

RESOURCE LIBRARY
ACTIVITY : 45 MINS

Introduction to Invasive Species

Students learn what invasive species are, reasons they are introduced to new locations, and how invasive species harm ecosystems.

GRADES

6 - 8

SUBJECTS

Biology, Geography, Human Geography, Physical Geography

CONTENTS

2 Links, 1 PDF

OVERVIEW

Students learn what invasive species are, reasons they are introduced to new locations, and how invasive species harm ecosystems.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/introduction-invasive-species/>

DIRECTIONS

1. Introduce the topic of invasive species.

Tell students that every animal and plant species has a native habitat, or environment where it naturally and normally lives and grows. Explain to students that humans sometimes relocate a species, either by accident or on purpose. Ask: *What do you think might happen if a species is moved out of its native habitat and into a new environment?* Then introduce the vocabulary term *non-native species*. Tell students that introducing a non-native species to a new ecosystem can have negative consequences—the species may become an *invasive species*, or a species that causes harm to the new environment.

2. Explore the reasons people relocate species.

Ask students to brainstorm a list of reasons people relocate species. Prompt students to include a variety of reasons, such as:

- accidentally moving them; for example, through transportation or trade, or by moving firewood from one location to another
- purposely introducing them to help control a native species that is considered a pest; for example, to control pests that destroy crops
- importing ornamental plants to buy or sell
- importing animals as pets

3. Discuss examples of invasive animal species in the United States.

Provide students with the following examples of invasive animal species in the United States:

- European Starling: This bird was part of an effort to introduce to the U.S. all of the birds mentioned in the works of Shakespeare.
- Burmese Pythons: These snakes are imported into the United States as pets. In the Florida Everglades, released or escaped pythons have established themselves in the wild.
- Snakehead Fish: This fish was released into the wild from fish markets and has established a population in the wild.
- Zebra Mussel: This mussel attaches itself to boats, and has spread because of boats moving between different bodies of water.

Have students go to the USDA website and click on your state to see the invasive species in your area.

4. Discuss examples of other invasive species in the United States.

Provide students with the following examples of invasive plant species in the United States:

- Kudzu: This plant is a climbing vine native to southern Japan and southeast China. Its growth is out of control in the Southeastern United States.
- Andean Pampas Grass: This grass is native to the northern Andes, but is now a common weed near the California coast.

- **Yellow Starthistle:** This plant was introduced into agricultural fields in California and is now found in almost all 48 contiguous United States.

Have students use the National Invasive Species Information Center website to find examples of invasive species that are insects, such as the emerald ash borer, or microorganisms, such as the influenza virus.

5. Brainstorm questions about how invasive species cause harm to their new environments.

As a class, explore the following questions:

- *Why should we have native species?*
- *When do we use non-native species?*
- *What are the ecological, economic, and social impacts of invasive species?*

Tell students that in a different ecosystem, a non-native species may have no natural predators to keep their numbers in balance, so they may multiply and crowd out native species or wipe out crops. Ask students to brainstorm a list of questions they have about invasive species. Ask: *What are you curious about? What would you like to know more about?*

Modification

Emphasize to students that prevention and early detection are extremely important to stop invasive species from threatening our ecosystems and resources. Have students brainstorm and list ways to prevent the introduction of invasive species and methods for reporting findings of pests.

Modification

If possible, take students outside and help them to identify trees or vegetation and whether or not each is native/non-native, harmful/not harmful, or invasive.

Modification

Make sure students understand that not all non-native species are invasive and harmful. To reinforce the concept, have them research one or more examples of non-native species, such as soybeans, that are not invasive species.

Extending the Learning

Provide students with an outline map of the world. Have them choose 3-5 plant, animal, or insect invasive species and use the provided websites to identify:

- the invasive species' native habitats
- methods of transport and directions of spread
- full area of spread today

OBJECTIVES

Subjects & Disciplines

Biology

Geography

- [Human Geography](#)
- [Physical Geography](#)

Learning Objectives

Students will:

- explain reasons why a non-native species might be introduced to a new location
- give examples of invasive species
- describe some of the consequences of introducing a non-native species
- describe relevance to their own lives

Teaching Approach

- Learning-for-use

Teaching Methods

- Brainstorming
- Discussions
- Hands-on learning

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Analyzing
 - Remembering
 - Understanding
- Geographic Skills
 - Acquiring Geographic Information
 - Asking Geographic Questions
 - Organizing Geographic Information

National Standards, Principles, and Practices

NATIONAL GEOGRAPHY STANDARDS

- Standard 14:

How human actions modify the physical environment

NATIONAL SCIENCE EDUCATION STANDARDS

- (5-8) Standard C-3:

Regulation and behavior

- (5-8) Standard C-4:

Populations and ecosystems

Preparation

What You'll Need

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, Projector

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

BACKGROUND & VOCABULARY

Background Information

A non-native species is a species that is not indigenous to an area. An invasive species is a non-native species that is harmful to an ecosystem. Invasive species can include plants, animals, insects, and microorganisms. Although people relocate non-native species for a variety of reasons, the results are unpredictable.

Prior Knowledge

Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
ecosystem	noun	community and interactions of living and nonliving things in an area.
habitat	noun	environment where an organism lives throughout the year or for shorter periods of time.
invasive species	noun	type of plant or animal that is not indigenous to a particular area and causes economic or environmental harm.
native species	noun	species that occur naturally in an area or habitat. Also called indigenous species.
non-native species	noun	a type of plant or animal that is not indigenous to a particular area. Non-native species can sometimes cause economic or environmental harm as an invasive species.

For Further Exploration

Websites

- [National Invasive Species Council](#)
- [Center for Invasive Species and Ecosystem Health](#)
- [U.S. Department of Agriculture: National Invasive Species Information Center](#)
- [Invasive Animals CRC: Australia](#)
- [USDA: Forest Service–Natural Inquirer](#)



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