

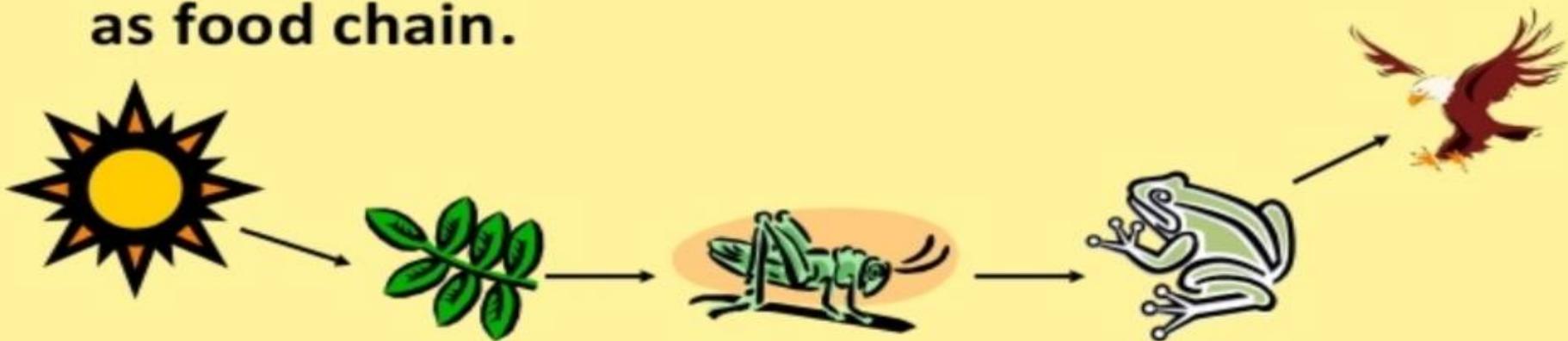
FOOD CHAINS



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What is Food Chain?

Flow of energy in an ecosystem is one way process. The sequence of organism through which the energy flows, is known as food chain.



Important facts

- In a food chain each organism obtains energy from the one at the level below.
- Plants are called **producers** because they create their own food through photosynthesis
- Animals are **consumers** because they cannot create their own food, they must eat plants or other animals to get the energy that they need.

Tropic levels in a food chain

□ **Producers**

□ **Consumers**

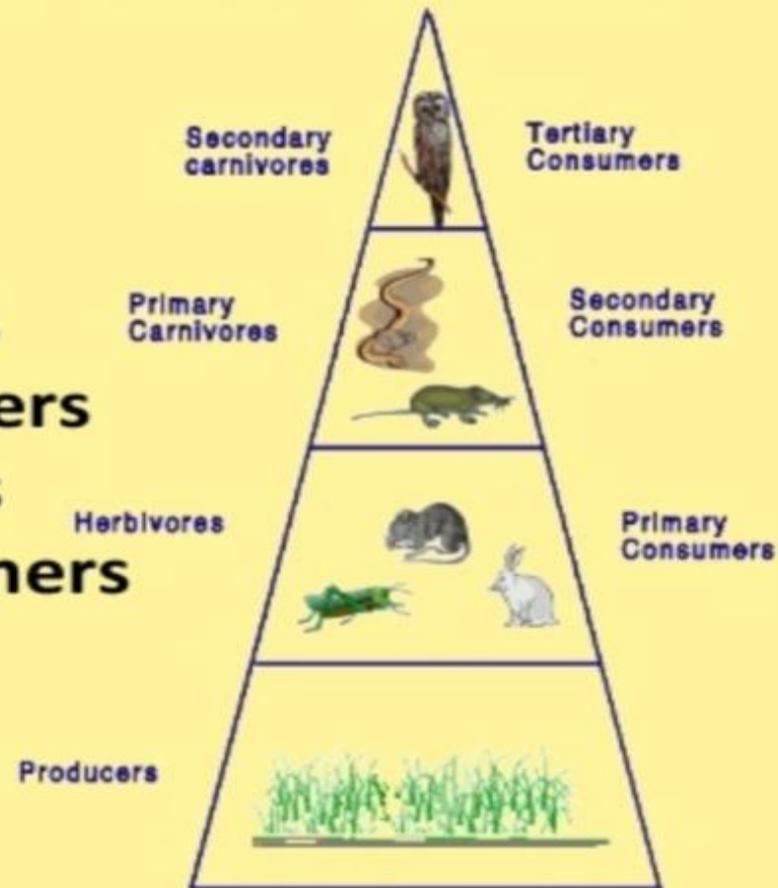
(i) **Primary consumers**

(ii) **Secondary consumers**

(iii) **Tertiary consumers**

(iv) **Quaternary consumers**

□ **Decomposers**



Types of Food Chain

(i) Grazing Food Chain

- The consumers utilizing plants as their food, constitute grazing food chain.
 - This food chain begins from green plants and the primary consumer is herbivore.
 - Most of the ecosystem in nature follows this type of food chain.
- Ex: grass => grasshopper => birds => falcon

Grazing Food Chain

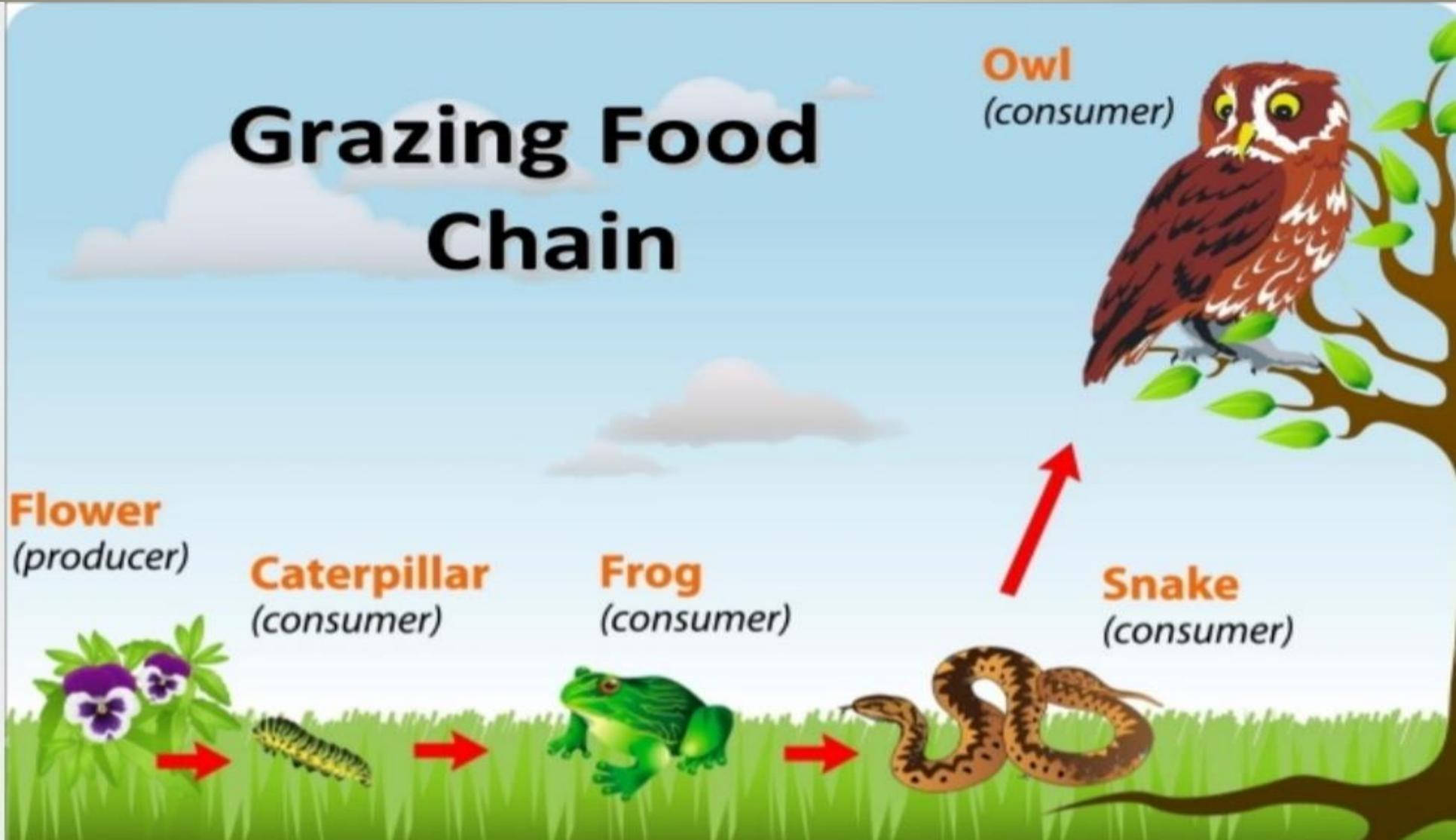
Flower
(producer)

Caterpillar
(consumer)

Frog
(consumer)

Snake
(consumer)

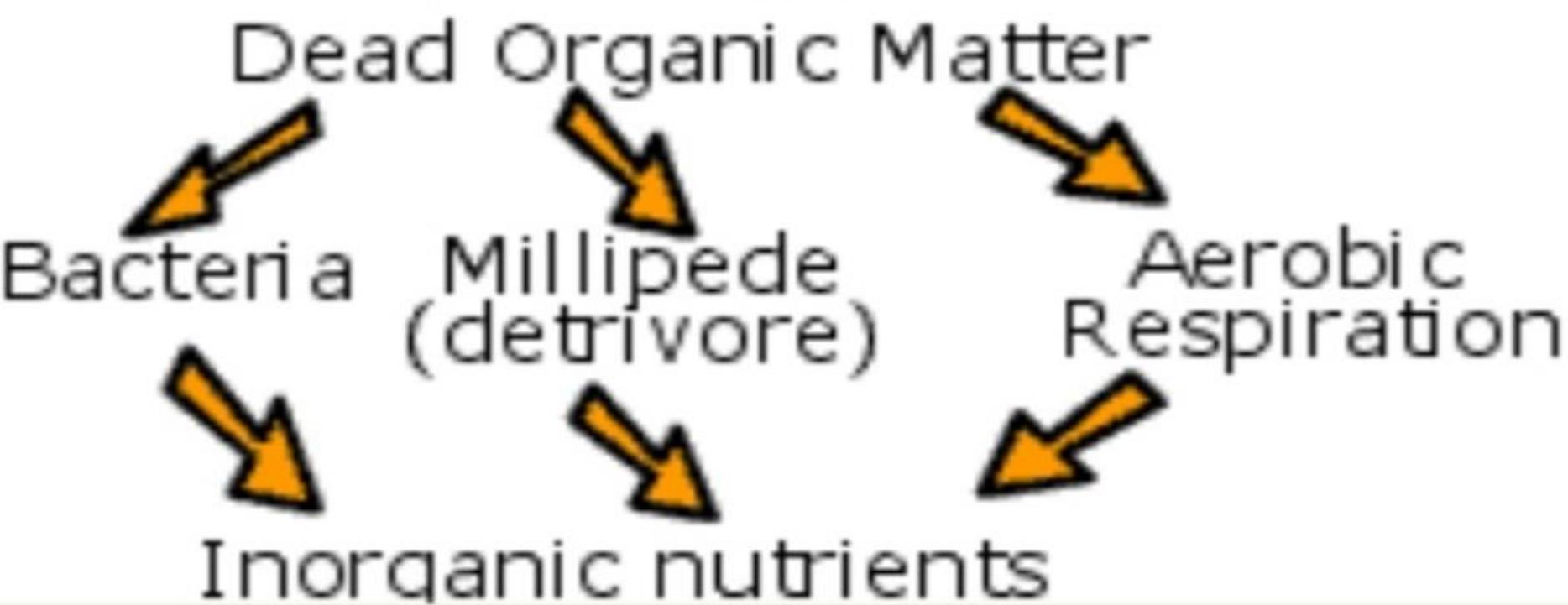
Owl
(consumer)



(ii) Detritus food chain

- This type of food chain starts from dead organic matter of decaying animals and plant bodies to the micro-organisms and then to detritus feeding organism and to other predators.
- The food chain depends mainly on the influx of organic matter produced in another system.
- The organism of the food chain includes algae, bacteria, fungi, protozoa, insects, nematodes etc.

Detritus Food Chain



Significance of Food Chain

- The knowledge of food chain helps in understanding the feeding relationship as well as the interaction between organism and ecosystem.
- It also help in understanding the mechanism of energy flow and circulation of matter in ecosystem.
- It also helps to understand the movement of toxic substance and the problem associated with biological magnification in the ecosystem.



FOOD WEBS

The Soil Food Web



Plants shoots & roots.



Organic matter



Mycorrhizae



Fungi



Bacteria



Earthworms



Protozoa

Nematodes - root feeders.



Arthropods - shredders



Nematodes - fungal/bacterial feeders



Arthropods - predators



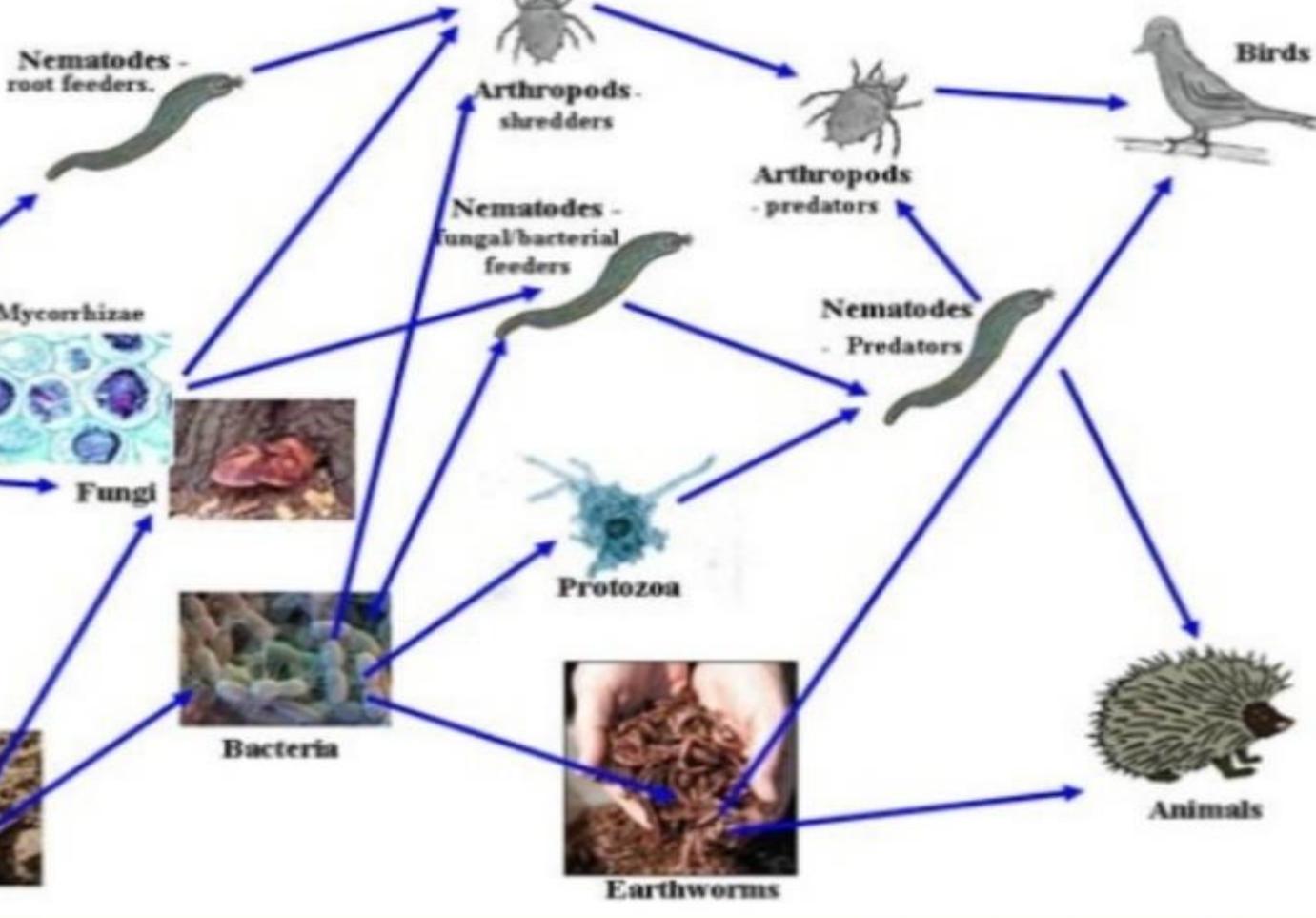
Nematodes - Predators



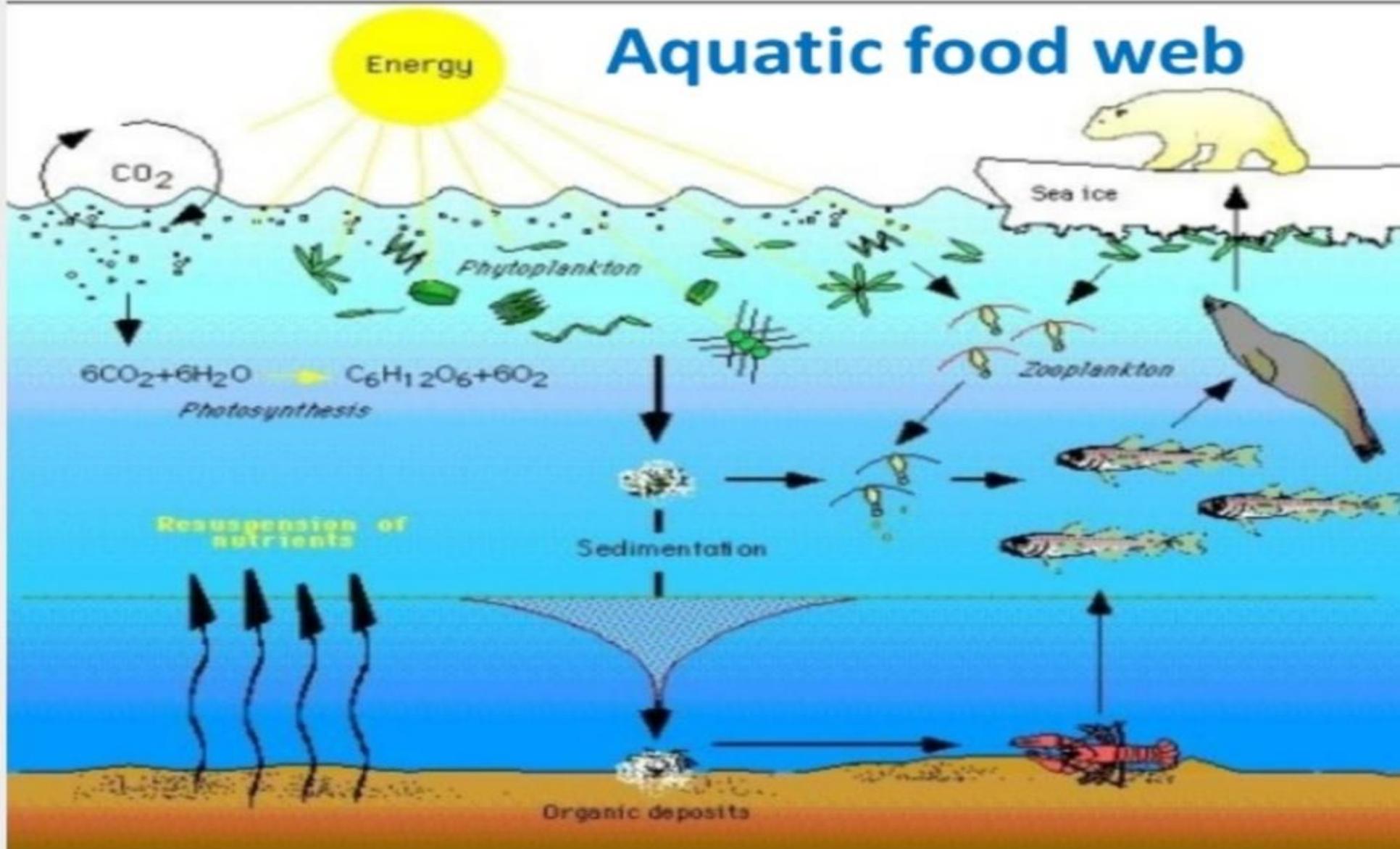
Birds



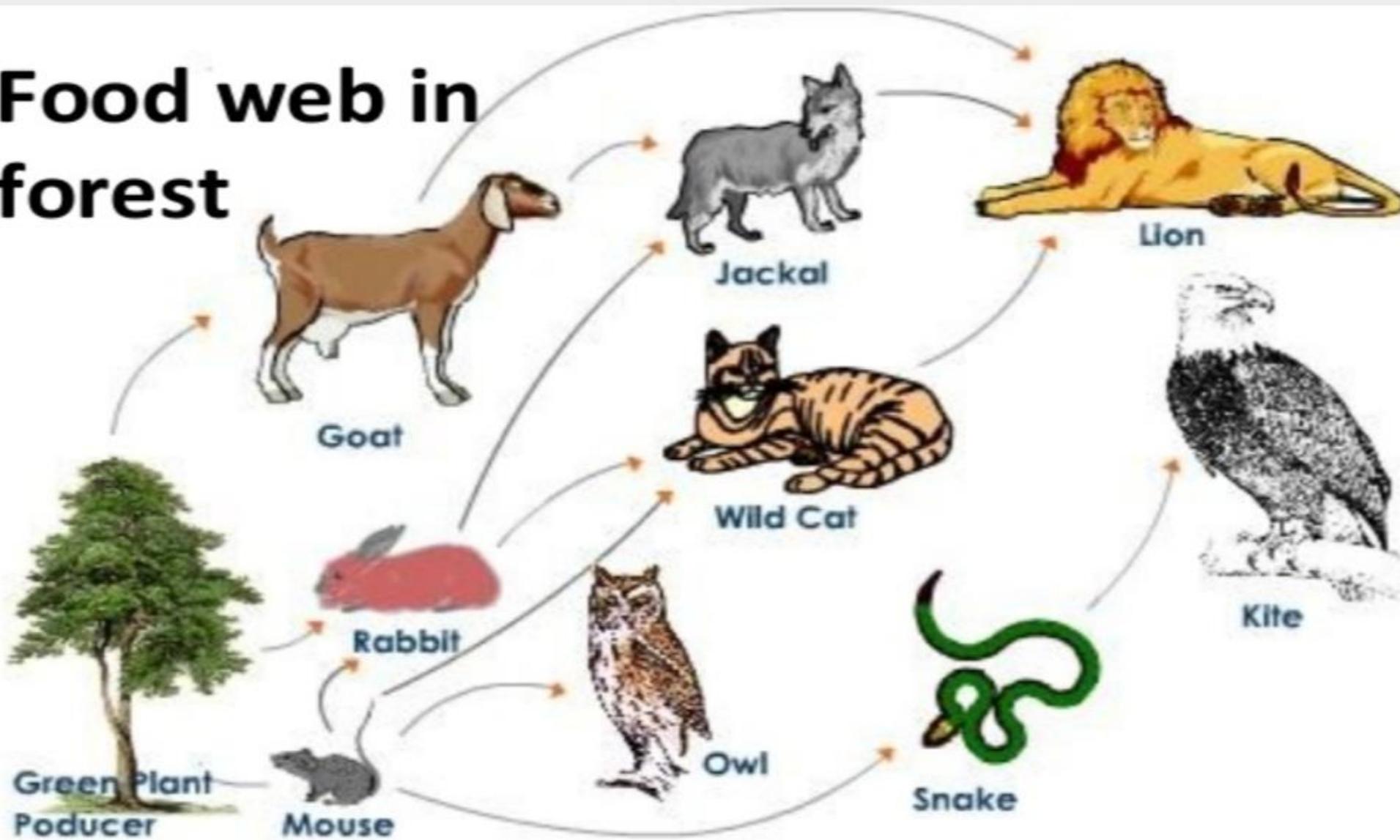
Animals



Aquatic food web

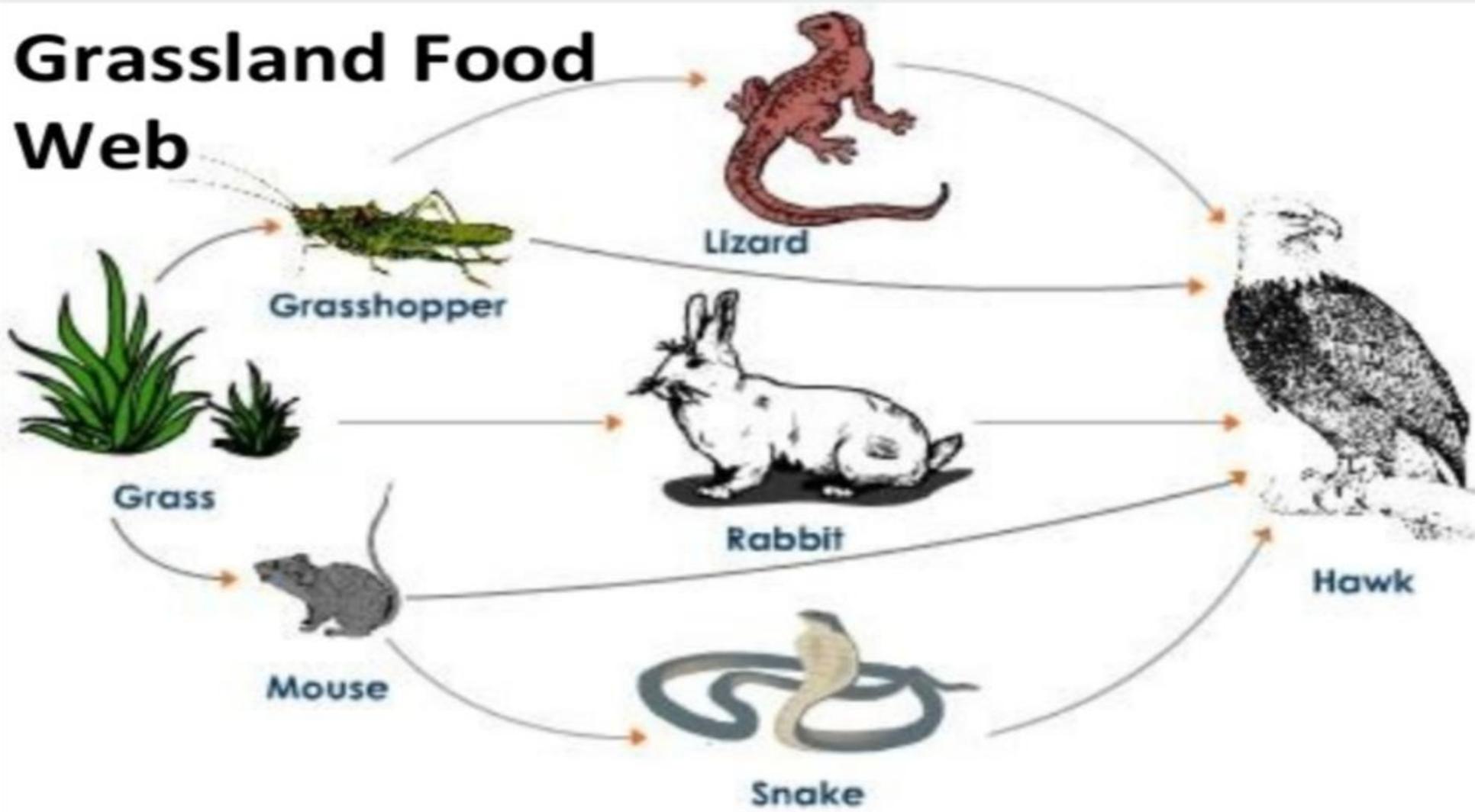


Food web in forest



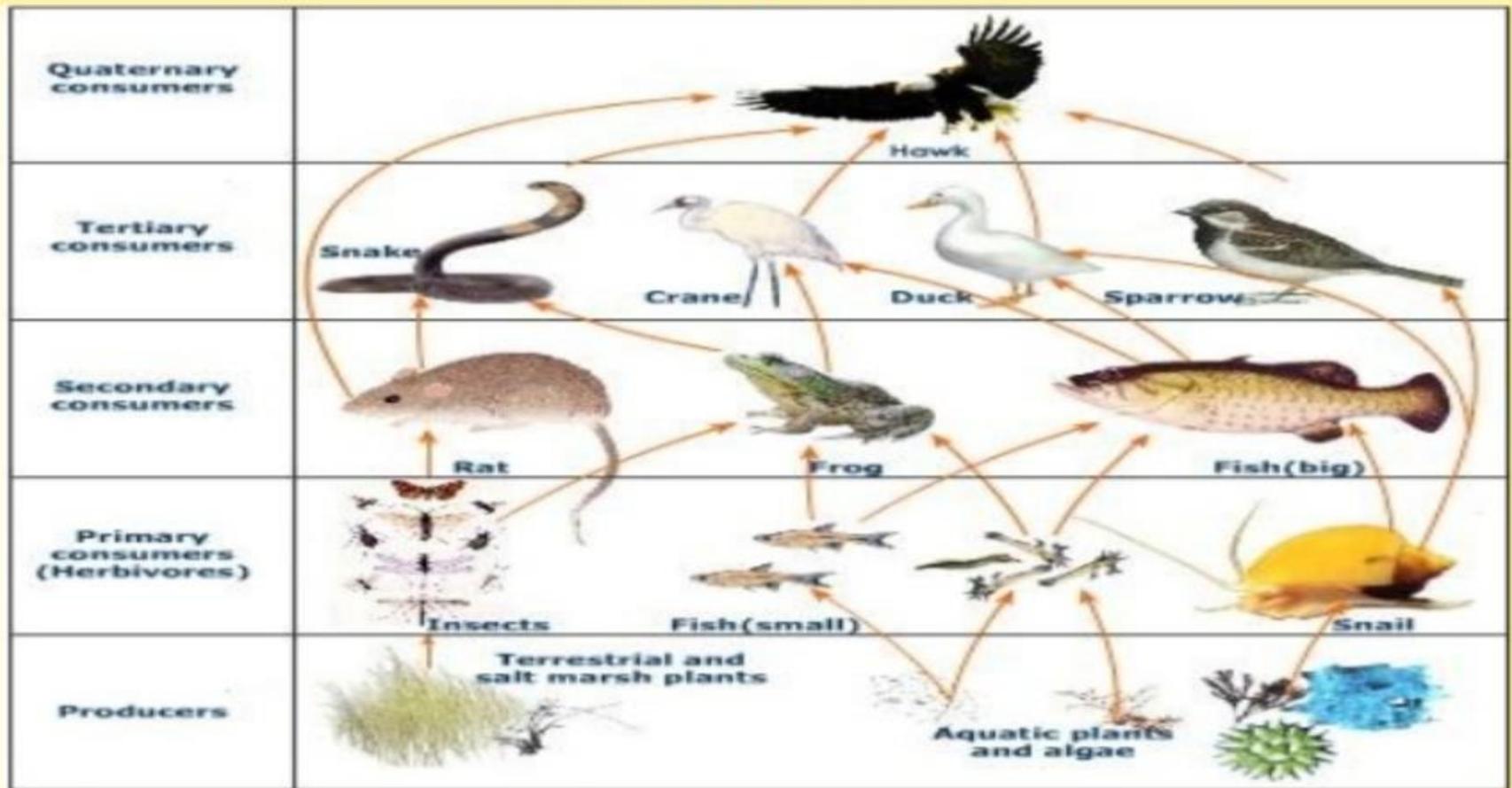
Food Web in a Forest

Grassland Food Web



A Food Web in a Grassland Ecosystem With Five Possible Food Chains

Food web in terrestrial and aquatic ecosystem



THANK YOU