

## SCIENCE

### FOOD WEB

#### Food Web :

- In nature, the food chains are not isolated sequences but are rather interconnected with one another.
- " A network of food chains which are interconnected at various trophic levels, so as to form a number of feeding connections amongst different organisms of a biotic community is called as food web".
- The food web opens several alternate pathways for the flow of energy.
- The food web increases the stability of an ecosystem by providing alternate source of the food and allowing endangered population to grow in size.
- Many food chains are interlinked together to form a food web in a big ecosystem in which flow of food takes place through many directions such as forest.

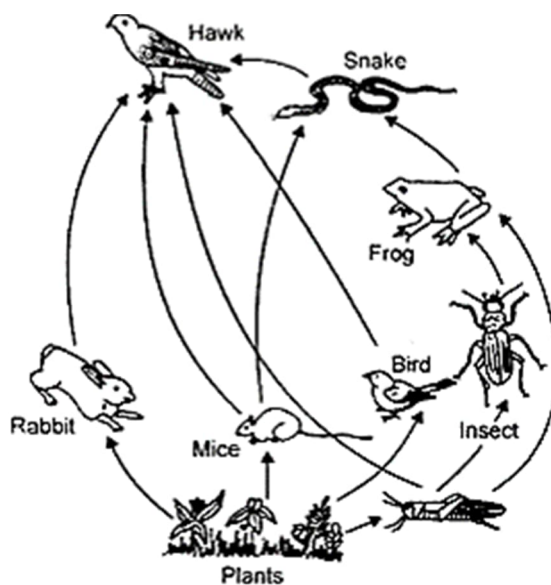


Fig.: A simple food web in a grassland ecosystem (showing seven interconnected food chains)

- As much as food web complexes the ecosystem become more permanent or stable, such type of ecosystem does not degenerate naturally and continues for longer time period.
- Any attack or cutting of plants can causes the destruction of whole ecosystem, e.g. Gondwana forest is converted into the desert by the activity of men.
- This is the example of desertification by men.

S.No.	Food Chain	Food Web
1	The sequence of eating and being eaten among the living organisms to transfer food energy is called food chain	It is a system of interconnected food chains. The network of food chains develop a relationship between various organisms.
2	It is having 4-5 populations (trophic levels) of different species.	It is having numerous populations of different species.
3	It is a part of food web.	It contains many food chains
4	Food chains do not help in increasing population of endangered species.	Food web helps in increasing the population of endangered species.

## MANAGING THE GARBAGE WE PRODUCE

- (a) Various sources of wastes : Industrial wastes : Many organic compounds ,heavy metals , CO<sub>2</sub> & SO<sub>2</sub> Domestic wastes : Sewage of sanitary facilities. Agricultural wastes : Chemical fertilizers, insecticides Commercial wastes : Building wastes, printing press wastes & biomedical wastes.
- (b) Type of wastes : (i) Biodegradable waste. (ii) Non-Biodegradable waste.

## DEPLETION OF OZONE LAYER

### OZONE GAS

Ozone is poisonous in nature.

- ❖ Ozone is formed in atmosphere by the action of ultraviolet radiation on oxygen gas.
- ❖ The high energy ultraviolet radiation (UV radiation) coming from the sun splits oxygen gas into free oxygen atoms  

$$\text{O}_2 \rightarrow 2\text{O} \text{ (oxygen atom)}$$
- ❖ The free oxygen atoms are highly reactive. One oxygen atom reacts with an oxygen molecule to form an ozone molecule.

$O_2 + O \rightarrow O_3$  (Ozone molecule)

❖ **OZONE LAYER**

It is a layer of the earth's atmosphere, where ozone is concentrated. The Ozone layer is very important for the existence of life on earth because it absorbs most of the harmful ultraviolet radiation coming from the sun and prevents them from reaching the earth.

**The thinning of ozone layer is commonly called ozone depletion.** Ozone is being depleted by air pollutants. Chlorofluorocarbons (CFCs) are air pollutants that are mainly responsible for the depletion of ozone layer in the stratosphere. Besides, methane ( $CH_4$ ) and oxides of nitrogen ( $NO_x$ ) also cause destruction of ozone.

**EFFECT OF OZONE DEPLETION**

- (i) Ultra violet radiations cause skin cancer.
- (ii) These cause damage to eyes and also can cause increased incidence of cataract disease in eyes.
- (iii) These cause damage to immune system by lowering the body's resistance to diseases.