



Chapter-11

Nature's Treasures

Q.1 Write the summary of the chapter in the flow chart below, using the hints give below:

1. **Air as a Vital Resource:** Air is necessary for respiration, the production of carbon dioxide for plants, and the process of combustion and weather regulation.
2. **Water:** Water is necessary for drinking, agriculture, industry, and the regulation of ecosystems; it must be conserved to prevent its scarcity.
3. **Energy from the Sun:** The sun's energy is necessary for photosynthesis, warming, and the generation of solar energy.
4. **Forests:** Forests are sources of timber, medicines, oxygen and habitat for animals; they also regulate soil erosion and the balance of nature.
5. **Soil, Rocks, and Minerals:** Soil supports plant life, while rocks and minerals are sources of metals, energy, and construction materials.
6. **Fossil Fuels and Resource Use:** Coal, oil, and natural gas are precious but limited resources; it is important to use them wisely and conserve both renewable and non-renewable resources.

Q2. Multiple Choice Questions

1. b) Spending time with their Ajji (grandmother)
2. b) In a village bordering a forest
3. b) Cleaner and cooler
4. b) Fresh air, fertile ground, and sunlight
5. b) Hydration and cultivating plants

Q3. Fill in the Blanks

1. Although air is invisible, we can feel/observe it through its effects.
2. The layer of gases encircling our planet is called the. atmosphere
3. Air plays a vital role in sustaining life on Earth.
4. Air is not just around us it also takes up space.
5. The process of winnowing becomes easier when the air is moving/windy.

Q4. True or False

1. Air exists in all regions of our planet. True
2. There is no air present within soil. False
3. When air is in motion, it allows us to fly a kite successfully. True

4. Carbon dioxide assists in the burning of candles. **False**
5. The ability of birds, bats, and insects to fly is supported by the presence of air. **True**

Q5. Assertion and Reason Questions

Choose the correct options

1. **Assertion (A):** Forests help in preventing soil erosion.
Reason (R): The roots of trees hold the soil together and prevent it from being washed away.

Ans: A (Both A and R are true, and R is the correct explanation of A. Forests help keep the soil safe and tree roots hold the soil together.)

2. **Assertion (A):** Solar panels are harmful to the environment.
Reason (R): They convert sunlight into electricity without releasing pollutants.

Ans: D (A is false, but R is true. Solar panels are a clean, renewable energy source that doesn't pollute.)

Q6. Very Short Answer Type Questions

1. **What do Bhoomi and Surya do during their school breaks?**

Visit their grandmother.

2. **Where is Ajji's home situated?**

In a village at the forest's edge.

3. **Describe the village's air quality.**

Cleaner and cooler than the city.

4. **Identify a natural resource.**

Fresh air.

5. **How do Bhoomi and Surya utilize water?**

For drinking and plant cultivation.

Q7. Short Answer Type Questions

1. **Where do Bhoomi and Surya spend their school holidays, and how would you describe the surroundings?**

They visit their Ajji (grandmother) in a village on the edge of a forest in the Western Ghats. The air is fresh and cooler than the city, and they see beautiful hills, streams, plants, animals, and birds.

2. **What does Ajji say about the natural treasures of the place?**

Ajji says the place has several treasures of nature that enrich their lives. These include pure air, fertile soil, and plenty of sunlight, which are useful in many ways.

3. **How do Bhoomi and Surya explain their use of water, and what point does Ajji make about the significance of nature's resources?**

Bhoomi and Surya say they use water for drinking and growing vegetables. Ajji adds that these treasures are needed for survival and for making lives more comfortable, and without them, no form of life on Earth is possible.

4. What form of exercise does Ajji practice, and what explanation does she give for taking deep breaths?

Ajji does breathing exercises. She says she is taking deep breaths to get more fresh air in the lungs and stay healthy.

5. What happens if we hold our breath for a long time, and how long can we survive without oxygen?

If we hold our breath for a long time, the body does not get enough oxygen. We can survive for only a few minutes without oxygen.

Q8. Long Answer Type Questions

1. Explain why conserving natural resources is important and what the effects of overusing them are.

It is crucial to conserve natural resources to ensure they are available for future use. Overuse of resources, such as water, fossil fuels, and forests, leads to depletion, environmental damage, and loss of different species. For example, deforestation can result in soil erosion, and overuse of fossil fuels adds to climate change. By conserving resources, we can maintain ecological balance, decrease pollution, and encourage sustainability, making sure that future generations can meet their needs without harming the environment.

2. Describe the setting of Bhoomi and Surya's vacation at Ajji's village. What natural bounties does Ajji highlight, and how does she articulate their significance?

Bhoomi and Surya are spending their vacation with their Ajji in a village located near a forest in the Western Ghats. The village atmosphere is characterized by fresher and cooler air compared to the city, and the surroundings are marked by scenic hills, flowing streams, diverse plants, various animals, and numerous birds. Ajji draws their attention to the village's natural bounties, which include clean air, productive soil, and abundant sunlight. She elucidates that these bounties enhance their lives and are indispensable for existence, asserting that life would be unsustainable on Earth without them. She also stresses that these resources are vital not only for basic survival but also for improving their quality of life.

Q9 Case Study Based Question

A town is considering building a new shopping mall. The proposed location is currently a wetland area that helps to filter water and provides habitat for various birds and plants.

1. Identify the key natural resources present in the wetland area.

The key natural resources present in the wetland area include water (for filtering), and a habitat for various plants and animals (biodiversity/forests/ecosystem).

2. What are the potential environmental impacts of constructing the shopping mall on this wetland?

Constructing the shopping mall on the wetland could lead to water pollution, loss of habitat for birds and plants, disruption of the ecological balance, and potential soil erosion.

3. Discuss the economic benefits that the shopping mall could bring to the town.

The document does not directly discuss the economic benefits of a shopping mall. However, generally, such developments can bring jobs and increase revenue for the town.

4. Suggest alternative locations or design plans that could minimize harm to the natural resources while still allowing for development.

Alternative locations could include already developed areas or land that is not a critical natural habitat. Design plans could incorporate green building practices, rainwater harvesting, and the use of solar energy to minimize environmental impact.

5. How can the town use the principles of sustainable development to make decisions about this project?

The town can use the principles of sustainable development by balancing economic growth with environmental protection. This means considering the long-term impact on natural resources and ecosystems, ensuring that resources are available for future generations, and exploring alternative solutions that minimize harm to the environment. They should prioritize responsible use of renewable resources and conservation of non-renewable resources.

Q10. Draw a pie chart

Label with Percentages & Color Code:

- Nitrogen – 78% (Blue)
- Oxygen – 21% (Green)
- Argon – 0.93% (Yellow)
- Carbon dioxide – 0.03% (Red)
- Other gases – Trace (Grey)

1. Why is oxygen essential for survival? Write one reason below the chart.

Oxygen is essential for survival because it helps in respiration, releasing energy from food for our body.

Q11. Firki and Windmill Connection

Observation: Both use wind energy.

- Firki spins when air blows.
- Windmill rotates to produce electricity or pump water.

1. List two uses of it in daily life.

Two uses of wind energy in daily life:

1. Generating electricity.
2. Pumping water in villages/farms.

Q12. Water Sources and Conservation

Instructions: Match the water sources to their types and uses.

- River → Freshwater → Drinking, irrigation
- Pond → Freshwater → Domestic use, fish farming
- Ocean → Saltwater → Transport, fishing
- Lake → Freshwater → Tourism, drinking water supply

1. Suggest one way to reduce water wastage at home.

One way to reduce water wastage at home: Turn off taps while brushing teeth.

Q13. Uses of Solar Energy

Label the Uses of Sunlight:

- Drying clothes → Renewable energy source
- Cooking food in solar cooker → Renewable energy source

1. What would happen if the Sun didn't shine for a week?

If the Sun didn't shine for a week: Plants would not make food, temperatures would drop, and life would struggle to survive.

2. Why is it important not to pluck all fruits from forest trees?

It is important not to pluck all fruits from forest trees because they provide food for animals, help seeds grow into new plants, and maintain the balance of nature.

Q14. Fossil Fuels vs Renewable Resources

Instructions: Classify the resources shown below.

Coal, Solar Panel, Forest, Petroleum, Windmill

Renewable Resources	Non-renewable Resources
Solar Panel	Coal
Forest	Petroleum
Windmill	

1. Suggest one alternative to fossil fuels for transportation. Justify your answer in 2-3 sentences.

One alternative to fossil fuels for transportation: Electric vehicles powered by solar or wind energy.