

Winged Treasures: Birds of the Bay

Purpose:

To introduce students to birds commonly found in Tampa Bay and give them the opportunity to research and discover the various issues surrounding bird habitat, behavior, physical characteristics and current ideas on their conservation.

Objectives:

- Students will be able to describe various Tampa Bay birds and their relationship to several aquatic ecosystems common to the area.
- Students will develop a better understanding of the threats to Tampa Bay wildlife and what can be done to preserve both the land and the animals who share it.

Correlation to Sunshine State Standards:

SC.G.2.4.5 Understands that the amount of life any environment can support is limited and that human activities can change the flow of energy and reduce the fertility of the Earth.

SC.G.2.4.4 Describe the different aquatic ecosystems and their organisms emphasizing Florida's wetlands, estuaries, coral reefs and Everglades.

Correlation to Curriculum:

Chapter 4 section 4.1 of the IS 1 curriculum
Chapters 34, 35, and 36 Biology Honor's curriculum.

Background Information:

Two long and narrow spoil islands located near the mouth of the Alafia River form the Audubon Alafia Bank Sanctuary. These islands are south of the main Alafia Ship Channel. They are owned by the Mosaic Company and leased to Audubon of Florida for management as a bird sanctuary.

Each spring, between 6,000 and 16,000 pairs of waterbirds nest in clusters or "colonies" on the islands. Sixteen species nest here, making this bird colony one of the most diverse colonies in the United States. The Florida Fish and Wildlife Commission lists the Alafia Bank Bird Sanctuary as the most important nesting colony in the state. This is because of its population size, its species diversity, and the longevity of the colony's use by nesting birds.

All of these birds nest on the islands: brown pelican; double-crested cormorants; all the herons and egrets that nest in North America; white and glossy Ibis; roseate spoonbills; and American oystercatchers. Most nesting occurs from April to August.

The birds that nest on the Alafia Bank include some of Florida’s rarest birds, many listed by the Florida Fish and Wildlife Conservation Commission as “species of special concern,” due to low population numbers in Florida. These include: brown pelican, snowy egret, little blue heron, tricolored heron, reddish egret, white ibis, roseate spoonbill, and American oystercatcher. With current development of the Tampa Bay region, it is extremely important to protect these valuable islands for future generations. - (From Ann Paul, National Audubon Society)

Activity 1 - Video Study

Purpose - To help students gather information from the video about birds and habitats.

Materials - *Tampa Bay: Living Legacy* DVD, student-made “Video Note Sheet,” PowerPoint illustration

Duration - 20 minutes

Teacher Directions -Ask your students to draw a “Video Notes Sheet” like the one below and on the PowerPoint slide to use to take notes during the video Use the PowerPoint slide to provide directions. They should fill this in while watching chapter 5 of the video. After they watch the video, have them compare their notes with two neighbors.

Main Idea	Detailed Notes
Why is the Audubon Alafia Bank Sanctuary important to the birds of Tampa Bay?	What and where is the sanctuary? What type of birds are found there? Why is the sanctuary valuable to the birds? Why do these birds nest on islands?
What is the most effective way to preserve habitat for wildlife around the bay?	What is land aquisition? Why is it important?

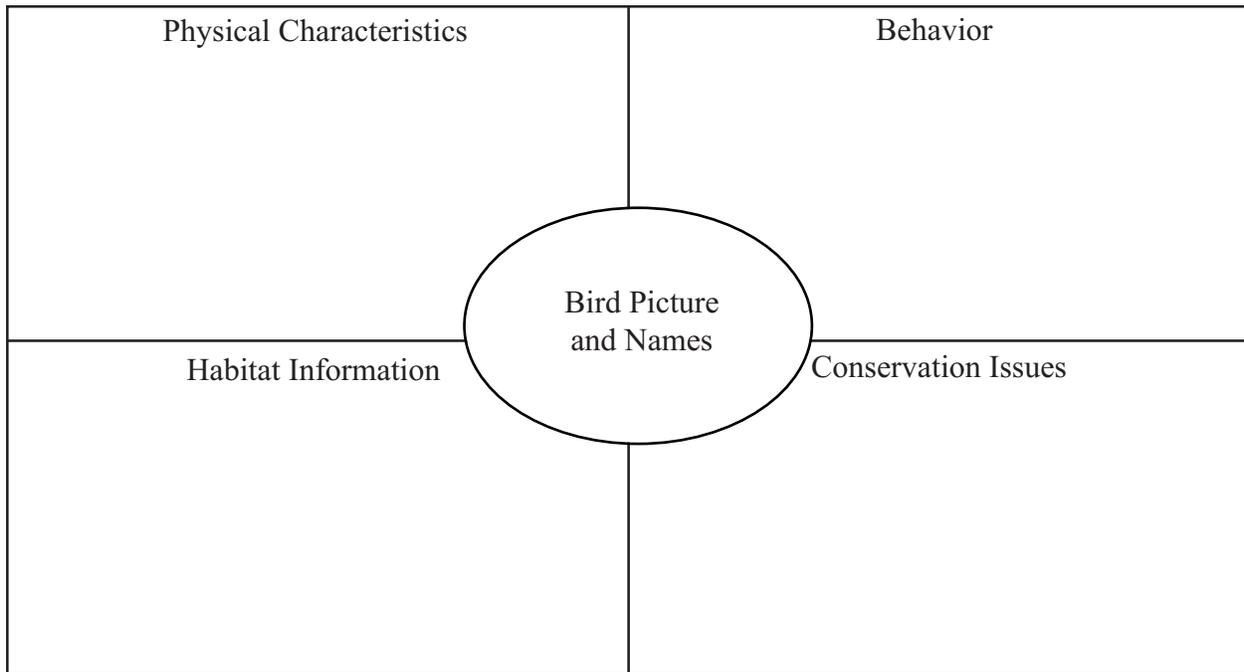
Activity 2 - Bird Modeling

Purpose - To help students learn information about a bird dependent on the Tampa Bay Estuary and organize information about the bird in a meaningful way.

Duration - 30 minutes

Materials - Student-made Frayer Models, PowerPoint illustration

Teacher Directions -Ask your students to draw a Frayer Model like the one below describing a bird from the video that is dependent on the Tampa Bay Estuary. Use the PowerPoint slide to provide directions. After completing the Frayer Model, project the questions. They should answer the questions on the back of the page.



Assessment Component:

- Completed Issue Note Sheet
- Completed Individual Frayer Model and questions

Relevant Vocabulary:

- **ecosystem** - community of living things plus the non-living features of the environment that supports them.

- **estuary** - area where fresh water from rivers merges with salty ocean water
- **habitat** - an organism's specific environment with characteristic abiotic and biotic factors
- **population** - group of individuals of the same species living in a particular area at the same time
- **rookery** - an area where birds nest together in a group

Assessment Rubric:

1. Center with bird picture and common name/scientific name (10 points)
2. Box labeled Physical Characteristics and five bulleted entries (5 points).
3. Box labeled Behavior and five bulleted entries (5 points).
4. Box labeled Habitat Information and five bulleted entries (5 points).
5. Box labeled Conservation Issues and five bulleted entries (5 points).
6. Questions re-written on the back of project and thoroughly answered (10 points).

Additional Resources:

Biology Textbook, Prentice Hall

Audubon of Florida

www.audubonofflorida.org

Bird Pictures

www.dearcroft.com/wade.html

Birds of the Bay - Teacher Notes

Main Idea	Detailed Notes
<p>Why is the Audubon Alafia Bank Sanctuary important to the birds of Tampa Bay?</p>	<p>What and where is the sanctuary? <i>The sanctuary is located on two spoil islands on the south side of the mouth of the Alafia River.</i></p> <p>What type of birds are found there? <i>Rosete Spoonbills, Ibis, Pelicans, Cormorants, Reddish Egrets, Oyster Catchers.</i></p> <p>How do the birds use the islands? <i>The islands provide nesting and feeding habitat for 10-18,000 pairs of breeding each spring.</i></p>
<p>What is the most effective way to preserve habitat for wildlife around the Bay?</p>	<p>What is a land aquisition program? <i>Buying land with public money that might be developed.</i></p> <p>Who does it? <i>Government agencies including the Southwest Florida Water Management District.</i></p> <p>Why is it important? <i>It preserves land for wildlife and is easier and cheaper than restoration.</i></p>

Framer Model - Student Directions

In the center circle, find/draw a picture of your bird and then write the common as well as scientific name beneath it. After conducting research on your particular bird via internet, library, magazines etc, use scientific information to fill in the four boxes surrounding your picture; include Physical Characteristics, Behavior, Habitat Information, and Conservation Issues. After completing the Framer Model answer the following questions on the back side of your project.

1. What bird did you choose?
2. Why did you choose this particular bird?
3. What is the current Tampa Bay population of your bird?
4. Where else in Florida does your bird live?
5. Where in Tampa Bay does your bird live?
6. What does your bird eat?
7. Is your bird an endangered or threatened species?
8. What conservation issues have affected your bird (both negative and positive)?
9. How does your bird help the Florida ecosystem?
10. What can you do to preserve Florida's birds without harming them?