

## GRADE

- 6<sup>th</sup> – 8<sup>th</sup> Grade

## STATE STANDARDS

- MS-LS2-4

## MATERIALS

- Clipboards
- Pencils
- Worksheet

## Ecosystem Changes

Introduction: Students explore the zoo and observe how environmental changes impact the ecosystem.

Goal: Students will analyze how changes to environmental conditions (such as habitat loss, introduction to a new species, or human activity) can impact populations within an ecosystem. By observing zoo habitats and animal behavior, students will develop explanations for how ecosystems respond to disturbances.

Instructions: Give each student a worksheet. At each exhibit listed, they should:

1. Observe the animal and its habitat.
2. Identify one possible threat to them or their environment.
3. Identify a solution to those threats.

Challenge students to think about real world factors such as invasive species, pollution, human activity, or food availability that can affect animals and their environment and come up with possible solutions to these problems.

Background Information: An ecosystem is made up of living organisms, like plants, animals, and microorganisms, and the nonliving parts of their environment, like water, soil, sunlight, and air. All of these parts interact and depend on each other. When something changes in an ecosystem, it can affect many different organisms. For example, if a habitat is destroyed, animals may lose shelter or food sources.

Conservation Message: Human activities can greatly influence ecosystems. Pollution, habitat destruction, and climate change can disrupt natural relationships between species. Zoos and conservation organizations work to protect endangered species, restore habitats, and educate people about protecting ecosystems. By learning about ecosystem changes, we can better understand how to protect wildlife.

Example:

- Lions: Threat: Poaching > Solution: Supporting Lion Guardians.
- Giraffes: Threat: Habitat fragmentation/human and wildlife conflict > Solution: Support Giraffe Wildlife Foundation.
- Orangutans: Threat: Habitat loss > Solution: Buy sustainably sourced products.
- Tigers: Threat: habitat loss > Buying sustainably sourced products.
- Penguins: Threat: Overfishing > Solution: Use the Seafood Watch Guide on [seafoodwatch.org](http://seafoodwatch.org) to purchase sustainably caught fish.
- Stingrays: Threat: Overfishing > Solution: Use the Seafood Watch Guide on [seafoodwatch.org](http://seafoodwatch.org) to purchase sustainably caught fish.

Name \_\_\_\_\_



**Directions:**

Read information signs and talk to zoo staff to determine each animal's threats in the wild, and the solution to the threat. Write them.

	Threat:	Solution:
Lions	_____	_____
Giraffes	_____	_____
Orangutans	_____	_____
Tigers	_____	_____
Penguins	_____	_____
Stingrays	_____	_____

How could one of these threats affect the ecosystem?

\_\_\_\_\_

\_\_\_\_\_

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What are other ways you can help?

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