

CLASS-IV

Lesson 1 Interdependence Of Organisms

Lesson 2 Useful Product For Us

Lesson 3 Organism Development

Lesson 4 Living Wrold And Diversity

Lesson 5 Structure of Living World



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INTERDEPENDENCE OF ORGANISMS

Everything, organisms and plants are dependent on each other. They are connected together. Nature has made us in a way that humans, plants, animals and organisms are connected to each other. This makes a balance in nature. If one of them slips out or get separated then the chain gets destroyed.

For example, you all must have seen an earthworm. They are mostly found in rainy or moisture land. Do you know that they are very helpful in making soil fertile? They make soil hollow and fertile for agriculture. This helps in high production. In this way, earthworm, soil and crops are related to each other. We will read about some related components of nature in this lesson.



OBJECTIVES

After reading this chapter you will be able to:

- Know about the inter dependence of plants and animals
- Explain the balance of nature.



Notes

- List the causes of natural imbalance.
- Tell the correct method of using natural resources.

1.1 HOW ARE PLANTS AND ANIMALS CONNECTED TO EACH OTHER/

We all know that plants prepare food by the process of photosynthesis in the presence of sunlight. In this way green plants are dependent on animals. On the other hand, animals cannot prepare their own food. They are dependent on plants for their food directly or indirectly.

For example, bees are dependent on flowers to prepare honey. They get pollen grains from flowers and stick from one flower to another. This process is called pollination. In this way, plants get benefit from bees and bees get benefited from plants for honey. This is called interdependence. In the same way, butterfly and plants are also dependent on each other.



Fig. 1.1

1.2 DEPENDENCE OF ANIMALS ON EACH OTHER



Notes

There are many organisms which are dependent on each other. For example, some organisms and protozoa present in food pipe of termites. These organisms are not the food of termites but they are helpful in digesting the wood eaten by termites. In this way, termites get digestible food and microorganism get food and place to live.

Have you seen any bird sitting on buffalo's back or cow's back? Have you seen them eating something from there? Indeed. These birds and animals sit and eat small insects. This helps animals in getting rid of insects and birds get food too.



INTEXT QUESTIONS 1.1

1. Write the name of any one thing that we get from animals?
2. What does bee get from plants? What does plant get from bee?

1.3 NATURE'S BALANCE

Every organism needs food to live, you know that big animals eat small or less powerful animals by hunting. In the same way



Notes

the powerful animals eat animals smaller to them. This makes a chain called food chain. Imagine a small jungle (forest) where

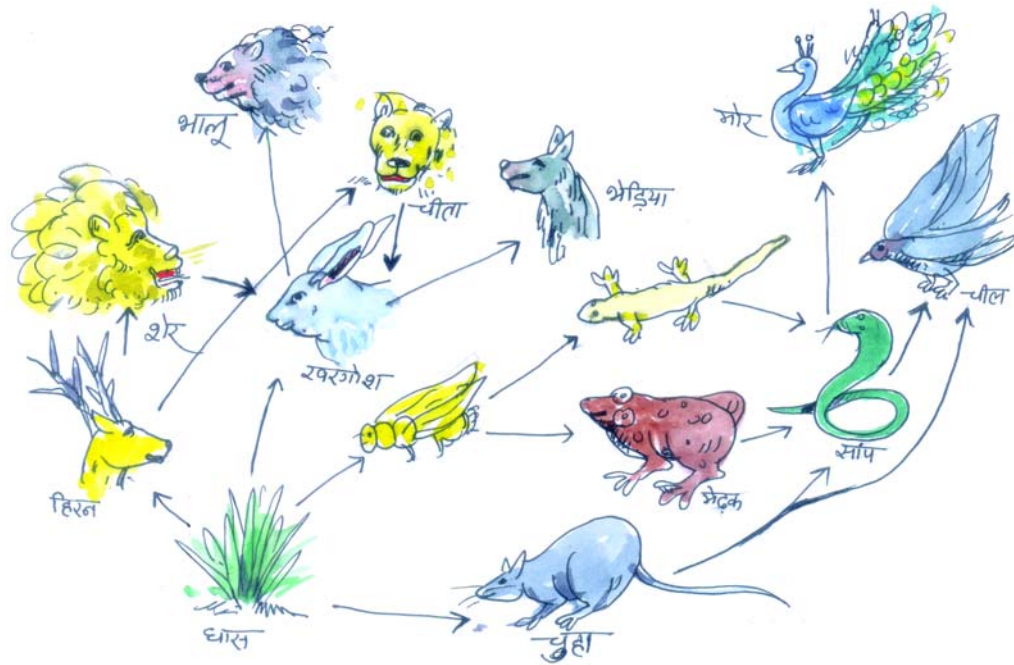


Fig. 1.2: Food Chain

only plants, deer and lion live. What will happen if all lions are killed in the jungle? This will increase the number of deer in the jungle. There will be a time when all the plants will be eaten by the excess population of the deer. After plants end, all deer will too die of hunger.

Note and observe how the excess or shortage of any organism can harm the natural balance. This has a bad effect on all the organisms.



INTEXT QUESTIONS 1.1

1. If all the snakes of the garden are killed then what will happen?
2. If all the plants of a garden are destroyed then what will happen?

1.4 NATURAL IMBALANCE

You all must have heard from your parents and elders that our nature is not clean as it used to be. We read in news papers that how much air is polluted in the city. The cause of this pollution is the use of chemical fertilizers. Natural balance is decreasing. Who is responsible for this imbalance? Think about it. You will find that humans create situations leading to the imbalance of the nature. For example, you will be shocked to know that human cut more trees than he grows in nature. This leads to the decrease in the number of trees.

Humans also release harmful chemicals from factories in water resources daily. This also pollutes water. Every day factories and vehicles emit harmful gases in environment which increases air pollution. Note that man is responsible for increasing pollution.



Notes



Think what is the basic cause of nature's imbalance? The main cause of nature's imbalance is the increasing population of humans.

Let us understand

More population needs more grains to eat, more clothes to wear and more space to live. Human cuts forests to produce more grains, establish more factories and build homes. This causes imbalance in nature. We need to control the continuous growth of population to stop the imbalance in nature.

1.5 OPTIMUM OR BEST USE OF NATURAL RESOURCES

Using nature is good but exploiting nature is bad. We must take only those things from nature which is necessary for us. Generally, plants should be in that number where animals eaten plants and new grown plants are equal. This also applies to both herbivores and carnivores animals too. One who eats plants are called herbivores and one who eats flesh of other animals are called carnivores. We get water from many sources like river, falls, ponds and rain or underground reserves. We use water for irrigation of plants. Underground water means water available after digging the earth. Have you ever thought that where does

underground water comes from? A part of rain water is absorbed by earth. Water collected under the earth is called underground water. If the rate of using this water is different from the rate of collection then underground water level will go down. A situation will come where we will not get a drop of water from underground. Think if there will be no water, will there be life?



Notes



INTEXT QUESTIONS 1.1

1. Write the names of any 4 items which humans get from jungle?
2. Give any one example of misuse of water from your daily life?
3. What is the relation between underground water and rain?
4. Write about any one misuse of natural resources from your neighbourhood?



WHAT HAVE YOU LEARNT

- All the objects and events that are seen, heard of felt are components of nature.
- Whatever useful for humans is a resource.
- All organisms are dependent on each other.

**Notes**

- Human is destroying the balance of nature by cutting trees and by releasing toxins (poison) from factories etc.
- Cutting of trees is harmful for humans and animals.
- Animals and plants are dependent on each other.

**TERMINAL QUESTIONS**

1. Explain how plants are dependent on animals?
2. How flowering plants and insects get benefited from each other. Give two examples.
3. What is meant by natural balance? What is the main cause of nature's imbalance?
4. Why jungles are becoming less? What is our role in it?
5. Give any 4 measures to keep the balance of nature intact?
6. What is the utility of organisms for us?

**ANSWERS TO INTEXT QUESTIONS**

1.1

1. milk etc
2. Pollen grain, pollination



1.2

1. Rats will destroy grass
2. Deer will die of hungers

1.3

1. Wood, fruits, medicine, water
2. Open tap
3. Rain water is stored in underground water
4. Use of wood for cooking of food