



Local Ecosystem Dynamics

Introduction

Think about a park or natural habitat (such as a lake or forest) found near your neighborhood. What type of ecosystem is it? What types of organisms live there? The organisms that live in this ecosystem depend on this environment to maintain a stable population size. This local ecosystem provides habitat, food, and a place to hide from predators.

Maintaining a stable population of organisms in an ecosystem is a result of complex interactions. This stability becomes difficult to maintain when the environment is continuously disrupted or changed. What happens to the population size of these organisms if they are unable to get what they need?

Task

Your task is to research change in a local park or natural habitat in your neighborhood. First, you will need to determine what types of organism live there and what is needed for these organisms to maintain a stable population. Next, you will research what types of disturbances have affected this ecosystem and if these disturbances have caused physical or biological change. Finally, you will use your findings to suggest to a local governing board if you think the ecosystem is being properly managed.

Process

Use your resources to answer the following questions.

1. What types of organisms currently live in the ecosystem? What resources do they need to survive? Are there any endangered or rare organisms? What about exotic organisms?

2. Imagine what this ecosystem looked like ten years ago, or 100 years ago. Describe changes that have occurred in and around the ecosystem.

3. Will the ecosystem look the same in another 10, or 100 years? What factors are at play that may stabilize/destabilize the current community?

4. Are there any regulations on how people can use this ecosystem? If there are not any regulations or if the regulations are not followed, how might this change the ecosystem?

Local Ecosystem Dynamics *CONTINUED*

Letter to Local Official

Once you have completed your research, prepare a letter to a local governing body. The letter should describe your findings, if the current regulations in place are adequate to maintain a healthy ecosystem, or any changes you feel would be better in order to preserve the habitat that is currently in place. Be sure to cite specific examples on how organisms are affected by changes to their environment and how these regulations may help maintain stability in the environment.

Resources

Many resources can be used to assist your research. These include journal articles, websites, and scientific news and magazines. You might also visit a wildlife preserve or an ecologist at a university or National Park.

Evaluation

Read the following rubric to see how you will be scored on your research and letter.

Criteria					Points
	0	5	10	15	
Task	The tasks were not completed.	Some effort was made to complete the tasks, but the major ideas are missing.	The tasks were completed but some information was omitted or incorrect.	The tasks were completed with great attention to detail.	
Process	The process was not followed.	The process was begun but not all questions were answered.	The process was followed but some answers were incorrect.	The project showed thorough research and a deep understanding of the topic.	
Letter	There was no attempt to create a letter.	There was minimal effort making the letter.	There was good material and ideas in the letter.	The letter was excellent, and showed knowledge of the topic.	
Total Score					