



Washing Away

LOSING LOUISIANA



THE WATER WAS COMING SO QUICKLY...

AN ACTIVITY FOR MIDDLE AND HIGH SCHOOL STUDENTS
DEVELOPED BY CLAUDIA FOWLER

OVERVIEW:

This series of mini-activities examines the impact of flood waters brought on by hurricanes, both real and contrived, the Flood of 1927, and the hurricane that devastated Last Island in 1856.

GRADE LEVEL EXPECTATIONS:

Louisiana Grade Level Expectations (Science)

Grade 5

- SI-M-A1 GLE 3 Use a variety of sources to answer questions (SI-M-A1)
- SI-M-A4 GLE 11 Construct, use, and interpret appropriate graphical representations to collect, record, and report data (e.g., tables, charts, circle graphs, bar and line graphs, diagrams, scatter plots, symbols) (SI-M-A4)
- SI-M-A7 GLE 19 Communicate ideas in a variety of ways (e.g., symbols, illustrations, graphs, charts, spreadsheets, concept maps, oral and written reports, equations) (SI-M-A7)
- SI-M-B7 GLE 39 Identify areas in which technology has changed human lives (e.g., transportation, communication, geographic information systems, DNA fingerprinting) (SI-M-B7)

Grade 8

- ESS-M-A8 GLE 20 Describe how humans' actions and natural processes have modified coastal regions in Louisiana and other locations (ESS-M-A8)
- ESS-M-9 GLE 21 Read and interpret topographic maps (ESS-M-9)
- ESS-M-A12 GLE 28 Use historical data to plot the movement of hurricanes and explain events or conditions that affected their paths (ESS-M-A12)

High School

- SI-H-A3 GLE 6 Use technology when appropriate to enhance laboratory investigations and presentations of findings (SI-H-A3)
- SI-H-A5 GLE 8 Give an example of how new scientific data can cause an existing scientific explanation to be supported, revised, or rejected (SI-H-A5)
- SI-H-B3 GLE 14 Cite examples of scientific advances and emerging technologies and how they affect society (e.g., MRI, DNA in forensics) (SI-H-B3)
- ESS-H-C3 GLE 19 Interpret geological maps of Louisiana to describe the state's geologic history (ESS-H-C3)
- ESS-H-C3 GLE 20 Determine the chronological order of the five most recent major lobes of the Mississippi River delta in Louisiana (ESS-H-C3)
- SE-H-B5 GLE 16 Evaluate the effectiveness of natural resource management in Louisiana (SE-H-B5)
- SE-H-C4 GLE 22 Analyze the risk-benefit ratio for selected environmental situations (SE-H-C4)



www.lpb.org/washingaway



Louisiana Public Broadcasting • 7733 Perkins Rd • Baton Rouge, LA 70810 • 225.767.5660 • 800.272.8161 • www.lpb.org • edserv@lpb.org

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Louisiana Grade Level Expectations (Social Studies)

Grade 8

- G-1B-M2 GLE 6 Describe ways in which location and physical features have influenced historical events in Louisiana and the development of the state (e.g., Mississippi River/swamp in the Battle of New Orleans) (G-1B-M2)
- G-1B-M3 GLE 7 Explain how or why specific regions are changing as a result of physical phenomena (e.g., changes in the coastal wetlands) (G-1B-M3)
- G-1B-M3 GLE 8 Identify and describe factors that cause a Louisiana region to change (e.g., natural occurrences, disasters, migration) (G-1B-M3)
- H-1A-M2 GLE 64 Compare and contrast events and ideas from Louisiana's past and present, explaining political, social, or economic contexts (H-1A-M2)
- H-1A-M3 GLE 65 Analyze the causes, effects, or impact of a given historical event in Louisiana (H-1A-M3)
- H-1D-M6 GLE 81 Explain cultural elements that have shaped Louisiana's heritage (e.g., festivals, music, dance, food, languages) (H-1D-M6)

High School

- G-1D-H1 GLE 38 Identify technological advances that expanded human capacity to modify the environment (e.g., steam, coal, electric, nuclear power, levees) (G-1D-H1)
- C-1A-H1 GLE 2 Identify and describe services provided by government and assess their necessity and effectiveness (e.g., health care, education) (C-1A-H1)
- H-1A-H2 GLE 7 Analyze or interpret a given historical event, idea, or issue in U.S. history (H-1A-H2)
- H-1A-H4 GLE 15 Interpret or analyze historical data in a map, table, or graph to explain historical factors or trends (H-1A-H4)

SUGGESTED STRATEGIES:

The following multiple activities are structured to be used in conjunction with unit plans the teacher has in place. Ideally, a student or student groups will be assigned one of the topics to research and to develop a presentation to be made during class time. Within the body of the activity are guidelines as to expectations for the presentation.

Each activity can also be broken down into several assignments. The teacher should be cognizant of the students' background, current events, time constraints, and the availability of resources at home and in school.

Several web sites are provided for each activity as a starting point. These are not all inclusive. It is expected that students will search the web and utilize other resources.

Activity 1 Flood Waters and the Blues

It has been said about history: “Rich people write the history, poor people write the songs.” (*NPR, Day to Day*, September 23, 2005). The history of Delta blues music that came out of the Flood of 1927 is well documented. Students should research this topic, including how the music was used as a vehicle to express ideas and feelings, how the times dictated the type of music, and the cultural aspects of the people who were instrumental in writing the songs. Show how music and even food have helped to shape Louisiana’s heritage.

The LPB documentary, ***Washing Away***, features an aspiring musician Marlon Horton, a.k.a. Tenth Ward Buck. His song, “Your FEMA Number” appears to be a big hit in the bounce community. Students should view Marlon’s story (video clip 5:54-8:37).

Dooky Chase Restaurant in New Orleans was a popular meeting place for many of the great black artists in the days prior to integration. They came for good food and good music. Ray Charles even mentions the restaurant in one of his songs. See Leah Chase (video clip 17:35-20:34)

Musician Randy Newman’s song, “Louisiana 1927” had gained somewhat of a following, even before Hurricane Katrina. Obviously Newman wrote it decades after the flood and was not there as a witness to the flood! The lyrics to that song can be found at the site given below.

Selected Resources:

NPR Interview with David Evans, Jazz historian
<http://www.npr.org/templates/story/story.php?storyId=4860785>

PBS documentary, American Experience, *Fatal Flood*
http://www.pbs.org/wgbh/amex/flood/sfeature/sf_blues.html

Randy Newman’s song, *Louisiana 1927*.
http://www.lyricsdepot.com/andy_newman/Louisiana-1927.html

Selected songs written shortly after the 1927 flood and recorded by blues artists from the Delta can be found here.
<http://www.odeo.com/audio/297170/view>

LPB documentary, ***Washing Away***,
<http://www.lpb.org/washingaway>

Activity 2
Flood of 1927

The flood waters of 1927 did not reach New Orleans; nevertheless, the dynamics and politics associated with that flood did reach the city.

Students researching this topic should view the video clip *The Roar of the Water* from the LPB production, **Louisiana: A History, Episode 5: A Current of Change**, in addition to the *Washing Away* video clip (5:54-8:37). Students should seek and describe similarities between the 1927 flood and the days leading up to and shortly after Hurricane Katrina impacted the metro New Orleans area. Points to consider may include: how were residents warned, how were they evacuated, how were they cared for and given shelter following the event, what agencies and organizations were involved in this effort, how did politics dictate events (either perceived or real), and what role did the federal government play?

Students should look for topographic maps of the areas flooded and compare the regions then and now, especially the area in South Louisiana.

Selected Resources:

Corps of Engineers site

http://www.mvn.usace.army.mil/pao/RELEASES/02-06_1927_Flood_Anniversary2.htm

National Geographic: Account by historian Stephen Ambrose.

http://news.nationalgeographic.com/news/2001/05/0501_river4.html

Barry, J.M. (1997). *Rising Tide, The Great Mississippi Flood of 1927 and How It Changed America*. Simon & Schuster: New York

The Roar of the Water from the LPB production, **Louisiana: A History, Episode 5: A Current of Change**
<http://www.louisianahistory.org>

The entire series or individual episodes may be purchased at the ShopLPB at <http://www.lpb.org>

LPB documentary, *Washing Away*

<http://www.lpb.org/washingaway>

Activity 3 Hurricane Pam

During the summer of 2004, FEMA and emergency officials in Louisiana conducted a simulation of Hurricane Pam, a “slow moving, category 3 hurricane” that impacted New Orleans. Students should look at the final report from FEMA and other resources that comment on the event. The classroom presentation should compare data from Hurricane Pam and Hurricane Katrina, determine what were the “lessons learned” from that simulation, and which, if any, were implemented prior to Hurricane Katrina. The report should also discuss the various technologies that have helped advance hurricane information.

Selected Resources:

FEMA Report

<http://www.fema.gov/news/newsrelease.fema?id=13051>

A short animation and other data related to the Hurricane Pam exercise.

http://hurricane.lsu.edu/floodprediction/PAM_Exercise04

TIMES-PICAYUNE series, Washing Away, June 2002. An in-depth look at the vulnerability of New Orleans to hurricane damage.

<http://www.nola.com/hurricane/?/washingaway>

PBS, NOVA: An interview with Dr. Ivor van Heerden. Click on **The Man Who Knew**.

<http://www.pbs.org/wgbh/nova/orleans/>

PBS, NOVA Science Now: A short video that looks to see if “lessons learned” implemented.

<http://www.pbs.org/wgbh/nova/sciencenow/3214/06.html>

Activity 4
August 29

In this activity, students should focus on the steps that led up to the flooding in the Greater New Orleans area from August 29 until September 1. Topics to be covered should include where the levee breaches occurred, the depth of the water at those locations, and the strain on the pumping system. An excellent resource is the animated map of events found below. In using this map, students should locate the breaches, compromised levees, and the flooded land. They should be sure to click on the "Floodwater Depths" icon in the pop-up menu that appears at the end of the video. Students should also view the **Washing Away** video clip (5:54-8:37) for scenes of the flooding in various areas of New Orleans.

The cost-benefits of living in the metro New Orleans area would be an excellent topic for this group to discuss, as well.

Selected Resources:

Animation of the New Orleans flooding provided by the Times Picayune

Note: For first time users, the TP asked for basic information from the user (zip code, year of birth and gender)

<http://www.nola.com/katrina/graphics/flashflood.swf>

Congressional Research Service of the Library of Congress: Protecting New Orleans: From Hurricane Barriers to Floodwalls

<http://fpc.state.gov/documents/organization/58444.pdf>

PBS, NOVA: How New Orleans Flooded

<http://www.pbs.org/wgbh/nova/orleans/how.html>

Activity 5 Why?

In this activity, students should research and report on the reasons that the greater New Orleans area is prone to flooding. Their report should cover general aspects of the geomorphology of the area, the proximity of the city to both Lake Pontchartrain and the Mississippi River, human activity (how human actions have modified this area), and the effects of coastal erosion. A brief overview of delta formation by the Mississippi River over the past 15 years would be important to include. As an alternative or additional component, students may conduct their research on the coastal area flooded by Hurricane Rita and compare the causes in each case. See **Washing Away** video clip (8:38-11:29) for footage of flooding in the Vermilion Parish area from Hurricane Rita.

Selected Resources:

America's WETLAND site. Go to the In Education section and scroll down to video: *New Orleans: The Natural History*

<http://www.americaswetland.com/>

Congressional Research Service of the Library of Congress: Protecting New Orleans: From Hurricane Barriers to Floodwalls

<http://fpc.state.gov/documents/organization/58444.pdf>

PBS, NOVA Science Now: January 2005 Story

<http://www.pbs.org/wgbh/nova/sciencenow/3204/02.html>

WETMAPP – the Martello Castle site shows maps and photos taken since 1956

<http://www.wetmapp.org/>

Activity 6
Last Island Hurricane Party

This activity focuses on the hurricane that destroyed Last Island in 1856. Located off the coast of Terrebonne Parish, legend has it that a group of wealthy vacationers on the island decided to weather an approaching storm and have a hurricane party. Whether or not this was true, the island and over 200 people were lost. All that remains is what is now known as Isles Dernieres, which is under siege today.

Students should report on the effects of the 1856 hurricane on Last Island and the damage done to the remaining islands (Isles Dernieres) during the 2005 hurricane season. Include in the presentation a graphic that shows the path of the 1856 hurricane along with that of Hurricanes Katrina and Rita.

An interesting eye-witness account by a survivor of that storm can be found in the resources listed below.

Selected Resources:

NOLA site; TIMES PICAYUNE article from the *Washing Away* series June 2005
<http://www.nola.com/hurricane/index.ssf?washingaway/lastislandswaltz.html>

LSU site: Photo comparison from September 2004 and September 2005. At this page click on Comparison Photo of Louisiana Barrier Islands
http://www.clear.lsu.edu/clear/web-content/Pages_content/28Hurricanes.html

Wikipedia Article
http://en.wikipedia.org/wiki/1856_Last_Island_Hurricane

Eyewitness Account of the Storm
<http://Lafourche.com/Presbyterian/lastisland.htm>

EXTENSIONS:

1. A concluding activity would be to challenge students to discuss whether or not they would move to (or back to) metro New Orleans (or to Cameron Parish\Vermillion Parish)

The following ***Washing Away*** video clips would be appropriate here.

- video clip (2:30-5:53)
- video clip (8:38-11:29)
- video clip (26:55-29:23)
- video clip (29:25-31:50)

2. Students can look at the various plans and strategies for protecting New Orleans from future flood damage and present their findings at a mock public hearing.

EVALUATION:

It is suggested that students and teacher design a rubric for assessing the project- based presentations. Teachers can find assistance in creating rubrics at various sites on the web such as Rubistar.

<http://rubistar.4teachers.org/index.php>



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