Project Learning Tree Standards-Based FCAT-Style Activities

Invasive Species

Teacher Page

Students practice FCAT skills while learning about invasive species.

GRADE LEVEL: 6th - 8th grades

ACADEMIC OUTCOMES/LESSON OBJECTIVES:

- Students will read a selection introducing them to the concepts of invasive exotic plant and animal species.
- Students will respond to FCAT-Style questions and prompts in Reading, Writing, Math, and Science.

SUNSHINE STATE STANDARDS ASSESSED:

- (LA.6.2.2.2; LA.7.2.2.2) reads text and determines the main idea or essential message, identifies relevant supporting details and facts, and arranges events in chronological order. (LA.8.2.2.2) synthesizes and uses information from the text to state the main idea or provide relevant details.
- (LA.6.4.2.3) writes informational/expository essays (e.g., process, description, explanation, comparison/contrast, problem/solution) that include a thesis statement, supporting details, and introductory, body, and concluding paragraphs. (LA.7.4.2.3, LA.8.4.2.3) writes in a variety of informational/expository forms (e.g., summaries, procedures, instructions, in; specialized informational/expository essays (e.g., process, description, explanation, comparison/contrast, problem/solution) that include a thesis statement, supporting details, an organizational structure particular to its type, and introductory, body, and concluding paragraphs.
- (MA.A.3.3.3) adds, subtracts, multiplies, and divides whole numbers, decimals, and fractions, including mixed numbers, to solve real-world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.
- (SC.G.2.3.4) understands that humans are a part of an ecosystem and their activities may deliberately or inadvertently alter the equilibrium in ecosystems.

RESOURCES:

Florida Project Learning Tree Web site - http://www.sfrc.ufl.edu/plt/
Florida Department of Education Web site - http://www.firn.edu/doe/

AUTHORS: Karen B. Smith
Kelley Weitzel, Education Consultant

Answer Key:

1. LA.6.4.2.3, LA.7.4.2.3, LA.8.4.2.3 Use the 6-point writing rubric.
2. b) MA.A.3.3.3
3. Use the 2-point science rubric for Short Response Questions.
   SC.G.2.3.4 Example of a Top Score Response:
   New species can out-compete native species, taking the space, nutrition, and other resources they need to survive. The animals and plants that depend on the disappearing species might start to go hungry without them as a food source. Even the habitat may change because a new animal might dig up the earth and cause erosion. A new plant might block all of the incoming sunlight so the other plants starve.
4. c) LA.6.2.2.2; LA.7.2.2.2; LA.8.2.2.2

This project is sponsored by National PLT and EETAP funding, copyright 2007.

Project Learning Tree Standards-Based FCAT-Style Activities

Invasive Species

Student Handout

Students practice FCAT skills while learning about invasive species.

WRITING

1. On the news and in movies, we see schools and neighborhoods taken over by gangs, violence, and drugs. Think about how a school or neighborhood with few problems would change if gangs and drug-dealers moved in. Write to explain how gangs, drugs, and violence could change a school or neighborhood.
   NOTE: Write your response to question 1 on another sheet.

MATH

2. Cogon grass is an invasive, non-native plant species that can survive in many different habitats. Because its seeds can travel up to 15 miles on the wind, it spreads quickly and easily. A single specimen of cogon grass can produce 3000 seeds a year. If 90% of its seeds germinate each year, how many new plants will the original cogon grass specimen have produced after 2.75 years?

   a. 2,700 new plants
   b. 7,425 new plants
   c. 7,560 new plants
   d. 8,250 new plants

SCIENCE

3. Because many non-native plants and animals reproduce quickly, they can start to replace our native Florida species. Explain how the introduction of a new, non-native species can affect a natural habitat and the other native species living in it.

READ
INQUIRE
EXPLAIN

Name: **Date:**

Project Learning Tree Standards-Based FCAT-Style Activities

Invasive Species

Student Handout

Students practice FCAT skills while learning about invasive species.

READING

This article was adapted from the table titled, "Common Characteristics of Invasive Species" in the Project Learning Tree activity "Reduce, Reuse, Recycle."

Invasive Species

A "native" species is a plant or animal that belongs in an area. A "non-native" species is an organism that has been introduced (often by people) to an area where it does not naturally occur. In their new habitat, some of these non-native organisms grow and spread quickly. As a result, they take up space and resources needed by the animals and plants that actually belong there. When this occurs, the invading organism is called an "invasive exotic."

Why are these invasive exotic species able to take over? First, they can tolerate a wide range of habitats and different kinds of weather. This helps them live in lots of different places. For example, the European starling (a small black bird) can live in a variety of habitats from woodlands to open fields to cities.

Second, invasive exotic species produce a lot of eggs or seeds. For example, one zebra mussel (a shellfish) can release up to one million eggs per year. That's a lot of babies!

Third, invasive exotic species have few natural controls, such as predators or disease to prevent their population from expanding wildly. For example, leafy spurge (a weed) is not edible to the native insects and animals of the American West. Since nothing eats it, the spurge is taking over and displacing the native plants around it. This means there are now fewer plants for the native insects and animals to eat.

Fourth, invasive exotic species spread easily. For example, cogon grass produces several thousand seeds that can be dispersed up to 15 miles by the wind.

Fifth, many invasive exotic species can reproduce at a very young age. For example, Buckthorn plants mature faster and can produce seeds sooner. They also have a longer growing season than many native plants.

With all of these advantages, invasive exotic plants and animals are taking over their new homes. They are using up the space, nutrients, and other resources needed by native species. So, when landscaping your yard or school, help our native species by growing native plants. They provide berries and flowers for native birds and butterflies, and that makes your yard doubly beautiful!

Name:	**Date:**

This project is sponsored by National PLT and EETAP funding, copyright 2007.

Invasive Species

Student Handout

Students practice FCAT skills while learning about invasive species.

READING, continued

4. Which of the following best states the MAIN IDEA of the article titled, "Invasive Species?"

   a. Invasive exotic species are plants or animals that are introduced into an area where they don't naturally occur.
   b. Invasive exotic species have an advantage because they can spread easily and reproduce quicker and more often than native species.
   c. Invasive exotic species have a variety of advantages that allow them to take the space and resources needed by native species.
   d. Invasive exotic species have few natural controls, so their populations grow quickly.

Name:	**Date:**