

# **Land Use: The Kissimmee River Project vs. Development in the Green Swamp – Will We Repeat the Past?**

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## **Summary**

The Kissimmee River and the Green Swamp both play important roles in Central Florida's environment. Man has attempted to control one and has failed. We are now paying for that mistake, both economically and environmentally. The other is in danger of suffering the same fate. Development is encroaching at an alarming pace. Can the trend be reversed before it's too late?

## **Objectives**

Students will:

- 1) examine the history of the Kissimmee River restoration project.
- 2) examine the history of the Green Swamp.
- 3) discover the connection between the Kissimmee River and the SFWMD.
- 4) discover the connection between the Green Swamp and the SFWMD.
- 5) be able to locate the Kissimmee River, Canal 38, and the area of restoration on a map.
- 6) be able to locate the Green Swamp and surrounding areas on a map.
- 7) be able to draw conclusions about the information presented on both areas and write an editorial defending a position on when and where humans should modify the environment.

## **U.S. History Event or Era**

This lesson is designed to show the environmental and economic impact as well as the historical significance of these areas to Central Florida, in particular, the Polk County area. This lesson could be included in American History during the Industrial Era unit, beginning with the purchase of the land in the Kissimmee River basin in the 1880s. It could also be included in the 1960s, when the channelization of the river began. It could be used in American Government to show federal and state government involvement in environmental issues. It could also be used in Economics in order to examine the economic impact on the environment and the cost to taxpayers for the restoration. Obviously, this topic lends itself very well to Environmental Science and related subjects, as well.

Sunshine State Benchmarks: SS.A.5.4.1, SS.A.5.4.8, SS.B.2.4.1, SS.B.2.4.6, SS.B.2.4.7, SS.B.2.4.4, SS.B.1.4.1

FCAT Skills: Words and Phrases in Context (L.A.A.1.4.2), Reference and Research (L.A.A.2.4.4 and L.A.A.2.4.8)

## **Grade Level**

This lesson is designed for middle/high school use (grades 8 and up).

## **Materials**

- 1) Computers with Internet access (for each student or pair of students)
- 2) Copy for each student – "Website Questions"
- 3) Florida map and 2 colored pencils/student or pair of students
- 4) Copy for each student – "How to Write an Editorial"
- 5) Editorial Assignment Sheet
- 6) River of Dreams (optional – may be downloaded from SFWMD website as a streaming video or may be ordered in VHS format from the website)
- 7) Editorial page from a newspaper (for each student)
- 8) Vocabulary word list

## **Lesson Time**

This lesson can be completed in 3 – 90 minute periods if the editorial is completed in class or 2 – 90 minute periods if the editorial is assigned for homework.

## **Lesson Procedures**

- 1) If the River of Dreams video is being used, it should be viewed before beginning the computer assignments. It gives an overview of the entire Kissimmee River situation (25 minutes).
- 2) Distribute the vocabulary word list. This could be a pre-test/post-test activity, also. The teacher might want to make up a pre-test before revealing the definitions then use the same test at the end of the lesson to check progress.
- 3) Distribute the “Website Questions” handout, maps, and colored pencils.
- 4) The students will log onto the websites and follow the instructions on the handout.
- 5) Brainstorm with the class what they have discovered about the Kissimmee River/Green Swamp after completing the computer assignments and maps. The teacher could make a list on the board or overhead as different points are being discussed. A comparison/contrast could also be done as a class with pros/cons of each topic, e.g. restoring the Kissimmee River vs. leaving it “as is” or a general comparison could be done between the Kissimmee River and the Green Swamp.
- 6) Ask students if they have ever had a disagreement with someone where they had to state their point of view and then listen as the other party stated his/her point of view. How did they go about persuading the other party to support their viewpoint? How did you resolve the issue and satisfy both parties?
- 7) Distribute editorial pages from a local newspaper. The teacher might want to choose an environmental-type editorial (or even one that has been published about one of the two areas being researched) and have students read it individually, underlining words/phrases/sentences that support the author’s viewpoint.
- 8) Ask students to share underlined items and explain why they thought that particular item supported the author’s viewpoint.
- 9) Distribute “How to Write an Editorial” handout. Explain to students that they now know about the circumstances surrounding the Kissimmee River restoration and the reason why so much importance is placed on the Green Swamp.
- 10) The students will then write an editorial (may be done in class or as a homework assignment) defending a position on when and where humans should modify the environment. Students will use information obtained from the websites to support their positions. The teacher may require a “web-style” outline or rough draft before the final draft is submitted. A rubric should be developed in order to assess the completeness of the editorials.
- 11) Some suggestions for wrapping up the lesson: Post-test vocabulary and map labeling could be used in addition to the editorials. Teachers may want students to share their editorials with the class.

## Website Questions

- 1) Go to [www.sfwmd.gov](http://www.sfwmd.gov)
- 2) Click on "Kissimmee" on the lower left side of the page.
- 3) Answer the following questions:
  - A. Between which two lakes is the Kissimmee River located?
  - B. Why was channelization of the river necessary?
  - C. Name some of the unintended effects of the channelization.
  - D. What did Congress authorize in 1992 and what is involved in trying to accomplish the task?
- 4) Scroll down to and click on "Frequently Asked Questions."
- 5) Read and summarize the answers for questions 1 and 3 below:

### Answers

Question #1 -

Question #3 -

- 6) Go to [www.saj.usace.army.mil](http://www.saj.usace.army.mil)
- 7) Scroll down and click on "Kissimmee."
- 8) This is the Kissimmee River Restoration site. Under "Maps" on the right side of the page, click on "Upper and Lower Basin." Enlarge the map to 150% for clarity.
- 9) Using the Florida map handout and a colored pencil, color and label Lake Okeechochee and the approximate locations of Lake Kissimmee and Canal 38.
- 10) Go to [www.watermatters.org](http://www.watermatters.org)
- 11) On the left side of the page, click on "The Green Swamp."
- 12) When the page appears, click on "Map" at the bottom of the page.
- 13) Using the Florida map handout and a colored pencil, shade the approximate area of the Green Swamp. Click on "Counties" while viewing the map to get a better approximation of the location.
- 14) Exit the map and click on "Significance." Answer the following question:
  - A. Why is water in the Green Swamp of higher quality than other watersheds?
- 15) Exit "Significance" and click on "History." Answer the following question:
  - A. What designation was the Green Swamp given in 1974?
- 16) Exit "History" and click on "Natural." Answer the following questions:
  - A. What fraction of the Green Swamp is publicly owned?

B. What naturally occurring phenomenon limits agriculture and large-scale development in the Green Swamp?

17) Exit "Natural" and click on "Management." Answer the following question:

A. Besides "the District" (SWFWMD), list 3 other agencies involved in the management of the Green Swamp.

18) Exit "Management" and click on "Education." Answer the following question:

A. Why does the District promote environmental education programs?

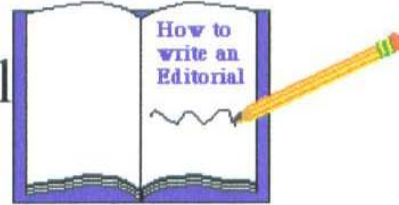
19) Exit "Education" and click on "Recreation." Answer the following question:

A. What is the purpose behind making so much of the Green Swamp public land?

20) Exit "Recreation," exit the website and return to the desktop.



# How to Write an Editorial



## —What is an Editorial:

An editorial is one of the writing styles used to express an opinion or reaction to timely news, event or an issue of concern. Most editorials are used to influence readers to think or act the same way the writer does. Not all editorials take sides on an issue but have one of the following four purposes:

1. **Inform:** The writer gives careful explanations about a complicated issue.
2. **Promote:** Writer tries to promote a worthy activity. Get the reader involved.
3. **Praise:** The writer praises a person or an event.
4. **Entertain:** The writer encourages or entertains the reader about an important issue.

## —Steps to writing your editorial:

- **Selecting:** Choose an issue ~ Your editorial could be about how the readers could help the environment, inform the public about a particular endangered species, praise an effort by a group who has helped to take an endangered animal off of the endangered species list, or any other idea that can be used as an editorial...first check with your teacher to make sure it is an acceptable article.
- **Collecting:** Gathering Support ~ Gather as many details

to convince others about your opinion. (Facts or evidence, written statements from sources or authorities in the subject (experts), comparisons to similar situations to support your argument, pictures or images that strengthen your argument, be able to counter argue your opponents on this issue.)

- **Connecting:** Write the first draft ~ Body should have clear and accurate details and examples. Give strong arguments in beginning of editorial and at the end. Show the opposing arguments and their weaknesses. Offer a solution at the end. Do not be wishy washy. Stick to your argument or opinion.
- **Correcting:** Getting it right ~ Your editorial should be clear and forceful. Avoid attacking others, do not preach, paragraphs should be brief and direct. Give examples and illustrations. Be honest and accurate. Don't be too dramatic.

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Swamp – Will We Repeat the Past?  
Editorial Assignment**

Directions: Using all of the information you have gathered, draw a conclusion about the information presented on both areas and write an editorial defending a position on when and where humans should modify the environment.

Length: 300-400 words

## Vocabulary

- 1) Aquifer - An underground zone of porous rock and sediment that can hold water. The *Floridan aquifer system* is the primary source of drinking water for southwest Florida.
- 2) Groundwater – Water that is underground in the aquifers.
- 3) South Florida Water Management District (SFWMD) – The oldest and largest of Florida’s water management districts. It oversees water resources in the southern half of the state. Also referred to as *Soft Mud*.
- 4) Southwest Florida Water Management District (SWFWMD) – The water management district that is responsible for managing and protecting water resources within west-central Florida. Also referred to as *Swift Mud*.
- 5) Watershed – An area of land that water flows across as it moves toward a common body of water, such as a stream, river, lake or coast.
- 6) Wetlands – An area where water covers the ground for more than one month a year.
- 7) Floodplain – The land bordering a river and subject to flooding.
- 8) Canal 38 – The 50-mile-long canal that channelized the Kissimmee River for the purpose of flood control.



## Resources

1. Southwest Florida Water Management District – [www.watermatters.org](http://www.watermatters.org)  
There are many teacher resources available from the District. Everything is free (even shipping) if you live in the District.

2. South Florida Water Management District – [www.sfwmd.gov](http://www.sfwmd.gov)

3. U.S. Army Corps of Engineers – [www.saj.usace.army.mil](http://www.saj.usace.army.mil)

4. Florida Electronic Library – <http://www.flelibrary.org/>

From this site, you can access your school district (from Polk County it's <http://destiny.polk-fl.net>) or use your own public library card number. Select your school then go to the Gale Student Resource Center. From there, select Opposing Viewpoints Resource Center.

5. Sierra Club – <http://florida.sierraclub.org/greenswamp.asp>

6. Florida Fish and Wildlife Conservation Commission –  
[http://myfwc.com/recreation/cooperative/green\\_swamp.asp](http://myfwc.com/recreation/cooperative/green_swamp.asp)

7. State erases 30-year-old blunder with restoration of Kissimmee River (South Florida Sun-Sentinel, October 30, 2001) Santaniello, Neil

8. Hard Corps Revival on the Kissimmee: Can the Army's Engineers March to Nature's Drummer? (*Sierra*, March-April 1992 v77 n2 p71 (3)) Hamilton, Joan

9. Nature's Crazy Antics (Editor's Page) (restoring the Kissimmee River) (*Florida Trend*, April 2003 v45 i13 p108 (1)) Howard, Mark R.

10. Moving the Mississippi (The Wall Street Journal, October 29, 2005) McKay, Betsy

11. Taking Sides – A series of reference books dealing with opposing views on controversial issues. The Dushkin Publishing Group, Inc. 1995 ISBN: 0-7172-7548-5

12. How to Write an Editorial –  
<http://projects.edtech.sandi.net/pbmiddle/environment/editor.htm>