



**Q: Define Environment. What are biotic and abiotic components of the environment?**

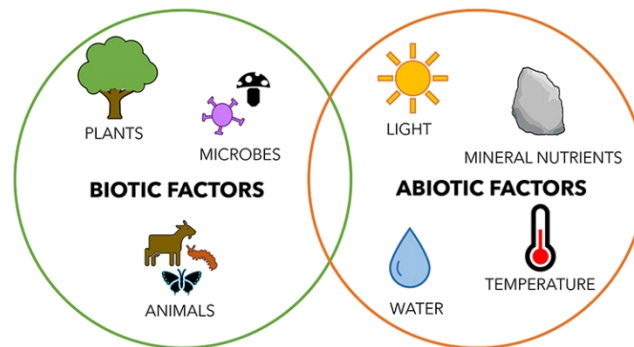
### Environment:

An Environment is everything that is around us, which includes both living and nonliving things such as soil, water, animals and plants.

### Components of Environment:

- **Biotic (living) components:** The living things of the environment are called biotic components.
- **Abiotic (non-living) components:** The non-living things of the environment are called abiotic components.

### Examples:



Choose the right option:

1. The particular place where an organism lives is called

- (A) House                      (B) Environment                      (C) Land                      (D) Home

**Reason:** The particular place where an organism lives is referred to as its environment.

2. Which is the living component of the environment?

- (A) Plants                      (B) Animals                      (C) Both a and b                      (D) Sunlight

**Reason:** Plants and animals are both living components of the environment.

3. The non-living components of environment are:

- (A) Sunlight                      (B) Soil                      (C) Water                      (D) All of these

**Reason:** Sunlight, soil, and water are all essential non-living components of the environment.



4. The biotic (living) components of the environment are:

- (A) Plants                      (B) Animals                      (C) Bacteria                      (D) All of these

**Reason:** Biotic components of the environment include all living organisms such as plants, animals, and bacteria.

5. The abiotic component of the environment is:

- (A) Plants                      (B) Animals                      (C) Bacteria                      (D) Soil

**Reason:** Soil is an abiotic component of the environment as it is non-living and provides nutrients for living organisms.

6. Which of the following are non-living components of the environment?

- (A) Sunlight, soil, water, animals                      (B) Plants, animals, soil, water                      (C) Soil, water, sunlight, air                      (D) Animals, soil, plants, air

**Reason:** Soil, water, sunlight, and air are all non-living components of the environment.

## Pollution:

The addition of harmful things to the environment is called pollution.



**Pollutants:** Pollutants are harmful substances that contaminate the environment, causing damage to air, water, soil, and living organisms. They include chemicals, waste products, and other hazardous materials.

### Related SLO

#### Students' Learning Outcomes

- Define pollution and its types.

### Short Questions

- What is pollution?

### Short Questions

- What is meant by pollutants?



### Effects of Pollution:

- Pollution can make our environment look dirty and unclean, making it harmful for living organisms.
- Pollution can cause diseases by contaminating the air, water, and soil, leading to health problems like respiratory issues, heart disease, and infections. Breathing polluted air or drinking contaminated water can make them sick.

#### Short Questions

- What are the effects of pollution on life?
- What is the relationship between diseases and pollution?

### Causes of Pollution:

The main cause of pollution is human activities, such as industrial production, vehicle emissions, deforestation, and improper waste disposal.

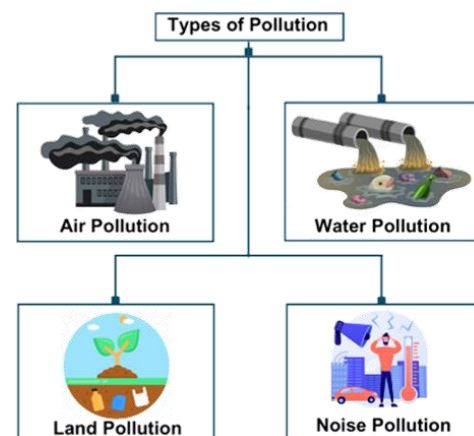
#### Short Questions

- What is the main cause of pollution?
- What are the types of environmental pollution?


### Types of Pollution:

There are three main types of pollution:

- Air pollution
- Water pollution
- Land pollution





<b>1. The types of environmental pollution are;</b>			
Ⓐ 1	Ⓑ 2	Ⓒ 3	Ⓓ 4
<i>Reason:</i> There are three main types of land pollution including, land, water and air pollution.			
<b>2. Which of the following are types of environmental pollution</b>			
Ⓐ Air pollution	Ⓑ Water pollution	Ⓒ Land pollution	Ⓓ All of these
<i>Reason:</i> The main types of environmental pollution are air, water, land, and noise pollution.			
<b>3. The substances which cause pollution are called;</b>			
Ⓐ Pollens	Ⓑ Pollutants	Ⓒ Polygons	Ⓓ Poisonous
<i>Reason:</i> Substances that cause pollution are called pollutants.			
<b>4. Which is not a type of pollution</b>			
Ⓐ Air pollution	Ⓑ Water pollution	Ⓒ Land pollution	Ⓓ Plants pollution
<i>Reason:</i> There is no recognized category of pollution specifically referred to as "plants pollution."			
Ⓐ Nitrogen and oxygen	Ⓑ Carbon dioxide and methane	Ⓒ Nitrogen and ozone	Ⓓ Water vapors and oxygen
<i>Reason:</i> The atmosphere is mostly composed of nitrogen (about 78%) and oxygen (about 21%).			
<b>5. Any change in the environment which is harmful for living things is called</b>			
Ⓐ Pollution	Ⓑ Pollutants	Ⓒ Disease	Ⓓ Filthy
<i>Reason:</i> Pollution refers to any harmful change in the environment affecting living organisms.			
<b>6. Which type of pollution is shown in the image</b>			
			
Ⓐ Water pollution	Ⓑ Land pollution	Ⓒ Air pollution	Ⓓ Noise pollution
<i>Reason:</i> A picture of a speaker indicates noise pollution.			



### Air Pollution:

Air pollution is when harmful substances, like chemicals, dust, or smoke, get into the air, making it dirty and unsafe to breathe. It is the most dangerous environmental pollution.



### Causes of Air Pollution:

- **Factories:**

When factories make products, they often release smoke and chemicals into the air.

- **Cars and Trucks:** Vehicles that burn fuel release exhaust fumes into the air.



- **Farming:** Using certain pesticides and fertilizers can release harmful substances into the air.



### Related SLO

#### Students' Learning Outcomes

- Explain the main causes of water, air and land pollution
- Explain the effects of water, air and land pollution (unclean or toxic water, smoke, smog, excess carbon dioxide or other gases, open garbage dumps, industrial water, etc.) on the environment and life.

### Short Questions

- Write the three causes of air pollution.
- What are the effects of air pollution?
- These days which one is the most dangerous environmental pollution? in Pakistan?



- **Natural Causes:** Events like wildfires and volcanic eruptions can also pollute the air.
- **Fossil Fuels:** Fossil fuels are energy sources like coal, oil, and natural gas formed from the remains of ancient plants and animals.



When we burn fossil fuels like coal, oil, and natural gas for energy, it releases various pollutants into the air.

### Short Questions

**What is meant by fossil fuels?**

**What are fossils?**

Fossils are the remains of ancient plants and animals which were present a long time ago.

### Effects of Air Pollution

- Breathing polluted air or smoke can cause problems like asthma, allergies, and lung diseases.
- Air pollution can harm plants and animals. It can also damage buildings and monuments.
- Pollutants in the air can mix with rain, making it acidic. This can harm plants, animals, and buildings.
- The pollutant gases of atmosphere combine together in the presence of sunlight and produces **smog**. In winters smog is present in atmosphere. It reduces visibility.



### Short Questions

**What do you know about smog?**

**What is acid rain?**

**How is smoke harmful to us?**



**7. Which diseases is caused due to air pollution?**

(A) diarrhea	(B) typhoid	(C) lungs cancer	(D) cholera
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*Reason:* Air pollution contains harmful pollutants that can damage lung tissue and lead to cancer.

**8. Which of the following acts causes most of the air pollution?**

(A) Collecting rubber	(B) Burning rubber	(C) Reusing rubber	(D) Recycling rubber
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*Reason:* Burning rubber releases toxic chemicals and pollutants into the air, causing significant air pollution.

**9. Smog reduces:**

(A) Hearing	(B) Visibility	(C) Listening	(D) Talking
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**Reason:** Smog reduces visibility because it creates a dense haze that obscures light and makes it difficult to see through.

**10. Smog cause disease of:**

(A) Lungs	(B) Throat	(C) Eyes	(D) All of these
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*Reason:* Smog can cause diseases affecting the lungs, throat, and eyes due to the inhalation of harmful pollutants.

**11. Which of the following disease is caused due to smog**

(A) Lung infection	(B) Heart disease	(C) Headache	(D) Kidney pain
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*Reason:* Smog can cause lung infections due to the inhalation of harmful pollutants.

**12. Carbon dioxide, smoke and fire in the trees cause;**

(A) Water pollution	(B) Land pollution	(C) Air pollution	(D) Noise pollution
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*Reason:* Carbon dioxide, smoke, and fire in trees contribute to air pollution by releasing harmful substances into the atmosphere.

**13. Smog occurs in which weather;**

(A) Summer	(B) Winter	(C) Autumn	(D) Spring
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*Reason:* Smog typically occurs in winter when temperature inversions trap pollutants close to the ground.

**14. The pollutant gases of air combine together in presence of sunlight and produce:**

(A) Smoke	(B) Carbon dioxide	(C) Methane	(D) Smog
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*Reason:* Pollutant gases in the air combine in the presence of sunlight to produce smog.

**15. Our atmosphere mostly consists of;**

(A) Nitrogen and oxygen	(B) Carbon dioxide and methane	(C) Nitrogen and ozone	(D) Water vapors and oxygen
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*Reason:* The atmosphere is mostly composed of nitrogen (about 78%) and oxygen (about 21%).

**16. Smoke pollutes the**

(A) Air	(B) Water	(C) Land	(D) All of these
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*Reason:* Smoke can pollute air, water, and land by depositing harmful particles and chemicals.

**17. Which of the following causes air pollution**

- |                |         |                 |                |
|----------------|---------|-----------------|----------------|
| Ⓐ Burning coal | Ⓑ Smoke | Ⓒ Exhaust fumes | Ⓓ All of these |
|----------------|---------|-----------------|----------------|

*Reason:* Burning coal, smoke, and exhaust fumes all contribute to air pollution.

### Land Pollution:

Land pollution is the contamination of the Earth's land surface by waste, chemicals, and other harmful substances.



### Causes of Land Pollution

- **Littering:**

Throwing garbage such as plastic, paper, and food waste on the ground instead of disposing of it properly.

- **Agricultural Activities:**

Using pesticides, fertilizers, and other chemicals that can seep into the soil and contaminate it.

- **Industrial Activities:**

Factories and industrial plants release harmful chemicals and waste products that can pollute the land.

#### Short Questions

**Write main causes of land pollution.**

**What are the effects of land pollution?**





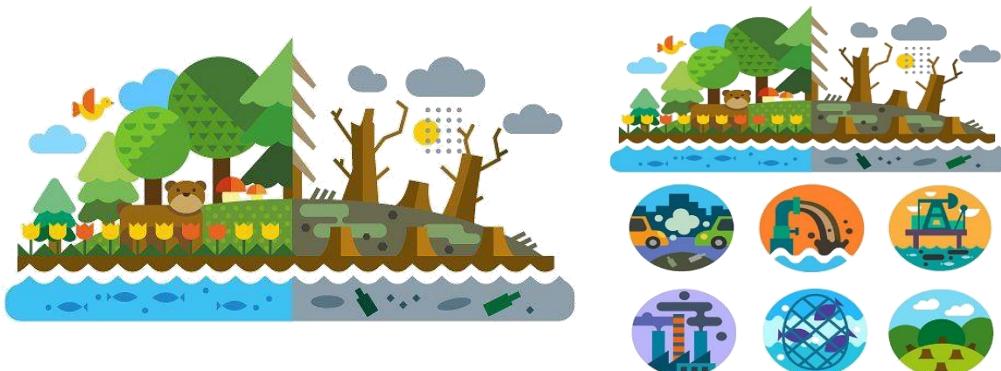
- **Deforestation:**

Cutting down trees and clearing forests for agriculture or construction can lead to soil erosion and land degradation.



### Effects of Land Pollution

- Harmful chemicals in the soil can kill plants, reduce soil fertility, and make it difficult to grow crops.
- Exposure to polluted land can cause health problems for humans and animals, such as respiratory issues, skin infections, and more severe diseases.
- Pollution can destroy habitats, leading to the decline or extinction of plant and animal species.
- Deforestation and land degradation contribute to the release of greenhouse gases, exacerbating global warming.





**1. The main reasons of land pollution are**

- |           |               |         |                |
|-----------|---------------|---------|----------------|
| Ⓐ Garbage | Ⓑ Fertilizers | Ⓒ Waste | Ⓓ All of these |
|-----------|---------------|---------|----------------|

*Reason:* Garbage, fertilizers, and waste contribute to land pollution through their improper disposal and use.

**2. Which of the following causes water pollution**

- |                        |                             |                                  |                    |
|------------------------|-----------------------------|----------------------------------|--------------------|
| Ⓐ Burning fossil fuels | Ⓑ Throwing rubbish in water | Ⓒ Using toxic chemical on plants | Ⓓ All of the above |
|------------------------|-----------------------------|----------------------------------|--------------------|

*Reason:* All listed actions, such as throwing rubbish in water and using toxic chemicals, cause water pollution.

**3. When waste is not disposed of properly it will cause**

- |                   |                  |                 |                   |
|-------------------|------------------|-----------------|-------------------|
| Ⓐ Water pollution | Ⓑ Land pollution | Ⓒ Air pollution | Ⓓ Noise pollution |
|-------------------|------------------|-----------------|-------------------|

*Reason:* Improper waste disposal leads to land pollution by contaminating soil and disrupting ecosystems.

**1. Non-biodegradable materials are increasing the \_\_\_\_\_ day by day**

- |                   |                  |                 |                   |
|-------------------|------------------|-----------------|-------------------|
| Ⓐ Water pollution | Ⓑ Land pollution | Ⓒ Air pollution | Ⓓ Noise pollution |
|-------------------|------------------|-----------------|-------------------|

*Reason:* The increasing amount of non-biodegradable materials contributes to land pollution.

**Water Pollution:**

Water pollution is when harmful substances, like chemicals, waste, or toxins, get into water bodies (rivers, lakes, oceans, and groundwater) and make the water dirty and unsafe for living things.

**Causes of Water Pollution**

- **Industrial Waste:**

Factories release chemicals and waste products into nearby water bodies.

**Short Questions**

Describe causes of water pollution.

- **Sewage and Wastewater:** sewage and wastewater from households are discharged into rivers and lakes.
- **Agricultural Runoff:** Fertilizers, pesticides, and animal waste from farms wash into streams and rivers.
- **Oil Spills:** Oil from ships and oil rigs can spill into oceans, harming marine life
- **Plastic Waste:** Plastic bags, bottles, and other waste items are thrown into water bodies.




### Effects of Water Pollution:

- Polluted water can poison fish and other aquatic animals, making it hard for them to survive.
- Drinking or swimming in polluted water can cause health issues like stomach problems and skin rashes
- Polluted water can disrupt the balance of ecosystems, affecting plants and animals that rely on clean water.

<b>4. The germs present in it cause typhoid.</b>			
Ⓐ Sewerage water	Ⓑ Fertilizers	Ⓒ Factory waste	Ⓓ Insecticides
<i>Reason:</i> Typhoid is commonly spread through contaminated water, including sewerage water.			
<b>5. Water pollution is caused due to;</b>			
Ⓐ Dirty water	Ⓑ fertilizers	Ⓒ sewage water	Ⓓ all of these
<i>Reason:</i> Water pollution can be caused by dirty water, fertilizers, and sewage water.			
<b>6. The aquatic animals die due to</b>			
Ⓐ Air pollution	Ⓑ Water pollution	Ⓒ Land pollution	Ⓓ Noise pollution
<i>Reason:</i> Aquatic animals often die due to water pollution, which contaminates their habitats and affects their health.			
<b>7. The oil leakages from oil tankers and petroleum refiners are polluting;</b>			
Ⓐ Water	Ⓑ Land	Ⓒ Air	Ⓓ Forests
<i>Reason:</i> Oil leakages from tankers and petroleum refiners primarily pollute water bodies.			
<b>8. Insecticides, fertilizers, chemical substances, agricultural and poisonous substances of factories all are cause of</b>			
Ⓐ Water pollution	Ⓑ Land pollution	Ⓒ Air pollution	Ⓓ Noise pollution
<i>Reason:</i> Insecticides, fertilizers, and chemicals can contaminate water sources, leading to water pollution.			
<b>9. The aquatic animals die due to the lack of</b>			









Ⓐ Oxygen	Ⓑ Carbon dioxide	Ⓒ Nitrogen	Ⓓ Ozone
<b>Reason:</b> Aquatic animals die due to a lack of oxygen, which is essential for their survival in water.			
<b>10. Which of the following causes water pollution?</b>			
Ⓐ Burning fossil fuels	Ⓑ Throwing rubbish in water	Ⓒ Using toxic chemical on plants	Ⓓ All of the above
<b>Reason:</b> All listed actions, such as throwing rubbish in water and using toxic chemicals, cause water pollution.			
<b>11. The organisms shown in the image are mainly affected by</b>			
Ⓐ Water pollution	Ⓑ Land pollution	Ⓒ Air pollution	Ⓓ Noise pollution
<b>Reason:</b> The organisms in the image are likely affected by water pollution, which can harm aquatic life.			
<b>12. Which type of harmful materials among the following causes typhoid?</b>			
Ⓐ Fertilizers	Ⓑ Sewage water	Ⓒ Factory waste	Ⓓ Insecticides
<b>Reason:</b> Sewage water can carry the bacteria <i>Salmonella typhi</i> , which causes typhoid fever.			

### Ways to Reduce Pollution:

#### Short Questions

Write three ways of preventive measures to reduce pollution.

		
Conserve energy	Plant more trees to absorb carbon dioxide	Use public transportation
		
Do not burn your garbage	Reduce plastic use	Recycle and compost

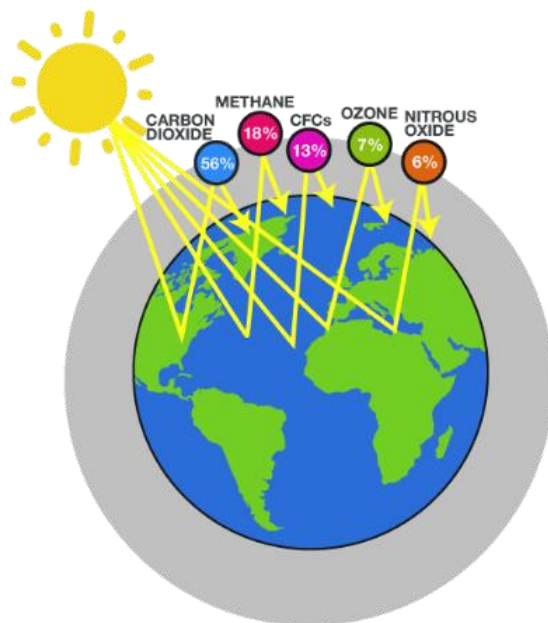


## Global Warming:

### Greenhouse gases:

In earth's atmosphere certain gases are present that trap heat. These gases are called as greenhouse gases. (also known as GHGs). Some main greenhouse gases are:

- **Carbon dioxide** (from cars and factories)
- **Methane** (from cows and garbage dumps)
- **Nitrous oxide** (from agricultural activities)
- **Chlorofluorocarbons** (from refrigerators and air conditioners)
- **Water vapors** (from water evaporation)
- **Ozone** (from upper atmosphere and chemical reactions between pollutants)



### Related SLO

#### Students' Learning Outcomes

- Explain the effects of fossil fuels and releasing greenhouse gases in the air.

### Short Questions

- What are greenhouse gases? Name some greenhouse gases.





### **Greenhouse effect:**

Greenhouse is a house made of glass. Its roof and walls are made of green colored glass.

The excessive burning of fossil fuels have resulted in an increase in the number of greenhouse gases which trap heat leading to the warming of the planet's surface and lower atmosphere. This phenomenon is known as greenhouse effect.



### **Global Warming:**

The increasing rate of greenhouse effect is increasing the average temperature of Earth. As a result, the Earth is getting warmer. This is called Global warming.

#### **Short Questions**

- What is greenhouse effect?
- Define global warming.
- Write two effects of Global warming?

### **Effect of Global Warming:**

- Global warming can cause ice to melt, leading to higher sea levels.
- It can make weather patterns more extreme.
- It can cause habitats to change, affecting plants and animals.
- Global warming can increase the risk of droughts and water shortages.







<b>1. Which of the following is not a greenhouse gas?</b>			
(A) Oxygen	(B) Methane	(C) Ozone	(D) Carbon dioxide
<i>Reason:</i> Oxygen is not a greenhouse gas; greenhouse gases include methane, ozone, and carbon dioxide which trap heat in the atmosphere.			
<b>2. The colour of roof greenhouse effect is</b>			
(A) Green	(B) Red	(C) White	(D) Black
<i>Reason:</i> The color of roofs in the greenhouse effect is often white to reflect sunlight and reduce heat absorption.			
<b>3. Which of the following is due to global warming</b>			
(A) Heavy rains	(B) Melting of ice	(C) Flood	(D) All of these
<i>Reason:</i> Global warming leads to heavy rains, melting of ice, and floods due to increased temperatures and climate changes.			
<b>4. Greenhouse is a house made of;</b>			
(A) Grass	(B) Plastic	(C) Glass	(D) Plants
<i>Reason:</i> A greenhouse is typically made of glass to allow sunlight to enter and warm the plants inside.			
<b>5. Which is not a greenhouse gas;</b>			
(A) Oxygen	(B) Hydrogen	(C) Nitrogen	(D) Methane
<i>Reason:</i> Oxygen is not a greenhouse gas; greenhouse gases include methane and carbon dioxide, which trap heat in the atmosphere.			
<b>6. The climate of the world is changing due to;</b>			
(A) Global warming	(B) Greenhouse	(C) Sunlight	(D) Pollution
<i>Reason:</i> Global warming is a major factor causing climate change by increasing temperatures worldwide.			
<b>7. Coal, oil and natural gas are all considered as;</b>			
(A) Domestic fuel	(B) Burning fuel	(C) Fossil fuel	(D) Natural fuel
<i>Reason:</i> Coal, oil, and natural gas are considered fossil fuels as they are formed from the remains of ancient plants and animals.			
<b>8. The remains of old animals are called</b>			
(A) Fuel	(B) Fossils	(C) Fossil fuels	(D) Biotic components
<i>Reason:</i> The remains of old animals are preserved as fossils, which provide evidence of past life.			
<b>9. The remains of old animals are called</b>			
(A) Fuel	(B) Fossils	(C) Fossil fuels	(D) Biotic components
<i>Reason:</i> The remains of old animals are preserved as fossils, which provide evidence of past life.			



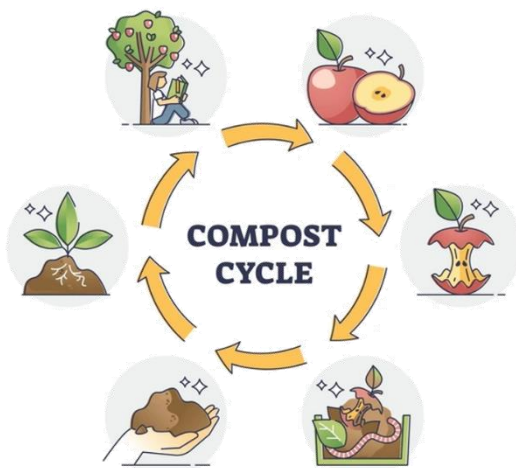
### Biodegradable Materials:

- These are materials that can break down naturally over time with the help of microorganisms like bacteria and fungi.
- They turn into simpler substances that can be absorbed by the environment without causing harm.

#### Related SLO

#### Students' Learning Outcomes

- Differentiate between biodegradable and non-biodegradable materials.



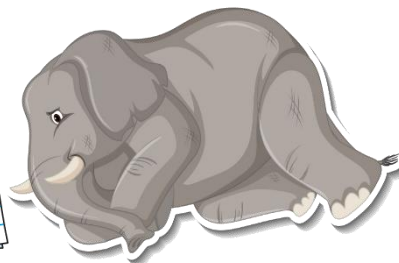
### Examples:



Food scraps



Paper



Dead animals



Wood

#### Short Questions

- What are biodegradable materials?
- Identify biodegradable and non-biodegradable materials present in your environment.



### Non-Biodegradable Materials:

- These materials do not break down easily and can take hundreds or even thousands of years to decompose.
- Non-biodegradable materials can accumulate in the environment and cause pollution because they cannot decompose.

#### Short Questions

- What are non-biodegradable materials?
- Give examples of non-biodegradable materials.

### Examples:

- Examples: plastic bottles, Styrofoam, metal cans, and glass. rubber



Plastic

Metal cans

Glass

Rubber

### Effect of Non-Biodegradable Materials on Environment:

Non-biodegradable materials have a significant impact on the environment because they do not break down easily and can persist for hundreds or even thousands of years.

- **Pollution:**

Non-biodegradable materials like plastic bottles and bags litter our streets, parks, and oceans, making the environment dirty and unattractive.

#### Related SLO

#### Students' Learning Outcomes

- Explain the impact of non-biodegradable on the environment.



- **Clogging Waterways:**

Trash that doesn't break down can block rivers and streams, leading to flooding and disrupting water flow.

- **Toxic Chemicals:**

Some non-biodegradable items, such as certain plastics, release harmful chemicals into the soil and water, which can be dangerous for all living things.

- **Harm to Animals:**

Animals may eat non-biodegradable items, like plastic bags, thinking they are food, which can make them sick or even cause death.

- **Greenhouse Gases:**

Making and disposing of non-biodegradable materials releases gases that contribute to global warming, causing extreme weather and climate changes.



### Ways to Reduce Non-Biodegradable Materials:

- **3R strategy:**

The 3R strategy—Reduce, Reuse, and Recycle—minimizes waste by cutting down on the amount of non-biodegradable materials produced, reusing items instead of discarding them, and recycling materials to make new products. This reduces the amount of waste that ends up in landfills and the environment.

#### Related SLO

#### Students' Learning Outcomes

- Investigate possibilities and suggest ways to reduce non-biodegradable materials

#### Short Questions

- What is 3R strategy?
- What is 4R strategy?

Ans: Refuse, Reduce, Reuse, Recycle



- **Support Eco-Friendly Products:** Choose products made from biodegradable materials or those with eco-friendly packaging to reduce the use of harmful non-biodegradable material



### Role of Government:

The Government of Pakistan has banned polythene bags because they pollute the environment and harm animals as they are non-biodegradable materials which cannot decompose. This helps keep our land and water clean and safe for everyone.

#### Short Questions

- Why Government of Pakistan has banned the use of polythene bags?
- How the use of polythene bags harmful to the environment?

### Billion Tree Plantation:

The Billion Tree Plantation was launched by the government of Pakistan in 2014 as part of the Green Pakistan Program to combat deforestation and climate change. This initiative aims to restore degraded forests and enhance biodiversity across the country.

#### Short Questions

What do you know about "Billion Tree Plantation?"



#### Short Questions

If it is written D2W on the polythene bags then why there is no ban on the use of such bags?

"D2W" means the bag can break down more easily than regular plastic bags. Even though it's better for the environment, many people still use plastic bags, which is why there's no ban on them yet.



**1. Which one of these is non-biodegradable?**

- |             |           |                      |                   |
|-------------|-----------|----------------------|-------------------|
| (A) feather | (B) paper | (C) leaves of plants | (D) polythene bag |
|-------------|-----------|----------------------|-------------------|

*Reason:* Polythene bags are synthetic materials that do not decompose naturally and are non-biodegradable.

**2. Glass, leather and polythene bags are examples of**

- |               |                             |                                 |                   |
|---------------|-----------------------------|---------------------------------|-------------------|
| (A) Pollutant | (B) Biodegradable materials | (C) Non-biodegradable materials | (D) Living things |
|---------------|-----------------------------|---------------------------------|-------------------|

*Reason:* Glass, leather, and polythene bags do not decompose naturally, making them non-biodegradable.

**3. By which strategy we can reduce non-biodegradable substances:**

- |        |        |        |        |
|--------|--------|--------|--------|
| (A) 2R | (B) 3R | (C) 4R | (D) 5R |
|--------|--------|--------|--------|

*Reason:* The 3R strategy (Reduce, Reuse, and Recycle) focuses on minimizing non-biodegradable substances.

**4. Paper, meat and vegetables are examples of:**

- |                        |                |                             |                                 |
|------------------------|----------------|-----------------------------|---------------------------------|
| (A) Abiotic components | (B) Pollutants | (C) Biodegradable materials | (D) Non-biodegradable materials |
|------------------------|----------------|-----------------------------|---------------------------------|

*Reason:* Paper, meat, and vegetables can decompose naturally through the action of microorganisms.

**5. The decomposition of dead bodies is caused by**

- |                        |           |           |               |
|------------------------|-----------|-----------|---------------|
| (A) Bacteria and fungi | (B) Virus | (C) Algae | (D) Cockroach |
|------------------------|-----------|-----------|---------------|

*Reason:* Bacteria and fungi are responsible for decomposing dead bodies by breaking down organic matter.

**6. The government has taken an initiative of “Billion Tree Plantation” across the country from;**

- |          |          |          |          |
|----------|----------|----------|----------|
| (A) 2016 | (B) 2017 | (C) 2018 | (D) 2019 |
|----------|----------|----------|----------|

*Reason:* The “Billion Tree Plantation” initiative was launched by the government in 2016.

**7. “Billion Tree Plantation” plan will be achieved in**

- |              |               |                 |                |
|--------------|---------------|-----------------|----------------|
| (A) One year | (B) Two years | (C) Three years | (D) Five years |
|--------------|---------------|-----------------|----------------|

*Reason:* The “Billion Tree Plantation” plan aims to be achieved in a span of five years.

**8. Which is not a biodegradable material**

- |                   |                |            |           |
|-------------------|----------------|------------|-----------|
| (A) Polythene bag | (B) Vegetables | (C) Fruits | (D) Paper |
|-------------------|----------------|------------|-----------|

*Reason:* Polythene bags are synthetic and do not decompose naturally, making them non-biodegradable.

**9. Which of the following is biodegradable**

- |                      |           |                   |                     |
|----------------------|-----------|-------------------|---------------------|
| (A) A plastic bottle | (B) A pen | (C) A potato peel | (D) An elastic band |
|----------------------|-----------|-------------------|---------------------|

*Reason:* A potato peel is biodegradable as it can decompose naturally through the action of microorganisms.

**10. What does it mean if something is non-biodegradable**

- |                       |                           |                                    |                                 |
|-----------------------|---------------------------|------------------------------------|---------------------------------|
| (A) It will decompose | (B) It will not decompose | (C) It is good for the environment | (D) It will not cause pollution |
|-----------------------|---------------------------|------------------------------------|---------------------------------|

*Reason:* Non-biodegradable materials do not break down naturally, remaining in the environment for a long time.





**11. Which of the following is not one of the 3R**

- |                                  |                                |                                   |                                 |
|----------------------------------|--------------------------------|-----------------------------------|---------------------------------|
| <input type="radio"/> (A) Reduce | <input type="radio"/> (B) Reap | <input type="radio"/> (C) Recycle | <input type="radio"/> (D) Reuse |
|----------------------------------|--------------------------------|-----------------------------------|---------------------------------|

*Reason:* "Reap" is not one of the 3R principles, which are Reduce, Reuse, and Recycle.

**12. It is not a biodegradable material**

- |                                   |                                |                                  |                                 |
|-----------------------------------|--------------------------------|----------------------------------|---------------------------------|
| <input type="radio"/> (A) Ceramic | <input type="radio"/> (B) Wood | <input type="radio"/> (C) Cotton | <input type="radio"/> (D) Paper |
|-----------------------------------|--------------------------------|----------------------------------|---------------------------------|

*Reason:* Ceramic is non-biodegradable as it does not decompose naturally and persists in the environment.

**13. It is not a non-biodegradable material**

- |                                   |                                |                                 |                                      |
|-----------------------------------|--------------------------------|---------------------------------|--------------------------------------|
| <input type="radio"/> (A) Ceramic | <input type="radio"/> (B) Foam | <input type="radio"/> (C) Glass | <input type="radio"/> (D) Vegetables |
|-----------------------------------|--------------------------------|---------------------------------|--------------------------------------|

*Reason:* Vegetables are biodegradable materials that decompose naturally through organic processes.

**14. Say no to \_\_\_\_\_ grocery bags;**

- |                                 |                                 |                                   |                                  |
|---------------------------------|---------------------------------|-----------------------------------|----------------------------------|
| <input type="radio"/> (A) Cloth | <input type="radio"/> (B) Paper | <input type="radio"/> (C) Plastic | <input type="radio"/> (D) Rexene |
|---------------------------------|---------------------------------|-----------------------------------|----------------------------------|

*Reason:* Saying no to plastic grocery bags helps reduce pollution and environmental harm.

**15. 3R principle is applied to which type of materials?**

- |  |  |  |  |
|--|--|--|--|
| <input type="radio"/> (A) Bread & Fruits | <input type="radio"/> (B) Meat & Vegetable | <input type="radio"/> (C) Pepper and peels | <input type="radio"/> (D) Polythene bags and bottles |
|--|--|--|--|

**Reason:** The 3R principle is particularly relevant for non-biodegradable materials like polythene bags and bottles because they cannot be decomposed.