



FORESTS: OUR LIFELINE

Understanding the Vital Role of Forests

What are Forests?

Definition & Coverage

- Vast land with dense trees.
- Cover 30% of Earth's land.

Composition & Life

- Includes plants, shrubs, bushes.
- Biodiversity hotspot for flora/fauna.
- Tribes rely on forest produce.

Structure of a Forest

Crown & Canopy

Upper part of trees; forms a protective roof.

Forest Floor

Hot, humid; contains organic matter, insects.

Humus Formation

Microorganisms decompose matter into humus; enriches soil.

Layered Growth

Different tree heights create distinct layers.

Seed Germination

Floor conditions favor seed growth to trees.

Products from Forests



Wood

Fuel and furniture.



Fodder

Food for animals.



Medicinal Plants

Natural remedies.



Paper

Communication, various uses.



Other Products

Bamboo, rubber, glue.

Many tribes depend on these products for livelihood.

The Food Chain & Web: Components



The Sun

Principal energy source.



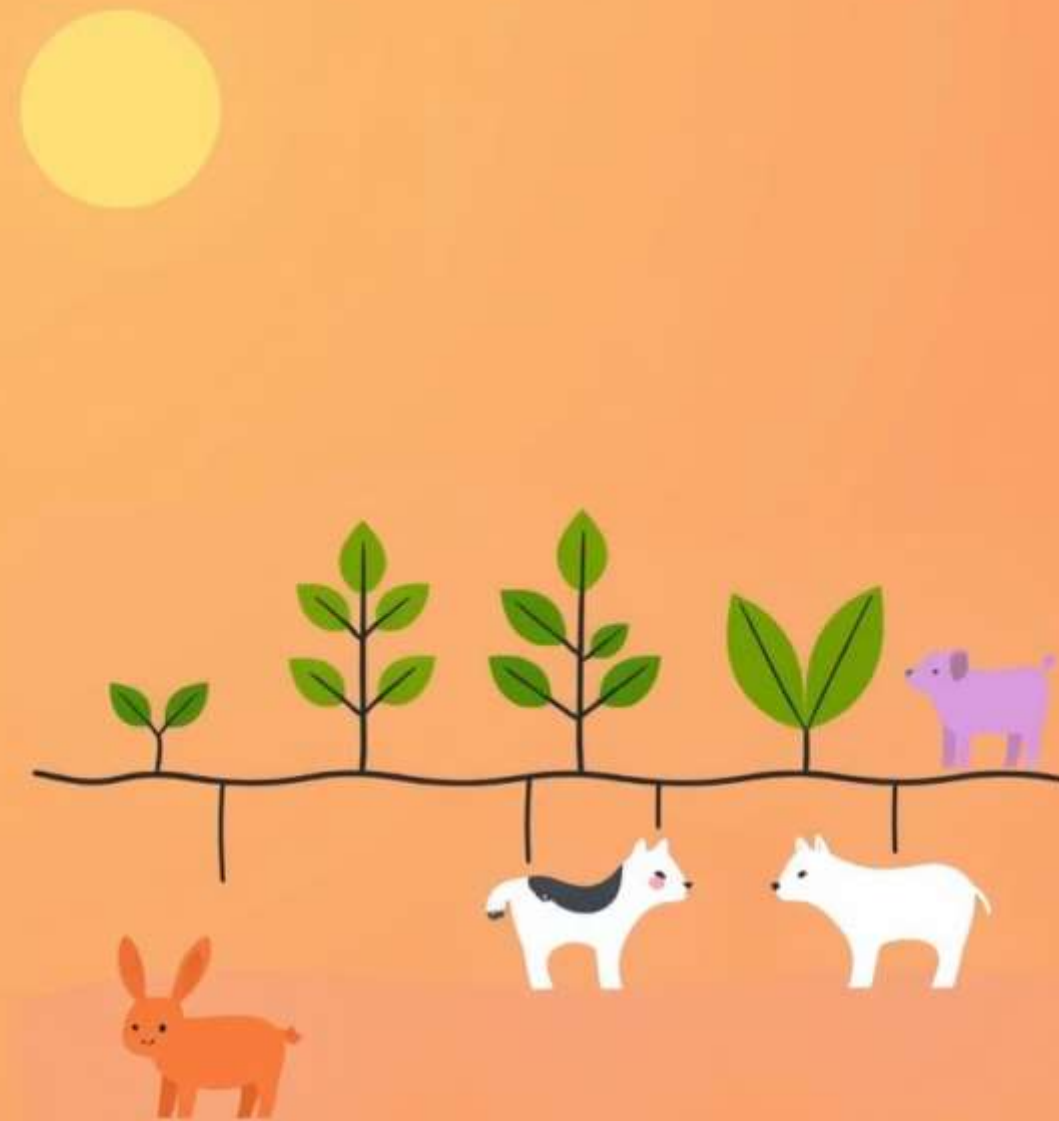
Plants (Producers)

Make own food using sunlight.



Animals (Consumers)

Herbivores, Carnivores, Omnivores.



The Food Chain & Web: The Cycle



Forests support intricate food webs.

Forests and Atmospheric Balance

The Green Lungs

- **Photosynthesis:** Plants use sunlight, CO₂, water for food.
- **Oxygen Release:** Oxygen released for respiration.
- **Atmospheric Regulation:** Maintain O₂/CO₂ balance.
- **Green Lungs:** Vital for oxygen production.



Forests and the Water Cycle

Transpiration

Water vapor from leaves.

1

Rainfall

Heavy droplets fall.

3

Cloud Formation

Vapor rises, condenses.

2

Water Flow

Rain to streams, rivers, oceans.

4

Forests crucial for continuous water cycle.

Forests and Soil Protection

Preventing Disasters

- **Soil Binding:** Plant roots hold soil.
- **Erosion Prevention:** Prevents loose topsoil erosion.
- **Fertility Maintenance:** Preserves soil fertility.
- **Flood Prevention:** Improves rainwater absorption.



Forests and Environmental Health

Cleaning Air & Noise

Air Purification

Trees absorb CO₂, release O₂.

Pollution Mitigation

Reduces smoke, poisonous gases.

Noise Absorption

Forests block urban noise.

Forests make Earth more livable.