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Our Environment

All interacting organism in an area together with the non-living constituent of the environment form an ecosystem.

Eco-system consist of biotic componorent consisting living organisms.

and abiotic components such as temperature air, sunlight, soil, minerals

There are 2 types of eco-system -

Artificial / Man-made ecosystem - The eco-system which is prepard by human for ex- aquarium, crop feild, pond

Natural ecosystem - The eco-system which is created by the nature for ex - forest, lakes, seas, river

Define producer

All green plants and certain bacteria which can produce food by photosynthesis are called producers.

Define consumers.

Organism which consume the food produced either directly from producers or indirectly by feeding on the other consumers are called consumers

Cosumers can be classified as -

Primary consumers, secondary consumers, tertiary consumers, decomposers.

Define Decomposers.

Decomposers are top level consumers which can consume or decompose all primary secondary, tertiary consumers or even producers. Bacteria is an example of decomposers.

Define Food Chain.

Food chain is a set of organism in which one organism consumes another organism as food. It is a straight line.
For ex

plants ⟶ deer ⟶ lion
↓
decomposers

plant ⟶ Insect → Frog ⟶ snake-eagle
↓
decomposers

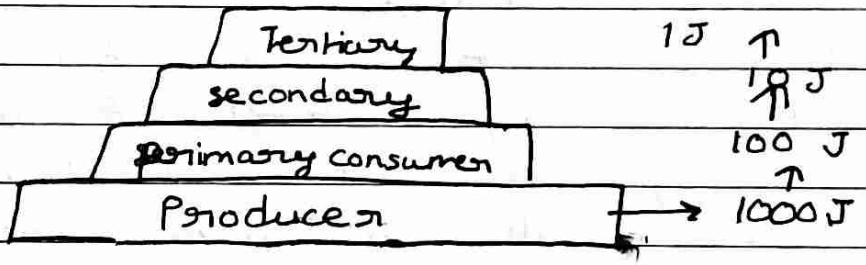
What do you mean by 1% law

Green plants in a terrestorial eco-system capture about 1% of energy of sunlight

that Falls of Heir leaves and converts it into food. for Ex- If 1 lakh Joule of sun energy fall on the leaves the plant can only capture 1000 Joule of energy.

Define 10% law.

Each level of the food chain is called trophic level at each trophic level organism can transfer only 10% energy to next trophic level and use remaining energy (90%) for diff. life processes growth, maintenance etc. This law is called 10% law.



Why is there little no. of organism availble on the second and third trophic level?

Due to 10% law little energy is availble for the next level of consumers in a food chain. The loss of energy at each step is so great that very little usable energy remains at 2nd and 3rd trophic level and negligible energy is availble at 4th trophic level.

Define Food Wave ?

The interconnected network of many food chain is called food wave in a food wave an organism has more than 1 option to consume another organism for food.

Define bio-magnification.

The accumulation of harmful chemical such as pestide, herbicide, DDT in organism is called bio-magnification these chemicals are non-degradable and get accumulated easily at each trophic level. As human beings occupy the top level in any food chain the maximum concentration gets accumulated in human brings.

What is role of Ozone O_3 in the environment

Ozone is a green house gas and a deadly poision at the surface of earth but at the higher level of atomosphere (stratosphere) ozone performs an essential function. It shields the surface of the earth from the ultraviolet radiation of the sun this radiation is highly damage to organism. It causes skin cancer to human beings. Ozone at

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The higher levels of atmosphere is a product of uv radiation acting on oxygen molecule

$$O_2 \xrightarrow{\text{U.V radiation}} O + O$$

(Nascent oxygen)
(highly reactive)

$$O + O_2 \longrightarrow O_3$$

Ozone gas is depleted due to chemicals like chloro-flouro carbon which are used refrigerants and in fire extinguishers

In 1987 united nations environment program (UNEP) succeeded in forging an agreement to freeze CFC production at 1986 level

Define biodegradable and non bio-degradable substances.

Substances that are broken down by biological processes are called bio-degradable. - Paper, vegetable leaves

non-biodegradable substances that cannot be decompose by biological factors

5 'R' - Reuse, Reduce, Recycle, Refuse and research can be used to manage garbage