

# Field Trip Activities

## Concepts

- Bridge the classroom and the local environment.
- Gain firsthand knowledge through an outdoor experience.
- Discover the ecosystem through multisensory experiences.
- View shorebirds, their habitats, and what they eat.
- Utilize the scientific method as a process for inquiry and discovery.
- Human behavior can affect wildlife and other people.

## Pre-field Trip Activities

### Using a Field Guide and Binoculars

*(lower elementary, upper elementary/middle school)*

In this pretend field trip, students work in pairs to practice using field guides and binoculars to identify a series of shorebird pictures.

### Map and Miles Study

*(lower elementary, upper elementary/middle school)*

Students learn about the upcoming field trip site by studying three different types of maps.

### Making Field Sampling Equipment

*(lower elementary, upper elementary/middle school)*

Students work in teams to create any of the four types of sampling equipment shown in the information sheets. They research how these tools are used by field biologists and then make presentations to the rest of the class.

## Birding Code of Ethics

*(upper elementary/middle school, upper middle school/high school)*

Students role-play to identify appropriate and inappropriate behavior when observing shorebirds, then develop a Birder's Code of Ethics to guide their behavior while on their field trip.

## Field Trip Activities

### Shorebird Field Study

*(all levels)*

Using a Shorebird Journal, students collect an assortment of shorebird data and site information while on a field trip.

### Cast a Track

*(all levels)*

Students look for shorebird tracks while on their field trip and then "collect" one that they find, using a plaster casting technique.

### Mud Creatures Study

*(all levels)*

Students use the sampling equipment made previously in a pre-trip activity to count the numbers and identify the types of invertebrates found in the sand and mud at their field trip site.

### Sampling Local Shorebird Populations

*(upper middle school/high school)*

Working individually, students design a shorebird observation study to determine how many shorebirds use a local stopover, breeding, or non-breeding site, then compare their results.

## Additional Activities Excellent for Field Trips:

	Pages
Migration Headache (Migration Activities Section)	286
The Incredible Journey (Migration Activities Section)	327
Behave Yourself (Nesting and Breeding Activities Section)	267
It's A Tough Life (Nesting and Breeding Activities Section)	279
Banded Birds (Research and Technology Activities Section)	346
Shorebirds On The Web (Research and Technology Activities Section)	366

## Post-field Trip Activities

### Sharing Circle

*(all levels)*

Students discuss the field trip and share what new information they discovered and what they especially enjoyed about their experience.

### Data Analysis

*(upper elementary/middle school, upper middle school/high school)*

Students analyze the invertebrate, shorebird, or environmental data they collected on their field trip, using a variety of mathematical calculations and observations.



# Using a Field Guide and Binoculars

*Adapted with permission from "Wetlands & Wildlife" and from Molly Brann, North Star Elementary. Nikiski, AK.*

**Grade Level:** lower elementary, upper elementary/middle school  
**Duration:** one 30 to 60-minute class period, depending on class size  
**Skills:** teambuilding, comparison, and observing  
**Subjects:** science

## Concepts

- Bridge the classroom and the local environment.
- Gain firsthand knowledge through an outdoor experience.
- Discover the ecosystem through multisensory experiences.
- View shorebirds, their habitats, and what they eat.

## Vocabulary

- field marks
- field guides
- binoculars

## Overview

In this pretend field trip, students work in pairs to practice using field guides and binoculars to identify a series of shorebird pictures.

## Objectives

After this activity, students will be able to:

- Explain to another person how bird field guides are organized.
- Use binoculars in the field to locate and focus in on shorebirds.
- Identify common shorebird field markings.
- Identify at least one local shorebird.

## Materials

- A collection of ten to twenty bird pictures, including shorebirds you are likely to see on your field trip (and are found in the identification guide you use)
- Cardboard or poster board for mounting pictures

- Bird field guides (suggestions in the Shorebird Resources for Educators in the Appendix)
- Binoculars (one pair for every two students, if possible)
- Large room or playing field outside
- One copy of the How to Use Binoculars handout for each team of older students

## Optional

- Mural paper
- Colored pencils, markers, crayons, or paint and brushes

## Introduction

Using binoculars and field guides for the first time can be a frustrating experience for those who do not learn and practice some basic techniques before going into the field. Once mastered, they are wonderful tools for science exploration and outdoor recreation.

Students are usually very enthusiastic about using field equipment, especially when there is enough for everyone. Since shorebirds walk about in open habitat, they are a relatively easy group of birds to observe.

If you do not have access to field guides and binoculars, contact a local environmental education office, such as the U.S. Fish and Wildlife Service to inquire about borrowing materials. To obtain a set of binoculars for your own classroom, try contacting a military base excess equipment program, writing a grant, or requesting a local service organization or sportsman's club to donate the equipment.

For more specific information about how to observe and identify shorebirds in the field, read the section **How to Identify Shorebird Species** found in the Shorebird Primer.

## Activity Preparation

1. Mount the color pictures of the shorebirds you will be identifying in the wild on cardboard or poster board. Number each picture on the front. The picture can be collected from old field guides, magazines, or calendars and, if possible, should show the natural habitat of the birds. Keep pictures hidden until you are ready to go on your practice field trip.
2. Prepare a list of birds that you might find on your field trip. Refer to the charts in Shorebird Migration Flyways or Shorebird Profiles for help.
3. Familiarize yourself with the How to Use Binoculars handout so you can instruct younger students directly. Make one copy of this handout for each team to read prior to the activity.

## Procedure

1. Provide students with the list of local shorebirds. Have them find and highlight the birds in the field guides, using Post-It notes or tabs. Read the information about each bird and discuss the field marks. Identify what makes each bird unique, distinguishing it from other birds.
2. Demonstrate how to use binoculars carefully and safely. Begin by putting the binocular strap around your neck. Demonstrate how to focus the various lenses, and how to adjust for eye width and focus differences. Explain the magnification of each type.
3. Place your shorebird pictures around a large room such as a gym--or outside on a school wall. If time permits, have your class create a paper habitat mural of the field trip site. Then place the



pictures where you would expect to find the shorebirds.

4. Identify a safe place for the students to stand to “observe” the shorebirds. On a field trip, this would be an area where they will not get stuck in the mud, wet from surf, or run over by cars. It should be far enough away from the shorebird pictures that the students must use the binoculars to identify the birds.
5. Have the students work in pairs. Each team must correctly identify all of the shorebirds within the designated time limit. The first person with the binoculars identifies field marks such as color (“I see a black spot on the chest.”) and size (“It has longer legs than the other birds.”). The second team member looks in the field guide to find potential birds to show to his or her partner.
6. Remind your students to keep their voices very quiet, not to scare the birds (and not to give their answers away). Remind them to take turns with the binoculars.
7. If you have only a few pairs of binoculars, have several teams at a time take the practice field trip while the rest of the class works on another quiet activity. Invite parents who will chaperone the field trip to attend this practice too.

### **Additional Activities**

#### *Shorebird Morphology*

Pass out a copy to each team of the **Shorebird Morphology: Flying** and **Shorebird Morphology: Standing** Worksheets found in the Appendix. Ask them to use their field guides to locate the names of the various parts of the shorebird’s anatomy. Once all the teams are done, display the same illustration with the answers (also found in the Appendix, so the teams can check and correct their work. Have them practice field identification using these terms in a second round of the binocular activity.



# How to Use Binoculars

## Step 1 Put the Binocular Strap Around Your Neck

This is very important to ensure that the binoculars do not fall.

## Step 2 Adjust the Binoculars to Fit Your Eyes

Look through the binoculars in the normal viewing position. Grasp each barrel firmly, and adjust them until you see a single circular field. Many binoculars have rubber eye cups which can fold down for use with glasses or sunglasses.

## Step 3 Adjust the Binoculars to Your Eye Strength

Set the right eye piece to zero and look at a distant object. Cover the right lens (the outer, big lens) with your hand. With both eyes open, look through the binoculars and turn the center focusing wheel until the object is sharp and clear. Now cover the left lens with your hand. This time, keeping both eyes open again, turn the adjustable eyepiece to focus on the same object until it is clear. Do not use the center focusing wheel. Your binoculars are now properly focused for your use. Check the number on the adjustable lens and be sure it is set to this number every time you use this pair of binoculars.

## Step 4 Focusing on a Distant Object

Use the central focusing mechanism to focus for objects at various distances from you. Do not turn the adjustable eyepiece.

## Step 5 Focusing on a Moving Object

Focusing on something that is about to fly or move out of view is a real challenge. Finding and focusing on objects in the sky is another challenge. Without trees in the background, there are no reference points to help you locate and then focus on your subject. Be patient and practice, practice, practice.

