

Project WILD Standards-Based FCAT-Style Activities



Edge of a Home

Teacher Page

Students practice FCAT skills while learning about ecotones (transitions between habitats).

GRADE LEVEL: 6th - 8th grades

ACADEMIC OUTCOMES/LESSON OBJECTIVES:

- Students will read a selection introducing them to the concept of ecotones.
- Students will respond to FCAT-Style questions and prompts in Reading, Writing, Math, and Science.

SUNSHINE STATE STANDARDS ASSESSED:

- LA.6.2.2.2 Uses information from the text to answer questions related to the main idea or relevant details, maintaining chronological or logical order.
- LA.7.2.2.2 Uses information from the text to state the main idea and/or provide relevant details.
- 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 Writes 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.
- LA.8.4.2.3 Writes 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.3.3.2 Selects the appropriate operation to solve problems involving addition, subtraction, multiplication, and division of rational numbers, ratios, proportions, and percents, including the appropriate application of the algebraic order of operations.
- SC.H.3.3.4 Knows that technological design should require taking into account constraints such as natural laws, the properties of the materials used, and economic, political, social, ethical, and aesthetic values.

RESOURCES:

K-12/Project WILD website - <http://myfwc.com/educator/K12.html>
Florida Department of Education Website - <http://www.firn.edu/doe/>

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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) SC.H.3.3.4
3. c) MA.A.3.3.2
4. Use the 2-point rubric for Short Response Questions.

LA.6.2.2.2; LA.7.2.2.2; LA.8.2.2.2, Example of a Top Score Response:

Ecotones are important in maintaining the biodiversity of an area because animals and plants have access to more kinds of food and shelter within this mixed ecosystem. If one food or shelter source is lost, animals have a better chance of being able to find alternative plants or animals to eat and shelter under.



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WRITING

1. When swamp and forest ecosystems overlap, both swamp and forest animals can live in this edge habitat or ecotone. Think about what might happen to these ecosystems in a severe hurricane. Write to explain how the animals in the swamp, the forest, and the overlapping ecotone might be affected by the storm damage.

NOTE: Write your response to question 1 on another sheet.

SCIENCE

2. One factor contributing to the disappearance of our planet's animal and plant species is the destruction of the world's ecotones (areas where two or more ecosystems overlap). Which of the following actions could **DECREASE** the loss of our planet's ecotones?
 - a. Create man-made ditches between ecosystems to prevent the spread of wildfire.
 - b. Prevent construction of roads that would separate neighboring ecosystems.
 - c. Require construction projects to preserve natural spaces inside suburban areas.
 - d. Require construction projects to create ponds and lakes to support wetland wildlife.

Name:

Date:

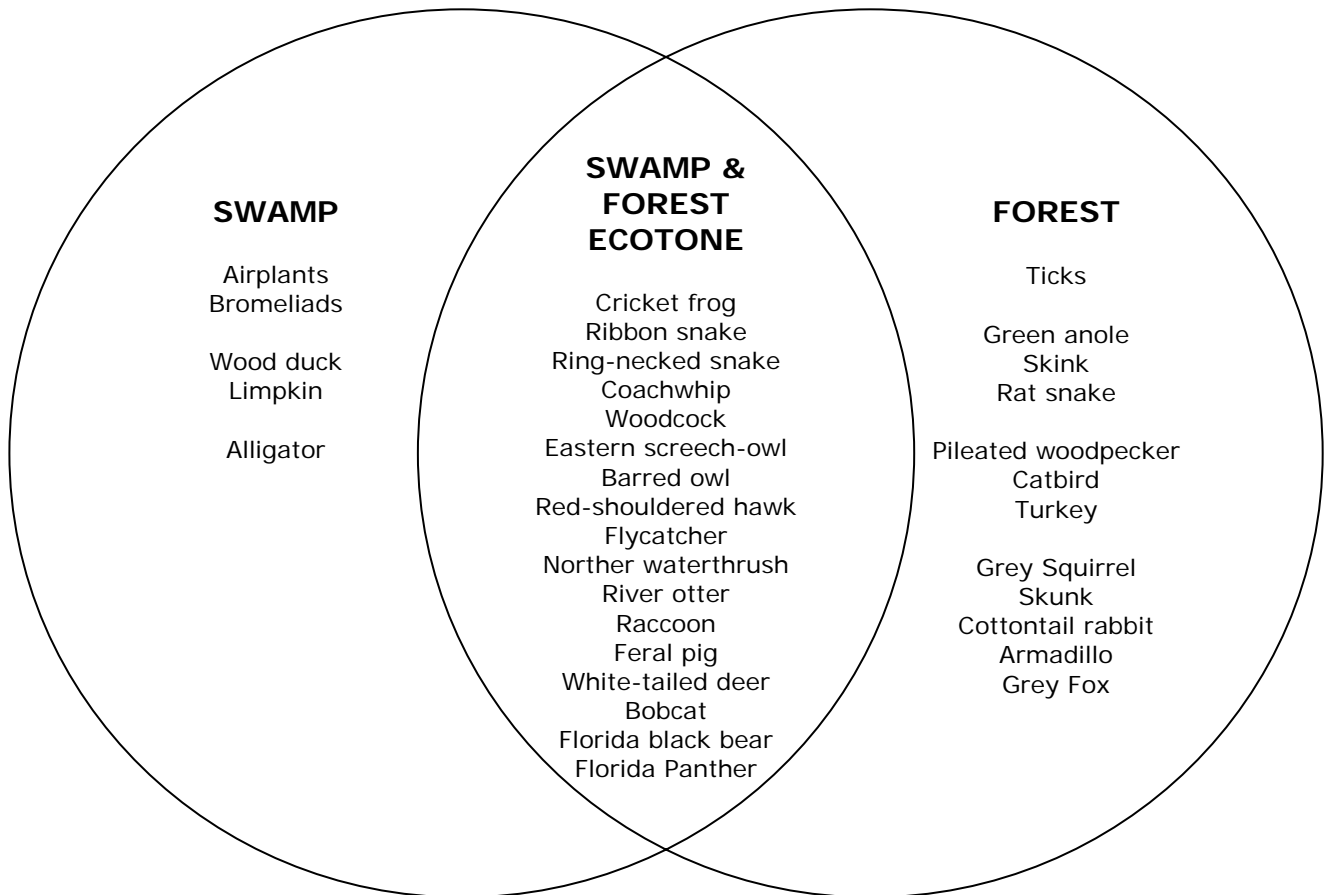


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Species Living in a Swamp, a Forest, and in the Overlapping Ecotone



MATH

3. Use the Venn Diagram above to answer the following question. A scientist wants to know what percentage of species is found in the ecotone, where the swamp and forest overlap. Which of the following mathematical processes would give him that answer?
- Counting the total number of species in the Swamp & Forest Ecotone
 - Adding the number of Swamp species to the number of Forests species
 - Dividing the total number of Ecotone Species by the overall number of species
 - Multiplying the total number of Ecotone Species by the overall number of species

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READING

This article is adapted from the Background Information for the Project WILD activity “Edge of a Home”:

The Importance of Ecotones

An ecotone is a unique environment created by the overlap of two or more surrounding habitats. This area of overlap between two ecosystems creates a habitat *edge* where parts of each surrounding habitat are present. These overlapping ecosystems are more complex than any single ecosystem alone. For example, in an overlap of forest and marsh, it is common to find forest plants growing within the marsh. The growth of these forest plants is usually stunted by the deep marshy waters. This prevents the forest from overtaking the marsh completely. Similarly, during wet seasons, the marsh plants may begin to grow up into the forest.

Edge habitats may shift and change from year to year, but their existence provides important habitat for many different kinds of wildlife. Why? When both marsh and forest plants can coexist in an ecotone area, the local animals have access to a higher-than-normal variety of food and shelter options. These options create more niches - specific habitats - for a diverse group of animals. By maintaining ecotones and all of their components, scientists hope to preserve the world’s biodiversity. If the diversity in an ecotone begins to disappear, it is often a clue that problems exist in one or both of the overlapping ecosystems.

4. Based on information in the article titled, “The Importance of Ecotones,” explain how ecotones can preserve or even increase the biodiversity of an area. Use details and information from the article to support your answer.

READ
THINK
EXPLAIN

Name:	Date:
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