

UNIT-3

LECTURE - 2

ECOSYSTEM

Structure of an Ecosystem

➤ Living (Biotic) Components

- Producers
- Consumers
- Decomposers

➤ Non-living (Abiotic) Components

- Physical factors
- Chemical factors
- Limiting factors

Biotic Components of Ecosystems

- **Producers (or autotrophs)**

Green plants and some bacteria which manufacture their own food.

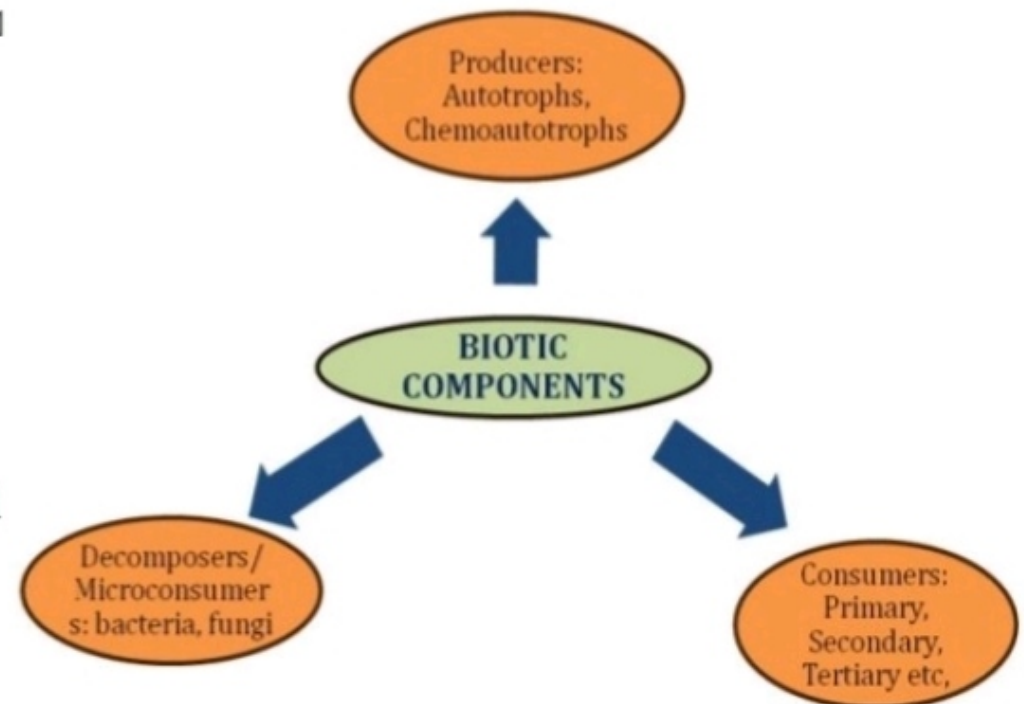
- **Consumers (or heterotrophs)**

Animals which obtain their food from plants

- Primary consumers
- Secondary consumers
- Tertiary consumers

- **Decomposers**

Bacteria and fungi that decompose dead organic matter and convert it into simpler parts



- herbivore

any animal that eats only vegetation (i.e. that eats no meat)

- carnivore

any animal that eats meat as the main part of its diet

- omnivore

an animal which is able to consume both plants (like a herbivore) and meat (like a carnivore)

Abiotic Components of an Ecosystem

Physical Factors


Rainfall
Humidity
Temperature
Nature of soil
Water currents
Sunlight

Chemical Factors

Percentage of Water and air in soil
Salinity of Water
Oxygen dissolved in water
Nutrients present in soil

Limiting Factors

Food, water, shelter and space are limiting factors for the growth of population of human and animals.



Functions of an Ecosystem

- **Food chain and food web**
 - **Energy flow**
 - **Ecological pyramids**
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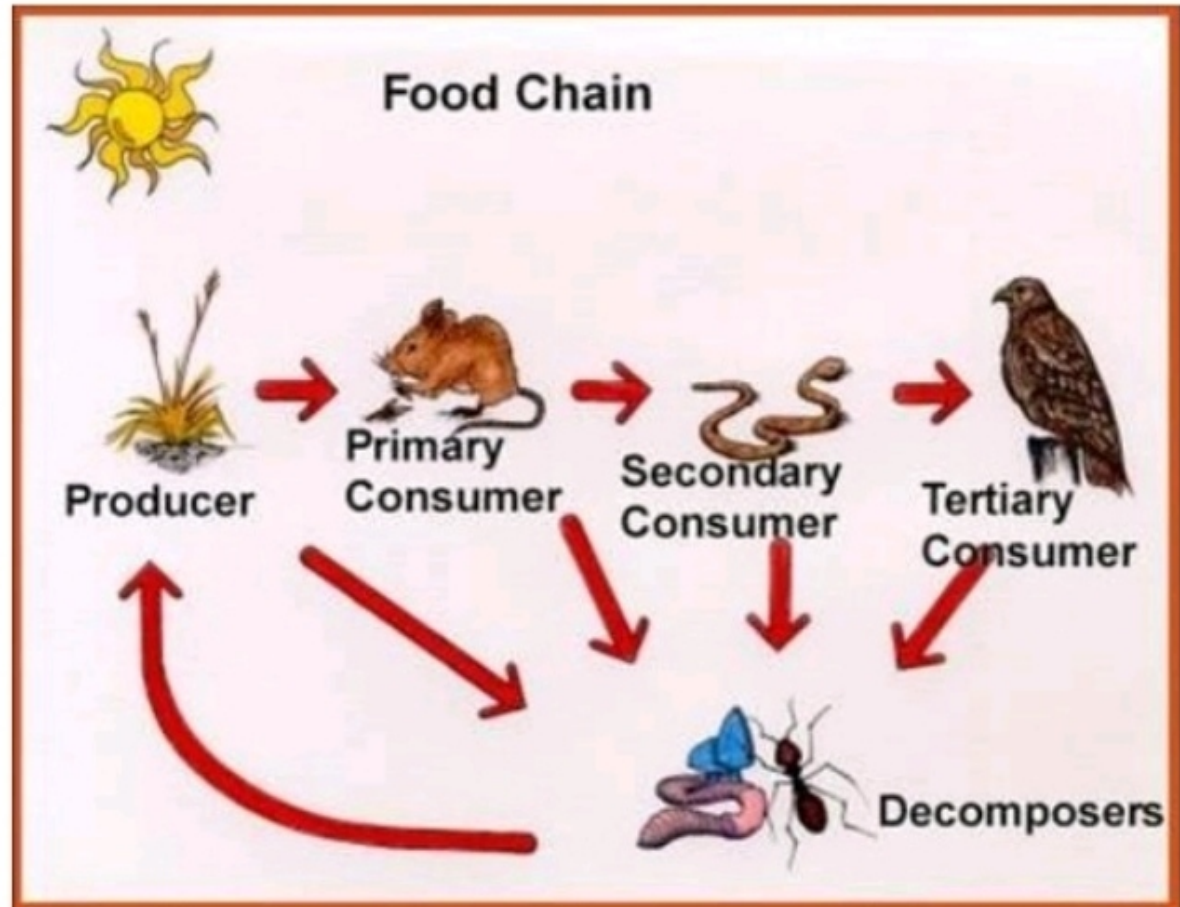
The interlocking pattern formed by several food chains that are linked together is called a *food web*.

Food Chain

- A series of organism by repeated **eating and being eaten up** is referred as **food chain**.

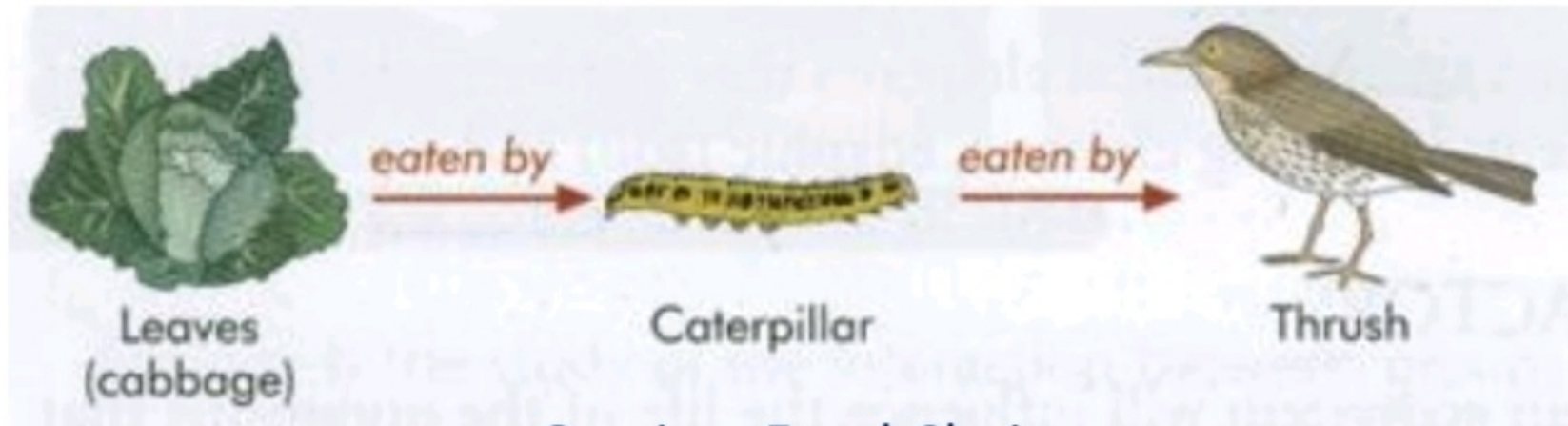
Types:

- Grazing food chain-a common chain
- Detritus food chain-chain derived by the organic wastes and dead matter from grazing food chains



The process of eating and being eaten

Grazing and Detritus Food Chain



Grazing Food Chain



Detritus (**Dead organic matter**) Food Chain

The Producers

- **Producers are the beginning of a simple food chain. Producers are plants and vegetables.**



The Producers

- All energy comes from the Sun and plants are the ones who make food with that energy.
- They use the process of photosynthesis.
- Plants also make loads of other nutrients for other organisms to eat.



The Consumers

- Consumers are the next link in a food chain. There are three levels of consumers.
- Primary
- Secondary
- Tertiary

