

4



DISCOVER THE LIFE STYLES OF THE WILD - BIO DIVERSITY

Man is a social animal. He can't live in isolation. For his various needs he is dependent on others. We acquire food to eat, clothes to wear, houses to live in and vehicles to travel. What about the animals? How do they live? What do they do for their living? Do you know their life style?

See the picture below:



Discuss in groups



- ◆ Have you ever seen the animal in the picture above?
- ◆ How many elephants are there in the herd? What are they doing?
- ◆ Why do they move in herds? What could be the benefits of moving in herds?

4.1. The life styles of the animals

The elephants in the forest live in herds. There may be 10-12 elephants in each herd along with their babies. Female elephants are more in number. Male elephants

leave the herd at the age of 15. Usually, an old female elephant leads the herd. She starts her journey in the morning, with a trumpet. Others follow her. The journey halts where rich vegetation is seen. Everyone feeds on the leaves and the tender branches. By afternoon, they enter into the water body and play, splashing the water. The babies are taught to swim. This way of living in groups gives protection to the elephants.

That's the life style of an elephant. We all know about the life styles of our pets. Do we know the life styles of wild animals, stray animals or domestic animals? What do they eat? Where do they live? What do they do? Discuss these issues with your friends or ask your elders or read from the library books on animals. Watch the National Geographic Channel or the Discovery Channel on T.V. Next day, and discuss what you saw with your friends of your group. Then write a small note covering your discussion.

Discuss in groups



- ◆ Which other animals live in herds?
- ◆ Did you see the herd of monkeys, anytime? Why do they live in herds?
- ◆ Describe the life styles of different animals?
- ◆ What are the reasons for living together?

Do you know?



Tigers are hunting animals. Their cubs can not hunt when they are small. They learn by observing the elders. Slowly, the cubs learn everything.

You have known about the life styles of some animals. Here are some questions. Where do the birds live? What do they do? Do you know anything more about them? Do the birds also live in groups? Did you see, anytime, the birds flying in the sky in a group? In which season do you see this happen? Look at the picture on the next page.



Discuss in groups



- ◆ During what time do the birds fly in groups?
- ◆ Did you notice any particular form during their flight?
- ◆ What do you feel when you see a flock of birds in the sky?
- ◆ Do you know that the crows live in groups? Why?
- ◆ If one crow dies, what would the remaining do?

Do This



Make a paper bird with a waste paper and fly it.

Birds and animals live in groups. In a group they are protected from enemies. Young ones observe the elders and learn hunting, escaping from the enemies, searching for food and identifying the water bodies.

The birds too migrate in flocks. Even from great heights they can spot crops and they stop to feed. They travel thousands of kilometers in search of food and shelter. Fields and gardens are their areas of food source. Some birds eat insects, fish and other small living organisms. For this, they go to near by lake, pond, canal, river, reservoir etc. They do so, in groups.

Do you know?



Dr. A.P.J. Abdul Kalam

The former-president of India - Dr. A.P.J. Abdul Kalam used to observe the flying of birds at the seacoast everyday. He used to wonder, how they could fly? This observation helped him a lot in his future researches and experiments on rockets. Observing, acquiring knowledge, setting goals and working hard towards the goal, made him a great man.

Lets us too observe the birds & animals around us and discover new things.

4.2. Birds - their nests

You have learnt about the homes of the animals in class-3. Where do the birds live? What do their homes look like? See the pictures below and try to match the birds with their correct homes.



How beautiful are the nests like the birds themselves! Have you seen any of these nests, before? We build our houses, so do the birds. How are they able to build their nests? What do they use for it? Discuss these with your friends.

Discuss in groups



- ◆ Did you like the nests? Why?
- ◆ What did they use to build the nest?
- ◆ Did you see the tailor bird? How could a tiny bird weave a big nest, so perfectly?
- ◆ Some birds make holes on the tree trunks and live. Name them.

Look at this nest, the tailor bird is busy weaving its nest.

Do this

1. Observe a nest of any bird in your surrounding. Don't disturb it. Write in your note book about the materials used and how they made it.
2. Collect leaves, small twigs, dry hay, yarn, pieces of cloth, thread etc. Weave a bird's nest with them and display.



Oh! Its not easy to weave a nest! Its difficult! It needs skill, which the birds have.

Birds use straws, twigs, threads, thin wires, paper, jute, cloth, leaves etc. to build their nests.

The birds are different, so are their nests. Among Tailor bird, the male bird builds the nest. Female bird lays the eggs in them. They build their nests during egg laying season. They leave the nest, once the young ones develop wings and fly off. Again they build the new nest and lay eggs. They weave their nests constantly.

Discuss in groups



- ◆ What do birds feed their young ones? How?
- ◆ Have you ever seen birds feeding their young ones? How did you feel?

Some children try to disturb the birds and spoil their nests by throwing stones etc. This should be stopped. Do you like your house being damaged? Is it right to damage the nests.

Think...

- Do all the birds lay eggs in their nest, alone?
- Where does a hen lay the eggs?

Do you Know

Dr. Salim Ali, the ornithologist of India, has done many researches and written a lot on birds. His work is recognised and renowned globally. He received many international awards. He belongs to our country.



It is our responsibility to protect birds. The number of birds is reducing with the cutting down of trees, spraying fertilizers on the crops etc. The recent studies say that the radiation from the cell phone towers has affected the population of the sparrows. What are the consequences of bird extinction.

4.3. Insects and their colonial life

Vijaya has observed a mound of mud on her Varanda. Just then, she heard, "buz.....z.....z.....z....." Its an insect and it flew into that mound. After a few minutes it came out of it and flew off. Vijaya is curious to see inside the mud. She went near and observed some insects in it.



Discuss in groups



- ◆ How do the birds feed their young ones? What do they feed?
- ◆ Did you see them feeding any time? How did you feel?

Vijaya's father removed the mound of mud with a stick. Then she noticed that it had partitions. What is it? Have you seen it anytime? It is a bee hive. Hives are of many types. They build their hives depending on the area they are living in. Female bees build the hives.

There is a huge tree at the backyard of Ramu's house. There is a honey beehive on its branch. Did you observe the hive of honey bee? How does the bee hive with many rooms look. How do they make honey? Each bee lives in one compartment. Hundreds of bees live together in the hive. Honey is made from their mouth secretions.



Think...

- **Ramu, a naughty boy, threw a stone on the honey beehive. What might have happened then? Think. Is it safe to do so? If not why?**

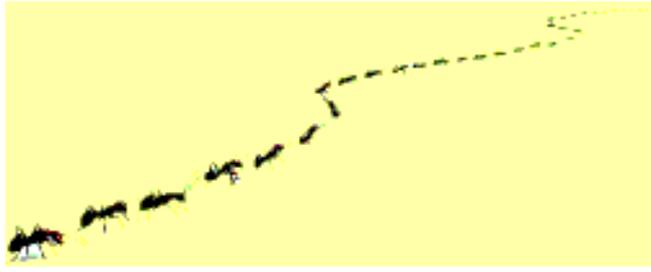
When we disturb the bee hives, the bees attack the houses. They inject poison like fluid into our body. Sometimes this may lead to death. So, we should not go near them.

Ants also live in groups of hundreds. Though they are very small, we can learn a lot from them.

Do this

- ◆ Keep a cube of jaggery or sugar at one place either at your school or home. Observe after sometime.
- ◆ You will notice a line of ants. Now, without disturbing them, try to observe the ants under a magnifying glass.
- ◆ Notice their body parts & movements? Where are the ants carrying food particles?

Ants are the ideals, for social living. There is discipline and division of labour in their colonies. The colony consists of queen ants, male ants and the worker ants. Female ants lay the eggs. Protection of the eggs, procuring the food, building and repairing the ant hill are the duties of the worker ants. They build the ant hill with mud. They divide the hill into different compartments for different work. They cut the food into pieces with their jaws.



A few ants release a secretion, which gives a specific smell. This smell helps the ants to follow their colony and find their way. When two ants come from opposite direction they touch each other with their heads. Hope, you all have observed this. Why, they do so?

They pass information on food source and the route through it.

Do you know?

An ant can lift a weight 50 times more than its weight. All the insects have six legs. Ants have two antenna like feelers on the head. These are useful in finding the sources of food and passing the information to one another.



Like ants, honey bees also live in a colony. There is a division of labour too.

You have seen that wild animals like elephants, tigers, monkeys and birds live in groups. It is needed, that human beings should also live in communal harmony with love and peace.

4.4. Empathy to birds and animals



Think...

- What do you see in the above pictures?
- Like them, did you feed birds and animals anytime?
- How do you feel when you do so?

Did you ever medically treat any animals? (cat, dog, ox, cow etc) How did you feel?

Animals are also living things like us. We should not hurt them. We should provide food and water to them. We should identify their needs and help them every day.

How do you feel when you find dogs, cats, cattle and other animals hungry? We should

not hunt / capture animals. We should feed grains to the birds. We should take care of the animals and their babies.



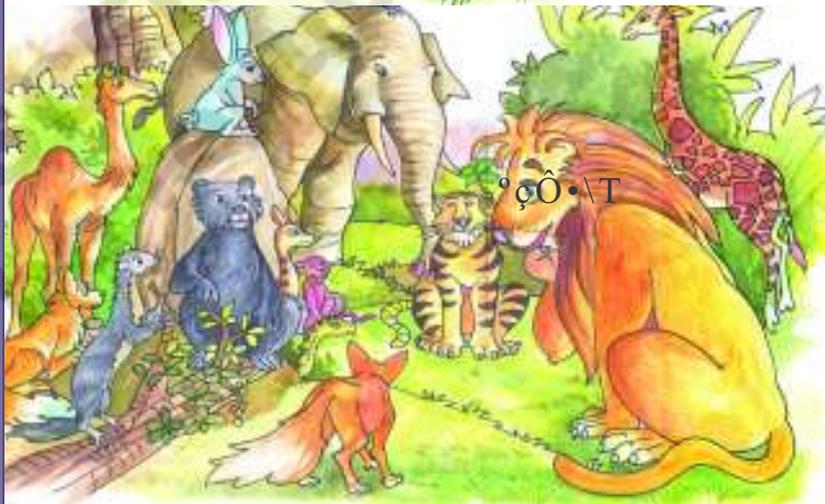
4.5. Biodiversity

Various types of animals, birds, insects, plants and trees existing in one place, is called Bio-diversity. Nothing is useless and harmful in the nature Bio-diversity exist more in the forest. Every organism has relationship with the other organism. Every organism has the right to live. All the organisms living on earth directly or indirectly depend on each other. So, it



Think...

- What are the various birds and animals seen in the picture?
- Which animals are there in the lake?
- Have you seen, these species of animals anytime? If so, where?
- Write an instance when you saw all these animals in your place?
- Do we have these many species of animals now? If not what happened to them?



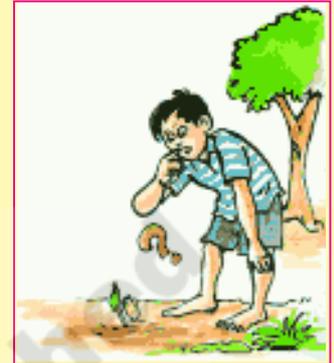
is our duty to protect each and every organism. Due his ignorance, man is culting down the forests, hunting animals which is leading to imbalance of nature and destruction of bio-diversity.

When you visit a field as you get the chance to see the crops, plants, insects and birds and you would be delighted. It's a joy to see the water canals and lakes with the fishes in it. Everything around us, including the huge mountains and deep oceans are a part of Biodiversity.

Man is a part of the living things on earth. He is surrounded by plants and animals. Every organism has a specific body structure, food habit and life style. This speciality indicates diversity.

Do this

- Select any place in your village. Observe the natural resources like water bodies, hills, plants, birds and animals.
- Write, what do you mean by bio-diversity.
- Did you notice, any plants or animals in your village which were present in the past but not now?



In this type of living, the organisms influence one another. This bio-diversity is useful for our daily life. We all are interdependent on one another for water, air, food and shelter. Gases like carbon monoxide released from man-made things are degrading the resources and polluting the atmosphere. This is affecting bio-diversity. This is affecting the air, water, temperature, sea level and the marine life. Due to the drastic changes some organisms are extinct and some are endangered.

This life on earth evolved some million years ago. It is providing us with required food, medicines, wood, fruits, crops, aquatic life, microbes and many other resources.

Discuss in groups



- ◆ What are harmful effects of deforestation? How is the marine life affected?
- ◆ What steps do you take to protect the bio-diversity.
- ◆ How is the deforestation affecting the bio-diversity?

Bio-diversity is being constantly affected by civilisation, urbanisation, industrial revolution, human selfishness etc. with this some species of plants and animals are becoming extinct and leading to imbalance of bio-diversity.

Planet Earth belongs to all the living organisms on it. Living things are dependent on the non-living things like the hills, lakes, rivers and the oceans around it. But man is disturbing the natural balance resulting in the extinction of some species.

Avoid the wastage of natural resources by conserving them understanding the importance of bio-diversity and protecting it. Maintaining the environmental balance, can only sustain man's life on this earth, other-wise, he will be on the verge of extinction.

4.5.1. Endangered Species

Did you hear about Dinosaurs? They don't live now. Like them many other plants, birds, animals and insects are not seen now. We lost them! Once the Indian forests had thousands of tigers and lions. Now they have come down to a few hundreds. Cutting down the forests led to their less numbers. Now, its time to save the few left.

Do this

Ask the elders in your village about the animals, birds and insects which lived in the past but are not seen in the present.

Endangered Animals	Birds	Insects

The animal shown in this picture are on the verge of becoming extinct on earth. Man's greed is the cause. To save them, the government is maintaining reserved forest areas for tiger. Wild life sanctuaries, protected lake areas for the birds. Lets protect them. They are our wealth!



Key Words :

- | | | |
|--------------------------|-------------------------------------|--------------------|
| 1. Living styles | 5. Living shelters-nest, hive, hill | 9. Micro organisms |
| 2. Bio-diversity | 6. Social living | 10. Extinction |
| 3. Herd / flock / colony | 7. Nests of birds | 11. Research |
| 4. Being protected | 8. Insects | 12. Endangered |

What have we learnt?

1. Conceptual understanding

- Write about the life style of two animals.
- Differentiate between spider's web and the bird's nest.
- List the materials used in building the nest.
- Why do the birds and animals build their homes?
- Write the similarities and the differences in the living styles of birds and animals.
- What is bio-diversity? How do you support the right to live for birds and animals



2. Questioning - hypothesis

- One day, Ramu saw a honey bee hive on the tree in his field. He wants to know more about it. What questions Ramu, might have asked his father?

3. Experiments - field observations

- Observe a bird building its nest. Describe it.
- Observe a bird while feeding its young ones. Write the observations.



4. Information skills, projects

- Collect the pictures of different birds nests and make a scrap book.
- Tabulate the different animals / birds living in your place with respect to its shelter and the material used to build it.

Sl.No.	Name of the bird/animal	Shelter	Materials used

5. Communication through mapping skills, drawing pictures and making models

- Prepare a model of your favourite bird's nest and speak about it.
- Draw the picture of any bird. Colour it. speak about it.

6. Appreciation - values and awareness towards bio-diversity

- Navya has kept a parrot in a cage. She is feeding it with fruits. Is it proper to keep a bird in a cage? Why? What would you do, if you were in her place.
- "Right to Live" is meant for all the beings. Its our duty to respect and protect this right. Write slogans conveying the same.



Can I do this?

- | | |
|---|----------|
| 1. I can explain, why birds and animals live in groups. | Yes / No |
| 2. I can tell about the living style of birds and animals. | Yes / No |
| 3. I can draw the shelters of animals and prepare the models of bird's shelter. | Yes / No |
| 4. I can prepare a scrap book of photos on bird's nests. | Yes / No |
| 5. I will love the birds and animals. | Yes / No |