

Classroom Takeover!

Sneak Peek

Students will be introduced to concepts and issues surrounding Invasive Species. Students will explore the differences between non-native and invasive species by creating one of their own. They will see how their classroom environment changes with the introduction of their species. This activity incorporates making connections, drawing conclusions and thinking critically.

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

SC.F.1.2.2 CS	SC.G.1.2.7 CS
SC.F.1.2.3 AA	SC.G.2.2.2 CS
SC.F.2.2.1 CS	SC.G.2.2.3 CS
SC.G.1.2.2 AA	SC.H.1.2.3 AA
SC.H.1.2.5 CS	SC.H.2.2.1 CS
SC.H.3.2.4 AA	

AA = annually assessed
CS = content sampled

Objectives:

Students will:

- Identify growth and survival characteristics that make invasive species survive and thrive.
- Demonstrate several impacts invasive species have on the environment.

Materials:

- Colored pencils or markers.
- Five to ten unique items such as a toilet paper roll, small foam football, water bottle, etc.
- Overhead projector and pens.
- Internet access or resource articles on invasive species (recommended, not required).

Background:

An *invasive species* is defined as a species that is 1) *non-native* (or alien) to the ecosystem under consideration **and** 2) causes harm to the economy, the environment or human health. Invasive species may compete with native species for food and living space. A successful *invader* will take over space in which a native species normally lives. Eventually, invaders can reduce the variety of species in an area, which is called a loss of *biodiversity*.

An invasive species usually thrives in an environment for two main reasons. First, it has the ability to reproduce rapidly. This means that it either has many offspring that survive and flourish and/or the individuals grow quickly and produce offspring of their own relatively soon. A second reason for success is that the invader can often survive in a wider range of conditions than the native species surrounding it. Changes in temperature or amounts of food, water, or nutrients may not adversely affect the invasive species as

much as the native species. In their introduced range, invasive species may also escape from predators, diseases or other natural controls.

A species may be *non-native* but not have the negative effects of an invasive species. A *non-native* species is a species introduced to a region intentionally or accidentally.

Florida has more than 2,000 non-native species, which makes it second only to Hawaii. There are several state laws restricting the cultivation of specific non-native species of weeds and aquatic plants. You can find a listing of these laws at www.invasivespecies.gov.

Procedure:

1. Divide the class into groups of three. Distribute one of the unique objects representing a fictitious invasive or non-native species to each group.
2. Explain to the students that the classroom is the local environment supporting the native species, teachers and students. Right now, the environment is balanced and functioning well. This environment allows the students to learn and the teachers to teach each day.
3. Using their knowledge of invasive and non-native species, as well as any additional resource materials, ask each group to decide if their species will be invasive or non-native.
4. Instruct each group to decide how the classroom would change as their species reproduces. They should list potential impacts their species may have on the environment. (e.g. their species eats chalk so eventually the teacher wouldn't be able to write on the board.)
5. Ask students to create a name for their species and list at least four characteristics critical for the species' survival (e.g. it eats pencils, needs to be in the dark for twenty hours of the day, etc.).
6. Have students present their information on an overhead.

Rapping It Up!

1. What are the characteristics of your species that make it able to be categorized as invasive or non-native?
2. What makes your invasive species harmful to the environment?
3. If your species was introduced to your schools' environment, how could you stop from spreading and/or causing harm?
4. Do you think there are laws that could be adopted to protect native species in Florida?

Glossary:

Biodiversity – The variety of plant and animal species present in an ecosystem.

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.