Classroom Activity: Exploring Biodiversity

Introduction to Biodiversity (15 minutes)

Begin by exploring what we already know about the living world around us:

1. What does "biodiversity" mean to you? Write your definition below:

2. Draw a quick sketch of your local ecosystem, including at least 5 different species:

3. List three reasons why biodiversity is important for our planet:

Ecosystem Investigation (25 minutes)

Field Research Activity:

Working in small groups, explore your school grounds and document the following:

Type of Organism	Location Found	Quantity	Description
Plants			
Insects			
Birds			

Other Animals			

Food Web Construction (20 minutes)

Using the organisms you observed, create a food web:

1. In the space below, draw arrows connecting the organisms you found showing who eats whom:

2. Identify and label:
   - Producers (green)
   - Primary consumers (yellow)
   - Secondary consumers (orange)
   - Decomposers (brown)

Biodiversity Analysis (15 minutes)

Based on your observations, answer the following questions:

1. Which type of organism was most common in your study area?

2. What factors might affect the biodiversity in your study area?

3. How might the biodiversity change in different seasons?

4. What could be done to increase biodiversity in your study area?

Environmental Impact Assessment (20 minutes)

Evaluate human impact on your local ecosystem:

Human Activity	Positive Effects	Negative Effects	Possible Solutions
Construction			
Waste Management			
Gardening/Landscaping			

Design an Action Plan:

Create a proposal for improving biodiversity in your school environment:

1. Short-term goals (1 month):

2. Medium-term goals (6 months):

3. Long-term goals (1 year):

Habitat Mapping Project (30 minutes)

Create a detailed map of different microhabitats within your study area:

1. Divide your study area into zones:

2. For each zone, record:

Zone	Soil Type	Light Level	Moisture	Species Present
A				
B				
C				

Species Interactions Study (25 minutes)

Document different types of species interactions you observe:

Interaction Type	Species Involved	Description of Interaction	Sketch/Notes
Competition			
Predation			
Symbiosis			

Adaptation Investigation (20 minutes)

Select three species and analyze their adaptations:

Species 1:

- Physical adaptations:
- Behavioral adaptations:
- How these help survival:

Biodiversity Data Analysis (30 minutes)

Create visual representations of your findings:

1. Species Distribution Pie Chart:

2. Habitat Type Bar Graph:

Answer these questions based on your data:

1. What patterns do you notice in species distribution?
2. How does biodiversity vary between different habitats?
3. What conclusions can you draw about ecosystem health?

Conservation Planning (25 minutes)

Design a Conservation Strategy:

Threat Assessment:

Threat	Impact Level	Proposed Solution	Resources Needed

Conservation Action Plan:

1. Priority Species/Habitats:

2. Conservation Goals:

3. Implementation Timeline:

4. Success Metrics:

Conclusion and Assessment

Final Reflection:

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

2. How has this activity changed your view of your local environment?

Assessment Checklist:

Criteria	Achieved	Comments
Ecosystem Investigation Complete		
Food Web Construction		
Action Plan Development		