



## Elementary Ecosystems – Grades 3-5

Proposed Time: 1 hour

### Student Performance Objectives:

1. Students be able to describe the things animals need to survive and the ways in which animals depend on other animals and plants.
2. Students will be able to perform a simulation to demonstrate the interdependencies within an ecosystem.
3. Examine pictures of endangered animals and explain what they think might happen to other animals and plants if these animals become extinct.
4. Create pictures of animals in their natural habitats and describe what these animals need to survive.

### National Geography Curriculum Standards Addressed:

Standard 8: "The characteristics and spatial distribution of ecosystems on Earth's surface"

### Materials:

Various endangered species photos  
Various photos of human activities that affect animal habitats  
Any additional information needed  
Pencils & Paper for essay  
Internet access for further research.

### Anticipatory Set:

The instructor will open the lesson by discussing the basics of species interdependency within an ecosystem or habitat. Students will be asked to think of animals they are familiar with, such as pets, or animals that live outdoors near their homes. They should be asked the following questions:

- ✓ What do they need to survive?
- ✓ What do they eat?
- ✓ Where do they live?
- ✓ How do they depend on plants and other animals around them?
- ✓ What would happen to these animals if their main food source no longer existed?



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This portion of the lesson will more or less include open ended questions to get the students to use their critical thinking skills.

### Steps of the lesson:

1. Assign each student the role of a local plant or animal (more than one student can play the same role). Ask everyone to stand on one side of the classroom. Then ask one "plant" or "animal" to step out of the picture. For example, you could say, "Will all the oak trees please sit down?" The children taking their seats would represent the dying out oak trees in your area.
2. Ask students if any other species depend on the oak tree (or whatever local species you have asked to sit down). Give them hints if they are unsure (e.g., the squirrel eats acorns). If any species depends on the species you have asked to sit down, those students will have to sit as well. Continue until there are no (or very few) students left standing.
3. You may then discuss the implications of the simulation with the class. What happens to the plants and animals in an area when one type of plant or animal dies out? Make sure students understand that all plants and animals in an area (an ecosystem) depend on one another. Can they think of other examples of dependence, such as in their families, with their friends, or at school?
4. Have students look at pictures of the endangered animals. Explain that there are fewer of these animals in the wild than there used to be. Define the word "extinct" and ask students what they think might happen to other plants and animals if these animals become extinct

### Evaluation Strategy:

Have students look at pictures of animals living in their natural habitats. These pictures may be chosen beforehand from either books or magazines. The students may then be encouraged to draw the animal of their choice, and briefly describe the things these animals need to remain healthy and happy.



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### **Closure:**

The instructor will reiterate the anticipator set once again to reinforce the concept of interdependency in our ecosystems. Students will be encouraged to share their pictures and descriptions of their animals they have chosen.

### **Plan for independent practice**

- Students may draw pictures or find pictures in magazines where healthy ecosystems in which plants and animal species coexist. They may also find areas near their homes.

### **Extensions for gifted students**

- Students may brainstorm the reasons why they think some species might be in trouble. Ask them to draw pictures of how human activities might cause problems for the animals of the ecosystem.

### **Adaptations for special needs students:**

- ELL : a bilingual instructor may be needed to translate the requirements and expectation.
- Hearing Impaired: Special seating may be required as well as hearing devices.
- Intellectually Disabled: Teacher aide will be available to assist with instructions and requirements.