause death.

2.



This cute, cuddly rodent measures from 2 inches to 7 inches. It has such a poor vision that it can only see up to six inches in front. It has the shortest gestation period among all mammals. A single pair can give rise to a population of several thousand within a single year!

3.



Also known as the African Pig, it is known for wart-like growths on its face. It is called the 'back-end first' animal, as it enters its burrow with the head always facing the opening.

4.



This animal has a membrane of skin between its legs, which is used to glide between trees. It is a nocturnal creature and does not hibernate, but migrates to areas with more food. It is characterised by its dark red colouring and large eyes.

5.



It is the world's largest living rodent. It is found in Central and South America. They grow up to 4.3 feet in length and weigh about 65 kilograms. They have no tail.

6.

Help!

Giant Flying Squirrel Weasel

Warthog Capybara

Cape Buffalo Hamster