



What Is Service-Learning?

- It is a method of encouraging student learning and development through active participation in thoughtfully organized service that is conducted in, and meets the needs of, a community.
- It involves an elementary school, secondary school, institution of higher education, or community service program, along with the community.
- It helps foster civic responsibility.
- It is integrated into, and enhances, the academic curriculum or the educational components of the community service program in which the participants are enrolled.
- It provides structured time for students or participants to reflect on the service experience.

Acknowledgements

Making an Environmental Difference:

Service-Learning as a Solid Waste Education Experience

ervice-learning is more than just a buzzword for community service or volunteering. By participating in an environmental service-learning project, you are making a difference in your future and the future of our planet. Service-learning goes beyond what is learned in the classroom. It is hands-on experience. Students gain new skills by working directly with the community. Service-learning enhances students' valuable academic skills, including communication, team-building, and critical-thinking; builds their self-esteem; and develops their sense of responsibility for

decision-making.

The types of service-learning projects students in grades K–12 are doing throughout the country are very diverse. They range from starting a recycling or composting program to preserving native plants, to setting aside time after school to teach young children to read.



This booklet contains several service-learning projects that focus on various aspects of safe solid waste management, such as reducing household hazardous waste and buying recycled-content products. Each profile includes contacts who can provide information on how to start a similar program in your area. Additional resources, including grants that can help you start a project, are located in the back of this booklet.



Whether you are looking for ideas to start a program in your school or a service project in your neighborhood, the projects in this booklet will help jump-start your efforts. Service-learning projects are one of the best ways to make an environmental difference for you and your community.

for More Information:

EPA Docket/OSWER Team

1200 Pennsylvania Avenue, NW (5305T) Washington, DC 20460 Phone: 800 424-9346 (TDD: 800 553-7672)

Fax: 202 566-0272

Contents

Kids and Governments & Businesses1
"Real World" Recycling: Winston Middle School— Winston, Oregon
On the Road Again: La Quinta High School— La Quinta, California
Students Graduate to Safe Disposal: Montgomery County High Schools—Montgomery County, Maryland 4
Old Computers Find New Homes: Chippewa Valley Technology Charter School—Eau Claire, Wisconsin5
Upholding Village Values: Mount Sanford Tribal Consortium—Chistochina and Mentasta, Alaska 6
Kids and Neighbors
Kids and Neighbors
Working with Worms: Earthworks Junior Master Composter
Working with Worms: Earthworks Junior Master Composter Program—Grapevine, Texas
Working with Worms: Earthworks Junior Master Composter Program—Grapevine, Texas

Contents (cont'd)

Kids and Schools
Charged Up About Recycling: Burlington Township High School—Burlington, New Jersey
Mentoring To Make a Difference: Stonington High School—Pawcatuck, Connecticut
Remove, Recycle, Reuse: Oxford Academy— Oxford, New York
Students Become Teachers: Smyrna Primary— Smyrna, Tennessee
Sights and Smells Inspire Action: McKinley Elementary School—San Leandro, California
"Strut" Your Stuff: Eddyville School— Eddyville, Oregon19
Thinking Globally, Working Locally: Beverly Hills High School—Beverly Hills, California
Resources
More Ideas

Kids and Governments & Businesses

"Real World" Recycling: Winston Middle School

Winston, Oregon

t a time when few homes and businesses were recycling in Winston, Oregon, the eighthgrade class at Winston Middle School helped make a lasting impact on local businesses' waste management efforts.

Students made numerous recycling presentations to the school board and city council to encourage the community to expand its efforts to reduce waste. In addition, they performed 20 waste audits

Contact:

Terri Peterson
Douglas County Waste
Reduction and Recycling
1036 South East Douglas Avenue,
Room 220
Roseburg, OR 97470
Phone: 541 440-4350

in two years for interested companies, examining trash, weighing recyclable materials, and noting potential waste reduction opportunities. The students then presented their findings—which included waste loss assessments as well as current and potential costs and savings—to the companies.

The project culminated in a town Earth Day event, complete with booths designed and staffed by students, teachers, and local government entities. Through the project, students formed community connections and taught solid waste concepts, while business owners and employees offered insights on environmental concerns in the corporate world. "Many of the students who excelled in performing waste audits were not strong academic students," said Terri Peterson, project coordinator. "This project allowed students to recognize their individual talents outside the classroom, in a real-world atmosphere."

Winston Middle School is no longer involved in the waste audit project, but its success inspired Peterson to continue doing waste audits with other area schools. She has already helped approximately 50 schools of all age levels conduct internal waste audits to improve their own recycling programs. Now, a local high school performs waste audits for area businesses, including a hospital, pizza parlor, food bank, and nonprofit and commercial offices. The students plan to use the data they collect to encourage all downtown businesses to implement recycling programs.

On the Road Again: La Quinta High School

La Quinta, California

tudents in the La Quinta High School environmental club work with community businesses and tribal organizations to collect and recycle tires abandoned in a nearby desert. The recycling drive has taken place during a weekend each year for the past two years.

Since the adoption of a state-wide law banning tires from disposal in landfills, more people have illegally dumped tires in desert areas in California. To help alleviate this problem, the La Quinta environmental club organizes a trip to remove and recycle tires from a section of desert near Joshua Tree National Park.

The students are first notified by U.S. Bureau of Land Management rangers

students pass the information to Waste Management of the Desert—a local private hauler—who places empty containers in the identified areas. Wearing protective gloves and safety vests, the students return to the site to collect tires and place them in the containers. The hauler, who also provides lunches for the students on the collection day, takes the filled containers to First Nation

ence teacher at La Quinta who founded the environmental club. "Some of the tires were shredded and used to resurface area roads."

The tire recycling project shows students firsthand what happens to trash when it is not properly disposed of. It also allows them to work with local businesses and state and tribal organizations to make a difference in their community.

Contact:

Liz Biller La Quinta High School 19255 Westward Ho Drive La Quinta, CA 92253 Phone: 760 772-4150 E-mail: Lizb@surf.dsusd.k12.ca.us

which areas of the desert have the most concentrated dumping sites. The Recovery Incorporated, a tire recycling facility operated by the Cabazon Tribe. "The students recycled eight tons of tires in the first year," said Liz Biller, a sci-



Students Graduate to Safe Disposal: Montgomery County High Schools

Montgomery County, Maryland

n Montgomery County, Maryland, high school students learn that volunteering can be just as important as classroom studies. By assisting with the county's household hazardous waste collection program, students learn about solid waste issues and earn credits toward graduation.

Contact:

Jim Welch, Manager
Montgomery County Master
Recycler/Composter Volunteer Program
16101 Frederick Road
Derwood, MD 20855
Phone: 301 840-2852

E-mail: volunteers@mcrecycles.org

Montgomery County's Master

Recycler/Composter Volunteer Program works with adult and student volunteers to operate collection events for recyclable materials that are not regularly accepted at the county transfer station. On household hazardous waste collection days, unused paint, leftover household chemicals, and other materials that cannot be disposed of safely in the trash are collected at the transfer station and other satellite locations. Events take place between March and December once or twice a month. Volunteers provide necessary logistical support to make these collections possible, reduce the cost of frequent collection, and allow for safe disposal of these materials.

Following a state mandate that students perform a set number of service hours to qualify for graduation, large numbers of high school students began volunteering at collection events. Now more than 20 percent of the volunteers participating in the collections are students. Typically, six to eight student volunteers work with adults to direct 250 to 665 cars per event. As part of their graduation requirement, the students write a paper to reflect on what they learned.

After observing how much household hazardous waste is collected for disposal in a single day, students began to understand the need for source reduction, such as buying only the amount they will use or selecting a less toxic alternative. In addition, the county used the household hazardous waste collection program as a model to begin a computer recycling collection program with student volunteers. Thanks to student efforts, the computer recycling pilot was so successful that computers are now regularly accepted at the transfer station.

Old Computers find New Homes: Chippewa Valley Technology Charter School

Eau Claire, Wisconsin

o help reduce the amount of hazardous waste unknowingly disposed of when throwing out obsolete electronics, students in a computer construction and network design class at Chippewa Valley Technology Charter School in Eau Claire, Wisconsin, participate in a service-learning program called Computers Refurbished in Schools (CRIS). The Wisconsin Department of Natural Resources runs the CRIS project in conjunction with Chippewa Valley Tech, which serves nearby North and Memorial

Contact:

Ed Jeffers, Damon Smith
Chippewa Valley Technical
Charter School
2700 Mercury Avenue
Eau Claire, WI 54703
Phone: 715 839-6227,
715 839-1500
E-mail: ejeffers@ecasd.k12.wi.us,
dsmith1@ecasd.k12.wi.us,

high schools. The project's goal is to keep obsolete computers out of landfills while providing students with educational, real-life work experience.

North and Memorial students have been involved in refurbishing and recycling computers since 1998, and Chippewa Valley Tech won a state grant to participate in CRIS in 2000. In the classroom, students learn computer basics, including how to diagnose and solve computer problems and install and upgrade operating systems. They use this knowledge to refurbish or recycle computers donated by local businesses. The school then donates refurbished computers to the



United Way, which sells them to needy families and non-profit businesses in the Eau Claire area. "Since getting involved in CRIS, we've refurbished approximately 100 computers per year," said Ed Jeffers, a computer construction and design teacher at North. Computers that can't be fixed are disassembled so that usable parts can be salvaged and the rest can be recycled.

Several students who have participated in the program have earned apprenticeships with local businesses and advanced standing credits with a local technical college. Although the state grant has expired, the program continues to receive local support, and Chippewa Valley Tech plans to continue refurbishing and recycling computers as long as they keep receiving donated computers.

Upholding Village Values: Mount Sanford Tribal Consortium

Chistochina and Mentasta, Alaska

hrough the Mount Sanford Tribal Consortium's *Whouy Sze Kiunalth* ("Teaching Our Many Grandchildren") service-learning program, 70 students in grades K–12 in the villages of Chistochina and Mentasta, Alaska, learned from their Elders and others why caring for the land is important.

Contact:

Joan Herrmann

Mount Sanford Tribal Consortium
P.O. Box 357

Mile 33 Tok Cutoff
Gakona, AK 99586
Phone: 907 835-5510

E-Mail: jjherrmann@myexcel.com

One aspect of the program aims to teach

students and the community how to store and eliminate trash and household hazardous waste in a safe manner. To this end, Elders participated in culture camp programs for kids and told stories about their ancestors' way of respecting the land. In the fall, students and village members participated in village clean-up days. And students participated in periodic hazardous waste treasure hunts—collecting batteries, oil bottles, fuel cans, and other items that had been discarded at their original Village sight, and then disposing of them properly or recycling them.



Lessons from the program reverberated from the children to the larger community, and the villages also began to take action. Both Chistochina and Mentasta began building structures to support recycling programs. Villagers are more careful to avoid littering. In addition, with input from the Elders and others, the community developed the first culturally relevant environmental curriculum, which is now being used

by both school districts and is helping to inspire neighboring communities to begin similar service-learning programs.

"Everyone's attitude has changed over these few years," says Project Director Joan Herrmann. "People are making permanent changes to some old habits. Kids are growing up learning how to be more responsible for their environment—they are learning to see the connections between the toxic waste they toss on the ground and the river they take their fish from."

Kids and Neighbors

Working with Worms: Earthworks Junior Master Composter Program

Grapevine, Texas

Master Composter Program in Grapevine, Texas, don't mind getting their hands dirty. In fact, they've taken it upon themselves to spread the word in Grapevine and throughout the South that composting and organic recycling can help reduce waste.

Contact:

Larry Wilhelm
Grapevine Parks and Recreation
P.O. Box 95104
Grapevine, TX 76099
Phone: 817 410-3366

According to a Texas Governor's Report, up to 70 percent of the state's waste stream is organic. Inspired by that fact, the Junior Master Composter Program decided to increase children's awareness of the positive role they can play in waste reduction at home and at school through composting. They are also learning how worms can help them compost organic materials through a process known as "vermicomposting."

Through the program, fifth and sixth graders learn about composting and vermicomposting in a four-hour course that teaches them how to turn leaves, grass, and food scraps into "black gold," or compost. The course teaches them the history of garbage and landfills, the definition of organic material, and the

principles of composting. Participating schools receive a compost bin, thermometer, manual, resource books, and worm bin. After attending the class, each student spends an additional four hours teaching parents and neighbors to compost yard trimmings or working with other students at school composting demonstration sites. To receive their Junior Master Composter certificate, students must commit to teaching at least two others about the fundamentals of composting.

Over the past six years, the Earthworks
Junior Master Composter Program, funded by 10 grants, has reached 20,000 students at 250 schools, zoos, and nature centers across the South. The program has also trained an additional 200 classroom instructors.

Blazing the Trail to Recycling: Seward Trailblazers 4-H Club

Nobles County, Minnesota

ost residents of Seward Township in southwestern Minnesota had never considered recycling because the closest recycling center was 25 miles away. Instead, they used to burn or bury all of their refuse. Thanks to the work of a local 4-H Club, however (an organization dedicated to community service and education), recycling in this rural part of Minnesota is now a way of life.

It all started in response to a severe drought, which led to a ban on burning. The approximately 60 members (ages 7 to 19) of the Seward Trailblazers 4-H Club had just completed a lesson on recycling taught by Wayne Smith, the Environmental Director for Nobles County. The group decided the ban was a perfect opportunity to use what they had learned to educate their community about recycling.

Contact:

Wayne Smith
Nobles County Environmental
Director
P.O. Box 757
Worthington, MN 56187
Phone: 507 372-8227

The Trailblazers started an annual education campaign including mailings and door-to-door visits to each resident of Seward Township. They also informed residents about the six new 96-gallon containers set up by the Trailblazers outside the township hall to serve as a convenient recycling drop-off site. Residents could use the containers, supplied by Nobles County Environmental Services (NCES) to drop off plastic, paper, glass, and corrugated cardboard. NCES would then pick up the recyclables and take them to the Nobles County Recycling Center, located in Worthington, Minnesota. Two additional 55-gallon containers were set up to collect aluminum cans. The Trailblazers planned to use the deposits from these cans to support their activities.

Although the ban was only in place for about 30 days, Seward Township residents started recycling and now recycle about 340 pounds every 10 days. To keep up with the amount of recyclables collected, the Trailblazers added two more containers and built a new recycling drop-off building with money from the aluminum can deposits. They also plan to offer residents 15-gallon recycling containers for a small fee. The project has been so successful that neighboring townships have expressed an interest in starting similar programs.

From 4-H to 3 Rs: 4-H CAPITAL Program

Austin, Texas

eventh- and eighth-grade students in a 4-H after-school program in Austin, Texas, are learning about waste issues using the "three Rs"—reduce, reuse, and recycle—and are spreading the message to their community.

After studying the "three Rs" in school, students at Martin Junior High worked with teachers to redesign their 4-H cur-

Contact:

Lillianne Goeders
Travis County Agricultural
Extension Service
1600 B Smith Road
Austin, TX 78722
Phone: 512 473-9600

E-mail: L-goeders@tamuledu

riculum to incorporate lessons on reducing, reusing, and recycling. The students promoted their new curriculum to other Texas 4-H groups and then decided to spread the message to the community, setting up a composting display at a local environmental education center and producing a 10-minute



educational video. The Travis County Master Composters organization has included the video as part of its resource library for adults who work with youth, and the composting display is visited by more than 3,000 students and teachers each year. In a project funded by a National 4-H Council grant, the students also developed a Web page with hints and tips on waste issues to promote the "three Rs" worldwide.

The students also use community events such as Austin's Science Fun Day as an opportunity to teach others about environmental issues. They recently taught more than 200 younger students about the importance of "beneficial bugs" in breaking down waste materials through composting.

This successful youth-led collaboration teaches the importance of understanding the waste cycle, and participants develop a sense of pride and achievement while learning the importance of protecting the environment. The partnership between Martin and 4-H has been recognized by Austin Corporate Recycling Council's 2000 Environmental Vision as the "Best of the Best," and by Texas Corporate Recycling Council's 2000 awards for schools and universities.

Stewardship in Action: Groundwork Providence, Inc.

Providence, Rhode Island

igh school students in Providence, Rhode Island, are learning to be stewards of their community by teaching their neighbors about local environmental issues and being role models for younger children.

Led by educators from the nonprofit organization Groundwork Providence, a local affiliate of Groundwork USA, a national community and environmental group, students participate in a program known as the Education Team (E-

Team). Each year, this team—comprised of Providence students between the ages of 14 and 18—is involved with developing, organizing, and implementing an environmental after-school club and a summer environmental education camp for kids in grades K–6. Students also serve as mentors for elementary school children.

E-Team members attend regular training workshops and participate in field trips to learn about a variety of environmental issues

Contact:

Sally Turner
Groundwork Providence
69 Washington Street
Providence, RI 02903
Phone: 401 351-6440

E-mail: sally_turner@yahoo.com

affecting their local community. For example, to learn about proper solid waste management, students covered the issues of brownfields, trash containment, recycling, and household hazardous waste. After the training, E-Team members share their newly acquired knowledge with the club and camp participants by leading service projects, such as cleaning up vacant lots, stenciling storm drains, and educating community members about recycling and proper trash containment by providing brochures, sample recycling bins, and trash cans with lids. Together the E-Team members and the club and camp participants produce a newsletter as a record of their achievements and a community outreach tool.

Most recently, E-Team members partnered with Providence's Neighborhood Task Force on Recycling and created new educational lessons and projects for the club and camp children they serve. The projects are designed to broaden the reach of earlier neighborhood recycling campaigns by using grassroots education and outreach to promote awareness about the importance of recycling. This project also aims to increase recycling rates throughout the city of Providence.

From Paper to Flowerpots: Thayer County Cooperative Extension Agency

Hebron, Nebraska

s part of a school enrichment program promoting volunteerism, first-through sixth-grade students in Nebraska learned how to use recycled-content paper to make flowerpots, which they gave to "adopted grandparents" at area elder care communities.

Crystal Fangmeier of the Thayer County Cooperative Extension Agency developed the program to show children that "just because

Contact:

Crystal Fangmeier
Thayer County Cooperative
Extension
225 North Fourth Street
Hebron, NE 68370
Phone: 402 768-7212

you throw something away, that doesn't mean it's gone." More than 100 students from six classrooms at public, private, and parochial schools in a three-county area participated. First, they learned about the concepts of recycling and reuse. Then, with shredded paper from a local hospital, they created paper pulp. Using little cups as molds, they shaped the paper pulp into starter pots, let them dry for a week, and planted flowers for their adopted grandparents.

The students were encouraged to tell the recipients how they made the pots and to talk about recycling with them.

This ongoing project enabled the students to not only reduce the amount of paper thrown away each year, but also to form a connection with the elderly. After the program, students told Ms.

Fangmeier that they continued to reduce paper waste by coloring their own wrapping paper, using less paper, and recycling the paper they used.

Kids and Schools

Charged Up About Recycling: Burlington Township High School

Burlington, New Jersey

fter learning about the environmental problems associated with household battery disposal, students at Burlington Township High School in New Jersey developed a battery recycling program for their hometown.

Contact:

Shirley Pires
Burlington Township High School
610 Fountain Avenue
Burlington, NJ 08016
Phone: 609 387-1713

Eleventh and twelfth grade students in

Shirley Pires' "Community Issues" class, an elective directed primarily by students, chose several community issues they wanted to learn about in the 2000-2001 school year. After selecting the environment, homelessness, and terrorism as areas they wanted to cover, they developed service programs (such as fundraisers or community outreach projects) for each. One student volunteered to coordinate each project.

As part of the unit on the environment, students learned about hazardous household waste and recycling. Students became particularly interested in household battery waste, including how long batteries take to break down and the subsequent chemicals released into the environment. They decided to start a battery recycling program in their school.

First, students collected soda and laundry bottles and converted them into battery collection containers by washing them out, cutting off the tops, and re-labeling them with computer-generated labels.

Students distributed these containers, along with flyers explaining their project, to teachers and offices throughout the school. News of the program spread, and teachers from the four other schools within the district asked to become involved. Students also involved parents and community members by developing additional informational materials to send home and distribute in the district. Eventually, children began coming to school with batteries from home to be recycled. Students collected the recycling bins weekly from each school. At the end of the school year, the local recycling center collected more than 500 pounds of batteries from all the schools combined.

The program is continuing this year and is so popular that relatives and friends from other towns now drop off their batteries at Burlington Township schools. In fact, the recycling center must now pick up more than one load of batteries a year.

Mentoring To Make a Difference: Stonington High School

Pawcatuck, Connecticut

fter successfully starting their own recycling program, Stonington High School students in Pawcatuck, Connecticut, became mentors to help other schools around them.

Students began by forming an after-school recycling committee to help improve the existing recycling program in their own school. The committee took charge of recycling white paper and expanded the program to include cans, plastic bottles, colored paper, and light bulbs. The committee also persuaded school officials to start buying recycled paper. The improved recycling program won a state award, inspiring the students to use their program as a model for other schools.

To help other schools improve their recycling programs, students began a mentoring program, which involved making videos of their activities and conducting presentations about recycling and its benefits. Students filmed the tours they took of a recycling plant and a waste-to-energy plant and prepared a video series on special topics such as product life cycles. The students used the videos to develop a presentation about their recycling program, which they shared at school functions at district elementary and middle schools, at a meeting of state school superintendents,

Contact:

Bill Garraty Stonington High School 176 South Broad Street Pawcatuck, CT 06379

Phone: 860 599-5781 E-mail: zaderi@aol.com

and with community officials to help raise recycling awareness.

The program helped students become involved in recycling and also helped spread the message to younger students and to the community. "We are cutting a path in education at the high school level that middle and elementary students can walk along," said Bill Garraty, a teacher at Stonington High. Now in its third year, the recycling committee has evolved into a broad environmental group that covers a wide variety of issues, including nuclear power, fisheries, and reforestation.

Remove, Recycle, Reuse: Dxford Academy

Oxford, New York

ach year since 1999, the entire fourth grade (approximately 90 students) at Oxford Academy has taken part in a year-long service-learning program that is fully integrated into the New York State school curriculum.

The program starts with a visit by a representative from the North Norwich

Contact:

Heidi Foster

Service-Learning Coordinator

The Place
P.O. Box 509

Norwich, NY

Phone: 607 336-9696

Waste Management Facility (NNWMF) who talks to the students about waste, the importance of recycling, and the types of recyclables to look for in various parts of the community. Students then spend part of one day in the community removing trash from playgrounds, near the river, public benches, school grounds, and in front of business establishments.

Students take the materials they collect to NNWMF where the same representative teaches the fourth graders about how materials are recycled and gives them an opportunity to be a part of the recycling process. Students weigh the materials they collected and separate them into recyclable and non-recyclable items. Last year students removed 116 pounds of garbage from the community.

Back in the classroom, lesson plans continue to integrate the recycling theme. Students graph the amount and type of garbage collected by geographic region. In science class, students learn about different types of garbage, including biodegradable products, and then brainstorm different uses of biodegradable materials. They read poetry about the environment and then write poems of their own on recycled paper they created. "Students benefit by not only gaining a local understanding of their environment, but by creating a respect for their community," said fourth grade teacher Glenn Van Houten.

This year, students also decided to create art from the materials they collected and display the projects throughout the school.

Students Become Teachers: Smyrna Primary

Smyrna, Tennessee

ourth graders in Smyrna, Tennessee, work with other children and their parents to increase awareness of recycling and promote participation in the school's recycling program.

Smyrna's current recycling program was inspired by a one-year pilot project in which fourth graders taught preschoolers about recycling, set up recycling bins in the preschool classroom, and helped the younger children collect, sort, and count materials. The older students planned lessons on recycling, designed a booklet on how to get others involved in recycling, and taught the preschool students how to make toys and games from recy-

clable materials. "The preschool children became so involved in the recycling project that their class often won the recycling awareness award at our academic celebrations," said Carla Sartin, a special education teacher at Smyrna Primary.

Following the success of this project, the fourth-grade students started the school's existing recycling program, setting up more

Contact:

Carla Sartin Smyrna Primary P.O. Box 305 Smyrna, TN 37167

Phone: 615 459-3161

bins around the school and counting the total number of recyclables brought in every six weeks. To encourage other students to recycle, the fourth graders award prizes to the grade level that brings in the most recyclables, the top recycler in each class, and the top recycler school wide. By the end of the 2000-2001 school year, Smyrna students had recycled more than 65,000 pieces of trash, and the numbers are expected to rise in following school years. The fourth graders also took part in a special community recycling project in 2001—a telephone book collection project sponsored by a local recycling organization.

Through this ongoing program, students use math and communication skills to tabulate recyclables and promote recycling, while learning a sense of responsibility for the environment. In addition, students become teachers in their own homes, working closely with their parents to share and apply their new knowledge.

Sights and Smells Inspire Action: McKinley Elementary School

San Leandro, California

School in San Leandro, California, became waste reduction detectives after visiting their county's largest transfer station. By discovering the sights and smells of the large garbage pit, third-grade students decided to investigate waste reduction options in their school.

A team of second, third, and fourth grade teachers encouraged their students

to collaborate on a waste reduction strategy for the school. Armed with clipboards, the students explored the school campus to learn where waste was generated. They recorded their findings and created charts of the amounts and types of waste produced in classrooms, lunchrooms, and other areas around the

Contact:

Karla Ball McKinley Elementary School 2150 East 14th Street San Leandro, CA 94577 Phone: 510 667-3582

school. Back in their own classroom, students and teachers discussed the data, then brainstormed solutions and developed suggestions for implementing campus-wide change to their school's waste management practices. To encourage awareness and greater recycling among their peers, the students informed their fellow students what materials could be recycled and then placed a paper recycling bin in

every classroom. In the months following, teams of students conducted surprise classroom waste audits twice a week to monitor progress toward increasing recycling in their school. Classes with no recyclables in the garbage were rewarded with prizes and an announcement over the public address system. This public recognition inspired other classes to participate and recycle more.

"This was an extremely exciting project for the students," said Karla Ball, a teacher involved with the project. "Not all classes were recycling at 100 percent. We saw an increase in classroom recycling over the school year and gained a better understanding of how change is created one classroom at a time."

"Strut" Your Stuff: Eddyville School

Eddyville, Oregon

small, rural K–12 school in Eddyville, Oregon, really knows how to strut its stuff. The "Strut," or "Students Recycling Used



Technology," Program, initiated in 1998 at Eddyville School, promotes recycling of old computer hardware into renewed, refurbished components for use in classrooms, school computer labs, and students' homes. Strut provides opportunities for high school students to learn about equipment and technology through a hands-on approach, while helping rescue "technological trash" from landfills and installing it in educational settings where it can enhance instruction.

"Strut is the auto shop of the new millennium," says Don McDonald, principal of Eddyville School. "It allows students to work with their hands rather than paper and pencil, and it gives them the technological awareness and skills they need to enter into today's world." Using an inquiry-based approach, teacher Robert Pearson encourages students' problem-solving skills and sense of responsibility.

Contact:

Don McDonald or Robert Pearson P.O. Box 68 Eddyville, DR 97343

Phone: 541 875-2642

Small and large businesses, community members, and public agencies donate used or outdated computers and technical equipment to Strut. Students tear down the equipment and upgrade components, reassemble units, and then distribute the equipment based on student and district needs. Over the last three years, more than 300 computers have been "recycled" and made available for student use. Students also provide follow-up services related to the computers they have reclaimed.

Student technicians install, service, and troubleshoot the computer hardware to ensure problem-free and efficient use.

Judging by students' reactions, the program is a tremendous success. "This is the only class I look forward to during the day," said one student. "I finally found 'Nerd-vana'," another reported.

Thinking Globally, Working Locally: Beverly Hills High School

Beverly Hills, California

ailing from Iran, Korea, Russia, Israel, and other international locations, Beverly Hills High School students worked together to bring recycling to their community.

After learning how materials such as paper and plastics are made and what happens to those materials once they are discarded, the sophomores, juniors, and seniors in Sarah Utley's Life Science class designed a project to establish a recycling

Contact:

Sarah Utley Beverly Hills High School 241 Moreno Drive Beverly Hills, CA 90212 Phone: 310 551-5100 ext.8709

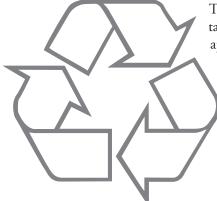
E-mail: sarahutley@hotmail.com

program at their school. Ms. Utley used curriculum materials from a recent service-learning workshop organized by Generation Earth, an environmental education program of the Los Angeles County Department of Public Works, to guide the students in creating a successful program.

Students broke into small workgroups to help make their case for a school-wide recycling program. One group performed a waste audit to document the need for recycling. Another group talked with the city manager and local waste disposal facilities about the feasibility of starting recycling at the school, including the cost of hauling the recyclable materials and the revenue from the bottle and can deposit refunds. Other groups interviewed students and teachers to gauge awareness of waste disposal problems, concern for waste reduction issues, and opinions on a school recycling program. The responses—incorporated into a video presentation—mostly favored the students' efforts.

The project culminated in an oral and video presentation to the school principal. The principal gave his approval, and the students are now working with the student council on implementation.

According to Ms. Utley, these first and second generation American students gained great pride and self-confidence by creating and completing the project themselves and making a difference in their community.



Resources

or more information about service-learning programs, grants, and ideas, contact your state's community service commission or education department. The following national organizations also are involved in coordinating or funding service-learning projects.

Corporation for National and Community Service

1201 New York Avenue, NW. Washington, DC 20525 Phone: 202 606-5000

Phone: TDD 202 565-2799

Web site: www.nationalservice.org

The Corporation for National Service was chartered by Congress in 1993 to provide a broad range of opportunities to Americans of all ages and backgrounds to serve their communities and the nation. One of its grant programs, Learn and Serve America, supports service-learning programs in schools, colleges, and community organizations that engage nearly one million youth in the areas of education, public safety, the environment, and other human needs.

Learn and Serve America/National Service-Learning Clearinghouse

ETR Associates P.O. Box 1830

Santa Cruz, CA 95061

Phone: 866 245-SERV (7378)

Fax: 831 430-9471

Web site: www.servicelearning.org

This informational Web site, funded by the Corporation for National Service, is designed to support Learn and Serve America grantees, as well as other programs engaged in service-learning. The site includes information about service-learning resources, a listsery, and other helpful tools.

National 4-H Council

7100 Connecticut Avenue Chevy Chase, MD 20815 Phone: 301 961-2800

E-mail: info@fourhcouncil.edu
Web site: www.fourhcouncil.edu

The 4-H Environmental Stewardship Program offers grants, curricula, and other resource and reference materials to help youth address local environmental issues. The program works to bring young people, their families, and communities together in environmental projects. Youth are encouraged to become catalysts for action and generators of knowledge.

Girl Scouts of the U.S.A.

National Headquarters 420 Fifth Avenue New York, NY 10018-2798

Phone: 800 GSUSA4U (478-7248) or 212 852-8000

Web site: www.girlscouts.org

Girl Scouts from age 5 to 17 and their leaders are involved in environmental activities in their communities. All Girl Scouts can earn recognition for activities such as learning about landfills, recycling, participating in community cleanups, making recycled paper, or promoting clean water and conservation.

Boy Scouts of America

National Council Boy Scouts of America P.O. Box 152079 Irving, TX 75015-2079

Web site: www.bsa.scouting.org

Traditionally involved in many outdoor activities, Boy Scouts strive to become citizens that treat their environment responsibly. Through a conservation program, scouts learn about the use of natural resources, collaborate on community projects with local, state, or federal environmental organizations, and receive awards for projects that inform the public about the importance of environmental protection.

Boys & Girls Clubs of America

National Headquarters 1230 West Peachtree Street, NW.

Phone: 404 815-5700 Web site: www.bgca.org

Atlanta, GA 30309

The Boys & Girls Clubs of America help youth from all backgrounds—especially disadvantaged children—develop the qualities they need to become responsible citizens and leaders. Various programs promote community service projects, environmental awareness, and other related initiatives.

Take A Class Outdoors: A Guidebook for Environmental Service Learning

National Dropout Prevention Center Clemson University 209 Martin Street Clemson, SC 29634-0726

Phone: 864 656-2599 Fax: 864 656-0136

E-mail: ndpc@clemson.edu

Web site: www.dropoutprevention.org

Designed to inform educators and administrators about environmental service-learning and its positive effect on students, this guide includes sections on starting a program, adapting curricula, obtaining funding, and involving the community. Published in 1998, the book contains detailed project ideas for various age groups and offers success stories from other service-learning programs.



More Ideas

Hopefully, our service-learning guide has provided you with some ideas for your own school-based or community service-learning project. Here are a few more great project ideas:

- Multifamily Dwelling Collection Days—start a volunteer program that
 picks up recyclables or coordinates household hazardous collection days in
 apartment complexes or other multifamily residential areas.
- Vehicles for Seniors—provide seniors with transportation to do their recycling or establish a weekly pick-up system within senior citizen communities.
- Cafeteria Recycling/Sorting Days—help your school become more environmentally sound by starting a cafeteria recycling/sorting program for packaging or food waste.
- Used Clothing or furniture/Collection Pays—start a neighborhood campaign and collection system and donate all goods to homeless shelters.
 Design and distribute flyers to encourage neighborhood participation.
- Moving Days—establish a volunteer service aimed at helping people who are moving into or out of your neighborhood locate recycling facilities and properly dispose of household hazardous waste.
- Senior Partners—start a volunteer program that pairs youth with senior citizens to give talks to local citizen groups and schools about the importance of safely managing solid and household hazardous waste.



U.S. Environmental Protection Agency Mission:

To protect human health and the environment

EPA Office of Solid Waste Mission:

To ensure responsible management of hazardous and nonhazardous waste

EPA Office of Solid Waste Goals:

- To conserve resources by preventing waste
- To reduce the waste that cannot be prevented
- To ensure that all waste is properly disposed of

One key initiative that OSW has taken to achieve these goals is to continue its education and outreach efforts through environmental service-learning.

