Shorebirds on the Web

Using the Internet Students learn about Shorebirds and Connect with Others

Grade Levels: all levels
Skills: communication, use of technology, and interpretation of data
Subjects: science, technology, social studies, and language arts

Concepts
■ There are still many unanswered questions about shorebirds and how we can conserve them best.
■ Scientists are still learning where shorebirds migrate and the flight paths they follow.
■ Some shorebirds concentrate in great numbers at their stopover sites, which provide large populations of birds for study.
■ Technology provides vital tools for research.

Vocabulary
■ Web site
■ Web page
■ modem
■ Internet
■ browser
■ navigate
■ listserve
■ E-mail
■ hypertext links

Overview
Students use the computer as a resource tool to learn about shorebirds, ecology, wetlands, other cultures, and ecosystems, while at the same time discovering computer technology that will help them throughout their school years and beyond.

Objectives
After this activity, students will be able to:
■ Locate a species of migrating shorebirds using the Shorebird Sister Schools Web site.
■ Describe the regions of the world one local shorebird species visits.
■ Communicate with students in other states, provinces and countries about shorebirds.
■ Use the Internet to communicate with biologists and other students.
■ Post questions on the Shorebird Sister Schools Website.

Materials
Access to a computer that satisfies the following requirements:
1. Monitor, keyboard, mouse, hardware computer, IBM clone or Apple/Macintosh with modem. Modem can be internal or external — the faster the modem the better. A 28.8 speed modem or faster is recommended.

2. Minimum computer speed of a "486" (preferably higher or the kids will lose interest because the pictures load too slowly).

3. Internet browser such as Netscape, Microsoft Internet Explorer, etc.

4. Dedicated phone line for your modem. If your school has a sophisticated phone system, you will need one phone line to the outside that is not part of that system. Perhaps you have a computer lab with that setup.

5. One copy of *Shorebirds on the Web Computer LINGO Crossword Puzzle* for each student.

Background
The Shorebird Sister School Program (SSSP) allows students, teachers, biologists, birders, parents to share shorebird observatoins as they migrate between their nesting and wintering grounds. By tracking the shorebird superhighway on the Internet, students will be engaged in learning about shorebird stopover locations, shorebird ecology, migration, ecology, and ecosystems while learning how to use computers.

By using the Internet to view the Shorebird Sister Schools Web, participants will have the opportunity to exchange ideas and observations with others throughout the Western Hemisphere. Participants can share field trip information and data, report sightings of banded shorebirds, and learn about current shorebird research. Participants can also ask questions about what other classes are doing in the Shorebird Sister Schools Program, or direct shorebird ecology questions to other educators and shorebird biologists.

Participant can also join the Shorebird Sister Schools E-mail Network. The Network will provide monthly e-mail updates on upcoming activities and events for participants, as well as new features on the Website.

For complete details on how to get involved in the Shorebird Sister Schools Program and how to use the Web site, go to SSSP and Connecting to Cultures.

Activity Preparation
1. Find and Become Familiar with the Shorebird Sister Schools Web site
   ■ To get to the Shorebird Sister Schools Program Web site, type in the Web address *http://sssp.fws.gov* wherever it asks you for a location or address. Then hit "return/enter" and the Shorebird Sister Schools Program Web site will appear on your screen.

   ■ To *navigate* around the various pages, you will need to click with your mouse on the colored, underlined text (*hypertext links*). This will take you to another page. There are two methods to return to the previous page — click with your mouse on the "back" button on your browser or click on the hypertext that says "Shorebird Sister Schools Main Page."

■ To quit the *browser* program, click on the quit button or click on File, Quit/Exit in the menu bar at the top of the page.

2. Join the Shorebird E-mail Network
   ■ To join the network, you will need an *E-mail* address. An E-mail address may look something like this: sandpiper@ western.flyway.net.

   ■ Depending on how your school is set up, you may already have an *Internet* connection or may need to sign up with an Internet provider. The computer support staff at your school can help you set up an E-mail address.

   ■ Once you have an E-mail address, join the E-mail Network by clicking on the "I want to join the Network" box on the Shorebird Sister Schools Registration page on the Website. You can also send your request directly to the Shorebird Sister Schools Program coordinator, *sssp@fws.gov.*

Procedure
1. Make sure your students are familiar with the computer terminology used throughout this activity. Use the Computer LINGO Crossword Puzzle for practice using and defining these terms. The answers are located on the last page of this activity.
2. Show your students how to log on to the SSSP Web site. Explore the different information categories together.
3. Ask the students to brainstorm how they could use the site individually and as a class. Write this list on the board. Refer to the suggestions provided in the box if the students did not come up with ideas. Go to the SSSP section of the guide for more Web ideas too.

4. Assign individual students, or student teams, to work on as many of their ideas as possible. Send home information about the Shorebird Sister Schools Program (including the Web address) so parents can log on too.

Field Trip Options:
1. During the Field Trip: Take a laptop computer to the field. At the end of the Field Trip, as a wrap-up activity, gather students in a circle around you with the open laptop. As a group, have the students write a posting for the SSSP Web site describing the Field Trip site, weather, birds send, activities done, etc. When you return to the office, simple copy and paste the posting on the SSSP Web site "Report Shorebird Sightings" link located from the "Tracking" link on the main page.

2. Post Field Trip: At the beginning of the next class period after the field trip, have students use their field journals to write a class posting for the SSSP Web site. Follow the directions above posting the observations on the Web site.

Ideas for Using the Shorebird Sister Schools (SSSP) Web Site

■ Get the students on the SSSP Website at least once a week to check on shorebird migration. Check more often during the spring migration. Those birds move fast!

■ After a field trip, "publish" the students field data observations on the Website.

■ Find pen pals through the Website. Share what you have learned about shorebirds with your pen pals.

■ Have the students write a question to ask research biologists and send them through the "Ask a Biologist" form on the Website.

■ Use a large wall map to track the shorebirds as migration routes are reported online. You may be able to use the poster included with this activity guide.

■ During the Spring plan time to allow students to follow along on the Tracking Projects featured on the SSSP Web site.

Additional Activity
Build Your Own Web Page
Older students might be interested in building a Web page that highlights their shorebird projects, field trips, and activities. Include species lists, research projects, maps of local habitat, and information about a local threat. Once your Web page is complete and on-line, send an E-mail message to the SSSP coordinator at *sssp@fws.gov* and the U.S. Fish and Wildlife Service will make a link to your site.

Answers to Web LINGO

Down
1. Web page
2. browser
3. Internet
4. Listserve

Across
1. Web site
2. E-mail
3. modem
4. navigate

Shorebirds on the Web
Computer LINGO

Directions: Match the correct computer term with the sentences below to complete the crossword puzzle.

Vocabulary
- Web site
- Web page
- modem
- Internet
- browser
- navigate
- listserve
- E-mail

Down
1. One page of a Website
2. Locates and displays Websites
3. A system that connects computers
5. Sends e-mail to everyone on a list

Across
1. A place on the Internet containing specific information and links
4. Electronic mail
6. Device that sends information by phone line
7. To find your way around the World Wide Web