



Learning with Trees

Program Report

School Year 2010-2011



Students at Nellie Stone Johnson School (Minneapolis, MN) pose in front of their newly planted tree.

Tree Trust -- Learning with Trees Program Report (School Year 2010-2011)

Our Learning with Trees program has involved more than 170 schools throughout Minnesota since its inception in 1992. During school year 2010-2011 Tree Trust partnered with three Minnesota schools to integrate environmental learning into their curricula, facilitate hands-on environmental education activities and transform grounds into outdoor classrooms.

The three schools were chosen through an application process and site visit that explored their interest in and ability to develop and incorporate outdoor environmental learning areas into their educational programs, as well as their commitment to partner with Tree Trust to make the program a success. Funding partners often assist with choosing partner schools.

School Partner	City	County	Grades	# Students/ # Faculty	Outdoor Classroom Components
Nellie Stone Johnson School	Minneapolis	Hennepin	K-8	675/95	5 benches, 1 picnic table, 36 trees, 6 shrubs
Somerset Elementary School	Mendota Heights	Dakota	K-4	381/55	3 benches, 24 trees, 6 shrubs
Hilltop Primary School	Minnetrista	Hennepin	K-4	368/35	benches, trees, shrubs (# TBD; to be completed fall 2011)
Total:	--	--	--	1,424/185	8 benches, 1 picnic table, 60 trees, 12 shrubs (plus elements at Hilltop to be added this fall)

School Year 10-11 Green Teams and Planting Days

Tree Trust staff worked closely with each of the three partner schools to create green teams of teachers, administrators, grounds maintenance staff, students and parents. Teams met throughout the school year to set goals, develop a landscape plan that would meet the schools' environmental and educational objectives, and plan for each school's spring planting day.

During school year 2010-2011, 43 individuals participated as active members of the three schools' green teams, volunteering a total of 166 hours. Initial site plans were developed by green teams and incorporated educational goals, such as opportunities to teach science, art, and math, as well as environmental goals like opportunities to create shade for hot playgrounds and to mitigate slope erosion.

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Tree Trust's Community Forestry Manager and School Coordinator worked with green teams at each school to turn the team's initial ideas into landscape plans that would guide each school's spring planting events.

During the month of May, we facilitated school-wide planting days for two of our partner schools – Somerset Elementary School and Nellie Stone Johnson School. (Hilltop Primary School's outdoor classroom will be created in October 2011.)

Left: Students at Somerset Elementary School dig in to find the root flare before putting their first tree in the ground.

Students from Nellie Stone Johnson and Somerset were released for a portion of the school day to participate in the creation of their school's outdoor classroom, giving them hands-on experience in environmental science. Teams of trained volunteers supervised and guided students.

More than 12 volunteers, including master gardeners and representatives from our funding partners, helped during the planting events. These volunteers provided 80.5 hours of service.

Right: A Tree Trust "Tree Trainer" shows students at Nellie Stone Johnson School how to properly plant a honey locust tree.



In addition to trained volunteers, Tree Trust provided each school with trees, shrubs, benches, tools, supervision, training and technical assistance on its planting day.

We also involved job trainees from our Young Adult Conservation Corps employment training program, who built benches and a picnic table for the outdoor classrooms at Nellie Stone Johnson and Somerset Elementary. Benches will come in handy when teachers bring their lessons outdoors and use the environment to strengthen math and reading skills.

Left: As students load mulch into buckets, they learn how important the mulch will be for each of the new plantings.

As they helped to shovel dirt and transport and apply mulch and water, students shared what they learned earlier in the year about the importance of trees to our communities. They also learned how to properly plant and care for the new trees, and made a commitment to keep a close eye on their new trees throughout the years.

Right: Students at Nellie Stone Johnson School gather water to bring back to their new plantings – several trips were needed for their thirsty trees.



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The teachers and parents who participated also learned about the importance of trees and green spaces, and became more connected to the environment by taking an active role in the creation of the outdoor classrooms.

Many classes completed their tree planting experience by naming their trees – we're sure "Billy Bob" and his new tree neighbors will be well cared for by these students.

Left: Students proudly display proof of their hard work.

School Year 10-11 Teaching Resources and Learning Experiences

Our Town Trees Exhibit

The Our Town Trees exhibit was facilitated for one week in Nellie Stone Johnson and Somerset Elementary in May and June. (Students at Hilltop Primary School will experience the exhibit in the weeks that precede their fall planting day event.) Students interacted with the exhibit and received a passport that was stamped as they visited each station. Developed in partnership with the Science Museum of Minnesota, the exhibit features five ecological activities that introduce students to the concepts they encountered when they helped to create their outdoor classroom later in the spring.

Tree Trunk Lesson Plans and E-Newsletter

Each of the three schools are provided with "tree trunk" education kits that will remain at each school as a shared resource for all teachers. (Nellie Stone Johnson received their tree trunk early in the school year.) Tree trunks contain grade-appropriate lesson plans, activities and materials for continued use by teachers. The tree trunk lessons complement the concepts presented in the Our Town Trees exhibit and further the program's emphasis on experiential environmental science learning through interaction with, and study of, the natural world.

We will continue to provide seasonal tree care tips to each of the three participating schools through our e-newsletter, which is distributed every other month throughout the year.

Ongoing Education and Future Plans

Our Community Forestry staff will visit two of the three schools in the fall to evaluate the condition of the grounds and provide additional maintenance, instruction and tree replacement if needed. We will continue to encourage green teams to work together in the coming years, following the maintenance plans they developed throughout the school year. (The creation of the outdoor classroom at Hilltop Primary School is planned for October, and follow-up for this school will occur in the spring of 2011.)

Results of the program are being shared with key Tree Trust staff, funders and other partners, and will be used to further develop our Learning with Trees program.

Plans for the 2011-2012 school year are underway; we expect to work with at least three schools. We are exploring costs for updating some components of the Our Town Trees Exhibit and developing sustainable, long-term funding strategies for this valuable program.

Tree Trust -- Learning with Trees Program Report (School Year 2010-2011)

School Sponsor(s): Covanta Energy
School: Nellie Stone Johnson School (Minneapolis, MN)
of Students/Faculty: 675 / 95

Nellie Stone Johnson School's green team included teachers, students, school staff and community volunteers. The team worked with Karen Zumach, our Community Forestry Manager from December 2010 through May 2011. Together they identified the school's environmental needs, developed comprehensive landscape plans incorporating their existing outdoor seating area and prepared the school to bring environmental learning into their curricula.

During the week of 05/31/11 - 06/03/11, students interacted with Tree Trust's Our Town Trees exhibit. Their participation in this component provided a hands-on environmental learning opportunity to incorporate what they had learned during the school's planting day.

Nellie Stone Johnson's school grounds were transformed during its school planting day event on May 27, 2011. The school is relatively new and has a large campus.

While an outdoor seating area was installed in 2009 by volunteers, this space and the rest of the campus, was completely lacking in trees. To make the grounds more inviting and functional, the green team decided to incorporate plantings around the school that represented three of Minnesota's four biomes.

In addition, an orchard of plum and cherry trees was planted next to the school's community garden to further encourage the conversation about how to produce homegrown, local fruit and vegetables amongst students.



The plan also included shade trees for a parking lot, a global arboretum area representing trees originating from other parts of the world to encourage discussions on global diversity, and ornamental trees planted near the front of the school to improve its appearance.



Additional trees and shrubs were planted on the school's grounds, including a few select shade trees planted near the playground to provide shade for students and to screen the nearby residential alley. Volunteers from the community, including five employees from Covanta Energy, the school's sponsor, helped get the job done.

The school's AmeriCorps Volunteer, JP Mason, led the green team and worked tirelessly to acquire additional funds for more trees, seizing on the momentum this program produced, and planting as many trees as possible this year.

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Nellie Stone Johnson School's teachers now have outdoor areas to take their students to learn about the natural environment. These areas emphasize the importance of trees for wildlife habitat and food production, and use trees as a catalyst for a discussion on diversity.

Students from Nellie Stone Johnson School celebrated their hard work during an end-of-day celebration in the gymnasium.

Among their guests were representatives of Covanta Energy, City Council Members Diane Hofstede and Barbara Johnson, Representative Joe Mullery, and Senator Linda Higgins.

The school received their "tree trunk" education kit earlier in the year to begin incorporating outdoor lessons into their lesson plans prior to the planting day event.

Tree Trust will return to assess the health of the new trees. The maintenance plans, which were developed during the planning process, will ensure proper long-term care of their transformed school grounds.



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School Sponsor(s):	Xcel Energy Foundation
School:	Somerset Elementary School (Mendota Heights, MN)
# of Students/Faculty:	381/55

Somerset Elementary School's green team included teachers, the school's principal, and several community volunteers. The team worked with Karen Zumach, Tree Trust's Community Forestry Manager from September 2010 - May 2011. Together they identified the school's environmental needs, developed a comprehensive site plan for their grounds and got the school excited about incorporating environmental learning into their curricula.

During the week of 05/16/11 - 05/20/11, Somerset students interacted with Tree Trust's Our Town Trees exhibit. Their participation in this component provided a hands-on environmental learning opportunity and set the stage for the school's planting day.

On May 20, 2011, students, Tree Trust staff, Master Gardeners, and parents transformed the school's grounds.



The focus of the project was to incorporate a shade arboretum along a wooded hillside to mitigate erosion issues and increase the diversity of trees. Two benches, which were built by Tree Trust's youth job trainees, were installed to provide an area for student reflection on the relative solace this space provides.

Large shade trees were planted on the western side of the school's playground and will increase students' awareness of how trees can provide energy savings.

While Somerset's school grounds are fairly wooded, there seemed to be an absence of evergreen trees. To increase conversations about bio-diversity, the green team decided to create a "pinetum" towards the back of the school's grounds for both learning and interactive play.

An existing outdoor learning area was created at Somerset last spring by volunteers. During the planting day, students helped to maintain this learning area by adding mulch.

Several trees and shrubs, including Welchi juniper and red twigged dogwood, were planted along the school library's windows in order to provide food and shelter for wildlife as well as winter interest for students. Representatives from S&S Tree Specialists donated mulch for the new plantings.

The school will be provided with an education kit this fall when we return to the school to assess the health of the new trees. Maintenance plans, which were developed during the planning process, will ensure proper long-term care of their transformed school grounds.



Tree Trust -- Learning with Trees Program Report (School Year 2010-2011)

School Sponsor(s): CenterPoint Energy
School: Hilltop School (Minnetrista, MN)
of Students/Faculty: 620/63

Hilltop Primary School's green team includes teachers, school staff, parents and the principal. The team has been working with Diana Preisen, Tree Trust's Learning with Trees School coordinator since April 2011. Together they have identified the school's environmental needs, developed a site plan for the outdoor learning area and excited the school about incorporating environmental learning into their standard curricula.

During the week of 10/11/2011-10/14/2011, Hilltop students will interact with Tree Trust's Our Town Trees exhibit. Their participation in this component will provide a hands-on environmental learning opportunity and set the stage for the school's planting day, which has been rescheduled from May 2011 to October 2011. Due to Hilltop's large earth day celebration in April, the green team decided to move the planting day to October 17.

On October 17, 2011, the school will come together during an all-school planting day event to create a much desired outdoor learning area that will be located in a new arboretum. The arboretum will include a wide variety of tree species that will help diversify the school's tree canopy, and will include Kentucky coffee trees, ginkgos, hawthorns, basswoods and red maples. The mature trees located throughout the school's grounds are mostly ash trees, so here will be an emphasis on planting replacement trees to prepare for the arrival of emerald ash borer.

Mulch will be donated from the Mulch Store in St. Bonifacius, and will be added to the new plantings when they are safely in the ground. CenterPoint Energy has agreed to pre-dig holes to make the planting project easier for the young students. As in previous years, we welcome CenterPoint volunteers at the school's planting day event.

A final report on this project will be submitted following Hilltop's planting day.