

Introduction to Ecosystems (10 minutes)

In pairs, discuss and write your thoughts on the following questions:

1. What is an ecosystem?
2. What are the components of an ecosystem?
3. Why are ecosystems important?

Exploring Local Ecosystems (20 minutes)

Group Task:

In groups of 3-4, explore a local ecosystem, observing the types of plants and animals that live there, and the interactions between them.

Location	Plants	Animals	Interactions

Understanding Biodiversity (25 minutes)

Based on your exploration, work with your group to answer:

1. What types of plants and animals did you observe in the ecosystem?
2. How do these organisms interact with each other and their environment?
3. What is the importance of biodiversity in an ecosystem?

Human Impact on Ecosystems (20 minutes)

Group Task:

In groups of 3-4, discuss and write about the human impact on ecosystems, including:

- Deforestation and habitat destruction
- Pollution and climate change
- Overfishing and overhunting

Solutions for Sustainability (25 minutes)

Based on your discussion, work with your group to propose solutions for sustainability, including:

1. Reducing, reusing, and recycling
2. Conservation and restoration of ecosystems
3. Renewable energy sources and reducing carbon footprint

Creative Response (15 minutes)

Choose *ONE* of the following activities:

1. Draw a diagram showing the relationship between human activity and environmental changes
2. Write a short story from the perspective of a local plant or animal
3. Create a poster promoting environmental awareness

[Space for creative work]

Reflection & Conclusion (10 minutes)

Individual Reflection:

1. What was the most surprising thing you learned today?

2. How will this learning change your actions in the future?

3. What questions do you still have about environmental impact?

Ecosystem Services (20 minutes)

In pairs, discuss and write about the ecosystem services provided by different ecosystems, including:

- Provisioning services (food, water, timber, etc.)
- Regulating services (climate regulation, water purification, etc.)
- Supporting services (soil formation, nutrient cycling, etc.)
- Cultural services (recreation, tourism, etc.)

Human Well-being and Ecosystems (25 minutes)

Group Task:

In groups of 3-4, explore the relationship between human well-being and ecosystems, including:

1. The impact of ecosystem degradation on human health
2. The role of ecosystems in providing livelihoods and economic benefits
3. The importance of ecosystems for mental health and well-being

Sustainable Development Goals (20 minutes)

In pairs, discuss and write about the Sustainable Development Goals (SDGs) related to ecosystems, including:

- SDG 13: Climate Action
- SDG 14: Life Below Water
- SDG 15: Life on Land

Case Study: Sustainable Development (25 minutes)

Case Study: Costa Rica's Conservation Efforts

Costa Rica has made significant efforts to conserve its ecosystems, including the establishment of national parks and protected areas. Discuss the following questions:

1. What are the benefits of conservation efforts for ecosystems and human well-being?
2. What are the challenges faced by Costa Rica in its conservation efforts?
3. How can other countries learn from Costa Rica's experiences?

Ecosystem-Based Adaptation (20 minutes)

In pairs, discuss and write about ecosystem-based adaptation strategies, including:

- Restoration of ecosystems to enhance resilience
- Conservation of ecosystems to maintain ecosystem services
- Sustainable management of ecosystems to support human well-being

Group Discussion: Ecosystem-Based Adaptation (25 minutes)

Group Task:

In groups of 3-4, discuss the following questions:

1. What are the benefits and challenges of ecosystem-based adaptation strategies?
2. How can ecosystem-based adaptation strategies be integrated into national and local planning?
3. What are the potential barriers to implementing ecosystem-based adaptation strategies?

Ecosystem Services and Human Well-being (20 minutes)

In pairs, discuss and write about the relationship between ecosystem services and human well-being, including:

- The impact of ecosystem degradation on human health and well-being
- The role of ecosystems in providing livelihoods and economic benefits
- The importance of ecosystems for mental health and well-being

Case Study: Ecosystem Services and Human Well-being (25 minutes)

Case Study: The Impact of Deforestation on Local Communities

Deforestation has significant impacts on local communities, including loss of livelihoods and decreased access to ecosystem services. Discuss the following questions:

1. What are the benefits and challenges of preserving ecosystems for human well-being?
2. How can local communities be involved in ecosystem conservation and management?
3. What are the potential solutions to address the impacts of deforestation on local communities?

Ecosystem-Based Management (20 minutes)

In pairs, discuss and write about ecosystem-based management strategies, including:

- Integrated management of ecosystems to maintain ecosystem services
- Sustainable use of ecosystem resources to support human well-being
- Conservation of ecosystems to maintain biodiversity

Group Discussion: Ecosystem-Based Management (25 minutes)

Group Task:

In groups of 3-4, discuss the following questions:

1. What are the benefits and challenges of ecosystem-based management strategies?
2. How can ecosystem-based management strategies be integrated into national and local planning?
3. What are the potential barriers to implementing ecosystem-based management strategies?

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