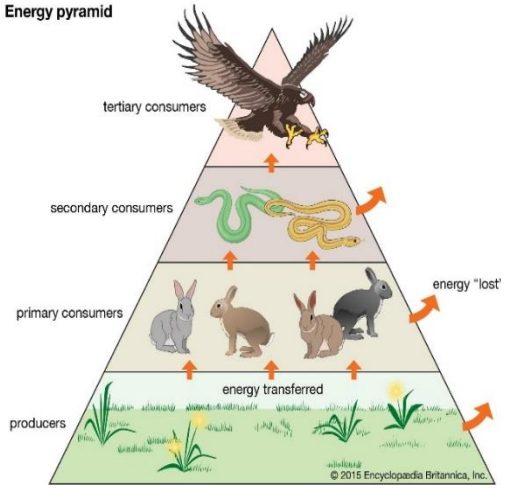
ECOSYSTEM - is a system consisting of biotic(Living) and abiotic(Non-Living Like Water, Light, Soil etc) components that function together as a self-sustaining unit.
E.g.- **Natural ecosystem** – forest, pond, lake **Man-made (artificial ecosystem)**- crop fields, garden.



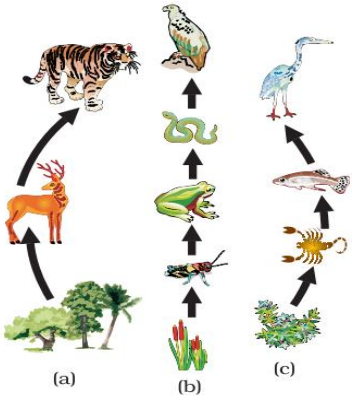
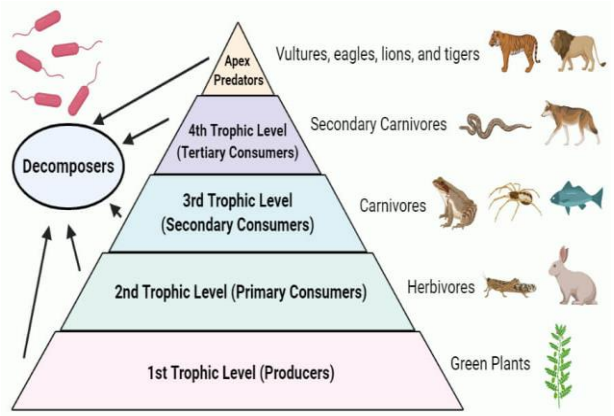


Figure 13.1 *Food chain in nature (a) in forest, (b) in grassland and (c) in a pond*

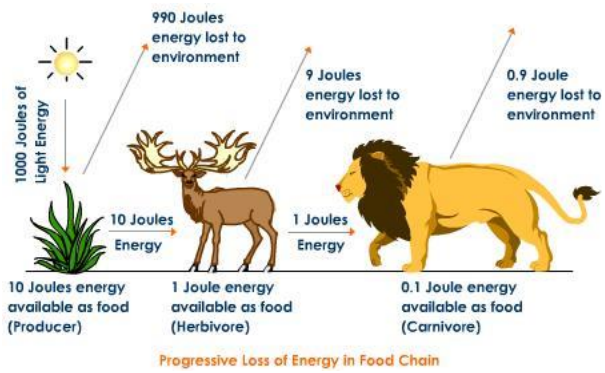
Trees	Grass	Phytoplankton
Deer	Grasshopper	zooPlankton
Lion	Frog	Small Fish
	Snake	Large Fish
	Eagle	Crane
TERRESTRIAL		AQUATIC

FOOD CHAIN-The sequence of living organisms in a ecosystem in which one organism consumes another organism to transfer food energy, is called a food chain.

PRODUCER	autotrophic, perform photosynthesis	green plants, blue green algae	Converts Solar Energy into Food Energy
CONSUMER	Depends on Producer directly or indirectly for energy.	I. Herbivores – deer ii- Carnivores – lion iii- Omnivores – cat iv- Parasites – Mosquito	Transfers energy from Producer to different animals.
DECOMPOSER	feed on dead and decomposed products	E.g. fungi, bacteria	Break Don Organic matter, recycle minerals & release into soil, Recycling of material

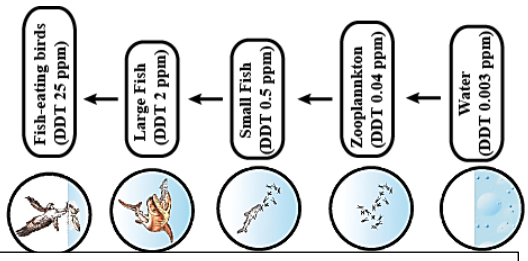


FOOD PYRAMID- It is graphic representation of food chain. It may be formed as, depicted as a pyramid having a broad base formed by producers and tapering to a point formed by end consumers.

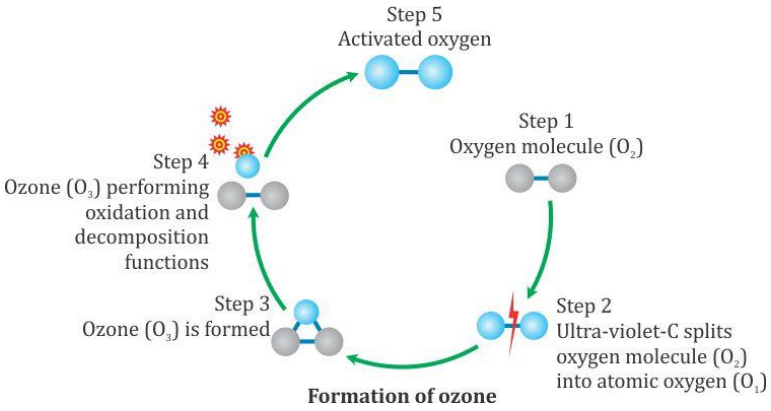


The 10% Rule means that when energy is passed in an ecosystem from one trophic level to the next, only ten percent of the energy will be passed on. Plant receives 1% energy from Sun.

BIOMAGNIFICATION : Progressive accumulation of toxic pollutants/ non-biodegradable substances at successive higher trophic level is called as bio magnification.



OZONE LAYER (O_3)



Ozone at the stratosphere is a product of UV radiation acting on oxygen (O2) molecule.

- **The higher energy UV radiations split apart some molecular oxygen (O2) into free oxygen (O) atoms. These atoms then combine with the molecular oxygen to form ozone**
- **The ozone layer depletion takes place at higher rate. The major cause is chlorofluorocarbons (CFCs) which are used as refrigerants and in fire extinguishers.**

BIODEGRADABLE AND NON BIODEGRADABLE WATSES

Bio degradable waste	Non bio degradable waste
1. The wastes decompose naturally in the environment.	The wastes do not decompose naturally.
2. They are safe for the environment.	They are harmful to the environment and create pollution.
3. The wastes are made up of natural ingredients.	The wastes are made up of synthetic materials.
4. They can be constantly reused.	They cannot be recycled.
5.Biodegradable substances persist for small time interval in the environment.	Non biodegradable substances persist for longer time in the environment.
6. Example – waste papers, wood crumbles.	Example – plastic bags, cans, disposable bottles.

Light is the form of energy that provides sensation of vision.