



Learning Objectives

- Understand key concepts of biodiversity and ecosystem balance
- Identify relationships between different organisms in an ecosystem
- Analyze the impact of environmental changes on ecosystems
- Develop problem-solving skills through ecosystem scenarios

Section 1: Vocabulary Explorer

Draw lines to match each term with its correct definition. Then, write an example for each term in the space provided.

Terms

1. Biodiversity
2. Ecosystem
3. Habitat
4. Interdependence

Definitions

- A. The natural home of a living thing
- B. All living things depending on each other
- C. The variety of different living things in an area
- D. A community of living things and their environment

Practice Examples:

Write an example for each term:

1. Biodiversity example: _____
2. Ecosystem example: _____
3. Habitat example: _____
4. Interdependence example: _____

Section 2: Web of Life Investigation

Based on our class Web of Life activity, answer these questions thoughtfully:

1. When we pulled one string in our web, what happened to the other strings? Explain why this occurred.

2. How does this activity demonstrate ecosystem interdependence?

Create Your Food Web:

In the space below, draw a simple food web with at least 5 organisms. Use arrows to show energy flow.

[Drawing Space]

Label each organism as a:

- Producer (P)
- Consumer (C)
- Decomposer (D)

Section 3: Ecosystem Detective Challenge

Study the pond ecosystem diagram carefully and complete the following activities:

Part A: Organism Identification

List 8 different organisms you can observe in the pond ecosystem:

- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

Part B: Relationship Analysis

Describe three ways these organisms depend on each other:

- | |
|----------|
| 1. _____ |
| 2. _____ |
| 3. _____ |

Part C: Habitat Features

Identify three important non-living features of this ecosystem and explain why they're important:

Feature	Why It's Important

Section 4: Ecosystem Balance Scenarios

Complete these "If-Then" statements about ecosystem balance. Think carefully about chain reactions!

Scenario Analysis:

1. If all the bees disappeared from an ecosystem, then...

First effect: _____
Second effect: _____
Third effect: _____

2. If there were suddenly twice as many rabbits in an ecosystem, then...

First effect: _____
Second effect: _____
Third effect: _____

3. If a drought caused all the plants to die, then...

First effect: _____
Second effect: _____
Third effect: _____

Create Your Own Scenario:

Write an "If-Then" scenario about ecosystem balance and draw a diagram to show the chain reaction:

If _____, then:
[Drawing Space for Chain Reaction Diagram]

Section 5: Biodiversity Investigation Project

Document your local ecosystem investigation using the following research framework:

Location Study

Study Area Location:	_____
Date and Time:	_____
Weather Conditions:	_____

Biodiversity Census

Plants Observed:

1. _____
2. _____
3. _____
4. _____

Animals Observed:

1. _____
2. _____
3. _____
4. _____

Habitat Mapping

Create a detailed map of your study area showing different habitat zones:

[Drawing Space for Habitat Map]

Map Key:

Symbol: _____
Represents: _____

Symbol: _____
Represents: _____

Symbol: _____
Represents: _____

Section 6: Environmental Impact Analysis

Analyze human impacts on your local ecosystem and propose solutions:

Environmental Issue	Impact on Ecosystem	Proposed Solution

Conservation Action Plan

Design a three-step plan to help protect your local ecosystem:

Step 1: Short-term Action (This Week)

Step 2: Medium-term Action (This Month)

Step 3: Long-term Action (This Year)

Section 7: Ecosystem Restoration Project

Design a restoration plan for a damaged ecosystem in your community:

Site Assessment

Current Condition:	
Main Problems:	
Target Species:	

Restoration Timeline

<p>Phase 1: Preparation</p> <ul style="list-style-type: none">• _____• _____• _____	<p>Phase 2: Implementation</p> <ul style="list-style-type: none">• _____• _____• _____	<p>Phase 3: Monitoring</p> <ul style="list-style-type: none">• _____• _____• _____
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Section 8: Final Assessment and Reflection

Knowledge Check

1. Which of these best describes biodiversity?

- A. The number of plants in an area
- B. The variety of life in an ecosystem
- C. The size of an ecosystem
- D. The weather in a habitat

2. What is the most important reason for maintaining ecosystem balance?

- A. To keep all animals happy
- B. To maintain natural resources
- C. To support all interconnected life forms
- D. To create beautiful landscapes

Final Reflection

1. What was the most surprising thing you learned about ecosystems?

2. How has your understanding of biodiversity changed?

3. What actions will you take to protect local ecosystems?

Final Reflection

What I Learned Today:

Three main things I learned about ecosystems:

1. _____
2. _____
3. _____

Questions I Still Have:

Write any questions you'd like to explore further:

Extension Activity:

Design a poster to show how you can help protect biodiversity in your local area.

[Drawing Space for Poster Design]

Teacher Feedback

Comments:

Signature: _____ Date: _____

