

Ecosystem Connections: Understanding Biodiversity

Student Information

Please fill in your details:

Name: _____ Date: _____

Part A: Ecosystem Explorer (15 minutes)

Let's discover what makes up an ecosystem!

1. Living or Non-living? Circle all the living things in this ecosystem:

Rocks



 Trees



 Water



 Birds



 Sunlight



 Insects



 Soil



 Fish



2. Habitat Matching Draw lines to connect each animal with its correct habitat:

 Bear


 Cactus

 Shark

 Camel


 Frog

 Desert

 Ocean

 Forest

 Pond

 Mountain

Part B: Biodiversity Detective (20 minutes)

Study the forest ecosystem picture below carefully and complete the tasks:

[Forest Ecosystem Illustration]

1. How many different animals can you spot? Count and write the number here:

2. How many different types of plants can you find? Count and write the number here:

3. Find and circle three different animal homes in the picture above

4. Draw arrows to show what each animal might eat (food chains)

Think About It:

Why do you think there are so many different types of plants and animals in this forest?

Part C: Food Web Connections (25 minutes)

Complete the food web diagram below:

Instructions:

1. Draw arrows between organisms to show who eats whom
2. Color all plants GREEN
3. Color plant-eating animals YELLOW
4. Color animals that eat other animals RED

[Food Web Diagram with organisms to connect]

Answer these important questions:

1. What would happen if we removed all the plants from this food web?

2. Why do ecosystems need different types of animals to survive?

Part D: Ecosystem Adaptations (30 minutes)

Explore how different animals adapt to their environments!

Desert Habitat

Animal: Camel

List 3 adaptations that help it survive:

Arctic Habitat

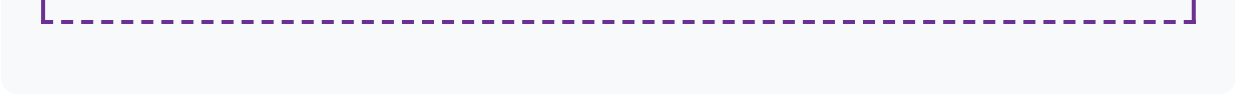
Animal: Polar Bear

List 3 adaptations that help it survive:

Design Your Own Animal!

Create an animal that could survive in a rainforest habitat. Draw it below and label its adaptations.

[Drawing Space]



Part E: Environmental Changes (25 minutes)

Investigate how changes affect ecosystems

Scenario 1: Forest Fire

A lightning strike has caused a forest fire. Think about what happens to:

| Trees and Plants | Small Animals | Large Animals |
|------------------|---------------|---------------|
| | | |

Ecosystem Recovery Timeline

1

Right After

2

1 Year Later

3

5 Years Later

4

10 Years Later

Part F: Human Impact Investigation (30 minutes)

Explore how human activities affect ecosystems

Local Ecosystem Survey

| Human Activity | Positive Effects | Negative Effects |
|------------------|------------------|------------------|
| Building Houses | | |
| Planting Gardens | | |
| Creating Parks | | |

Be an Eco-Hero!

Choose one negative impact and design a solution:

The Problem:

My Solution:

How it Helps:

Part G: Final Project - Ecosystem Protection Plan (45 minutes)

Create a comprehensive plan to protect your local ecosystem

Step 1: Research Your Local Ecosystem

What types of plants and animals live here?

What are the main threats to this ecosystem?

Step 2: Create Your Action Plan

Short-term Actions (This Month)

Long-term Actions (This Year)

Step 3: Get Others Involved

Family

School

Community

Conclusion

Great Job, Young Scientist!

You've learned about:

- Living and non-living things in ecosystems
 - Different habitats and their inhabitants
 - The importance of biodiversity
 - How food webs connect all living things
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Teacher's Comments:

Grade:

Date: