



FLORENCE INTERNATIONAL SCHOOL  
CLASS- VII  
WORKSHEET NO: 14  
SCIENCE

NAME:

DATE: 17/04/2020

TOPIC: NUTRITION IN PLANTS

Please follow the previous link and learning content before attempting the worksheet.

**KEYWORDS**

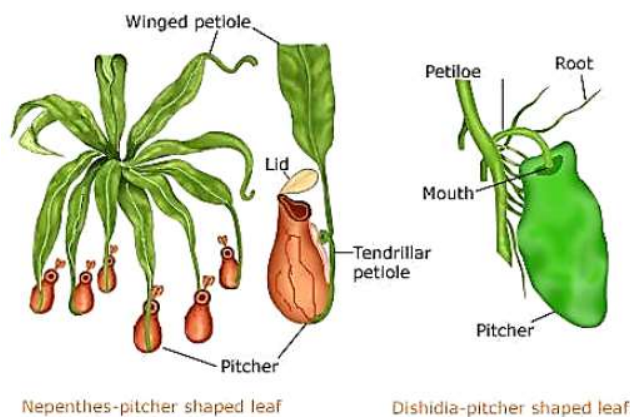
**Nutrition in Plants that do not contain Chlorophyll**

Plants which do not contain chlorophyll depend on other living organisms for their food. Thus, the plants which do not contain chlorophyll are heterotrophs and their mode of nutrition is heterotrophic.

**1. Parasitic Plants** - Some plants live on another plant for their nutrition. These are called parasites. The plants on which these parasitic plants survive are called the host. For Example, cuscuta is a parasitic plant.



**2. Insectivorous Plants** - Some plants depend upon insects for the food and thus are called **Insectivorous**. The leaves of these plants are modified into a pitcher like structure. The top part of the leaves acts as a lid which can open and close the pitcher. The pitcher contains hair in a downward direction which traps the insects. The pitcher on capturing the insect secretes some digestive juices which help in the digestion of the insect. For Example, Dischidia and Nepenthes



Nepenthes-pitcher shaped leaf

Dischidia-pitcher shaped leaf

**3. Saprotrophs** - Some organisms survive on decaying food and organisms. This mode of nutrition is called saprotrophic nutrition and the organisms that survive because of the saprotrophic nutrition are called **Saprophytes**.

### Saprophytes obtain their nutrition

- The saprophytes secrete digestive juices on the decaying and dead matter.
- These juices convert the matter into a solution.
- The saprophytes that absorb the nutrients from the solution.

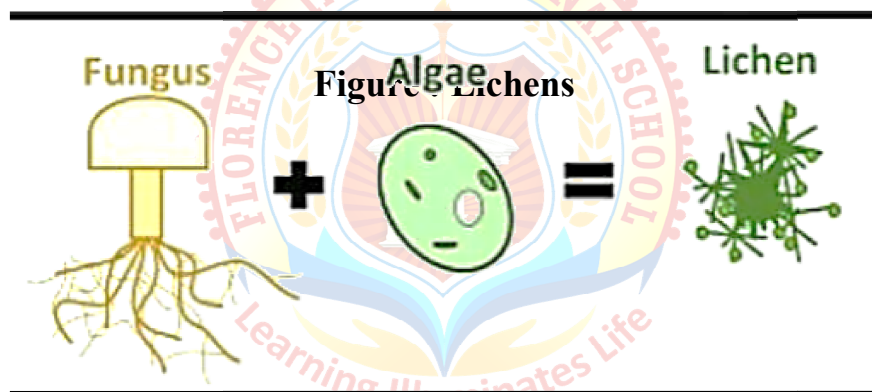
For Example, Fungi (yeast and mushrooms) are a saprophytes that can be found on stale food and pickles which are exposed to the hot and humid environment.



**4. Symbiotic Relationship** - Sometimes organisms live together to share shelter and food with each other. These are said to have a symbiotic relationship.

Examples of organisms living in a symbiotic relationship:

- Some fungi live in the roots of the trees. These fungi take food from the trees and in return help the trees in absorbing water and nutrients from the soil.
- Sometimes an organism that contains chlorophyll such as algae lives in association with a fungus (together called as **Lichens**). The algae provide food and nutrition to the fungus while the fungus provides water, minerals and shelter to the algae.



### Replenishing the Soil with Nutrients

- Plants get their nutrients from the soil mainly hence there is a need to replenish the soil again with nutrients so that the plants can survive on it.
- Fertilizers and manure are often used to replenish the soil with the nutrients. They contain potassium, phosphorus and nitrogen all of which are important for the plants.
- A **bacterium called Rhizobium** is present in the soil which can convert nitrogen present in it in the form that can be consumed by the plants.
- The rhizobium generally lives in the roots of the plants such as peas, beans, grams and legumes and provides nitrogen to these plants. This again is an example of a symbiotic relationship. The farmers often do not need to use fertilizers while growing such crops.

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**Q1. What are insectivorous plants? Give example?**

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**Q2. What are saprophytes? Give examples?**

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**Q3. What do you understand by term symbiosis?**

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**Q4. Explain the symbiotic relationship of Rhizobium bacteria and leguminous plants?**

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