

## Teacher's Guide: Florida's Everglades: The River of Grass

Recommended Grade Level: 5-8

(also applicable to grades 9-12 for students requiring significant support in learning)

Suggested Time: About 50-60 minutes spread over one or more class periods, plus additional time to complete a writing assignment

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### Goals

Following are the big ideas that students should take away after completing this lesson:

- Certain conditions support the wide variety of living things in the Everglades biome
- Changing conditions can upset the balance and health of any environment

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### Vocabulary

(See definitions on page 6.)

- biodiversity
- biome
- ecosystem
- environment
- habitat
- subtropical

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### Key Literacy Strategies

Following are the primary literacy strategies students will use to complete this activity:

- Categorizing basic facts and ideas (screens 4 and 9)
- Comparing and contrasting ideas (screen 5)
- Determining important information (screens 6 and 7, writing assignment 1)
- Making inferences (writing assignment 2)

Note: In addition to using the key literacy strategies listed above, students will use each of the strategies below to complete this lesson:

- Monitoring comprehension
- Synthesizing
- Making predictions
- Developing vocabulary
- Connecting prior knowledge to new learning
- Developing a topic in writing
- Identifying and using text features (photographs, captions, diagrams, and/or maps)

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### Overview

*Florida's Everglades: The River of Grass* is a student-directed learning experience. However, while students are expected to work through the lesson on their own, teachers should be available to keep the lesson on track, organize groupings, facilitate discussions, answer questions, and ensure that students meet all learning goals.

The following is a summary of the lesson screens:

- Screen 1: Students learn that they will explore the Everglades environment.
- Screen 2: Students read about ecosystems, biomes, and the interconnectedness of physical conditions and living things.
- Screen 3: Students learn what the goals are for the lesson, which skills they will be using to complete the lesson, and the important vocabulary words they will use during the lesson.
- Screen 4: Students consider the environment in which they live. They then write down two physical factors, two living things, and one habitat in this environment.
- Screen 5: Students watch a video about the Everglades biome and are asked to think about how it compares with their own environment. They also learn about the seasonal variation—the rainy and dry seasons—that characterize the Everglades’ climate. After watching, students list one to two ways in which the Everglades are the same as where they live, and one to two ways in which they are different.
- Screen 6: Students answer three multiple-choice questions to show their comprehension of what they’ve learned so far about the Everglades.
- Screen 7: Students read a passage on the factors that can positively or negatively influence the health of any ecosystem, including those found within the Everglades biome. After they have finished reading, they list three dangers that the Everglades face from outside influences.
- Screen 8: Students complete an interactive vocabulary activity, and then choose two words from the vocabulary list and write a new sentence for each word. These tasks demonstrate their understanding of the meanings of the words.
- Screen 9: Students use an interactive activity to categorize information on a concept map according to whether a word or phrase describes the physical conditions, living things, or habitats of the Everglades.

Final

Assignment: Students select and complete a writing assignment about the lesson topic.

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### Before the Lesson

- Go through each screen of the lesson, including all the interactive activities, so that you can experience ahead of time what students will be doing. As you go through each screen, jot down your own expectations for students’ responses.
- Determine if students will be working individually or in pairs on the lesson. Some students may be able to work independently with little or no support. Students who are less familiar with the subject area or who struggle with literacy skills may benefit from working with another student. An effective way to do this is to pair a stronger student with a less able reader. You can also have students work individually on certain tasks and in pairs on others,

depending on their experience and needs. If students will be working in pairs on any portion of the lesson, let them know if they will be expected to type in their notes individually or together.

- ❑ Provide instruction on key vocabulary (vocabulary words are defined in the lesson on screen 3, and on page 6 of this guide).
- ❑ Determine what students already know about the Everglades and ecosystems in general. You may want to start a discussion with questions such as: How would you describe the climate in which you live? What do you know about the climate in the southern part of Florida? How does it compare with where you live? What kinds of plants and animals live there? How are these different or the same compared with where you live? Why do you think plants and animals live where they do? Record their ideas on a chart, highlighting the words that may come up in the lesson. This will give you a sense of the background knowledge and possible misconceptions that students have before beginning this lesson. If time allows, return to the chart after students have completed the lesson to add new learning and correct misconceptions. Note: You may want to record their new learning in a different-colored ink so they can see how much they've learned.
- ❑ Arrange computers with Internet access so students can work individually or in pairs.
- ❑ Before students begin, suggest a timeline for completing the lesson, mention the different types of media they will encounter, and let them know how you expect them to submit their work. You may want to provide an outline of this information on a chart, chalkboard, or whiteboard, or as a handout.

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### Lesson Assessments

The following are descriptions of the lesson features that will be part of the packet of materials that students will submit. Students will use the packet for reference when writing their final assignment. It also serves as a formative assessment tool to monitor students' work as they're progressing through the lesson.

- **Notes** - Students take notes on screens 4, 5, and 7. If time allows, review their notes before students begin their writing assignment.
- **Multiple-choice questions** - Students complete the three questions on screen 6. Walk around to make sure students answer all three questions before they continue. If students click to go to the next screen before they finish, their work will not be saved.
- **Match It!** - Students complete an interactive vocabulary activity on screen 9. They begin by placing the vocabulary terms into the correct sentences. After they finish and save their work, they will be able to check their answers against an answer key. When they are done, they will be asked to choose two vocabulary words and write a new sentence for each word. Sentences should demonstrate a clear understanding of the meaning of each word. An inappropriate response would be "The Everglades has biodiversity." An appropriate response would be "Biodiversity describes the different kinds of plants and animals that live in a certain place."

- **Arrange It!** - Students complete the categorization activity Arrange It! on screen 9. They will assign information on a concept map according to whether it describes a physical condition, living thing, or habitat that is found in the Everglades. Students will not be able to check their answers online, so you will need to provide them with correct answers when they are finished with the lesson. You can choose to review the answers as a class or return the corrected packet of materials to students before they begin the final assignment.

Following are the words or phrases students will drag and drop onto the concept map in the appropriate category:

#### Physical Conditions

- Rainfall
- Sunlight
- Subtropical climate
- Drought

#### Living Things

- Tree frog
- Palm tree
- Water snake
- Biodiversity

#### Habitats

- Swamp
- Marshy grassland
- Gator hole
- Drainage

- **Final Assignment** - Students complete one final writing assignment. You can choose to let students make their own selection, or assign one according to your goals for the lesson. Use the rubric on page 7 to assess the writing assignments.

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### Lesson Aids and Extensions

Use the following suggestions to help students if they are stuck on a particular screen, to prepare students for completing their writing assignments, or as follow-up discussions to reinforce learning.

- **Watching Videos** - Encourage students to watch the video more than once. After the initial viewing, provide students with a specific content focus to frame their next viewing(s) of the video. This will help them draw connections between the main topic and the information that the video has to offer.
- **Participating in Discussions** - Organize class discussions or encourage students to talk about their questions in pairs. You may want to use the following discussion starters.
  - o Why do so many different types of plants and animals thrive in the Everglades?
  - o What adaptations do inhabitants of the Everglades have that help them thrive in these conditions?
  - o Why does biodiversity matter to the health and stability of ecosystems?
- **Reading the PDF Text** - Before they read the PDF text on screen 7, ask students to share their thoughts about factors that may negatively impact the health and stability of an ecosystem.
- **Sharing Student Work** - It may be motivational, and a further learning opportunity, for students to post their final essays so that their classmates, peers, and/or parents can see them. This may also provide an opportunity for students to comment on and discuss each other's essays.

If you do not already have access to an online writing community, Teaching Matters™ provides TeXT, free classroom publishing tools that allow teachers and students to create and publish their own online eZine. More information and a free signup are available at Teaching Matters: TeXT (<http://text.teachingmatters.org>).

- **Reflection and Self-Assessment** - After students have turned in their writing assignments, you can choose to have them assess their learning. Bring students together as a whole class or in small groups to discuss the questions below. You may want to return to the chart of their ideas developed before the lesson and record their new learning. You may also have students respond individually to the questions and then convene the class to discuss the chart.
  - o What did you learn?
  - o What was surprising?
  - o What questions do you still have?
  - o What was the easiest for you to understand and do?
  - o What was the most difficult?

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## **Vocabulary Definitions**

### **biodiversity**

The many different species of living things found within an ecosystem; from “bio” meaning “life” and “diverse” meaning “many different.”

### **biome**

A relatively large area that has a similar climate, land features, and types of living things throughout it.

### **ecosystem**

A system made up of plants, animals, and other life forms and the physical environment in which they live.

### **environment**

The area in which something exists or lives.

### **habitat**

A type of environment in which an organism or group of organisms normally lives. The organisms that live in a habitat are called inhabitants.

### **subtropical**

Areas that have short winters that are not very cold, and long, hot summers. Subtropical comes from the words “sub-,” meaning “almost” or “near,” and “tropical,” which means “very hot and humid” when describing climate. The tropics are the areas on Earth that lie closest to the Equator.

## Final Assignment Rubric Florida's Everglades: The River of Grass

1. Describe the physical conditions and habitats that support the biodiversity of the Everglades.
2. Think about a particular environment and its elements: physical conditions, living things, and habitats. (You can use the example of the Everglades or your own environment.) Describe something that might happen to this environment if one or more of its elements changes.

	4	3	2	1
	Provides a clear and accurate response to the question. Ideas are elaborated, with three or more relevant supporting details from the reading passage, video, and other materials in the lesson.	Provides an adequate response to the question. Topic and ideas are generally well organized, with two relevant supporting details from the reading passage, video, and other materials in the lesson.	Provides a generally accurate response, with one supporting detail from the reading passage, video, and other materials in the lesson.	Provides an inaccurate response to the question or fails to address the question. May include misinterpretations. Understanding of the topic is not apparent.
	Uses at least three vocabulary words (or a form of the vocabulary words) from the lesson, and uses them all correctly.	Uses two vocabulary words (or a form of the vocabulary words) from the lesson, and uses them both correctly.	Uses one vocabulary word (or a form of the vocabulary word) from the lesson, and uses it correctly.	Does not use any vocabulary words, or uses vocabulary words incorrectly.

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## Scoring the Rubric

Here are two suggestions for scoring the final assignment rubric. Select the option that best meets your needs or develop your own grading system.

**Option 1:** This option provides one score for each submitted assignment.

Assign a score of 4 or below for the written response (first row of the rubric) and a score of 4 or below for the use of vocabulary (second row of the rubric), for a total maximum score of 8. The interpretation of scores is as follows:

Score	Grade	Narrative Interpretation
7-8	A	Excellent
5-6	B	Good
4	C	Adequate (Fair)
3 or below	D	Minimal

**Option 2:** This option provides two scores for each submitted assignment: one for written content and one for the use of key vocabulary. An advantage of separate scores is that you can weight students' comprehension and composition differently than you do their knowledge of vocabulary. It can also help you identify specific needs for future instruction.

Assign a score of 4 or below for the written response (first row of the rubric) and a score of 4 or below for the use of vocabulary (second row of the rubric) and then score them separately. The interpretation of scores is as follows:

Score	Grade	Narrative Interpretation
4	A	Excellent
3	B	Good
2	C	Adequate (Fair)
1	D	Minimal

The final grade may look like this: A/B (A for content and B for vocabulary use).