

Let's Go Birding!

Everglades National Park Quarter

Grades Four through Six



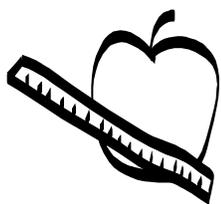
OBJECTIVES

Students will identify and categorize bird species. Students will practice observation, note-taking and map skills.



MATERIALS

- 1 overhead projector or equivalent technology (optional)
- 1 overhead transparency (or photocopy) of each of the following:
 - “Everglades National Park Quarter” page
 - “Everglades Bird Species Trading Card”
 - “My Birding Journal” worksheet
 - “My Birding Journal Rubric”
 - “School Bird Map Rubric”
- 1 class map of the United States
- Copies of the following:
 - “Everglades National Park Quarter” page
 - “Everglades Bird Species Trading Card”
 - “3-2-1 Exit Slip”
 - “My Birding Journal” worksheet
 - “My Birding Journal Rubric”
 - “School Bird Map Rubric”
- Age-appropriate Web sites that give information about birds at Everglades National Park, such as:
 - www.nps.gov/ever/naturescience/birdspecieslist.htm
 - www.nps.gov/ever/naturescience/birds.htm
 - www.nps.gov/ever/planyourvisit/upload/Bird%20Checklist%202006.pdf
- Age-appropriate Web sites that give information about local birds, such as:
 - www.allaboutbirds.org
 - birds.audubon.org/birdid
- 1 copy of an age-appropriate text that gives basic information on birding, such as:
 - *Birds, Nest, and Eggs* by Mel Boring
 - *Look Up!: Bird-Watching in Your Own Backyard* by Annette LeBlanc Cate
 - *Backyard Birding for Kids* by Fran Lee



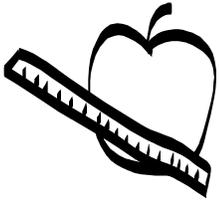
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- Copies of bird field guides, particularly those that detail birds local to your area
- Computers or tablet devices with Internet access
- Large paper or poster boards
- Markers
- Pencils
- Binoculars (optional)
- Digital cameras (optional)



PREPARATIONS

- Make an overhead transparency or equivalent of each of the following:
 - “Everglades National Park Quarter” page
 - “Everglades Bird Species Trading Card”
 - “My Birding Journal” worksheet
 - “My Birding Journal Rubric”
 - “School Bird Map Rubric”
- Make copies of each of the following:
 - “Everglades National Park Quarter” page (1 per student)
 - “Everglades Bird Species Trading Card” (1 per student)
 - “3-2-1 Exit Slip” (1/2 sheet per student)
 - “My Birding Journal” worksheet (1 per student plus additional copies for students who need more)
 - “My Birding Journal Rubric” (1 per student)
 - “School Bird Map Rubric” (1 per student)
- Arrange to use the school computer lab for part of Session 1.
- Bookmark Web sites that give information about bird species at Everglades National Park and local birds (see examples under “Materials”).
- Locate texts that give information about birding (see examples under “Materials”).
- Locate copies of bird field guides, particularly those that detail birds local to your area.
- Make charts on chart paper labeled:
 - “Characteristics of Birds”
 - “Birds of Everglades National Park” (3 columns labeled “Land Birds,” “Birds of Prey” and “Wading Birds”)
 - “Birds on our School Grounds”



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GROUPINGS

- Whole group
- Small groups
- Pairs
- Individual work



CLASS TIME

Four 45- to 60-minute sessions, total 3 to 4 hours



CONNECTIONS

- Science
- Social Studies
- Art



NATIONAL STANDARDS

Next Generation Science Standards

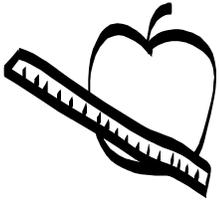
- Life Science Disciplinary Core Concepts:
 - LS1.A: Structure and Function.
 - LS2.A: Interdependent Relationships in Ecosystems.
 - LS2.C: Ecosystem Dynamics, Functioning, and Resilience
- Earth and Space Science Disciplinary Core Concepts:
 - ESS2.D: Weather and Climate
 - ESS3.C: Human Impacts on Earth Systems

National Social Studies Standards

- 3. People, Culture, and Environment
- 8. Science, Technology, and Society

National Art Standards

- 1. Understanding and applying media, techniques, and processes
- 3. Choosing and evaluating a range of subject matter, symbols, and ideas
- 6. Making connections between visual arts and other disciplines



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TERMS AND CONCEPTS

- Quarter
- Obverse (front)
- Reverse (back)
- Characteristics
- Species
- Diversity
- Birding
- Birds of prey
- Interbreeding
- Bird songs
- Identification characteristics
- Flight pattern
- Habitat



BACKGROUND KNOWLEDGE

Students should have a basic knowledge of:

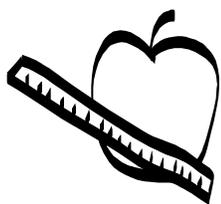
- Animals
- Birds
- Map skills
- Observation and note-taking skills



STEPS

Session 1

1. Display and examine the “Everglades National Park Quarter” page. Locate this site on a class map. Note its position in relation to your school’s location.
2. As background information, explain to the students that the United States Mint began to issue the quarters in the America the Beautiful Quarters® Program in 2010. By the time the program ends in 2021, there will be a total of 56 quarter designs. Each design will focus on a different national site—one from each state, territory and the District of Columbia.
3. Tell the students that the front of a coin is called the “obverse” and the back is called the “reverse.” Ask the students to share their ideas about the image on the quarter’s reverse. If necessary, explain that the image is inspired by the bird population in the Everglades; the artist has featured an Anhinga with outstretched wings on a willow tree with a Roseate Spoonbill visible in the mid-ground. Both birds are found throughout Everglades National Park.
4. Ask the students to share what they know about birds. Have the students in small groups brainstorm ideas about what three qualities distinguish birds from other animals. Ask each group to share their ideas. Display the chart entitled “Characteristics of Birds.”
5. Inform the students that the three defining characteristics of birds are that all birds have feathers, lay hard-shelled eggs and have hollow bones. Compare this list to



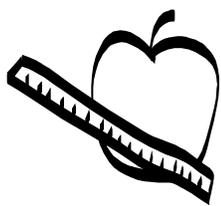
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the students' ideas recorded on the class chart. Explain how other characteristics that students may have noted, such as the ability to fly, build nests, have wings and sing, are not exclusive to birds. Consider other species who also exhibit these characteristics. For instance, bats and insects have wings and can fly; snakes, turtles, bees and squirrels build nests; and dolphins, whales and frogs can sing.

6. Inform the students that more than 350 different species of birds live in Everglades National Park. The Everglades National Park quarter depicts two of these bird species: the Anhinga and the Roseate Spoonbill. Review the definition of a species (a biological classification for a group of organisms capable of interbreeding).
7. Using computers or tablet devices, show the students how to access suggested Web sites that provide information about species of birds that live in the park.
8. Randomly assign a species of birds to each pair of students. Suggested species include the Roseate Spoonbill, Great Egret, Wood Stork, White-crowned Pigeon, Smooth-billed Ani, Short-tailed Hawk, Turkey Vulture, Osprey, Snail Kite, Wild Turkey, Cape Sable Seaside Sparrow, Eastern Bluebird, Brown-headed Nuthatch, Anhinga and American White Pelican.
9. Distribute the "Everglades Bird Species Trading Card" to each pair of students. Review the directions together. Have the students complete the trading card.
10. Display the three-column chart entitled "Birds of Everglades National Park." Inform the students that, in Everglades National Park, bird species can generally be placed into the three categories listed. Ask one pair of students at a time to briefly share their trading card, describe the bird species they studied and record the bird's name in the appropriate column on the chart.
11. Lead a class discussion about the diversity of bird species in Everglades National Park. Ask the students to note similarities and differences among bird species found in the park.
12. Distribute a "3-2-1 Exit Slip" to each student. Review the directions together. Have the students complete the slip and turn in at the end of the session.

Session 2

1. Review the charts and worksheets from the previous session.
2. Ask the students to share any previous experiences they have had with birding. Inform the students that birding is defined as the observation of birds in their natural habitats. Introduce the students to the selected text about birding. As a group, preview the text and illustrations to generate observations about what is occurring at different points in the text.
3. Read the selected text to the class and attend to any unfamiliar vocabulary relating to birding.

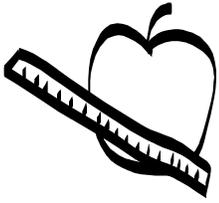


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4. Lead a discussion about the basics of birding. Ask the students to share ideas about identification characteristics, such as the bird's size and shape, behavior, habitat, flight pattern, color and song that would be helpful to note when birding.
5. Divide the class into small groups. Distribute a copy of a field guide featuring birds in your community to each group. Provide time for the students to review the field guide and familiarize themselves with some of the most common birds in the area. Alternatively, provide time for the students to access online field guides to learn more about birds in your area. If desired, have the students print and laminate a short field guide providing information about common local birds to be used during the birding walks.
6. Distribute a copy of the "My Birding Journal" worksheet to each student. Review the directions together. Ask the students to create their journals.
7. Inform the students that, over the next two sessions, they will be taking two twenty-minute birding walks around their school grounds during which they need to record observations in their birding journals. Stress the importance of recording the location of each bird, as this information will be used in Session 4. Discuss procedures and expected behavior outside of the classroom. Remind the students that they need to use quiet voices, stay in small groups or pairs and move slowly when observing birds.
8. If available, distribute tools such as binoculars and digital cameras to be used during birding walks.
9. Lead the students on a birding walk.
10. Upon returning to the classroom, ask the students to further consult local field guides to identify and learn more about the birds they observed on their birding walk.
11. Provide time for the students to complete their birding journals.
12. Display the "Birds on our School Grounds" chart. Record the names of different species that students observed and identified on their birding walk.

Session 3

1. Review the birding journals from the previous session. Review expectations for birding walks.
2. Lead the students on a second twenty-minute birding walk.
3. Upon returning to the classroom, ask the students to further consult local field guides to identify and learn more about the birds they observed on their birding walk. Provide time for the students to complete their birding journals.
4. Divide the class into small groups. Ask the groups to discuss their experience on the birding walks, including what they enjoyed about birding, what surprised them,



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what they found most challenging and how the birding walk observations might change depending on the season and weather.

5. Add to the “Birds on our School Grounds” chart the names of additional species that students observed and identified on their birding walk. Note how many different kinds of birds were seen by the class. Ask the students to compare the bird species they identified to the bird species that live in Everglades National Park, as discussed in Session 1 and displayed on the “Birds in Everglades National Park” chart. Lead the students to conclude that different habitats and environments support different kinds of bird species.

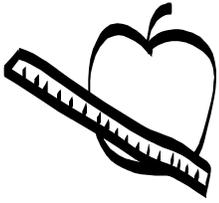
Session 4

1. Distribute the “My Birding Journal Rubric” and “School Bird Map Rubric,” one of each to each student, describing their purpose.
2. Review the “Birds on Our School Grounds” chart from previous sessions.
3. Divide the class into small groups. Provide each group with a large piece of paper or poster board and drawing supplies. Ask each group to create a map of the school and school grounds. The maps must include a title, map key and compass rose.
4. After mapping the school grounds, ask the students to add the birds they observed on their birding walks to the map. The students should consult their birding journals to recall the location of each bird. If the students did not observe enough birds to complete this activity, consider taking additional birding walks to collect more information or compiling all of the students’ observations onto a collective class map.
5. Have the groups share their maps with the class, noting how they created their maps and what they noticed about the location of birds on the school grounds. Ask the students to consider different ways that groups mapped the school grounds and bird locations and discuss why birds preferred some locations over others.
6. Give the students time to complete their section of the rubrics and collect their work.



ASSESSMENTS

- Use the rubrics to evaluate students’ birding journals and school bird maps.
- Take anecdotal notes about the students’ participation in class discussions and group activities.
- Evaluate the students’ worksheets for understanding of the lesson objectives.



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ENRICHMENTS/EXTENSIONS

- Have students create a game or class book utilizing their Everglades Bird Species Trading Cards.
- Have students write and illustrate their own field guide describing birds in their area.
- Have students create trading cards for bird species they identify on the school grounds. Laminate exemplar trading cards and staple them to stakes, then have students place them around the school grounds in appropriate spots according to their maps. Have parents or other classes use the student-created maps to find the signs and learn more about local birds.
- Have students bring in their pet birds to class for observation.
- Have students create and hang bird feeders to attract birds to the school grounds.
- Have students research plants that attract birds. Work with your school's groundskeeper to plant bird-friendly vegetation around the school.
- Have students learn more about a new hobby or career option by interviewing a local birder or ornithologist.
- Have students seek out opportunities to join local birding clubs. Have students learn to identify bird songs. Use online tools to hone students' ability to identify birds by their sounds.
- Have students research local birds from their journals that migrate to Everglades National Park.
- Have students continue to take birding walks through the year to observe birds in different seasons and weather conditions. Have students make and maintain a graph depicting the number and types of bird species they identify through the year.
- Have students research ways to make your community more bird friendly. Create posters or public service announcements to share tips with others in your school and community.



DIFFERENTIATED LEARNING OPTIONS

- Allow students to work with a partner or scribe.
- Allow students extended time to complete work.
- Allow students to complete their work using a computer or tablet device.



Everglades Birds Trading Card

Directions: With a partner, research your assigned bird species. Complete this trading card by filling in key facts and drawing a picture of your bird.

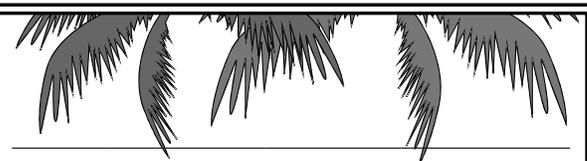
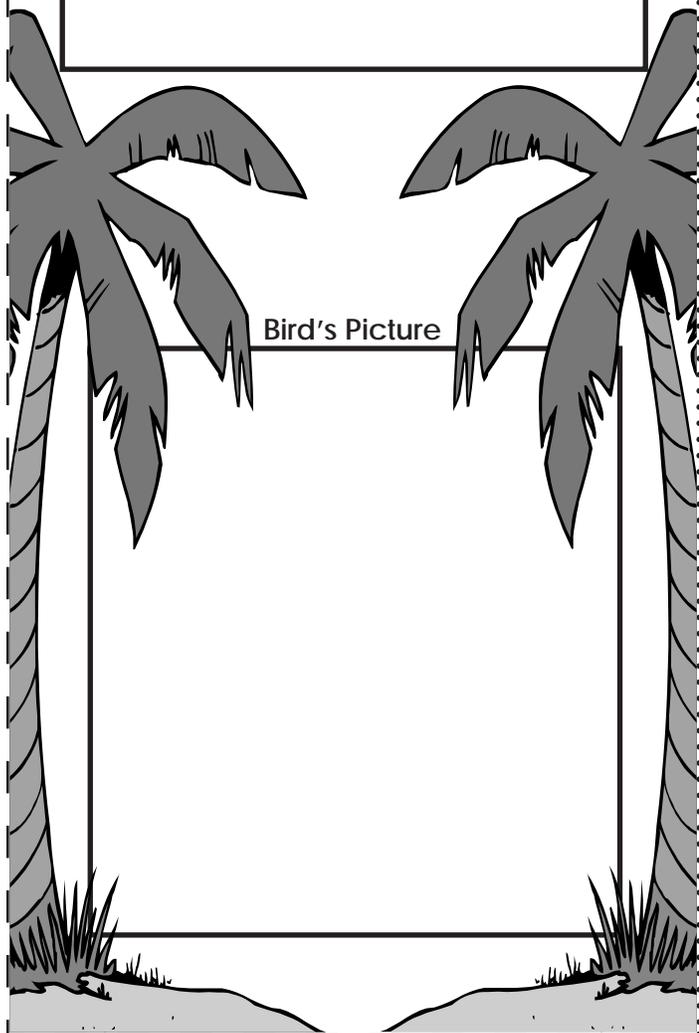


Bird's Name

Name _____

Bird's Name _____

Bird's Picture

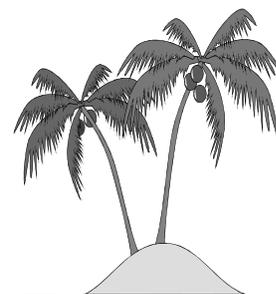


Location of habitat

Physical description

Behaviors

Other key facts





Name _____

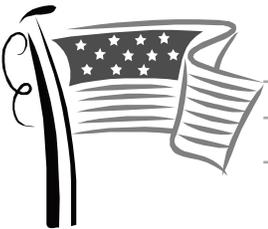
3-2-1 Exit Slip



Write **three** facts you learned today.

Write **two** things you learned that surprised you.

Write **one** question you still have.



Name _____

3-2-1 Exit Slip



Write **three** facts you learned today.

Write **two** things you learned that surprised you.

Write **one** question you still have.



Name _____

My Birding Journal

Directions: Cut out the boxes, then staple them together facing in the same direction. Bring your journal on your birding walks. Note your observations for each bird you see and sketch it on the blank page opposite.



My Birding Journal

Name _____



Bird Name _____

Location _____

Date _____

Weather _____

Behaviors _____

Field Markings _____

Observations _____

Bird Name _____

Location _____

Date _____

Weather _____

Behaviors _____

Field Markings _____

Observations _____

Bird Name _____

Location _____

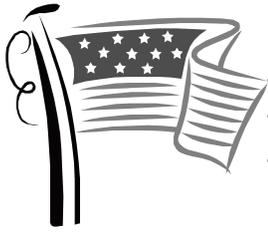
Date _____

Weather _____

Behaviors _____

Field Markings _____

Observations _____



Name _____

My Birding Journal

Rubric



Category	4	3	2	1	Self	Teacher
Journal	Neat with completed title page	Finished with completed title page	Mostly complete	Not complete		
Observations	Thoroughly recorded	Recorded	Somewhat recorded	Incomplete or missing		
Sketches	All present and detailed	All present and fairly detailed	Some present	Few present		
Time Usage on Walk	Stayed on task the entire time	Stayed on task most of the time	Stayed on task some of the time	Seldom stayed on task		
Discussion	Made thoughtful contributions	Contributed	Listened more than contributed	Did little to contribute or listen respectfully		

Totals

Student Reflection

Teacher Comments



Name _____

School Bird Map Rubric



Category	4	3	2	1	Self	Teacher
Map of School Grounds	Accurate and complete	Mostly accurate and complete	Somewhat accurate and complete	Lacks accuracy and completeness		
Bird Locations	Clearly marked	Marked	Some missing	Most missing		
Map Features	Clearly and completely included and labeled	Included and labeled	Some included and labeled	Few included or labeled		
Teamwork	Made quality contributions	Made many contributions	Made some contributions	Made few contributions		
Oral presentation	Clear, concise and practiced	Mostly clear and concise	Needed more practice	Hard to understand and follow		

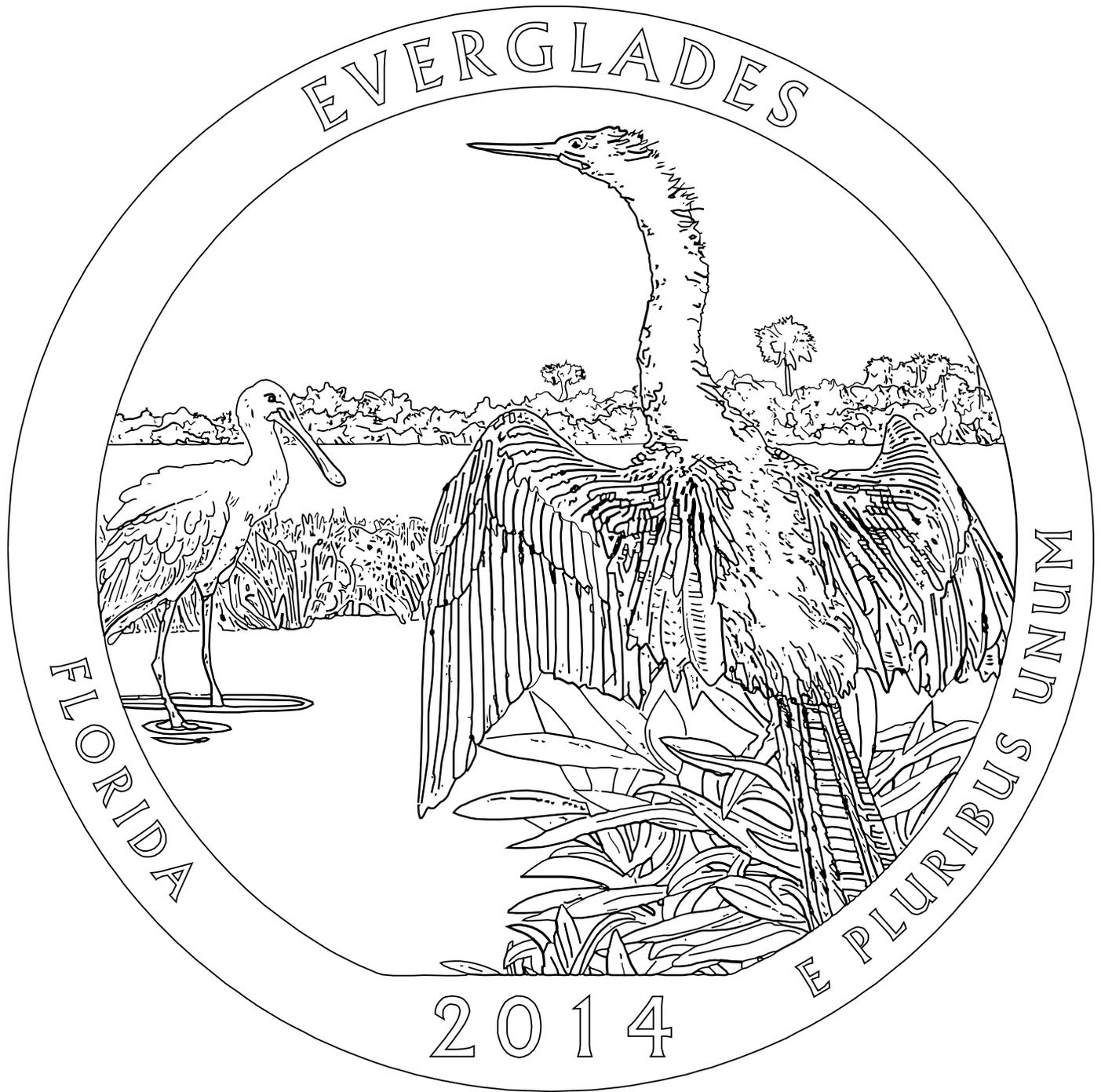
Totals

Student Reflection

Teacher Comments



Everglades National Park Quarter



The United States of America

