
Environmental Management

Grade 10

Watch



<https://www.youtube.com/watch?v=tvwqerpkwvl&feature=youtu.be> (English-Hindi) Part 1

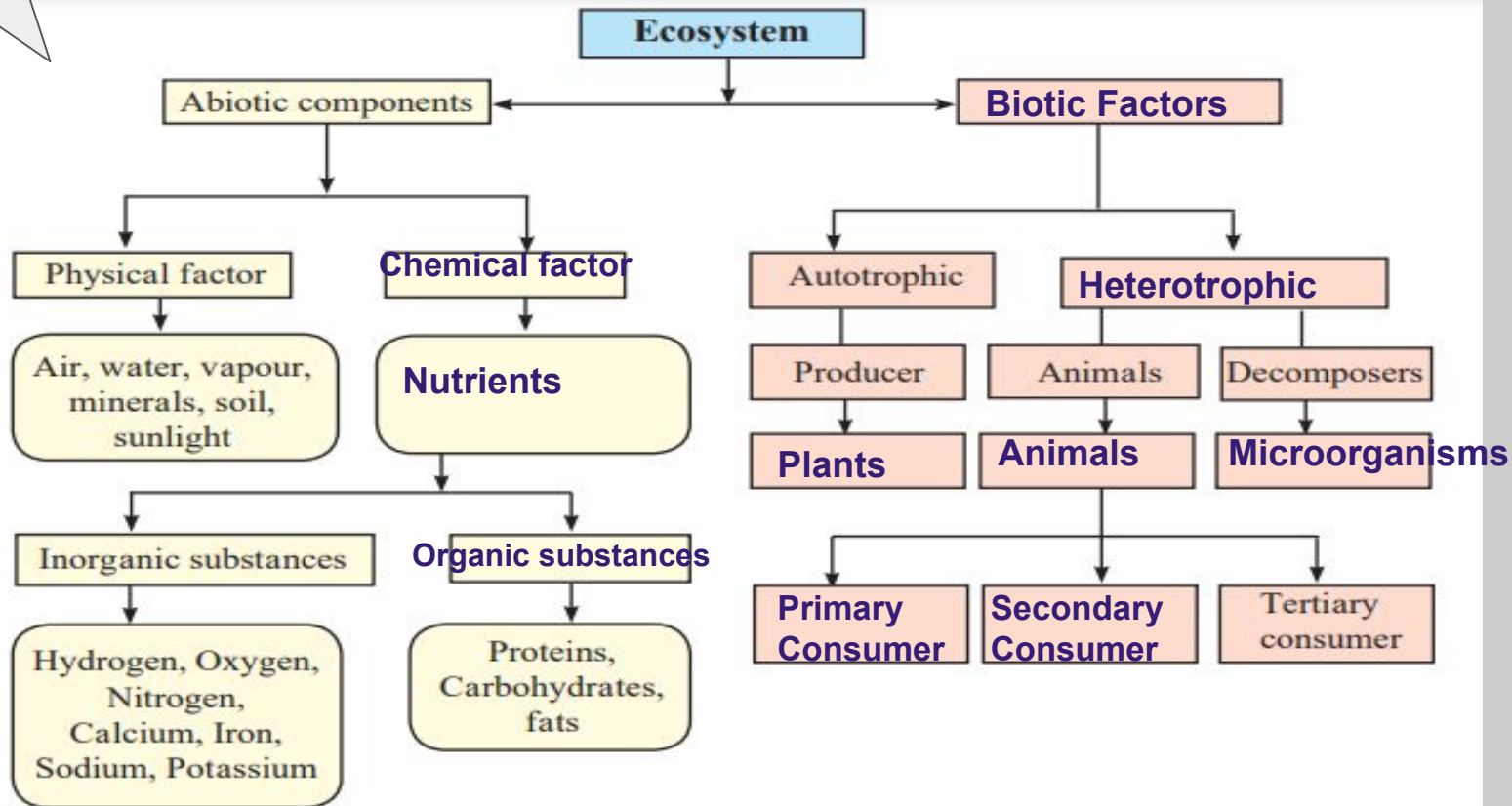
<https://www.youtube.com/watch?v=50YhWPRXu3g&feature=youtu.be> (English - Hindi) Part 2

<https://www.youtube.com/watch?v=GzO9piV6A0w&feature=youtu.be> Part 3- Hindi English

<https://www.youtube.com/watch?v=RBdLF0JlvW8>

<https://youtu.be/wuGwIus8mSw>

Very Important !



Ecology : Ecology is the science that deals with the study of interactions between biotic and abiotic factors of the environment

Ecosystem : Ecosystem is the basic functional unit used to study the ecology.

- Many ecosystems together form an environment.
- Ecosystems constitute biotic and abiotic factors occupying a definite geographical area and their interactions.

Components of Ecosystem :

The different components in the ecosystem are as follows:

Abiotic components : Air, water, soil, sunlight, temperature, humidity, etc.

Biotic components: All the types of living organisms, like bacteria, fungi, plants and animals.

Types of consumers : Primary, secondary, tertiary consumers or apex consumers are the different types of consumers in the ecosystem.

These types are classified according to the trophic level to which they belong.

Different trophic levels in food chain : The different trophic levels in food chain are

- Producers (First trophic level),
- Primary consumers (Second trophic level),
- Secondary consumers (Third trophic level),
- Tertiary consumers (Fourth trophic level) etc.

How can biodiversity be conserved?

Conserving all plants and animals.

Observing the rules.

Maintaining record of traditional knowledge

Protecting the rare species of organisms.

Projects for conservation of special species.

Establishing national parks and sanctuaries.

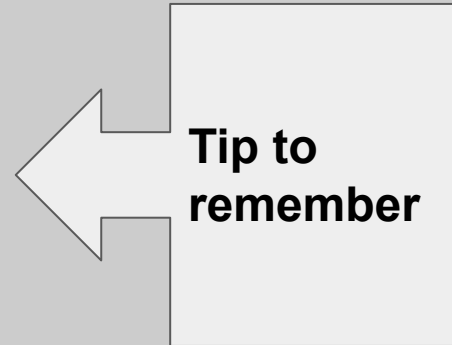
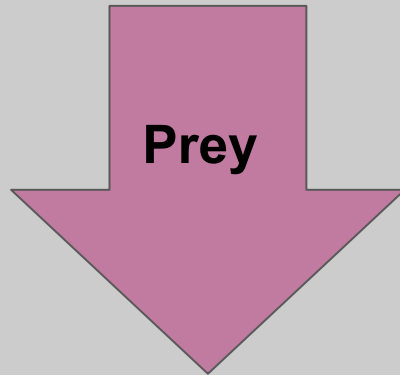
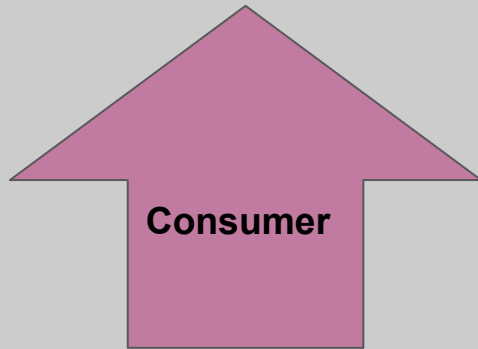
Declaring some regions as 'bioreserves'.



**Tip to
remember.....
COMPED**

What will happen if number of consumers in environment goes on increasing gradually?

Ans. If number of consumers increase gradually, it will create the scarcity of prey organisms. Then due to lack of prey, the number of consumers will also decrease.



If frog population declines all of a sudden, What will be the effect on paddy crop?

Ans. If the population of frog declines, then there will be rise in the population of grasshoppers. The paddy fields will hence be infested with insect pests.

Find the odd one out

1. Deer, Goat, Sheep, **Snake (Snake is carnivore, whereas rest are herbivores)**
2. Water, Sunlight, **Decomposers**, Soil (Decomposers are biotic factors of an ecosystem, whereas others are abiotic factors of an ecosystem)
3. **Water cycle**, Nitrogen cycle, Oxygen cycle, Carbon cycle
4. Earthquakes, Volcanoes, Droughts, **Deforestation (Deforestation is a manmade factor affecting environment, whereas others are natural factors affecting environment)**

Complete the analogy



X- Rays and radiations from atomic energy plants: Artificial radiations :: UV & IR radiations
: Natural radiations

2. : Conserve energy :: **Save Fuel**

3. UNEP : United Nations Environment Program :: WWF : **World Wildlife Fund**

4. Sundarban sanctuary: West Bengal :: Manas sanctuary : **Assam**

5. Vulnerable species : Lion :: **Rare Species**:: Red panda

What do these symbols say.....




RECYCLE

SAVE WATER

SOLAR PANEL

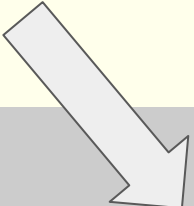
Some important symbols....



Save Energy



Do not Litter



Use Green energy

Classification of Threatened species

Endangered Species ***** (v imp)	Number of organisms reduced or habitat is shrunk to an extent that they will be extinct in near future if the measures are not taken	Lion tailed monkey,
Rare Species	Number of these organisms is considerably declined.	Red panda, Musk deer.
Vulnerable Species	Number of these organisms is extremely less and continues to decline. Continuous decline in their number is worrisome reason.	Tiger, Lion.
Indeterminate Species	Due to behavioural habits organisms appear to be endangered, but their status cannot be determined.	Giant squirrel (Shekhru).

Some Important Questions.

1. State the two factors that constitute the environment. [1 Mark]

Ans: The two factors that constitute the environment are biotic and abiotic factors.

2. What is ecology? [1 Mark]

Ans: Ecology is the science which deals with the study of interactions between biotic and abiotic factors of the environment.

3. Define ecosystem. Give any two examples. [2 Marks]

Ans: The definite geographical area formed by biotic and abiotic factors and their interactions with each other constitute the ecosystem. e.g. Pond ecosystem, forest ecosystem, etc.

Some Important Questions.



State the factors responsible for environmental pollution. [1 Mark]

Ans: The factors responsible for environmental pollution are population explosion, rapid industrialization, indiscriminate use of natural resources, deforestation and unplanned urbanization.

Define biodiversity. [1 Mark]

Ans: Biodiversity is the richness of living organisms in nature due to the presence of varieties of organisms, ecosystems and genetic variations within a species.

Biodiversity: The richness of living organisms in nature due to presence of varieties of organisms, ecosystems and genetic variations is called biodiversity. Biodiversity occurs at following three different levels.

Levels of biodiversity:

- **Genetic Diversity**- Diversity among the organisms of **same species**. The genetic constitution of each organism may be different.
- **Species Diversity** -Diversity in **different species of organisms** that occur in the nature. E.g. Various types of plants, animals and microbes.
- **Ecosystem Diversity** - Many ecosystems are present in a particular region. Diversity of the **different ecosystems**. E.g. Natural and artificial ecosystems.

Test yourself



<https://forms.gle/NGj5Sfxx2rwgsqBRA>

https://reviewgamezone.com/mc/candidate/test/?test_id=33006&title=Biotic%20And%20Abiotic%20Factors