

Where the River Meets the Sound

Field Trip Preparation Overview

Taking students on a field trip requires preparation on the part of teachers. Not all field trip locations are designed the same or have the same purpose. Understanding how a field trip to the Refuge differs from other field trip locations will be very helpful. At Nisqually NWR, there are several field trip options. You may choose:

1. To walk the trails on your own without any assistance from the Refuge.
2. To walk the trails on you own and have a brief orientation with no additional assistance.
3. To use additional Refuge resources including staff, volunteers, and the Education Center.

For groups that request assistance for their field trip (option 3), there are additional field trip preparation requirements including collaboration with the Refuge on lesson plans and scheduling. Field trip goals must be part of a unit of classroom study. Pre- and post-field trip activities are designed into the planning. The resources in this chapter will help you to prepare for your field trip and understand the resources that are available to you.

Environmental Education at Nisqually NWR

The goal of Nisqually NWR's education program is to provide hands-on, interactive, and interdisciplinary educational opportunities focusing on the fish, wildlife and habitats of the Nisqually River delta and watershed. The program is designed to complement and enhance classroom learning using a variety of educational materials and the outdoor environment. Short-term goals for student learning and the field trip experience include:

- Field trip goals for learning are met.
- Students have a safe and fun experience.
- Students are engaged in hands-on discovery and learning.
- Individual student learning styles are addressed by using a variety of teaching methods.
- Students desire to return to the Refuge with their family.



Long-term goals for student learning include the following:

- To develop an understanding of and respect for the natural environment.
- To gain an understanding of a diversity of our natural world.
- To acquire a sense of belonging to a special human niche within the natural environment.
- To develop a feeling of responsibility and accountability for human environmental impacts on the natural environment.
- To develop skills to identify and resolve environmental issues.
- To participate in all levels of environmental stewardship.

Key Concepts Emphasized in the Education Program

Wildlife First: At the Refuge, wildlife needs come first.

Wildlife etiquette requires people to stay on the trails, to harvest nothing from the habitats, and to be quiet and unalarming. Wildlife depends upon habitat for food, shelter, safety, clean air and clean water.

Diversity: Healthy ecosystems are diverse.

A diversity of life indicates that the ecosystem is intact, and that plant and animal populations have a better chance of surviving in our changing environment.

Adaptation: Organisms adapt to habitat conditions in order to survive.

Each habitat is its own mini ecosystem, providing different needs for different organisms.

Interdependence: All things are connected.

Ecosystems exist in a delicate balance. A single change, such as an introduced species, can upset the balance and threaten plant and animal populations.

Migration: Most birds and some fish migrate.

Birds use particular routes called flyways. Nisqually NWR is on the Pacific Flyway, and provides important feeding, nesting and resting for all sorts of birds. As habitat is lost to development, it is important to save these key habitats for migratory birds. Fish, particularly salmon also migrate from freshwater to salt water and back to freshwater.

Cycles in Nature: Cycles include life cycles, water cycle, cycles of the tides

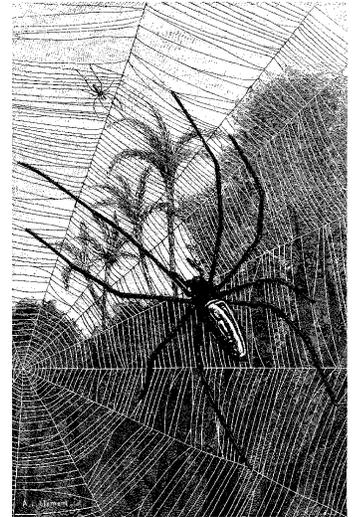
The process of birth, death and rebirth is reflected in the endless cycle of the seasons. Every living thing is born, matures and dies, transferring its energy to new life. Natural processes, including the tides also have cycles

History and Culture: The Nisqually Indians have hunted, fished and gathered food and materials in the Nisqually River watershed for thousands of years.

The Tribe ceded land rights to the United States in the famous Medicine Creek Treaty, right on the banks of McAllister Creek. Today, the Tribe owns land along the river and at the delta, fishes the Nisqually River and McAllister Creek, runs two salmon hatcheries on the Nisqually River, and takes a leadership role in land management.

Our Actions Make a Difference: Nisqually NWR came about through a grassroots effort to preserve habitat for wildlife.

People everywhere make decisions that affect wildlife. We are responsible for our impacts upon the environment.



Refuge Resources and Assistance

Nisqually NWR offers a variety of resources to help meet field trip learning objectives. Teachers plan and lead field trips together with input and assistance from the education coordinator and Refuge volunteers. Teachers are expected to be active participants in the planning and leading their field trips. In order for students to have the most productive educational experience, it is recommended that teachers attend a field trip orientation workshop, visit the Refuge, walk the trails, and have clearly defined field trip goals.

Opening Session for Students

An opening session, lasting approximately 15 minutes, will be provided for your group. This time should be included in the day's schedule. Staff will welcome the students, review rules, and discuss the teacher identified goals for the field trip. In order for staff to orient the program towards your teaching goals, it is important that you fill in the sections in the application packet entitled "Field Trip Goals," "Pre-Field Trip Activities," and "At-the-Refuge Activities." The opening session for students will be held at the Education Center.

Opening Session for Adults

An opening session, lasting approximately 15 minutes, will be provided for the adult chaperones and teachers at the same time as the students opening session. Staff will review the day's schedule, logistics, and expectations. Adults will also be given a "Chaperone Pack" to take with them on the trails.

Closing Session for Everyone!

A closing session held at the Education Center and lasting approximately 15 minutes will be provided just prior to leaving. This time should be included into the day's schedule. During the closing, staff will review the day's activities bringing closure to the field trip.

Website (<http://www.fws.gov/nisqually/education.html>)

The Refuge's website has a full description of the education program. News and events about the program including teacher training can be found here. Also, educator's can download the "Field Trip Application Packet" and "The Educator's Guide" from this site.

Teacher Training

The Refuge offers "Field Trip Orientation Workshops" for teachers wanting to learn more about planning and conducting a Refuge field trip. Teachers who plan to bring students during the last month of school must have attended one of these workshops.

Trail Assistance

Refuge volunteers are available to be on the trails with students. Depending on the volunteer, they may walk with one group or rove and be available for all groups at different times. The number of volunteers working with a group will vary. Trail assistance will vary for each group depending on the availability of the volunteers. The assistance will be determined after reviewing your application.



Available for Checkout

While at the Refuge, groups may check out binoculars (3rd grade and up) and clipboards.

Refuge Facilities

Parking – Bus Drop Off

Adjacent to the trail system, the Education Center, and Visitor Center are visitor parking lots. Busses should drop students off and pick them up in front of the Education Center and park during the day in the designated bus parking area.

Education Center

The Education Center is the home of the Refuge’s environmental education program. Designed for maximum flexibility, a large room can be divided into three rooms for groups of various sizes. There are indoor bathrooms and a drinking fountain. Outside is a covered deck and amphitheatre for outdoor talks. This is also a place to have lunch.



Typically, the opening and closing sessions (for groups up to 100 students) will be held in the common area (center room) of the Education Center with the other two rooms set up for student activities. These rooms can hold up to 30 students with 6 adult chaperones. Activities are designed to take 30 minutes each.

The Education Center has many educational resources including bird mounts, freshwater aquariums, and a view of a freshwater wetland.

The Nature Explore Area

Located adjacent to the Education Center the Nature Explore Area is a place where students, ages 2 – 10 can interact with and be in nature in very upclose and personal way. Trails lead to spaces, like rooms, where specific activities are carried out. These areas include Nature Art, Messy Materials, Building, Dirt Digging, Climbing, Nature’s Treehouse and Action Area. Teachers may choose to have unstructured time in the Nature Explore Area or design specific activities to occur here. Adult supervision is required in the Nature Explore Area.

Restrooms

There are accessible indoor restrooms in the Education Center. Handicapped accessible restrooms, open during daylight hours, are also across the deck from the Visitor Center. There is a sanikan outside next to the Twin Barns. There are no restrooms along the trails.

Drinking Fountains

There are drinking fountains in the Education Center and across the deck from the Visitor Center. There is no drinking water on the trails.

Telephone

There is a pay phone next to the restroom at the Visitor Center.

Trash Cans

Although trash cans are located at the parking lots, Education Center, and Visitor Center, we request you take all trash with you and recycle! There are no trash cans along the trails.

Visitor Center

School groups (maximum of 10 students at a time) may explore the interpretive exhibits on the Nisqually watershed, Pacific Flyway, Delta history, and Nisqually River salt marsh and estuary. If school groups wish to spend time in the Visitor Center, include this time in your schedule. The Visitor Center is open Wednesday -Sunday, 9:00 am to 4:00 pm.



Students learn about the Nisqually Watershed at a hands-on model in the Visitor Center.

Making a Reservation



In order to accommodate as many groups as possible, advanced registration is required for all school groups participating in the Refuge's environmental education program.

How Do I Register?

- Call the Refuge and ask to schedule a field trip. You will be e-mailed a "Field Trip Application Packet." Fill this out and send it to the Refuge. This application packet is also on the Refuge's website, www.fws.gov/nisqually
- You will be e-mailed a confirmation of your reservation.
- All reservations are made on a first-come, first-served basis.

Why are Reservations Required?

Nisqually National Wildlife Refuge is a popular place with limited facilities. By having teachers register their classes we can:

- Schedule classes so they do not conflict with another group. This reduces overcrowding of Refuge facilities, minimizes wildlife disturbance, and ensures a better opportunity for wildlife observation.
- Coordinate volunteers who provide assistance to groups.
- Provide better interpretive and educational programs.
- Determine the number of people participating in various activities on the Refuge.
- Use this information to obtain funding for improvements to our public use programs.

How Many Groups May Visit Daily?

The number of groups may vary. However, the number of total students is limited to 100 on any given day. This may be five groups of 20 students or two groups of 50. This is in addition to the individuals and families who do not have reservations.

Does Registration Guarantee a Visiting Date?

Yes, *if* you have obtained a confirmation in writing.

What About the Entrance Fee?

Groups that qualify for a fee waiver will have "exempt" stamped on their confirmation notice.

For a fee waiver, groups must meet the following criteria:

- The educational activity of the group is formally structured, with an approved course of study that focuses on the natural environment.
- The students are involved in a hands-on field activity on Refuge lands.

Guidelines for Refuge Field Trips

Certain rules are necessary to help protect the wildlife and facilities at Nisqually NWR:

Take Away Only Memories

All plants, animals and artifacts are protected. Students may take only photographs, drawings and memories.

Walk and Talk Quietly

By walking slowly and quietly you greatly increase your opportunities to observe wildlife. Snacking and cell phone use along the trail is discouraged.

For Safety, Stay with the Group

Please stay with your group on the trails! Each group must be accompanied by an adult at all times, and for every ten students there must be at least two adults in attendance.



Be Aware of Your Trash

Avoid littering the trails, and make an effort to pick up any litter you see. Bring litter and recycling bags with you. Snacking along the trail is discouraged.

Education Center

Groups reserving the Education Center are expected to leave the place clean. This includes picking up trash, cleaning tables, and putting away chairs and activities. Please refrain from touching the bird mounts as the natural oil on your fingers can damage them.

Lunch

Lunches must be eaten outside, on the covered deck outside the Education Center, on the bus, or at the picnic tables located outside the Twin Barns. The Education Center and Visitor Center are not available as a lunch room.

Help Protect the Wildlife

To prevent disturbances to wildlife, buses and private vehicles are not allowed on Refuge maintenance roads and trails without prior authorization.



Checklist for a Successful Field Trip



- ___ 1. Become familiar with the Refuge site, resources and background information. Attending a field trip orientation workshop or making a personal visit is highly recommended.
- ___ 2. Review the information in the Educator's Guide.
- ___ 3. Request or download an application packet.
- ___ 4. Identify your objectives. What do you want students to learn? Develop lesson plans and activities that fit your curriculum and take advantage of students' interests. Design worksheets for your students to use during their field trip to enhance learning.
- ___ 5. Have your schedule well thought-out and coordinated with Refuge staff. Consider small group divisions, distribution of equipment, travel time, timing of activities, and rainy day alternative activities.
- ___ 6. Fax or e-mail your application to the Refuge at least 2 weeks before your visit.
- ___ 7. Receive confirmation form from Refuge staff by e-mail or fax. This will include a detailed itinerary and instructions.
- ___ 8. Arrange transportation.
- ___ 9. Recruit adult leaders who can assist with your field trip. A ratio of 2 adults for 10 students is required. Emphasize this is to be a fun-filled learning experience.
- ___ 10. Have students' parents visit the Refuge or arrange an informational meeting at your school. Make copies of maps and itinerary for each group leader.
- ___ 11. Proper dress is important. Ask students to bring a warm jacket or rain gear and to wear clothes they won't mind getting dirty. Students should wear sturdy walking shoes. Backpacks are useful and help free hands to write, point out interesting animals, and use binoculars.
- ___ 12. Remember lunches and water! Bring a bag for collecting lunch garbage.
- ___ 13. Name tags with first names are helpful for students, group leaders and staff.
- ___ 14. Prepare students for their field trip. Let them know where they are going and the behavior expected of them. A Refuge is different from a park or playground
- ___ 15. Arrive ready to follow your plan, and bring your confirmation form.

Group Management Tips

This is a useful handout to copy for parent and group leaders.

If you have apprehensions about leading a group of children away from the four walled constraints of a classroom, relax! There are several techniques you can use to keep the group's attention and maintain the feeling of freedom and open exploration.

Be Prepared!

Read over the activities before coming to the Refuge. The more comfortable you are, the more comfortable the students will be.

Be Enthusiastic!

Enthusiasm is a greater catalyst than knowing a bunch of names. Whatever you are doing, do it with gusto! Get down on your hands and knees to look at the plants. As the leader, you set the tone for the student's experience.

Have a Focus

When you stop to look at something, focus on something concrete. Gather the group in a semicircle with everyone facing toward the object of attention.

Ask Questions

Encourage thinking and group interaction by asking questions; spark their imagination. For example, "Why is there a hole in the ground here?" "How did it get here?" "What would you need to live here if you were a _____?" Whenever possible, ask questions instead of giving information.

**Copy this page for
adult chaperones**

Speak with the Group

Speak loudly and clearly, facing the group. Talk with the group, not at it.

Make Eye Contact

Make eye contact with your students. If necessary, you should face the sun, rather than having the students look into the sun.



Be Patient with Answers

Give students time to think and answer questions. Count to 10 before revealing the answer.

Demonstrate

Keep it simple. Demonstrate an activity as you explain it.

Encourage Curiosity

Encourage your students to pursue their natural curiosity. Any observation they make is a good one. If they come up with questions you cannot answer, have them write them down; they can look up the answer or ask a staff member later.



Medical Considerations



Insect Stings

Because your trip to Nisqually NWR will be outdoors, educators should be prepared to deal with insect stings and bites. Teachers should know if any students are allergic to insect stings, and those with allergies should bring their own medications. Mosquitoes can be abundant during warmer months, so bring insect repellent.

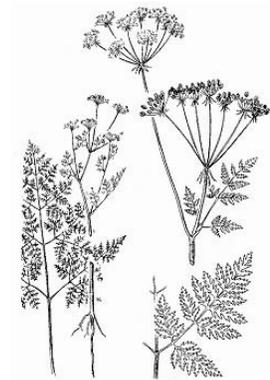
Hay Fever and Asthma

Those with respiratory problems or allergies to pollen should bring medication. Wearing a respiratory mask may be helpful.

Poisonous Plants

Most plants on the Refuge are harmless. However, there are a few that can present serious problems to unwary visitors. Everyone should know what these poisonous plants look like. Remember: leave the plants and berries for the wildlife of the Refuge.

Poison Hemlock is extremely deadly if eaten or chewed. This plant can grow to be over six feet tall. The hollow, erect stem branches extensively and has purple-red splotches. The leaves look very similar to parsley, and the flowers are tiny, white, and numerous.



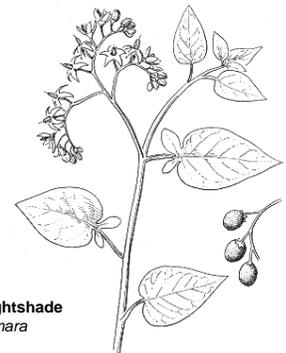
Poison Hemlock
Conium maculatum



Stinging Nettle
Urtica dioica

Stinging Nettles can be a nuisance to anyone who touches the plant, resulting in an itching, burning sensation for several hours or longer. This plant has strongly angular, unbranched stems. The leaves grow opposite on the stem with long stalks. They have equally long, broadly heart-shaped blades with very prominent hairs. Nettles can grow to more than six feet in height and are found mostly in moist, shady places.

Bittersweet Nightshade can be found along some ponds and streams. The bright red berries are poisonous. The berries change from green to yellow and orange and finally to red when ripe. The leaves of this plant vary in shape, but usually are pear-shaped and may have two ear-like lobes at the base of the blade. The blue or violet flowers branch laterally from the main stem. The stamens are deep yellow, projecting beak-like from the center of the flower.



Bittersweet Nightshade
Solanum dulcamara

Emergencies

For emergencies, a telephone (360) 753-9467 is located at the Education Center, Visitor Center or Administrative Office. The Visitor Center is open Wednesday through Sunday, 9:00 am to 4:00 pm, and the Office is open Monday through Friday, 7:30 am to 4:00 pm. Or, use the public phone outside the Visitor Center to dial 911. It is helpful for teachers to have a list of cell phone numbers of all parent chaperones.