

# **Wetland Habitat and Wildlife**

## **Wetland Week Lesson Plans**

**As our wetlands daily disappear, we become more aware of the importance of educating young people about the importance of the wetlands. This document contains a mini-thematic unit that is ready to use, educational, and fun. To begin your week you may want to consider reading this selection aloud to the students:**

In the past, wetlands were mostly considered to be wastelands. As the United States was settled and people moved west, swamps and marshes were obstructions along the way. Many were drained and replaced by farmland, railroads and road construction. The United States total of natural wetlands is estimated at 127,000,000 acres. About 45,000,000 acres (35%) of this was drained by 1950. In recent decades many people have come to recognize the values of wetlands.

No longer the forgotten stepchild of our environment, some scientists call them nature's kidneys because of the natural cleansing functions they perform. They provide rich habitat for a diverse range of plant and animal species, protection from flooding and erosion, and are also important to the nutrient cycle. The values provided by wetlands can be classified into four groups: hydrologic values, water quality values, habitat values and direct use values. (Continued on

[http://legacy.ncsu.edu/classes/nr400001/gradpage/Wetland\\_Mitigation\\_Home/wetland\\_importance.html](http://legacy.ncsu.edu/classes/nr400001/gradpage/Wetland_Mitigation_Home/wetland_importance.html))

**These paragraphs will help to establish a baseline of knowledge for the students and grab the students' interests on the subject of wetlands. At the end of this document is a section of additional materials that a teacher can use if needed. Good luck and enjoy your wetlands education week.**

# Wetland Habitat and Wildlife Lesson Plan

## Day 1

Ashley Feske

### I. Demographics

- a. Grade: 5
- b. Topic: Importance of Wetland Habitats
- c. ~30 students
- d. Approximate time for lesson: ~50 minutes

### II. Objectives:

- a. Content Objectives:

At the end of the lesson, TSWBAT name several animals found in a wetland habitat.

At the end of the lesson, TSWBAT discuss animal dependence on wetland habitats.

TSWBAT view online videos of animals in their habitats.

- b. Language Objectives:

During the lesson, TSWBAT work cooperatively in groups to complete a feature analysis chart of the vocabulary words (animals found in wetland habitats).

### III. Standards and GLE's:

LS-M-C3- Identify and describe ecosystems of local importance

LS-M-C3- Compare common traits of organisms within major ecosystems

### IV. Anticipatory Set/Motivation (8 minutes):

TTW ask the students if they have ever been to a wetland. TTW then ask what kind of animals the students might see/find in the wetlands. Answers will be recorded on the smart board.

- a. Statement of objective: Today we will learn about what animals are found in the wetland habitat. We will also learn about animal dependence on the wetlands.

### V. Procedures/Activities (32 minutes):

1. TTW will visit <http://www.whitanderson.com/wetlands/vid.htm> and show the following videos: White-tailed Deer (30 seconds),

- turtles (60 seconds), egret (60 seconds), fish (60 seconds), and red-winged blackbird (60 seconds).
2. TTW discuss examples of other animals found in the wetlands (5 minutes). A slide show of animals found in the wetlands can be accessed on the Missouri Botanical Garden web page: <http://www.mbgnet.net/fresh/wetlands/index.htm>
  3. TTW place the students into groups and pass out one blank feature analysis chart to each group (see attachment at the end of the lesson plan).
  4. Using a pencil, TSW have 20 minutes to make predictions of what animals use the wetlands for breeding, feeding, and shelter. TSW also predict which animals are totally dependent on their wetland habitat and which are only partly dependant.
  5. After the 20 minutes, TTW fill out the feature analysis chart on the smart board with the students, displaying the correct answers (8 minutes).

**VI. Closure (7 minutes):**

- a. TTW take time for questions (~ 7 minutes)
- b. TTW remind the students to review this chart for their exam.

**VII. Assessment/Evaluation (10 minutes):**

An exit survey card will be given for the students to write down one fact that they knew about the wetlands before class began, something that they want to know about the wetlands, and one fact that they learned today.

**VIII. Materials**

- a. Student:
  - i. Pencil
  - ii. Paper
- b. Teacher:
  - i. Smartboard
  - ii. Computer
  - iii. Internet
  - iv. Projector
  - v. Feature analysis handout (provided)
  - vi. Note cards

**IX. References/Resources:**

Hickman, P. (1993) *Wetlands*. Toronto: Kids Can Press Ltd.

Louisiana Department of Education (2007). *Grade Level Expectations: Science, Grade 5*. Retrieved on November 4, 2008 from Louisiana Department of Education Web Site:  
<http://www.doe.state.la.us/lde/saa/1842.html#5th>

Trempealeau Wetlands (2004). *Watch Animal Videos*. Retrieved on November 4, 2008 from the Whit Anderson Website:  
<http://www.whitanderson.com/wetlands/vid.htm>

**X. Accommodations/Individual Differences:**

- a. Academic needs
  - i. Visual learners
    - 1. TSW view videos of animal life in the wetland habitat.
    - 2. TTW complete the feature analysis chart on the Smartboard.
  - ii. Auditory learners
    - 1. TTW ask students questions about animals that live in the wetlands and give answers orally.
    - 2. TSW work in groups to discuss animal habitat and fill out the feature analysis chart.
    - 3. TTW present answers to the feature analysis chart both visually and verbally.
    - 4. TSW observe videos of animal life in the wetland habitat.
- b. Enrichment: Those students who finish early will be given books to read that pertain to the wetlands. The teacher provides these books.
- c. Special needs will be met for exceptional students throughout the lesson.

**XI. Integration of Technology**

- a. Planning
  - i. TTW use the Internet to research facts about wildlife in the wetlands.
- b. Implementation:
  - i. TTW use the Smartboard during lesson.
  - ii. TTW use the Internet and computer to show online videos.

Name \_\_\_\_\_

Date: \_\_\_\_\_

Please **use a pencil** and place a star in the appropriate square on the chart. The first row has done for you.

### Wetland Habitats

| Animal               | Breeding | Feeding | Shelter | Totally<br>Dependent | Partly<br>Dependent |
|----------------------|----------|---------|---------|----------------------|---------------------|
| Mink                 | *        | *       | *       |                      | *                   |
| Otter                |          |         |         |                      |                     |
| Painted<br>Turtle    |          |         |         |                      |                     |
| Muskrat              |          |         |         |                      |                     |
| Beaver               |          |         |         |                      |                     |
| Mallard<br>Duck      |          |         |         |                      |                     |
| Bald Eagle           |          |         |         |                      |                     |
| White-tailed<br>deer |          |         |         |                      |                     |
| Great Blue<br>Heron  |          |         |         |                      |                     |
| Green Frog           |          |         |         |                      |                     |

### Answer Key

| Animal            | Breeding | Feeding | Shelter | Totally Dependent | Partly Dependent |
|-------------------|----------|---------|---------|-------------------|------------------|
| Mink              | *        | *       | *       |                   | *                |
| Otter             |          | *       |         |                   | *                |
| Painted Turtle    | *        | *       | *       | *                 |                  |
| Muskrat           | *        | *       | *       | *                 |                  |
| Beaver            | *        | *       | *       |                   |                  |
| Mallard Duck      | *        | *       | *       | *                 |                  |
| Bald Eagle        | *        | *       | *       |                   | *                |
| White-tailed deer |          | *       | *       |                   | *                |
| Great Blue Heron  | *        | *       | *       |                   | *                |
| Green Frog        | *        | *       | *       | *                 |                  |

# Wetland Habitat and Wildlife Lesson Plan

## Day 2: Field Trip

Ashley Feske

### I. Demographics

- a. Grade: 5
- b. Topic: Animals Found in Our Local Wetlands.
- c. ~30 students
- d. Approximate time for lesson: 2 hours (plus 1 hour driving time)
- e. Field Trip Location 1: Turtle Cove Environmental Research Station, Manchac, LA.
- f. Field Trip Location 2: Southeastern Louisiana University North Oak Park

### II. Objectives:

- a. Content Objectives:

TSWBAT observe plants and wildlife in a real wetland habitat.

TSWBAT compare and contrast animal habitats.

- b. Language Objectives:

TSWBAT use pictures and knowledge gained on the field trips to write an essay on the differences between a wetland habitat and a park (natural) habitat.

### III. Standards and GLE's:

**LS-M-C3-** Identify and describe ecosystems of local importance

**LS-M-C3-** Compare common traits of organisms within major ecosystems

**SE-H-A1-** Describe the abiotic and biotic factors that distinguish Earth's major ecological systems

**LS-M-D1-** Describe adaptations of plants and animals that enable them to thrive in local and other natural environments

### IV. Anticipatory Set/Motivation (8 minutes):

After arriving at each location TTW tell the students background information about the Turtle Cove Environmental Research Station and North Oak Park. While visiting Turtle Cove, scientist Dr. Robert Moreau will give a 20-minute introduction to the facility and its wildlife.

- a. Statement of objective: Today we are going to observe animal and plant life from two different habitats. Our main objective today is to see what makes a wetland habitat different from a park (natural) habitat. As we

explore Turtle Cove and North Oak Park use your notebook and cameras to record what you see.

**V. Procedures/Activities (30 minutes per location):**

1. TTW group the students into six groups of five (one chaperone will be assigned per group). Each group will be provided with one disposable camera.
2. In each group there will be one photographer, one note person (jots down notes in a scientific notebook), three observers, and one navigator.
3. TTW float from group to group answering questions and interjecting facts.

**VI. Closure (10 minutes):**

- a. TTW ask the students to share with the class one interesting fact per group that they either observed or discovered while at each site.
- b. TTW answer any questions the students may have.

**VII. Assessment/Evaluation (45 minutes):**

The students will take their notes and as a group write a one-page essay comparing and contrasting the two habitats that they observed. Once completed, the group will choose one student to read the essay aloud to the class. Pictures taken by the students will be printed by the teacher and attached to the essays. The essays will be bound and published as a class anthology.

**VIII. Materials**

- a. Student:
  - i. Pencil
  - ii. Paper
  - iii. Scientific Notebook
- b. Teacher:
  - i. Permission slips for all students
  - ii. Six disposable cameras
  - iii. Transportation
  - iv. Chaperones



## **IX. References/Resources:**

*Lessons on the Lake: An Educator's Guide to the Lake Pontchartrain Basin* Version 1.0 CD ROM. (2007). Metairie, LA: The Lake Pontchartrain Basin Foundation.

Louisiana Department of Education (2007). *Grade Level Expectations: Science, Grade 5*. Retrieved on November 4, 2008 from Louisiana Department of Education Web Site:  
<http://www.doe.state.la.us/ldc/saa/1842.html#5th>

Southeastern Louisiana University (2008). *Turtle Cove Environmental Research Station*. Retrieved on November 4, 2008 from Southeastern Louisiana University's Web Site:  
[http://www.selu.edu/acad\\_research/programs/turtle\\_cove/](http://www.selu.edu/acad_research/programs/turtle_cove/).

US Fish and Wildlife Service Web Site. *Albemarle- Pamlico Environmental Education Activity Kit*. Retrieved on November 13, 2008 from  
[www.fws.gov/nc-es/edout/albemoreswmp.html](http://www.fws.gov/nc-es/edout/albemoreswmp.html).

## **X. Accommodations/Individual Differences:**

- a. Academic needs
  - i. Visual learners
    1. TSW view plants and animals in their natural habitats.
    2. TSW take pictures of plants and animals.
  - ii. Auditory learners
    1. TSW hear a twenty-minute seminar given by Dr. Robert Moreau about the wetlands.
- b. Enrichment: Those students who finish early will be given a wetlands word search worksheet (see attached and visit [www.fws.gov/nc-es/edout/albemoreswmp.html](http://www.fws.gov/nc-es/edout/albemoreswmp.html)).
- c. Special needs will be met for exceptional students throughout the lesson.

## **XI. Integration of Technology**

- a. Planning
  - i. TTW use the Internet to research facts about Turtle Cove and North Oak Park.
- b. Implementation:
  - i. TSW use cameras to take pictures.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Wetland Inhabitant Word Search

Search for the types of animals found in wetlands. See if you can find:

|        |          |           |         |          |          |         |       |            |
|--------|----------|-----------|---------|----------|----------|---------|-------|------------|
| beaver | flounder | wood duck | clam    | crayfish | mosquito | raccoon | heron | bear       |
| frog   | egret    | dragonfly | sunfish | turtle   | mink     | shrimp  | crab  | salamander |

A O O T X B Z T D A Q L X A T L M  
T H C U W O O D D U C K X T S X C  
B E L R A C C S T C R A B T F O R  
C R T T S M I N K F G C G F B S A  
S O N L T S S M O S Q U I T O U Y  
B N T E O Q R S T A O C U X N N F  
E L R T S O P X P P A B E A R F I  
A C C X T S H R I M P L L N A I S  
V D R A G O N F L Y N T S S C S H  
E T V V U Q Q R L U I V I L C H O  
R E G R E T X O T V N Z A T O X O  
V X S G N A Z G X T V M V S O A O  
X S A L A M A N D E R N Q X N N L  
N L T F L O U N D E R L I T T O L



# Wetland Habitat and Wildlife Lesson Plan

## Day 3

Ashley Feske

### I. Demographics

- a. Grade: 5
- b. Subject: Uses of the Wetlands
- c. ~30 students
- d. Approximate time for lesson: 70 minutes
- e. Subject: Science and ELA

### II. Objectives:

- a. Content Objectives:

TSWBAT discuss the importance of the wetlands to both humans and animals.

TSWBAT discuss the components of a wetland.

TSW use critical thinking to compare and contrast their manmade wetlands with those of other students. TSWBAT see areas that need improvement between the models in the classroom.

- b. Language Objectives:

TSWBAT use information gathered from their experiment to answer questions in paragraph form.

### III. Standards and GLE's:

**LS-M-C3-** Identify and describe ecosystems of local importance

**ESS-M-A7-** Identify the processes that prevent or cause erosion

**ESS-M-B3-** Estimate the range of time over which natural events occur (e.g., lightning in seconds, mountain formation over millions of years)

**LS-M-C2-** Compare food chains and food webs

**ESS-M-A7-** Demonstrate the results of constructive and destructive forces using models or illustrations

### IV. Anticipatory Set/Motivation (10 minutes):

- a. TTW provide PowerPoint minilesson about the biological makeup of the land in a wetland habitat. This information will include: soil makeup, sediment, trees and plant life. TTW discuss how sediment from the Mississippi River travels through 32 states and is deposited into the wetlands. He/she will then explain to the students that this deposition

builds up the wetlands. Next, TTW discuss the different ways that the wetlands help humans and animals (protection from storms, food and shelter for animals...) TTW also discuss how the wetlands fit into the food chain.

- b. Statement of objective: Today we perform an experiment to see how healthy wetlands benefit us as humans living in Louisiana.

**V. Procedures/Activities (30 minutes):**

1. TTW divide the class into six groups of five.
2. Materials will be distributed to each group.
3. TTW ask the students to prop their wooden boards at roughly a forty-five degree angle as demonstrated.
4. The board should be propped up so that a marble could roll down the board and into the pan.
5. TTW ask the students to dump their jar of water down the wooden plank and measure how long it takes to drain into the pan.
6. After the measurements have been taken, TTW ask one student from each group to empty their pans into the sink and refill their group jar with water to the 1-quart marker.
7. TTW next ask the students to use the materials presented to create what they believe would make the best wetland. TTW explain that the best wetland would be the wetland that minimizes the effects of flooding.
8. TTW plan five minutes for brainstorming before allowing the students to begin.
9. TSW write their ideas and draw pictures in their science notebook.
10. TTW remind the students to record the time that it takes for all of the water poured to flow down their wooden plank into the pan.

**VI. Closure (10 minutes):**

- a. TTW ask the students to share with the class the success or problems with their makeshift wetland.
- b. TSW present their findings for what makes a high quality wetland.
- c. TTW review the benefits of wetlands to the animals that live there: (Remember that the wetlands not only serve as a barrier from flooding and hurricanes, but they also provide a home and food for many different types of animals.)

**VII. Assessment/Evaluation (20 minutes):**

TSW be asked to take out their English journals and answer the questions written on the board (see attachment for questions). TTW remind the students that they will be graded on completeness as well as grammar and punctuation.

**VIII. Materials**

a. Student:

- i. Pencil
- ii. Paper
- iii. English journal
- iv. Science notebook

b. Teacher:

- i. Six quart jars (with measurement markings)
- ii. Pebbles
- iii. Sand
- iv. Dirt
- v. Crushed leaves
- vi. Grass
- vii. 6 flat pieces of wood (12 inches long, 1 inch thick, 6 inches across)
- viii. Water
- ix. 6 shallow aluminum pans
- x. Something to prop up the models so they will tilt

**IX. References/Resources:**

Louisiana Department of Education (2007). *Grade Level Expectations: Science, Grade 5*. Retrieved on November 4, 2008 from Louisiana Department of Education Web Site:  
<http://www.doe.state.la.us/lde/saa/1842.html#5th>

Slattery, B. (1991). *WOW! The Wonders of Wetlands: an educator's guide*. Baltimore, Maryland: Environmental Concern Inc.

**X. Accommodations/Individual Differences:**

a. Academic needs

- i. Visual learners
  1. TSW observe the differences between an efficient wetland and a faulty one.
- ii. Auditory learners
  1. TSW hear the teacher's minilesson about the wetlands.

iii. Kinesthetic learners

1. TSW use hands on techniques to build their own wetland.
- b. Enrichment: Those students who finish early will be given books to read that pertain to the wetlands. The teacher provides these books.
- c. Special needs will be met for exceptional students throughout the lesson.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Please answer the following questions about our wetlands:**

1. List the materials that you used to build your wetlands. What were your reasons for choosing these materials?

2. Was there any part of your experiment that you would change now that you see your results?

3. What do you think that you could do to improve the quality of the wetlands?

4. If you could be an animal in the wetland, what animal would you choose? Why?



# Wetland Habitat and Wildlife Lesson Plan

## Day 4

Ashley Feske

### I. Demographics

- a. Grade: 5
- b. Title: Wetland Functions
- c. ~30 students
- d. Approximate time for lesson: 60 minutes
- e. Subject: ELA/Science

### II. Objectives:

- a. Content Objectives:

At the end of the lesson, TSWBAT name the functions of a wetland.

- b. Language Objectives:

At the end of the lesson, TSW review the definition of a metaphor and TSWBAT provide examples.

### III. Standards and GLE's:

**SE-M-A3-** Identify and give examples of pollutants found in water, air, and soil

**SE-M-A4-** Describe the consequences of several types of human activities on local ecosystems (e.g., polluting streams, regulating hunting, introducing nonnative species)

**SE-M-A2-** Determine the ability of an ecosystem to support a population (carrying capacity) by identifying the resources needed by that population

### IV. Anticipatory Set/Motivation (20 minutes):

TTW read chapter 3 (pgs. 20-30) from Wow! The Wonders of Wetlands to the class. The class will be given a photocopy of the reading. Chapter three is about the four main functions of wetlands: physical/hydrological, chemical, biological, and socioeconomic. As the teacher reads, she will pause to discuss and take questions.

- a. Statement of objective: Today we will review the definition of a metaphor and play a game using metaphors.

### V. Procedures/Activities (20 minutes):

1. After reading chapter 3, TTW take any questions that the students may have.

2. Next, TTW pass out materials and ask the students to take out their writing journals.
3. TTW present the students with different objects (sponge, pillow, egg beater, etc. See materials section.) and ask the students to try to make a metaphor with these objects.
4. TTW model for the students by saying, “A wetland is a pillow because it is a resting place for migratory birds.”

**VI. Closure (10 minutes):**

- a. After the students have made up their own metaphors, TSW pick one to share with the class.
- b. TTW close by restating the four main functions of wetlands: physical/hydrological, chemical, biological, and socioeconomic.
- c. TTW ask the students if they can think of any other functions that the wetlands perform.

**VII. Assessment/Evaluation (10 minutes):**

An exit survey card will be given for the students to write down one example of each function of the wetlands: physical/hydrological, chemical, biological, and socioeconomic. For example a student may write, “An example of a biological function of the wetlands is that the wetlands forms a habitat for many different species of animals.”

**VIII. Materials**

- a. Student:
  - i. Pencil
  - ii. Paper
  - iii. Writing journal
- b. Teacher:
  - i. Sponge
  - ii. Pillow
  - iii. Egg beater
  - iv. Strainer
  - v. Coffee filter
  - vi. Antacid
  - vii. Cereal or rice
  - viii. Soap
  - ix. Picture of a hotel or resort

**IX. References/Resources:**

Louisiana Department of Education (2007). *Grade Level Expectations: Science, Grade 5*. Retrieved on November 4, 2008 from Louisiana Department of Education Web Site:  
<http://www.doe.state.la.us/lde/saa/1842.html#5th>

Slattery, B. (1995). *WOW! The Wonders of Wetlands: an educator's guide*. Baltimore, Maryland: Environmental Concern Inc.

US Fish and Wildlife Service Web Site. *Albemarle- Pamlico Environmental Education Activity Kit*. Retrieved on November 13, 2008 from  
[www.fws.gov/nc-es/edout/albemoreswmp.html](http://www.fws.gov/nc-es/edout/albemoreswmp.html).

**X. Accommodations/Individual Differences:**

a. Academic needs

i. Visual learners

1. TSW be able to see different items and compare them to a wetland habitat.
2. TSW be able to follow along as the teacher reads from *Wow! The Wonders of Wetlands*.

ii. Auditory learners

1. TSWBAT hear the teacher read chapter 3 (pgs. 20-30) from *Wow! The Wonders of Wetlands* to the class.
2. TSWBAT listen as other students give their example metaphors.

iii. Kinesthetic learners:

1. TSWBAT touch objects that perform similar actions to that of a wetland.

b. Enrichment: Those students who finish early will complete a wetlands crossword sheet (see attached). Answers to the crossword can be located in the material on the US Fish and Wildlife Service Web Site:  
[www.fws.gov/nc-es/edout/albemoreswmp.html](http://www.fws.gov/nc-es/edout/albemoreswmp.html).

c. Special needs will be met for exceptional students throughout the lesson.

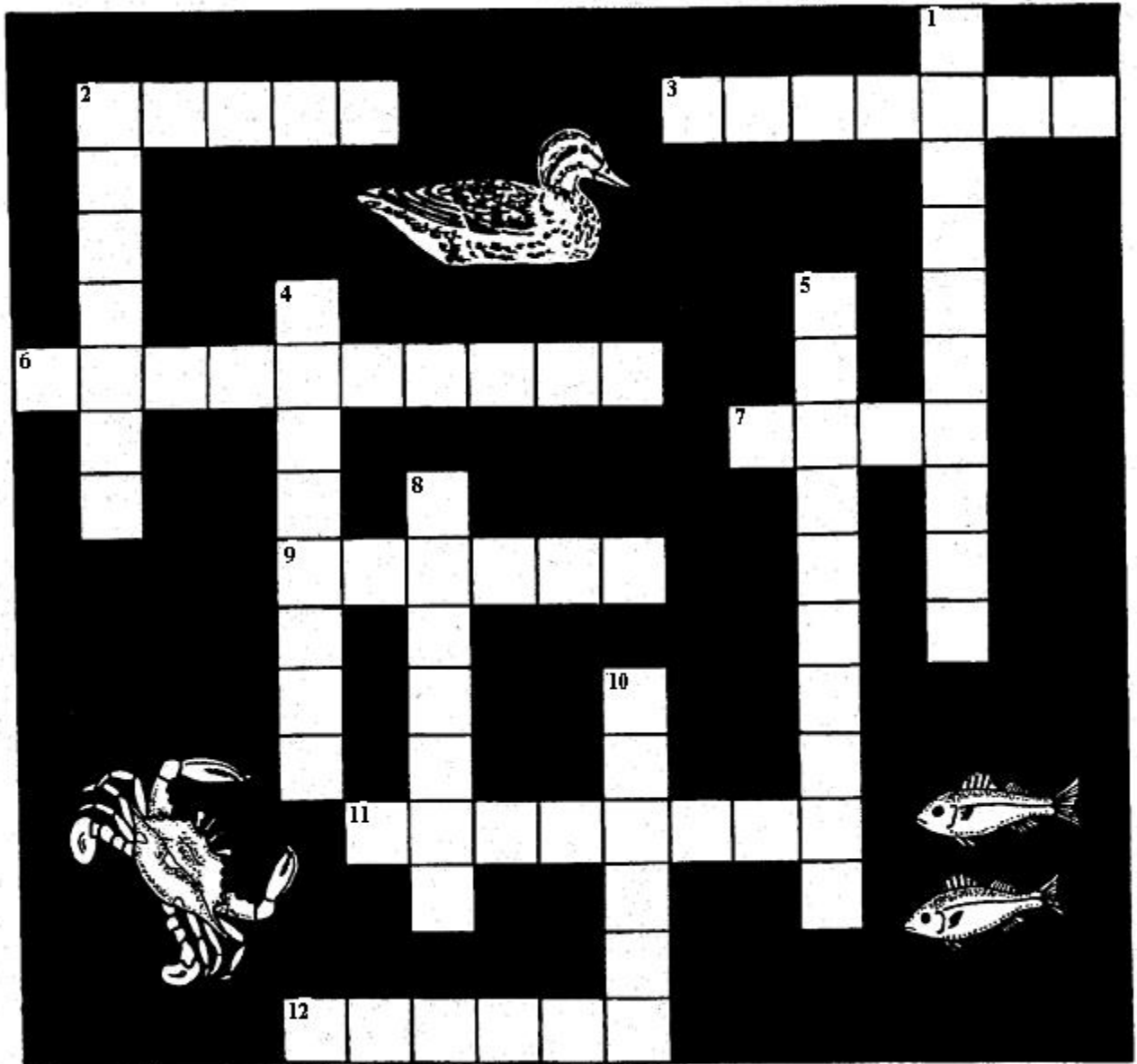
Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Wetland's Crossword

Test your wetlands knowledge by completing this wetlands crossword puzzle.

| Across  | Down   |
|---|--|
| 2. _____ are wetlands that are flooded with water for most or all of the year, and are vegetated with trees and shrubs.             | 1. A use of wetlands by people.  |
| 3. A use of wetlands for food and cover by young fish and other animals.  | 2. Commercial fishermen depend on wetlands to supply us with _____ to eat.                                     |
| 6. A wetland type found along streams and rivers. They are flooded for part of the year and dry for part of the year.               | 4. Bottomland wetlands are often _____ .   |
| 7. The type of soil often found in pocosin wetlands. It is made up of decayed plants.   | 5. A _____ marsh does not contain salty water.   |
| 9. Peat soil feels _____.   | 8. A wetland type with evergreen trees and shrubs. This word means "swamp on a hill" to the Algonquin Indians. |
| 11. Many kinds of _____ use wetlands for sources of food, resting sites, and cover.   | 10. Wetlands have the ability to remove, or _____ out, pollutants from water.                                  |
| 12. Wetlands along the coast may lessen the damage caused by storms, and protect land from erosion since they function as a _____ . |  |



# Wetland Habitat and Wildlife Lesson Plan

## Day 5

Ashley Feske

### I. Demographics

- a. Grade: 5
- b. Title: Improving the Condition of the Wetlands
- c. ~30 students
- d. Approximate time for lesson: 75 minutes
- e. Subject: ELA

### II. Objectives:

- a. Content Objectives:

At the end of the lesson, TSWBAT name several ways that humans can conserve their resources.

- b. Language Objectives:

At the end of the lesson, TSWBAT voice their opinion on issues discussed during the lesson.

TSWBAT brainstorm and hypothesize different methods of conservation.

TSWBAT compare the efficiency of many programs whose goal is to save the wetlands.

TSWBAT relate the importance of the wetlands to personal needs.

TSWBAT write a formal letter to the town mayor or local government official about their concerns for the wetlands.

### III. Standards and GLE's:

**SE-M-A4-** Describe the consequences of several types of human activities on local ecosystems (e.g., polluting streams, regulating hunting, introducing nonnative species)

**SE-M-A2-** Determine the ability of an ecosystem to support a population (carrying capacity) by identifying the resources needed by that population

### IV. Anticipatory Set/Motivation (10 minutes):

TTW project the America Wetland Foundation web site onto the smart board for the students to observe. On the main page of the web site there is a counter clock. This clock displays how many square yards of wetland have been lost since the first of the year. After displaying the clock, TTW tell the students

that there are 100 yards in a football field. TTW then ask the students to calculate how many football fields of wetlands have eroded thus far this year.

- a. Statement of objective: Today we will discuss the disappearance of the wetlands. We will talk about causes of erosion and what we can do to help save the wetlands.

**V. Procedures/Activities (50 minutes):**

**a. Review of material from Day 4: 10 minutes**

1. TTW help the students to recall the material learned from the previous lesson by playing a game.
2. TTW pair the students into groups of two.
3. TSW chose who gets to be student A and who gets to be student B.
4. Student A will quiz Student B by choosing one of the following topics: Physical/Hydrological functions, Chemical Function, Biological Functions, and Socioeconomic Functions/Benefits.
5. After the topic is chosen, Student B will have to name one function/benefit that can be found under the category chosen.
6. Points will be tallied.
7. After all topics have been covered, the students will swap. (Student B will ask the questions and Student A will answer)
8. Prizes will be awarded to the group with the most points.

**b. Destruction and Preservation of Our Wetlands: 40 minutes**

1. With the functions of the wetlands fresh in their minds, TTW pass out the Wetland Destruction Notes Sheet (See attachment adapted using information from <http://marine.usgs.gov/fact-sheets/LAwetlands/lawetlands.html>).
2. TSW fill in the blanks on this sheet as the teacher lectures. These notes will help them study for their exam.
3. TTW next open up the floor for discussion about what we can do to save the wetlands.
4. TSW write a letter the town mayor or local government official about their concerns for the wetlands

**VI. Closure (5 minutes):**

- a. After the students have written their letters, TTW give the students a handout with the general ways that they can conserve in their homes (ex: turn off the lights, take short showers, recycle)
- b. TTW take time to answer questions.

**VII. Assessment/Evaluation (10 minutes):**

TTW ask the class to take out a sheet of paper. TSW answer one of the following questions:

1. What are three things that you can do to help save the wetlands?
2. What can you do to help others become more aware of the wetlands?

**VIII. Materials**

- a. Student:
  - i. Pencil
  - ii. Paper
- b. Teacher:
  - i. Internet
  - ii. Computer
  - iii. Smartboard

**IX. References/Resources:**

America's Wetland Foundation (2008). Retrieved on November 6, 2008 from America's Wetland Foundation Web Site:

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

Louisiana Department of Education (2007). *Grade Level Expectations: Science, Grade 5*. Retrieved on November 4, 2008 from Louisiana Department of Education Web Site:

<http://www.doe.state.la.us/lde/saa/1842.html#5th>

Slattery, B. (1995). *WOW! The Wonders of Wetlands: an educator's guide*. Baltimore, Maryland: Environmental Concern Inc.

**X. Accommodations/Individual Differences:**

- a. Academic needs
  - i. Visual learners
    1. TSWBAT write a formal letter to the town mayor or local government official about their concerns for the wetlands.
    2. TSWBAT fill in the blanks on the Wetland Destruction Notes Sheet to help them study for their exam.
  - ii. Auditory learners
    1. TSWBAT discuss their views on wetland conservation with other students.
- b. Enrichment: Those students who finish early will be given a wetlands crossword puzzle.





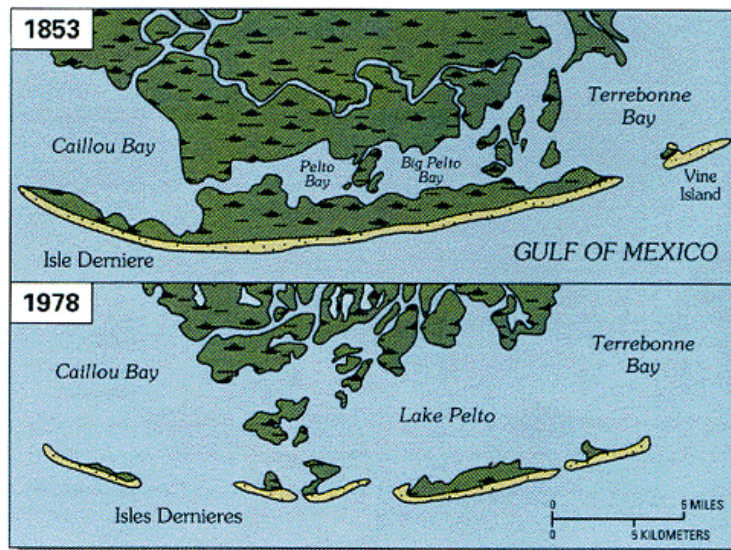
Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Wetland Destruction Notes

Louisiana's 3 million acres of wetlands are lost at the rate about \_\_\_\_ square kilometers annually, but reducing these losses is proving to be \_\_\_\_\_ and \_\_\_\_\_.

Approximately \_\_\_\_\_ the Nation's original wetland habitats have been lost over the past 200 years. In part, this has been a result of natural evolutionary processes, but human \_\_\_\_\_, such as \_\_\_\_\_ wetlands for canals or \_\_\_\_\_ and \_\_\_\_\_ for agriculture, \_\_\_\_\_, or development, share a large part of the responsibility for marsh habitat alteration and destruction. Louisiana's wetlands today represent about \_\_\_\_ percent of the wetlands of the continental \_\_\_\_\_, but about \_\_\_\_ percent of the losses. The State's wetlands extend as much as 130 kilometers inland and along the coast for about 300 kilometers. Not all the wetlands are receding; in fact some wetlands are \_\_\_\_\_, and others are \_\_\_\_\_. But, at the present net rate of wetlands loss, L \_\_\_\_\_ will have lost this crucial habitat in about 200 years. Considerable \_\_\_\_\_ has been expended, and will continue to be expended, on understanding the processes that control wetlands \_\_\_\_\_.



*Over the past 150 years, the Isles Dernieres have undergone very rapid erosion and land loss due primarily to natural processes of relative sea-level rise, storms, and sand loss by coastal currents.*

Name: \_\_\_\_\_

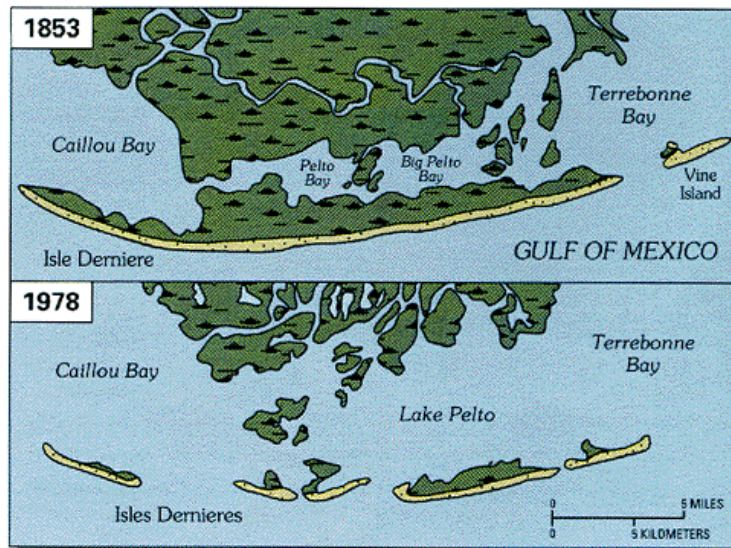
Date: \_\_\_\_\_

### Wetland Destruction Notes

#### KEY

Louisiana's 3 million acres of wetlands are lost at the rate about 75 square kilometers annually, but reducing these losses is proving to be difficult and costly.

Approximately half the Nation's original wetland habitats have been lost over the past 200 years. In part, this has been a result of natural evolutionary processes, but human activities, such as dredging wetlands for canals or draining and filling for agriculture, grazing, or development, share a large part of the responsibility for marsh habitat alteration and destruction. Louisiana's wetlands today represent about 40 percent of the wetlands of the continental United States, but about 80 percent of the losses. The State's wetlands extend as much as 130 kilometers inland and along the coast for about 300 kilometers. Not all the wetlands are receding; in fact some wetlands are stable, and others are growing. But, at the present net rate of wetlands loss, Louisiana will have lost this crucial habitat in about 200 years. Considerable effort has been expended, and will continue to be expended, on understanding the processes that control wetlands evolution.



*Over the past 150 years, the Isles Dernieres have undergone very rapid erosion and land loss due primarily to natural processes of relative sea-level rise, storms, and sand loss by coastal currents.*



# Additional Wetland Resources For Teachers

## Books:

Cone, Molly. *The In - Between World of Wetlands*. San Francisco: Sierra Club Books for Children. 1996. ISBN: 0871564807.

Hickman, P. (1993) *Wetlands*. Toronto: Kids Can Press Ltd.

Hirschi, R., Erwin Bauer, Peggy Bauer. *Save Our Wetlands*. (Audubon One Earth Books) Bantam Dell Pub Group; 1994. ASIN: 0385311974. (4th - 8th grade).

Kalman, B. (2002). *What are Wetlands?* - Crabtree Publishing Company

Pitre, V. (1991). *Grandma was a Sailmaker: Tales of the Cajun Wetlands*. Blue Heron Press.

Salas, L. (2006). *Wetlands: Soggy Habitat. Picture Window Books*.

Slattery, B. (1991). *WOW! The Wonders of Wetlands: an educator's guide*. Baltimore, Maryland: Environmental Concern Inc.

Slattery, B. (1995). *WOW! The Wonders of Wetlands: an educator's guide*. Baltimore, Maryland: Environmental Concern Inc.

Stille, D. (1999). *Wetlands (True Books-Ecosystems)*. Canada: Children's Press.

## Videos:

The Barataria-Terrebonne National Estuary Program (1997). Haunted Water Fragile Lands What Tales To Tell [VHS Tape] (*Video Guide also available*).

Trempealeau Wetlands (2004). *Watch Animal Videos*. Retrieved on November 4, 2008 from the Whit Anderson Website:

<http://www.whitanderson.com/wetlands/vid.htm>

*Fabulous Wetlands*. Staring "Bill Nye, the Science Guy" (all ages; seven minutes). Washington State Department of Ecology, Wetlands Section.

*Conserving America: Wetlands.* National Wildlife Federation, 1400 16<sup>th</sup> Street NW, Washington D.C. 20036.

## CD ROM:

*Lessons on the Lake: An Educator's Guide to the Lake Pontchartrain Basin* Version 1.0 CD ROM. (2007). Metairie, LA: The Lake Pontchartrain Basin Foundation.

## Websites:

National Wetlands Inventory: [http://www.fws.gov/nwi/Pubs\\_Reports/publi.htm](http://www.fws.gov/nwi/Pubs_Reports/publi.htm)  
This is a very good resource for publications about the wetlands.

Southeastern Louisiana University (2008). *Turtle Cove Environmental Research Station*. Retrieved on November 4, 2008 from Southeastern Louisiana University's Web Site: [http://www.selu.edu/acad\\_research/programs/turtle\\_cove/](http://www.selu.edu/acad_research/programs/turtle_cove/).

**America's Wetland Foundation Web Site:** A support site with information on wetland conservation. <http://www.americaswetland.com/>

**The Acorn Naturalist:** resources for teachers use to teach about the wetlands  
<http://www.acornnaturalists.com/store/Freshwater-Ecosystem-Studies-C65.aspx>

**Wetlands Glossary:**  
<http://www.idahoptv.org/dialogue4kids/season6/wetlands/glossary.cfm>

## Coloring Books:

*My Wetlands Coloring Book.* U.S. Environmental Protection Agency, Region VI, 1445 Ross Avenue, Dallas, TX 75202.

*Save Our Species: Endangered Species Coloring Book.* Endangered Species Protection Program, US-EPA, 401 M Street SW, Washington D.C. 20460.

*Wetlands Coloring Book*, art by Jack Elrod of "Mark Trail". U.S. Fish and Wildlife Service, Government Printing Office, Washington, D.C. 20402.

## Posters:

*Welcome to the Wetlands*, coloring and information poster. U.S. Environmental Protection Agency, Region V, 230 South Dearborn Street, Chicago, IL 60604.