

By Land, By Sea, By Air...

Sneak Peek

Students will be introduced to concepts and issues surrounding Invasive and Non-Native Species. Students will explore how invasive species arrive in Florida. They will research the origin of a specific species and create a storyline outlining the arrival of the first individual. This activity incorporates information gathering, creative writing and presentation skills.

Aligned with the following Sunshine State Standards and FCAT Benchmarks for grades 6-8:

SC.D.2.3.2 AA SC.G.2.3.4 AA
SC.F.1.3.7 CS SC.H.2.2.1 CS
SC.G.2.3.3 CS
AA = annually assessed
CS = content sampled

Objectives:

Students will:

- Identify the vectors by which non-native species are transported.
- Collect information on a specific invasive species in Florida.
- Demonstrate an understanding of how vectors transport non-native species by creating a fictitious story of the first individual's arrival.

Materials:

- Internet access, books or resource articles on invasive species.
- Copies of Florida Aquarium invasive species fact sheets.
- Variety of costumes (not required) and craft supplies for role-play.

Background:

How did they get here?

Non-native species arrive in Florida several different ways. The **vector** is the means by which a species is transported from one location to another, and the **pathway** is the geographic path it follows. Some species are deliberately introduced by humans. The plant Kudzu was introduced to control soil erosion. Non-native ornamental plants, such as Brazilian pepper, have been used in landscaping around homes and businesses. Unusual pets, including aquatic species, have been released by owners into Florida's wild lands and waterways.

Non-native species also arrive in Florida as the unintentional consequence of human activities. **Ballast water** can carry organisms across the world. The process of importing fruits and vegetables can carry pests to a new location. Even the international movement of people can bring diseases or viruses wherever they may travel!

The intentional and unintentional vectors and pathways described above are enhanced or created by human activity. Species also make use of natural vectors, including wind and currents. Please visit www.invasivespecies.gov for more information.

Procedure:

1. Divide the class into groups of three. Distribute one of the Florida Aquarium invasive species fact sheets to each group. You can also decide to let each group choose their invasive species.
2. After each group has a specific invader species, instruct them to research how the invader is thought to have arrived in Florida. If this information is not known, lead the group to speculate based on how similar species arrived.
3. Once the class has gathered this information, instruct them to create a specific story outlining the way the original individual arrived. This should include an introduction of the human characters including their jobs or role in the story, a depiction of the trip and a description of the arrival in Florida.
4. Once they have written the script for the presentation, they can use craft supplies or costumes to “dress up” as their characters.
5. Each group will present their “play” to the class.

Rapping It Up!

1. The non-native species in this activity all had vectors and/or pathways. Was your species introduced intentionally? Describe why you think the introduction was intentional or non-intentional.
2. Non-native species are not necessarily invasive. Define the difference between invasive and non-native.
3. You have created the arrival of the first individual of your species. What are ways the introduction of this species could have been prevented?
4. Can you think of any other vectors and pathways a species could use to come to Florida that you haven't heard about in this class?

Glossary:

Ballast– Water or other heavy material placed in the hold of a ship for stability.

Invader/Invasive species – A plant or animal that is not native and causes harm, including disrupting natural ecosystems.

Native species – A plant or animal species that originated in a certain place. A species occurring in its natural range. Species that were present in Florida at the time the first Spanish settlers arrived.

Non-native species – A species introduced to a region intentionally or accidentally.

Pathway – The geographic path a species follows on its way to an introduction.

Vector – The means, or transport mechanism, by which species are transported from one location to another.