



LESSON

13 Keeping Our Earth Green and Clean



Learning Outcomes

After completing this chapter, students will be able to:

- ◆ list the importance of trees
- ◆ define and identify biodegradable and non-biodegradable wastes
- ◆ state the three R's
- ◆ understand the importance of recycling

Inside the Chapter

- ★ Importance of Trees
- ★ Deforestation
- ★ How to Save Trees
- ★ Water
- ★ How to save water
- ★ Soil
- ★ Biodegradable and Non-biodegradable Wastes
- ★ The Three R's



Let's Do

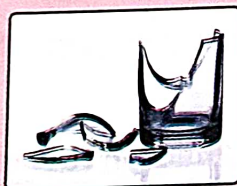
Identify and write, where do you throw the following things (Green Waste Bin, Blue Waste Bin).

1.



green

2.



Blue

3.



Blue

4.



Green

Pinky goes to her grandmother's place every summer vacation. On the way, she enjoys the green forests and clean rivers. This time, while she was going there, she noticed that the forests had become less dense. She saw that some men were cutting down the trees. She also noticed that the colour of the river water had changed. Polybags and dirty clothes were flowing in the river. So, she became upset and asked her father about all that was happening there. Her father replied, "My dear, it is because of increasing population and human activities. They are destroying natural resources and polluting the environment." What is environment?



Afforestation

Planting trees on a large scale is called afforestation. Trees are valuable to us. We all should plant trees and take care of them.

Some other steps taken by us to save the trees are as follows:

Van Mahotsav

It is a festival of trees. It is celebrated in July for one week. People plant lakhs of trees all over the country and take pledge to protect the nature and take care of it.

World Environment Day

It is celebrated all over the world on June 5. People discuss the environmental problems on this day and talk about the ways to save the environment.

Look Beyond (Inquiry Driven)

(NEP GUIDELINES)

22nd April is celebrated as World Earth Day. Find out how it is celebrated and its theme for this year.

Multiple Choice Questions

Tick (✓) the correct answers:

(Remembering, Understanding)

1. Which one of the following effects is **not** due to deforestation?

- (a) lack of rainfall
- (b) better air quality
- (c) increase in carbon dioxide level

2. Our environment consists of

- (a) living things only
- (b) non-living things only
- (c) both living and non-living things

3. Trees are important because they

- (a) give out carbon dioxide
- (b) reduce rainfall
- (c) reduce soil erosion

WATER

Water covers about 71% of our Earth's surface. Our planet is also called the blue planet because of the water.

Importance of Water

Water

- makes about 60% of our body volume.
- helps us to stay healthy.

M Multiple Choice Questions

(Remembering, Applying)

Tick (✓) the correct answers:

- Which one of the following is **not** a way to save water?
 - repairing leaky taps
 - taking long showers
 - keeping taps off while brushing teeth
- Mansi eats a toffee while walking in the park. She wants to throw the wrapper but there is no dustbin nearby. What should Mansi do?
 - find an open space and throw the wrapper
 - bury the wrapper under the soil
 - keep the wrapper till she finds a dustbin

BIODEGRADABLE AND NON-BIODEGRADABLE WASTES

The wastes that decompose or rot after some time and get mixed with the soil are called **biodegradable wastes**. These include paper, leaves, fruit and vegetable peels and things made up of wood. Biodegradable wastes can be converted into manure by letting it decompose in deep covered pits. Animal wastes, like cow dung, can be used to produce biogas (or gobar gas) that can be used as fuel in villages.

Non-biodegradable wastes do not rot or decompose even after long period of time. They remain in the soil as such and pollute it. These include things made up of plastic, glass, metal and rubber. We can manage non-biodegradable wastes to some extent by adopting the three R's.

THE THREE R's

The three R's that we must adopt to reduce pollution are **reduce, reuse and recycle**.

Reduce

Reduce means the reduction in waste production by cutting down those practices which produce wastes. Here are some ways to reduce waste:

- We must buy only those things that we need.
- Avoid buying things with a lot of packaging materials.
- Avoid buying throw-away products like plastic cups, glasses and tins.
- Use a steel plate instead of a paper or plastic plate.

Reuse

Reuse means using those items again that otherwise would have been thrown away as waste. Reusing saves money and put waste to good use. Here are some ways of reusing items:

B Science Riddles:

1. I am process that wears the land,
caused by wind or water, you understand.
Topsoil washes away, oh no! *Erosion*
to prevent this, what can you sow?
2. I am a word that starts with 'R',
to save the Earth, you must do me, for.
Instead of throwing things away, *Recycling*
find on now we and for longer they'll stay.
What am I?

C Multiple Choice Questions:

Tick (✓) the correct options:

(Applying, Analysing)

1. Poonam digs a pit in her garden and puts vegetable waste, plastic bags and rotten fruits into it. After a few months, which one of the following waste materials remains the least changed?
(a) vegetable waste (b) plastic bags (c) rotten fruits
2. Which one of the following is the best way to reduce air pollution?
(a) burning all the house wastes once a month
(b) spending as much time as possible inside the house
(c) walking or using a bicycle to go to nearby places

D Case/Source based Question:

Read the situation given below and choose the correct answer :

(Analysing)

Ravi takes three waste samples (A, B and C) of equal weight and buries them in the soil. After two months, he takes out the samples. He weighs them and records their weight as shown in the table given below:

Object	Weight (before burying)	Weight (two months after being buried)
A	50 grams	27 grams
B	50 grams	50 grams
C	50 grams	12 grams

Which of the following waste samples have biodegradable material?

- (a) A and B (b) B and C (c) A and C

E Fill in the blanks with the help of the given words:

1. Animal waste is used to produce _____.
2. Burning fuels produce _____ that causes air pollution.
3. Trees are being cut down for _____.

(Remembering)

(biogas/LPG)

(dust/smoke)

(water/housing)

(Remembering)

F Write 'T' for true and 'F' for false statements:

1. Burning coal pollutes the soil.
2. Deforestation helps to prevent soil erosion.

F

F

SECTION - B

A Very Short Answer Questions:

(Remembering)

1. What is pollution?
2. Name a waste that is recycled.
3. List two gases that pollute the air.

(Remembering, Understanding, Applying, Analysing)

Section - B

A. Very Short Answer Question.

① What is pollution?

Pollution is ^{when} something harmful is added to the environment, making it dirty or unsafe.

2. Name a waste that is recycled.

Ans Paper is a waste that can be recycled.

3. List two gases that pollute the air.

Ans Two gases that pollute the air are carbon dioxide (CO_2) and sulphur dioxide (SO_2).

B. Short Answer Questions. —

1. What are the causes of deforestation?

It is caused by

(i) Clearing land for agriculture.

(ii) Cutting down trees for wood and paper.

(iii) Expansion of cities.

2. Why should we plant trees?

We should plant trees because

(i) They produce oxygen, which we need to breathe.

(ii) They provide a home for animals.

(iii) They help prevent soil erosion.

3. What is the importance of World Environment Day?

Ans World Environment Day is important because it raises awareness about environmental issues and encourages people to take positive action to protect the environment.

4. Simi and her friends are planting trees in an abandoned piece of land. They are encouraging their other friends also to do so.

(a) What is this activity called? How does it help us?

Ans. This is called Afforestation.

It helps by increasing the number of trees which is beneficial for environment.

(b) What environmental value do we learn from Simi and her friends? Discuss with your partners.

Ans. Simi and her friends are teaching us the value of caring for the environment. They show us that small actions can have a big impact.

5. How does deforestation lead to poor air quality?

Ans. Because trees absorb pollutants from the air. When trees are cut down, there are fewer of them to filter out pollutants, or it may lead to the level of harmful gases in the air.

C. Long Answer Question:-

1. List three measures to keep the air clean.

(i) Plant more trees to absorb pollutants and release oxygen.

(ii) Using public transport.

(iii) Reducing use of harmful chemicals.

(iv) Stop cutting trees.

(v) Stop burning polythene.

2. What are the ways to reduce waste production:

Ans (1) Recycling materials to make new products reduces the need for new products.

(2) Composting organic waste instead of throwing them away.

(3) Reducing use of packaging items.

3. Explain the following and give two examples of each.

(a) Biodegradable wastes

Ans. Waste that can do not breakdown

Waste that can be broken down by natural processes.

example:- Fruit peels, paper etc.

(b) Non-Biodegradable wastes.

Waste that do not broken easily in the environment.
example:- Plastic bags, glass bottles.

4. Should the idea of Van Mahastav be celebrated for only a week in a year, or would it be better to celebrate it everyday? Justify your answer.
Celebrating Van Mahastav everyday would be better because planting trees and caring for the environment is an ongoing process. This continuous effort towards the environment is more effective than limiting it to just a week.