



**GUIDELINES:**

Dear Students

- Refer to the following content of the chapter: **NUTRITION IN PLANTS.**
- These notes will help you understand the concept of the lesson and complete the assignment that follows, which will be graded on submission.
- Do the assignment questions in the science notebook
- You may follow the given link to refer to class 7 science ncert  
<http://www.ncert.nic.in/textbook/textbook.htm?gesc1=1-19>

**SUB-TOPICS:-**

**# OTHER MODES OF NUTRITION IN PLANTS**

- Parasitic
- Insectivorous
- Saprophytic
- Symbiotic

**# OTHER MODES OF NUTRITION IN PLANTS:**

- Some plants do not contain chlorophyll and depend on other plants for their food through the heterotrophic mode of nutrition.
- These type of nutrition in plants are referred to as **Heterotrophic nutrition** in plants, hence are called parasites.

**Heterotrophic Plants**

Listed below are different types of heterotrophic plants that are mainly classified based on their mode of nutrition:

- Parasitic
- Insectivorous
- Saprophytic
- Symbiotic

**# Parasitic Nutrition**

- Some heterotrophic plants depend on other plants and animals for nutrition. Such plants are known as parasitic plants.
- However, the host (the one on which the parasite grows) is not benefitted from the parasite. (the one which obtains nutrition from a live host)

For example:- *Cuscuta* (Dodder plant/Amarbel).



*Cuscuta* growing on a host plant

Now, watch the video shared below through the given link. This video will help you to know more about parasitic plant *Cuscuta*.

<https://www.youtube.com/watch?v=KPsjJRGaC1I>

### **#Insectivorous Nutrition**

- Some plants have special structural features that help them to trap insects and are commonly known as carnivorous or heterotrophic plants.
- These plants digest the insects by secreting digestive juices and absorb the nutrients from them.

For example- Pitcher plant, Venus flytrap

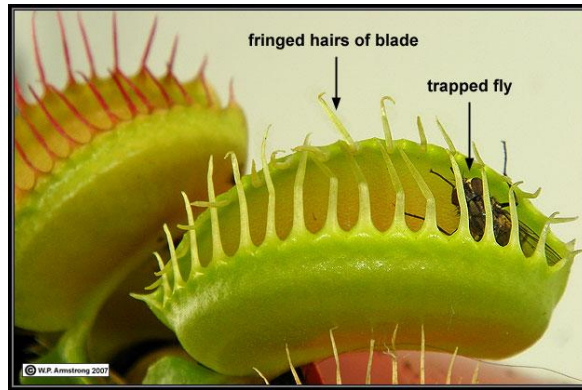
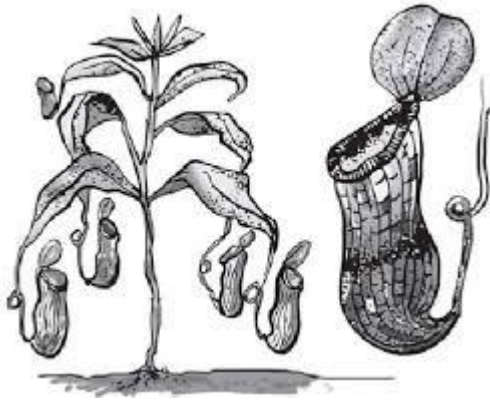
**Fact:** These types of plants are green and carry out photosynthesis to obtain a part of food.



I WONDER THAT IF  
INSECT EATING PLANTS  
CAN PHOTOSYNTHESISE,  
THEN WHY DO THEY  
CATCH INSECTS?

**OKAY!**

It is because these plants grow on soil that lacks minerals like: nitrogen.



Now, watch the video shared below through the given link. This video will give you detailed information about various insectivorous plants.

<https://www.youtube.com/watch?v=4yvUjw2-jl>

### # Saprophytic Nutrition

- The saprophytic organisms / saprotrophs derive nutrition from dead and decaying plants and animals.
- They dissolve the dead and decaying matter by secreting digestive juices and absorb the nutrients.

For example, mushrooms, moulds. (Fungi)

. Now, watch the video shared below through the given link. This video will give you detailed information about various insectivorous plants.



Boojho says once his grandfather told him that his wheat fields were spoiled by a fungus. He wants to know if fungi cause diseases also. Paheli told him that many fungi like yeast and mushrooms are useful, but some fungi cause diseases in plants, animals including humans. Some fungi are also used as medicines

### ACTIVITY TIME

Now, watch the video shared below through the given link. This video shows you an experiment on topic 'how you can grow mould (fungus) on food items.'

<https://www.youtube.com/watch?v=LUBXUgoGM98>

### **# Symbiotic Nutrition**

- When two different plants belonging to two different categories show a close association, they are termed **as symbiotic**.
- In this, both the plants are benefitted from each other.

For example :- 1. The association of fungi and trees' roots.

2. Association of fungi with algae. (called Lichen)

**Now , watch the video shared below through the given link. This video will help you understand more about symbiosis and lichens, along with a visual interpretation of the concept:**

[https://www.youtube.com/watch?v=4\\_cgm6kh0ns](https://www.youtube.com/watch?v=4_cgm6kh0ns)

### **ASSIGNMENT:**

Q1.MCQs:-

i.Pitcher plant traps insects because it

- (a) is a heterotroph.                      (b) grows in soils which lack in nitrogen.  
(c) does not have chlorophyll.      (d) has a digestive system like human beings.

ii. The term that is used for the mode of nutrition in yeast, mushroom and bread-mould is

- (a) autotrophic      (b) insectivorous      (c) saprophytic      (d) parasitic

iii. Two organisms are good friends and live together. One provides shelter, water, and nutrients while the other prepares and provides food. Such an association of organisms is termed as:

- (a) saprophyte      (b) parasite      (c) autotroph      (d) symbiosis

Q2. Distinguish between the following in one point each:

- (a) Parasite and Host  
(b) Saprophytic and Symbiotic nutrition

Q3.Draw the diagram of a pitcher plant and explain how it traps an insect.

Q4. Write a short note on lichens.