

Chapter 6

LIFE PROCESSES

Nutrition is the process of taking food by an organism and its utilisation by the body to build the body, for growth, to repair the damaged parts of the body and for energy.

- Life on earth depends on carbon based molecules and most of the food are also carbon based molecules. The outside raw materials used by living organisms are food, water and air.

a) Modes of nutrition: There are two main modes of nutrition. They are autotrophic nutrition and heterotrophic nutrition.

i) **Autotrophic nutrition:** is nutrition in which organisms prepare their own food from simple inorganic substances like carbon dioxide and water in the presence of sunlight and chlorophyll.

E.g., all green plants and some bacteria.

ii) **Heterotrophic nutrition:** is nutrition in which organisms get their food directly or indirectly from other living organisms.

E.g., All animals fungi and some bacteria.

b) Types of heterotrophic nutrition: There are three main types of heterotrophic nutrition. They are saprophytic, parasitic and holozoic nutritions.

i) **Saprophytic nutrition:** is nutrition in which organisms get their food from dead and decaying organisms. They break down the food material outside their body and then absorbs it.

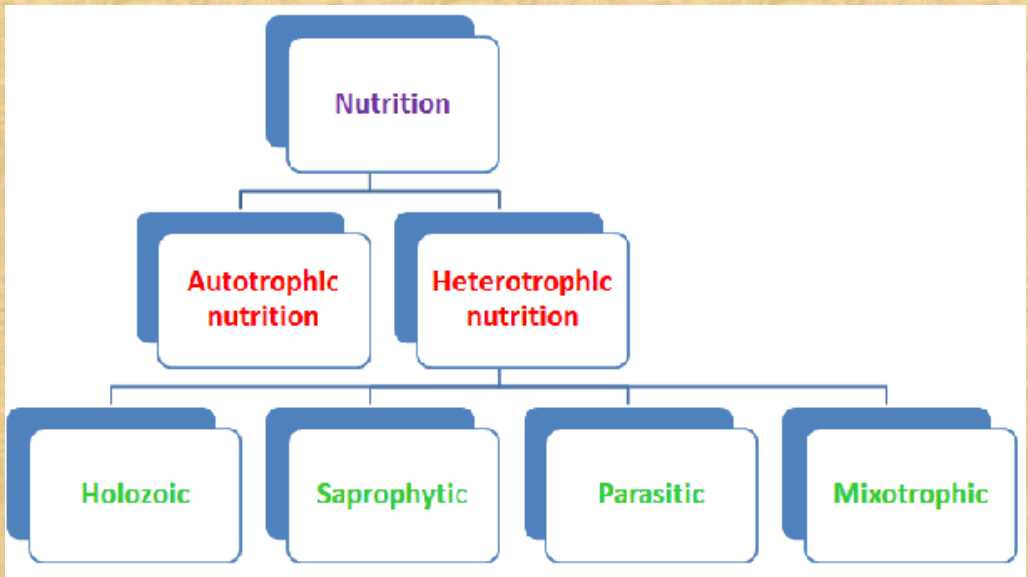
E.g., mushroom, bread mould, yeast, some bacteria etc.

ii) **Parasitic nutrition:** is nutrition in which organisms get their food from living organisms (host) without killing them.

E.g., cuscutea, orchids, ticks, lice, leeches, round worm, tape worm, plasmodium etc.

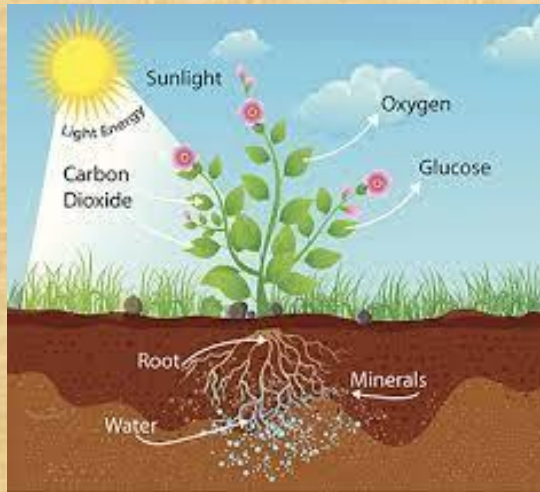
iii) **Holozoic nutrition:** is nutrition in which organisms take food directly and then digest and absorb it.

E.g., amoeba, paramecium, birds, fishes, humans etc.

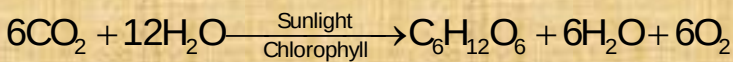


Nutrition in plants:

Photosynthesis is the process by which plants prepare food by using carbon dioxide and water in the presence of sunlight and chlorophyll.



Equation of photosynthesis:



Process of photosynthesis:

Photosynthesis takes place in three main steps. They are,

- i) Absorption of light energy by chlorophyll.
- ii) Conversion of light energy into chemical energy and splitting up of water molecules into hydrogen and oxygen.
- iii) Reduction of carbon dioxide by hydrogen to form carbohydrates.