## Vocabulary

| |
|---|
| • **Environment**: All living (biotic) and non-living (abiotic) elements around us. |
| • **Biotic components**: Living organisms — plants, animals, microbes. |
| • **Abiotic components**: Non-living factors — air, water, soil, rocks. |
| • **Lithosphere**: Earth's land surfaces — crust and upper mantle. |
| • **Hydrosphere**: All water—rivers, oceans, lakes, groundwater. |
| • **Atmosphere**: The gaseous layer enveloping Earth. |
| • **Biosphere**: The global sum of all ecosystems – where life exists. |
| • **Ecosystem**: A community of organisms interacting with their environment. |
| • **Pollution**: Contamination harming the environment. |
| • **3Rs of sustainability**: Reduce, Reuse, Recycle. |

## Short-Answer Questions

**Define environment.**
All the surroundings—biotic and abiotic—that influence living beings.

**Differentiate lithosphere and hydrosphere.**

- **Lithosphere**: Solid land area.
- **Hydrosphere**: All forms of water on Earth.

**What is an ecosystem?**
An ecological system where organisms interact with each other and their physical environment.

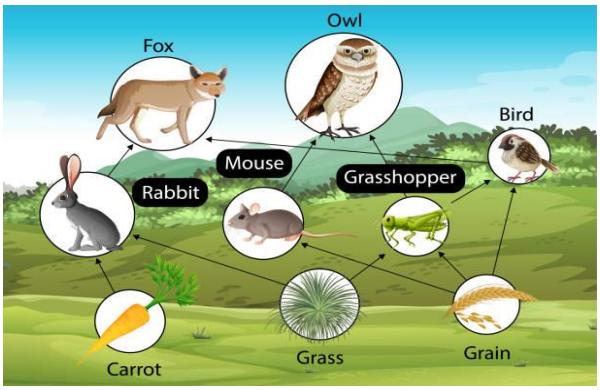
**Explain the 3R approach.**

- **Reduce** waste generation.
- **Reuse** items when possible.
- **Recycle** materials into new products.

## Differentiation

| Concept Pair | Differences & Examples |
|---|---|
| **Natural vs Human-Made Environment** | **Natural**: Rivers, mountains, forests — occur without humans.<br>**Human-made**: Roads, cities, dams — built by humans. |
| **Producers vs Consumers (in Ecosystem)** | **Producers**: Green plants; they convert sunlight into food.<br>**Consumers**: Animals and humans who rely on plants or other animals for energy. |

## Picture-Based Questions




- **Label the trophic levels.**

  A. Producers → Consumers (primary, secondary, tertiary).

- **Why shouldn't food chains be too long?**

  A. Energy loss (about 90% per level) means insufficient energy for higher levels, limiting the chain's length.