

Minnesota Refuge Partner School Program

Making School Visits More than “One-Hit No-Wonder”

By Suzanne Trapp

“What are we really accomplishing running 20,000 students through the refuge each year?”

Beth Ullenberg, supervisory visitor services manager at one of the largest urban refuges in the National Wildlife Refuge System, summarized staff sentiment when she arrived at Minnesota Valley National Wildlife Refuge in 2006. “We’d have two hours to teach anywhere from 60 to 120 students about nature. Teachers and students were not always engaged, and the majority of staff time was spent trying to control the group.” The result was what Ullenberg described as a “one-hit no-wonder” experience.

Staff agreed. They had little confidence that students understood the value of the National Wildlife Refuge System, let alone the refuge treasure in their own urban backyard. What emerged in 2006 was the Refuge Partner Schools Program, which places the quality of student and teacher experiences at the forefront of the environmental education program.

The program has enrolled three schools: East Union Elementary in Carver, Minnesota, the American Indian School in St. Paul and Jackson Elementary in Shakopee. Staff, interns, volunteers,

teachers and parent chaperones all contribute their time to the program.

The 2011-12 school year marks the fifth season of the Refuge Partner School Program. During this time, principal retention and support have proved critical to the program’s success.

Indeed, the best Partner Schools have a principal who strongly supports outdoor learning, wants to see teachers use the refuge as an outdoor classroom and supports associated teacher training.

To provide outdoor experiences and environmental learning to students least likely to visit a wildlife refuge on their own, Minnesota Valley Refuge considered the percentage of ethnically diverse and low-income students when it selected Refuge Partner Schools. Such demographic information is available from the state’s Department of Education website. Additionally, the refuge sought partner schools that lacked environmental educators or naturalist staff and a nature area within walking distance.

At first, several Twin Cities environmental magnet schools seemed the logical choice for participation. They were eager to join and clearly met the criteria of strong principle support. However, with nature areas just outside their back doors and environmental education specialists or naturalists on staff, these schools did not need mentoring.

The program structure

Each school initially signs a three-year cooperative agreement. The principal commits to sending each class (K-5) to the refuge at least three times a year. “This is the hands-on piece that I wanted,” says Jenny Killian, a second- and third-grade teacher at East Union Elementary School, which has participated in the program for its entire five years. By getting the kids out in nature, the instruction “becomes more meaningful,” she says. “It sticks in those little brains more than it would if we just read about it in books.”

In addition, teachers set aside one hour in the classroom to allow refuge staff to introduce an activity before each two-hour field trip. Teachers are invited to attend workshops in natural history, outdoor teaching techniques, and other national environmental education curricula led by refuge staff and partners, all free of charge.

At the end of the third year, teachers and refuge staff assess the partnership. If it continues, a two- or three-year extension is granted. Students continue to visit the refuge on the same schedule but teachers present the field trip pre-activity. Teachers are asked to brainstorm with students about Service Learning projects that help both the refuge and the learning experience. East Union Elementary students, for example, created a colorful, interactive magnetic mural that shows the variety of plants and wildlife on the refuge. The mural hangs in the Rapids Lake Education and Visitor Center.

Right: Catching wildlife in the Prairie Insect Survey is a favorite fall field trip.

Left: Elementary students created a colorful, interactive magnetic mural that shows the variety of plants and wildlife on Minnesota Valley Refuge.





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Who goes there? Three Refuge Partner Schools send students to Minnesota Valley National Wildlife Refuge for spring, fall and winter field trips.

Survey, targeted toward second- and third-graders, although this may be altered to suit first-graders since the state guidelines are changing. Students collect a half-dozen or so butterflies, grasshoppers and other insects and use a chart to record how they are similar and different. They create graphs, tally numbers, write or draw about their observations and build their math and critical observation skills – all in one exercise.

In Habitat – Who Needs It? kindergarteners learn the four major components of habitat – food, water, shelter and space – and the difference between wild and domestic animals. As they visit different habitats on the refuge, they think about the food and water sources in each.

In Seeds on the Go, second- and third-graders collect different seeds in various habitats, consider how plants disperse seeds and think about how the seeds might move in the habitat. They also learn about refuge management – such as controlling the dispersal of nonnative reed canary grass seeds.

After three years and two revisions, the teaching matrix outlines not only ensure three years of visits to the refuge, but they also provide increasingly challenging lessons that meet state educational standards in math, English, physical education, social studies as well as science.

Each year, fifth-graders graduating from the program spend a Friday in spring learning how to fish on the refuge. Thanks to Youth Fishing Day sponsors such as the Red Lake Nation, the Minnesota Department of Natural Resources, General Mills and Gander Mountain, students learn to cast, tie a knot, identify common Minnesota fish species and create fish art before going home with their own rod, reel and tackle set.

The curriculum

For teachers to embrace the refuge as an extension of their classrooms, the Refuge Partner School curriculum had to meet state education standards. According to Killian, no valuable class time is lost because the material covered at the refuge correlates with required instruction. For refuge staff and management to support the program, it had to increase student environmental awareness and foster a stewardship ethic. For the program to compete with offerings at nearby, Partner School Coordinator nature and environmental centers, it had to provide a unique experience to teachers and students.

After three years and two revisions, the teaching matrix outlines not only ensure three years visits to the refuge, but they also provide increasingly challenging lessons that meet state educational standards in math, English, physical education, social studies as well as science. It builds on student knowledge and experience gained each year.

Students learn hands-on, real-life research and data collection techniques related to management on wildlife refuges. They also have a chance to snowshoe hike, fish and observe wildlife. Teachers regularly suggest additions and revisions to the curriculum.

Some popular courses include Prairie Insect

Students from East Union Elementary School use nets and buckets for Pond Insect Investigation.



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The cost

The program hosted 3,039 student visits during the 2010-11 school year. Busing costs totaled roughly \$13,600. Yearly busing costs average about \$350 per classroom.

In the first two years, nine refuge staff hours are devoted to each partner classroom. The time commitment drops to six hours per class in the next three partnership years as teachers become

prepared to lead their own classroom pre-field trip activity. Additional administrative time is needed to purchase materials and schedule field trips.

While one refuge staffer usually presents the bulk of the field trip lesson, refuge volunteers assist with small group activities during each field trip. Parent chaperones act as additional small group leaders.

If you are interested in starting a Refuge Partner School program, you can download curriculum and other helpful materials from <http://www.fws.gov/midwest/MinnesotaValley/refugeteachers/>. For more information, contact Suzanne Trapp at 952-361-4502 or by email, Suzanne_Trapp@fws.gov.

Minnesota Valley National Wildlife Refuge Partner School Curriculum Matrix			
Years 2-5	Fall	Winter	Spring
Kindergarten	Habitat – Who Needs It?	Who Goes There?	Forests Are More than Trees
Grade 1	Tracking Nature through the Seasons	Survivor: Minnesota Winter	A Peek at Plants
Grade 2	Prairie Insects or Meet the Mammals	WSI: Wildlife Scene Investigators	Pond Investigation
Grade 3	Seeds on the Go!	Tree Math or Bird's Beaks & Adaptations	How Animals Communicate or Wetland Safari
Grade 4	Migration Matters	Winter Under a Microscope	Water Canaries
Grade 5	Minnesota Biomes or White-tailed Deer: How Many?	Tracking Wildlife or Compass Crusade	Landforms or Birding Basics

The Blue Goose Bus Fund

School budgets have left many schools – especially those in low-income areas – unable to absorb busing costs. Indeed, teachers have identified transportation costs as the number one barrier to the Refuge Partners Program. In response, the non-profit Refuge Friends, Inc., which works with Minnesota Valley Refuge, established the Blue Goose Bus Fund. Schools that join the program can apply for partial or total busing scholarship.

There are alternatives to funding by a Refuge Friends organizations. In response to dwindling school district budgets, many foundations have offered grants to support school field trips. Even a 50:50 cost share will entice schools to participate. Fund your refuge's share with grant dollars and let the schools raise the remaining funds.

Many parents have formed school support organizations that assist with raising funds for special projects. Businesses are often looking for meaningful ways to contribute to their community. Consider working with local Audubon, Ducks Unlimited, Optimists or Lions Clubs chapters, among other non-profit organizations.

Watching wetland birds at Bass Ponds is a popular spring field trip activity.



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