

## Chapter 4: Environmental Balance

---

### CAN YOU TELL? [PAGE 18]

#### Can you tell? | Q 1 | Page 18

In the course of your observations, did you notice any signs of the presence of living things though the living things themselves were not seen? For example, did you notice any partly eaten fruits or shells, fallen feathers, animal tracks, dung, droppings, nests, cocoons, eggs, honeycombs, etc.?

#### SOLUTION

Different types of living things are seen in different places. Some signs of their presence are seen sometimes even if these living things are not seen themselves. For example, partly eaten fruits, shells, fallen feathers, animal tracks, dung, droppings, nests, cocoons, eggs, honeycombs, etc. are noticed during observations. Partly eaten fruits can confirm that there were squirrels, monkeys, or some fruit eating birds before we arrived. From the fallen feathers, one could guess about the types of birds that visited the place. We can also guess from the animal tracks, pugmarks, dung, or droppings.

#### Can you tell? | Q 2 | Page 18

Could you observe any microorganisms?

#### SOLUTION

We are not able to see microorganisms with a naked eye. We need a microscope to confirm these. So it is not possible to observe microorganisms directly during observations.

### CAN YOU TELL? [PAGE 18]

#### Can you tell? | Q 1 | Page 18

Which one of the places you visited shows greater biodiversity?

#### SOLUTION

Greater biodiversity is seen in the areas in and around forests. The places with lesser interaction with human beings have greater biodiversity.

### CAN YOU TELL? [PAGE 20]

#### Can you tell? | Q 1 | Page 20

Who eats birds?

#### SOLUTION

Smaller birds are killed and eaten by bigger birds. Cats and snakes may also hunt the smaller birds. Man also kills birds for food.

**Can you tell? | Q 2 | Page 20**

What is the food of plants?

**SOLUTION**

Water and minerals present in the soil are food for plants. Plants take up water and minerals from soil with the help of their roots. With the help of the sunlight, they use carbon dioxide from the air and prepare their own food. Through their leaves, they absorb carbon dioxide. The green coloured pigment, chlorophyll present in the leaves helps in this process of photosynthesis to prepare their own food.

**CAN YOU TELL? [PAGE 20]**

**Can you tell? | Q 1 | Page 20**

What is the deer's food?

**SOLUTION**

Deer is a herbivorous animal. It eats grass. In search of green grass, they move about in the jungles. It also feeds on leaves and smaller herbs and shrubs.

**Can you tell? | Q 2 | Page 20**

What is food for the tiger?

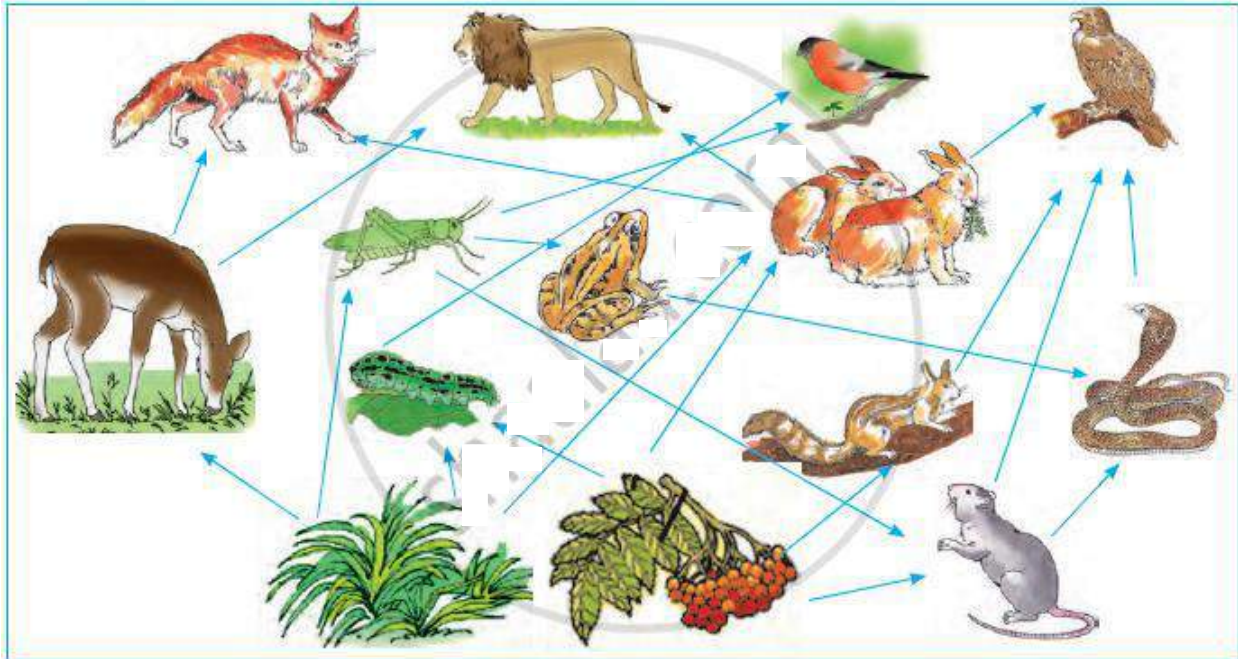
**SOLUTION**

Tiger is a carnivorous animal. It feeds by hunting on small prey. The flesh of these animals is food for the tiger.

**CAN YOU TELL? [PAGE 21]**

**Can you tell? | Q 1 | Page 21**

Find the different food chains of which the worm and the mouse form a link.



### **SOLUTION**

Do it Your self.

### **EXERCISES [PAGE 23]**

#### **Exercises | Q 1 | Page 23**

##### **What's the solution?**

We have to remove insects from the grain without using insecticides.

### **SOLUTION**

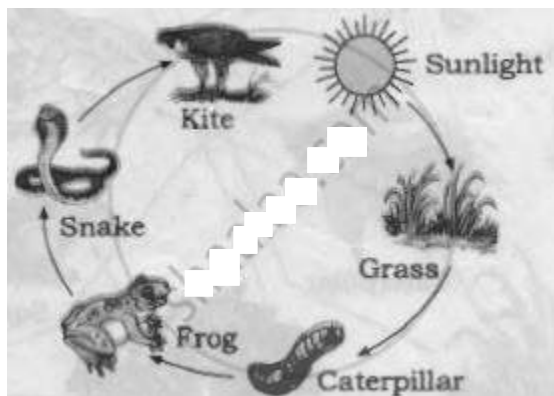
1. Let the grain dry in the sunlight. The harsh sunlight does not allow eggs and caterpillars to grow in the grain.
2. Keep dried Neem leaves in the container in which the grains are stored. The Neem acts as a repellent for insects.
3. Grains like beans are smeared with mud. The mud particles keep the weevils away from infesting the grains.
4. The place where grain is stored should be cool and dry. It should be airy. The chances of insect infestations are less in such storage places.

#### **Exercises | Q 2 | Page 23**

##### **Use your brain power!**

Make up a food chain: Frog, kite, worm, snake, grass.

### **SOLUTION**



### **Exercises | Q 3. (a) | Page 23**

**Answer the following question.**

What is a food chain? Give an example of it.

### **SOLUTION**

1. One living thing is dependent on other living things for the purpose of feeding. Therefore, they are interconnected with each other like a chain. This relationship is called a food chain.
2. Plants prepare food with the help of sunlight. Leaves of this plant are nibbled by a caterpillar. Grasshoppers eat these caterpillars. Grasshoppers are eaten by sparrows. This is a food chain.

Sunlight → Plants → Caterpillar → Grasshopper → Sparrow

### **Exercises | Q 3. (b) | Page 23**

**Answer the following question.**

How is the balance in the environment maintained?

### **SOLUTION**

1. In any environment, the food chains and food webs are present.
2. Due to this, there are interactions among different types of living things.
3. Similarly, the non-living things too move in a cyclic manner in this environment.
4. Living and non-living things give and take different materials in the water cycle, carbon dioxide-oxygen cycle, etc.
5. Microorganisms bring about decomposition in the soil and add required substances in the soil.
6. When all these cycles and interactions take place in an environment without any check, then there is balance in that environment.

### **Exercises | Q 4 | Page 23**

What substances in the soil are useful for the growth of plants?

### **SOLUTION**

1. Plants require water, minerals, and other substances in the soil for their growth.
2. The substances formed due to the decomposition of dead and decaying plant and animal material are very useful for plants.
3. These substances help in the rapid growth of plants.

### **Exercises | Q 5. (a) | Page 23**

#### **True or false?**

Micro-organisms form a part of the environment.

1. **True**
2. False

### **SOLUTION**

Micro-organisms form a part of the environment. - **True**

### **Exercises | Q 5. (b) | Page 23**

#### **True or false?**

It is necessary to maintain biodiversity.

1. **True**
2. False

### **SOLUTION**

It is necessary to maintain biodiversity. - **True**

### **Exercises | Q 5. (c) | Page 23**

#### **True or false?**

A grasshopper eats birds.

1. True
2. **False**

### **SOLUTION**

A grasshopper eats birds. - **False**