Classroom Activity: Ecosystem Biodiversity Investigators

Introduction to Biodiversity (15 minutes)

Begin by exploring your understanding of biodiversity through these engaging activities:
Quick Think:

1. Write down three different types of living things you observed on your way to school today
2. Share with your partner and compare your observations
3. As a pair, categorize these organisms into plants, animals, and other life forms

---

Ecosystem Explorer Activity (25 minutes)

Working in small groups, complete the following biodiversity investigation:
Part 1: Ecosystem Mapping

Create a simple map of your school's ecosystem by:

- Identifying different habitat zones (e.g., garden, playground, grass area)
- Marking locations of various plants
- Noting signs of animal activity

[Draw your ecosystem map here]

Biodiversity Data Collection (20 minutes)

Zone Type	Plants Found	Animals/Evidence	Environmental Conditions
Garden Area			
Playground			
Open Space			

Ecosystem Relationships Analysis (30 minutes)

Based on your observations, explore the connections within your school ecosystem:
1. Food Web Construction

Create a food web using the organisms you observed:

[Draw your food web here]

2. Relationship Analysis

Identify three different types of relationships you observed:

Organism 1	Relationship Type	Organism 2

Environmental Impact Assessment (20 minutes)

Analyze the human impact on your school ecosystem:

1. What positive human actions benefit biodiversity in your school?

2. What negative impacts can you identify?

3. Propose three solutions to protect and enhance biodiversity:

Biodiversity Data Analysis (30 minutes)

Using your collected data, create visual representations to analyze biodiversity patterns:

1. Species Distribution Chart

Species Type	Garden Area	Playground	Open Space
Plants			
Insects			
Birds			

2. Data Interpretation

1. Which zone shows the highest biodiversity? Why do you think this is?
2. What patterns do you notice in species distribution?

Habitat Enhancement Project (45 minutes)

Design a Biodiversity Enhancement Plan

Current Habitat Assessment

Feature	Current Status	Improvement Needed
Plant Diversity		
Water Sources		
Shelter Areas		

Enhancement Proposal

Detail your plans for habitat improvement:

Short-term Actions (1-3 months)

1. 2. 3.

Long-term Goals (6-12 months)

1. 2. 3.

Scientific Documentation (30 minutes)

Create a Scientific Report

1. Research Question

What is your main research question about school biodiversity?

2. Methodology

Describe your data collection methods:

3. Results

Present your key findings:

4. Conclusions

What conclusions can you draw from your research?

Community Engagement Plan (30 minutes)

Develop a Strategy to Involve the School Community

1. Stakeholder Identification

Stakeholder Group	Role in Project	Engagement Method
Students		
Teachers		
Parents		

2. Communication Strategy

Key Messages:

1.
2.
3.

Project Timeline and Milestones

Timeline	Activities	Resources Needed	Success Indicators
Month 1			
Month 2			
Month 3			

Final Reflection Questions:

1. What has been the most significant learning from this project?

2. How can we ensure the long-term sustainability of our biodiversity improvements?

3. What recommendations would you make for future biodiversity projects?

Conclusion and Presentation (20 minutes)

Finalize your ecosystem investigation with these closing activities:
Group Presentation Planning

1. Summarize your key findings about biodiversity in your school ecosystem
2. What was the most surprising discovery from your investigation?
3. How could you help protect and enhance the biodiversity in your school?

Personal Reflection

Complete these reflection questions about your learning journey:

What I learned about ecosystems...

How this changes how I see my school environment...

Assessment Criteria

- Thorough completion of ecosystem mapping
- Detailed biodiversity data collection
- Clear understanding of ecosystem relationships
- Thoughtful environmental impact analysis
- Active participation in group activities