



**PLANIT**  
TEACHERS

# Exploring Ecosystem Balance: Understanding Human Impact on the Environment

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## 1. Introduction to Ecosystems and Human Impact

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An ecosystem is a community of living and non-living things that interact with each other in a specific environment. Human activities can significantly impact ecosystems, either by disrupting the balance or by preserving it. Understanding how human activities affect ecosystems is crucial for maintaining balance and preserving biodiversity.

### Activity 1: Ecosystem Diagram

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*Draw a simple diagram of an ecosystem, labeling key components such as living organisms, water, soil, and sunlight. Discuss how human activities can impact each component.*



## 2. Understanding Abiotic Factors

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Abiotic factors are non-living parts of an ecosystem that affect living organisms. Examples include light, temperature, water, and soil. Human activities can alter these factors, impacting the organisms within the ecosystem.

### Activity 2: Abiotic Factor Sorting

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*Sort examples of abiotic factors into categories based on their effects on different organisms. Discuss how human activities can change these factors and the potential consequences.*

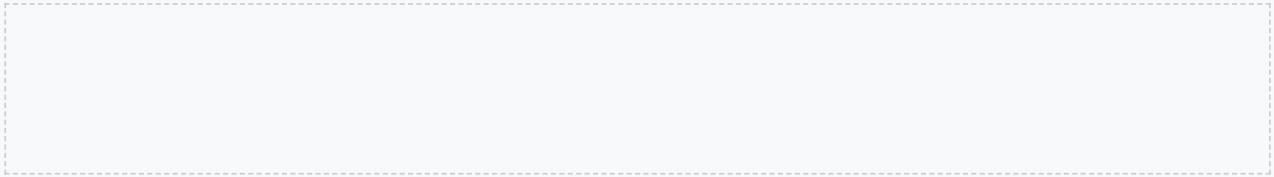
### 3. Biodiversity and Its Importance

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Biodiversity refers to the variety of different plants, animals, and microorganisms that live in an ecosystem. Preserving biodiversity is essential for maintaining healthy ecosystems and ensuring the provision of ecosystem services.

#### Activity 3: Biodiversity Web

*Create a web diagram showing the relationships between different species in an ecosystem. Discuss the importance of each species and how human activities can impact biodiversity.*



## 4. Human Activities and Ecosystem Balance

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Human activities such as deforestation, pollution, and climate change can disrupt ecosystem balance. However, practices like sustainable agriculture, reforestation, and conservation efforts can help preserve ecosystems.

### Activity 4: Human Impact Scenario

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*Imagine a scenario where human activities have impacted an ecosystem. Discuss the effects on the ecosystem and propose strategies for restoring balance.*

## 5. Strategies for Preserving Biodiversity

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Preserving biodiversity requires a multifaceted approach, including the establishment of protected areas, sustainable use of resources, and community engagement.

### Activity 5: Conservation Plan

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*Develop a plan for preserving biodiversity in a local ecosystem. Discuss the strategies and actions needed to implement the plan.*

## 6. Case Studies: Real-World Examples

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Real-world examples such as the Amazon rainforest, the Great Barrier Reef, and the Arctic tundra illustrate the impact of human activities on ecosystems.

### Activity 6: Case Study Analysis

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*Analyze a case study of an ecosystem impacted by human activities. Discuss the effects on the ecosystem and propose solutions for restoring balance.*

## 7. Conclusion and Call to Action

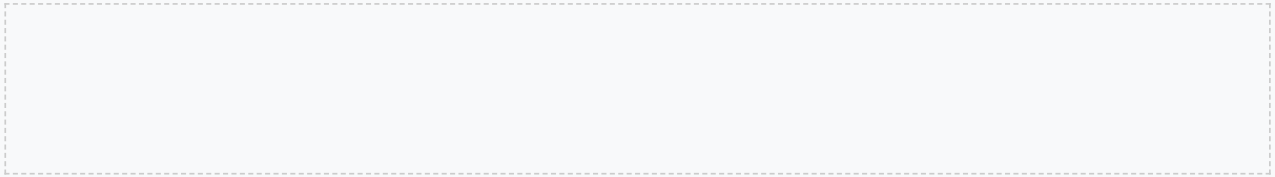
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Understanding the impact of human activities on ecosystems is crucial for maintaining balance and preserving biodiversity. Individuals can make a difference by reducing their environmental footprint and supporting conservation efforts.

### Activity 7: Environmental Pledge

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*Create a poster or video pledging to make a change in daily life to reduce environmental impact. Discuss the importance of individual actions in preserving ecosystems.*





## 8. Activities and Questions

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1. What is an ecosystem, and how do human activities impact it?
2. How do abiotic factors affect different organisms?
3. Why is biodiversity important, and how can it be preserved?
4. What are some strategies for reducing human impact on ecosystems?
5. How can individuals contribute to preserving biodiversity?

## 9. Glossary

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- Ecosystem: A community of living and non-living things that interact with each other in a specific environment.
- Abiotic factors: Non-living parts of an ecosystem that affect living organisms.
- Biodiversity: The variety of different plants, animals, and microorganisms that live in an ecosystem.

## 10. References

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- National Geographic Educational Videos
- Ecosystem Diagrams and Models
- Abiotic Factor Sorting Activity
- Biodiversity Web Diagram
- Human Impact Scenario
- Conservation Plan
- Case Study Analysis

