

Lab: Invasive Species Poster

HONORS BIOLOGY: UNIT 6

BACKGROUND: "Invasive species" — it doesn't sound very threatening, does it? But these invaders, large and small, have devastating effects on U.S. wildlife. Invasive species are one of the leading threats to native wildlife. Approximately 42% of Threatened or Endangered species are at risk primarily due to invasive species.

Human health and economies are also at risk from invasive species. The impacts of invasive species on our natural ecosystems and economy cost billions of dollars each year. Many of our commercial, agricultural, and recreational activities depend on healthy native ecosystems.



An invasive species can be any kind of living organism—an amphibian (like the cane toad pictured left), plant, insect, fish, fungus, bacteria, or even an organism's seeds or eggs—that is not native to an ecosystem and which causes harm. They can harm the environment, the economy or even, human health. Species that grow and reproduce quickly, and spread aggressively, with potential to cause harm, are given the label of "invasive".

An invasive species does not have to come from another country. For example, lake trout are native to the Great Lakes, but are considered to be an invasive species in Yellowstone Lake in Wyoming because they compete with native cutthroat trout for habitat.

How do invasive species spread? Invasive species are primarily spread by human activities, often unintentionally. People, and the goods we use, travel around the world very quickly, and they often carry uninvited species with them.

- Ships: Ships can carry aquatic organisms in their ballast water.
- Wood products: Insects can get into wood, shipping palettes and crates that are shipped around the world.
- Ornamental plants: Some ornamental plants can escape into the wild and become invasive.
- Pet trade: Some invasive species are intentionally or accidentally released pets. Burmese pythons are becoming a big problem in the Everglades.

Why do invasive species pose such a threat? Invasive species cause harm to wildlife in many ways. When a new and aggressive species is introduced into an ecosystem, it might not have any natural predators or controls. It can breed and spread quickly, taking over an area. Native wildlife may not have evolved defenses against the invader or they cannot compete with a species that has no predators.

The direct threats of invasive species:

- preying on native species
- out-competing native species for food or other resources
- causing or carrying disease
- preventing native species from reproducing or killing their young

The indirect threats of invasive species:

- Changing food webs: Invasive species can change the food web in an ecosystem by destroying or replacing native food sources. The invasive species may provide little to no food value for wildlife.
- Decreasing biodiversity: Invasive species can alter the abundance or diversity of species that are important habitat for native wildlife. Aggressive plant species like kudzu can quickly replace a diverse ecosystem with a monoculture of just kudzu.
- Altering ecosystem conditions: Some invasive species are capable of changing the conditions in an ecosystem, such as changing soil chemistry or the intensity of wildfires.

From: <https://www.nwf.org/Wildlife/Threats-to-Wildlife/Invasive-Species.aspx>

PROCEDURE:

1. Form groups of 3 students
2. Obtain poster materials from your teacher
3. Create a “Wanted” poster of an invasive species of their choice.

The poster must include:

WANTED: Name of invasive species	5 points
PICTURE: Picture of invasive species	5 points
IDENTIFYING CHARACTERISTICS: Special adaptations, characteristics, coloring, environmental limiting factors, etc.	10 points
LAST SEEN: Where they originally came from	10 points
SUSPECTED HIDEOUTS: Where they are now? Include a map	10 points
CRIMES COMMITTED: How have they affected the ecosystem they invaded? Give evidence.	10 points
REWARD \$\$: How can this species be controlled or eliminated	10 points

4. After creating the poster you will do a gallery walk and take notes on other groups' posters. Be prepared to answer questions about all the posters.

Invasive Species Gallery Walk Notes

#1 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#2 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#3 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#4 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#5 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#6 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#7 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#8 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#9 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

#10 SPECIES NAME: _____

Claim: What is the problem (CRIMES COMMITTED) with the invasive species?

Evidence: What evidence did they give?

Conclusion Questions:

1. What can happen to native species when you introduce an invasive species?

2. How do humans contribute to the spread of invasive species?

3. Why is species diversity important in an ecosystem?