



Washing Away

LOSING LOUISIANA



IT'S A WONDERFUL LIFE

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

OVERVIEW:

While the economic loss from Katrina and Rita is still being assessed, preliminary estimates to Louisiana agriculture alone puts the cost near \$1,590,734,900.00.

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-A5 GLE 16 Use evidence to make inferences and predict trends (SI-M-A5)
 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)

Grade 7

- LS-M-C4 GLE 29 Predict the impact changes in a species' population will have on an ecosystem (LS-M-C4)

High School

- SI-H-A3 GLE 6 Use technology when appropriate to enhance laboratory investigations and presentations of findings (SI-H-A3)
 SE-H-A3 GLE 4 Determine the effects of limiting factors on a population and describe the concept of carrying capacity (SE-H-A3)
 SE-H-A5 GLE 6 Analyze the consequences of changes in selected divisions of the biosphere (e.g., ozone depletion, global warming, acid rain) (SE-H-A5) (SE-H-A7)

Louisiana Grade Level Expectations (Social Studies)

Grade 8

- G-1A-M2 GLE 2 Locate major landforms and geographic features, places, and bodies of water/ waterways on a map of Louisiana (G-1A-M2)
 G-1B-M1 GLE 5 Describe and analyze the distinguishing physical and/or human characteristics of Louisiana regions (G-1B-M1)
 E-1A-M1 GLE 42 Analyze situations involving scarcity (limited resources) at the individual, group, and societal levels to determine the need for choices or what is gained/lost by decision (E-1A-M1)
 H-1D-M4 GLE 78 Describe and analyze the impact of Louisiana's geographic features on historic events, settlement patterns, economic development, etc (H-1D-M4)



www.lpb.org/washingaway



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Educational outreach made possible by the generous support of *America's Wetland: Campaign to Save Coastal Louisiana*.

H-1D-M4 GLE 79 Explain how Louisiana's natural resources have shaped its history (e.g., petroleum) (H-1D-M4)

High School

G-1A-H1GLE 3 Analyze or interpret a map to locate geographic information, using a variety of map elements (e.g., compass rose, symbols, distance scales, time zones, latitude, longitude) (G-1A-H1)

G-1D-H2 GLE 39 Describe challenges to human systems and activities posed by the physical environment or the impact of natural processes and disasters on human systems (e.g., infrastructure) (G-1D-H2)

E-1B-H1 GLE 28 Identify factors that cause changes in supply or demand for a product (e.g., complements, substitutes) (E-1B-H1)

E-1B-H2 GLE 30 Identify factors affecting production/allocation of goods/services and characterize their effects (E-1B-H2)

SUGGESTED PROCEDURES:

1. Class discussion should begin with student inquiry as to what were the commodities that were most impacted by the two hurricanes. Elicit from students any personal knowledge of individuals in the agricultural business (farmers, fishermen, tree farmers, etc.) who were impacted. While most students would not have a sense of the value of this loss, dollar amounts could be solicited from the students and recorded as a reference point.
2. View **Washing Away** video clip (11:30-14:14).
3. Provide students with a topographical map of the coastal area of Louisiana that includes Delcambre. Locate this town on the map.¹ This is where Mr. Doré's seafood restaurant was located. Notice the distance from Delcambre to the coastal waters. Describe the distinguishing features of this area to a partner while looking at the map.
4. Using seafood as the main commodity, ask students to think of all the individuals and businesses, that will be economically impacted if Mr. Doré cannot continue to harvest shrimp and leaves the area. These would include his supplier of fuel, ice, nets, maintenance, etc. and who, in some cases, have also been impacted by the storm. Students should make a list of all of these "value added" costs, realizing that Mr. Doré is only one of many fishermen whose livelihood is threatened. It is important for students to understand that when one person or occupation is impacted, many others are, as well. They are all connected!
5. View **Washing Away** video clip (8:38-11:29) Locate Erath on a topographic map of Louisiana. This is where the Domingue family farms are located. Discuss any distinguishing features of this area as compared to the area in which the students reside.
6. Using the commodity losses on the Domingues farm (cattle, sugarcane, crawfish and rice) students should once again identify other groups of individuals who will be affected by the loss of these commodities.
7. Using the data table from the **Louisiana Cooperative Extension Service** publication *Estimates of Cumulative Economic Impact: Hurricanes Katrina & Rita*, discuss with students the statistics presented in the document.
http://www.lsuagcenter.com/en/money_business/farm_business/budgets/Estimates+of+Cumulative+Economic+Impact+From+Hurricanes+Katrina+and+Rita+to+Louisiana+Ag.htm

8. Student groups should select a subset of a commodity (timber or Christmas trees within the category of Forestry) and research their chosen topic to find:
 - a. in what parish(es) of the state is the commodity usually found?
(this link gives a parish by parish summary of major commodities
http://www.lsuagcenter.com/en/money_business/farm_business/agsummary/)
 - b. how was the commodity affected by the storms? (for example, the habitat for alligators was disrupted; thus, there will be fewer nesting grounds for the coming year, and therefore less breeding)
 - c. what are the short term and long term effects?
 - d. what were the value added costs that are associated with this commodity?
 - e. what were the limiting factors for each commodity?
 - f. what challenges are posed to human systems and activities?

Students should analyze the consequences that the change in the given commodity will bring about in the particular ecosystem involved, and when applicable, should explain how the commodity has helped shape the history of Louisiana.

All of this information should be compiled into a short class presentation, using technology, graphic organizers, and other means of communication.

Students should use Louisiana state agencies such as the **Louisiana Cooperative Extension Service** (<http://www.lsuagcenter.com>), the **Louisiana Wildlife & Fisheries** (<http://www.wlf.state.la.us/>), and the **Louisiana Department of Agriculture & Forestry** (<http://www.ldaf.state.la.us/>) as references or resources. Special interest groups, such as the **Louisiana Farm Bureau Federation** (<http://www.lfbf.org/>), which has the successful program **AG in the Classroom** (<http://www.lfbf.org/aitc/index.html>), can also provide current information.

9. Student groups should merge so that all those within a given commodity heading compile a report to present to the class.

Farming is very expensive. Individuals not familiar with this livelihood often find it hard to comprehend the costs associated with farming. For example, a tractor may cost up to \$200,000, a cane cutter \$300,000, and tires for that cutter may cost the farmer between \$500-\$1000. If time allows, you may wish to have someone from the **LSU Cooperative Extension Service** (<http://www.lsuagcenter.com>) speak to the class on the costs associated with farming and/or the economic impact of Hurricanes Katrina and Rita on agriculture.

RESOURCES:

1. Students who have used maps previously may want to download maps from various websites such as USGS (<http://www.usgs.gov/>), the National Wetlands Research Center (<http://www.nwrc.usgs.gov/>), the Regional Application Center (<http://www.rac.louisiana.edu/>), and WETMAPP (<http://www.wetmapp.org/>). A regular state map is also acceptable.

LSU Ag Center: This report gives a parish by parish account of the commodities value.
http://www.lsuagcenter.com/en/money_business/farm_business/agsummary/

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>