

**PG&E CORPORATION FOUNDATION AND PG&E NATIONAL ENERGY GROUP
2001 ENVIRONMENTAL EDUCATION GRANT RECIPIENTS**

Alaska

1. **The Boys and Girls Club of Kenai Peninsula – Homer Unit; Homer, Alaska**
Bay Explorers Expedition to Kachemak Bay **\$4,000**
Students, ages 6 to 16, will explore the Kachemak Bay Watershed during an expedition. Prior to the trip, they will learn about the region's history and the forces that shaped it. They will visit a local nature center and natural history museum, in addition to participating in hands-on experiments. Students will conduct experiments on a floating classroom and engage in plankton tows, census data collection using microscopic equipment and videoscopes.

Funds will help provide curriculum materials, transportation, center and expedition fees and post-expedition materials.

California

2. **Fresno Unified School District; Fresno, Calif.**
Loggers on Loan **\$5,000**
About 500 students, ages 8 to 12, will become familiar with industrial level technology tools that are easy to use in a classroom setting and offer precision data collection over a period of time. Data loggers will allow the students to monitor various rooms in their homes and at school for heat accumulation and loss. They then will design or make recommendations on how to modify those environments to conserve energy.

Funding will help toward the purchase of loggers, software and training materials.

3. **Los Angeles Conservation Corps' Science Education Adventure (S.E.A.) Laboratory Program; Los Angeles, Calif.**
Plankton vs. Plastic – A Marine Science Education Project **\$5,000**
About 5,000 students, ages 8 to 18, will be educated on the connection between urban pollution and the health of our oceans. They will use plankton tow nets and microscopes and apply their math skills and knowledge to determine the relative density of microorganisms in water they collect from the Pacific Ocean with the plankton tow nets. Youth will learn about the effects of urban runoff and pollution on the marine environment.

Funding will help purchase tabletop video microscopy sets and plankton tow nets.

4. **Mira Vista Elementary School; Richmond, Calif.**
Mira Vista School Garden Project **\$5,000**
Through the Mira Vista School Garden Project, about 200 students, ages 4 to 12, will participate in nature-related activities, teaching them cause and effect related to conservation, water pollution and the concept of growing food. Students will learn about their impact on the environment, the effect of pollutants and how chemicals poured down a drain make their way into drinking water. The program also will cover many aspects of the science and art curricula.

Funding will help with the purchase of irrigation equipment, plants, gardening supplies, gloves, sketch and field books.

5. **Ocean View Elementary School; Whittier, Calif.**
Ocean View Gardens and Greenhouse Project **\$3,500**
More than 500 students, ages 4 to 12, will participate in creating an outdoor classroom. The project will provide a forum for applying traditional concepts of math, science, art and social studies in a practical outside setting. Students will develop oak tree seedlings grown in a greenhouse environment, harvest acorns, germinate oak seedlings and then plant them – thus increasing the local population of oak trees.

Funds will go toward the purchase of a greenhouse.

Connecticut

6. **Connecticut Audubon Society at Pomfret; Pomfret, Conn.**
Water Quality Monitoring **\$5,000**
About 650 students, ages 8 to 12, will learn about the importance of stream health. They will help measure water quality by collecting and identifying riffle dwelling microinvertebrates. Assisting the state Department of Environmental Protection in monitoring streams in northeastern Connecticut, students will make the data collected available at the Audubon Society's center.

Funding will go toward the purchase of rapid bio-assessment equipment.

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7. Killingly Memorial School; Danielson, Conn.

Taking Care of the Earth

\$5,000

About 600 students, ages 4 to 12, will learn about the importance of trees in our environment. They will develop an awareness of trees as a renewable resource as they provide clean air for people and habitat for birds and other wildlife. Students will interact with an environmental author/illustrator, as well as participate in a science assembly dealing with taking care of the world.

Funding will help purchase trees and shrubs, garden hoses and soakers, hand magnifiers and guidebooks.

District of Columbia

8. Discovery Creek Children's Museum of Washington; Washington, D.C.

Urban Safari

\$5,000

Through an exhibition, this project will work to bring systemic changes in the science and environmental content offered to students; teaching methods; and, the depth of intergenerational education offered to families and communities. The exhibit will include live animals, experiment and learning areas and cultural and historic stations. School curricula and teacher development programs will be developed in conjunction with the exhibit.

Funding will go toward the exhibit's design, materials, construction and educational activity programs.

Florida

9. Mandarin High School; Jacksonville, Fla.

Marine Science Environmental Discovery Experience

\$5,000

This program will provide an opportunity for marine science students to explore the marine environments they have learned about in class. About 30 students, ages 13 to 18, will participate in a field study for the ongoing high school habitat restoration project. The project focuses on building artificial reefs which help to provide students with a sense of environmental stewardship.

Funding will help with snorkeling equipment rental, transportation and housing.

Georgia

10. Tybee Island 4-H Center; Tybee Island, Ga.

Adopt-A-Wetland

\$5,000

About 1,200 students, ages 8 to 18, will gain experience with a salt marsh ecosystem, with tools for scientific data collection and analysis and with how fieldwork is conducted. They will collect visual, biological and chemical data from the salt marsh site. Additionally, they will complete a survey, study a map of the site and complete a checklist of land use activities. They will make visual inspections and inventories, sketch animals and plants, take water samples and pick up litter around the site. Students will compile data and determine how the site has changed since the last monitoring survey and original baseline study; causes of non-point and point source pollution to the site and the health of the local water bodies.

Funds will help provide research materials, lab equipment and supplies along with other materials to complete the study.

Maryland

11. The Key School; Annapolis, Md.

Campus Environmental Restoration Showcase

\$5,000

More than 700 students, ages 4 to 18, will be involved in an environmental restoration showcase project from concept through implementation and presentation to the community. The program will have an environmental emphasis on habitat creation and restoration, wetlands protection, water quality and conservation education. Students will learn watershed management and solve environmental problems by testing and using various methods of erosion control, decreasing the percentage of impervious surface and increasing biodiversity on campus through native plantings, which create new habitats.

Funds will help with the purchase of curriculum supplies, materials and equipment.

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Massachusetts

- 12. Kelley School; Newburyport, Mass.
Schoolyard Habitat Project** **\$5,000**
An urban schoolyard will be transformed into a thriving wildlife habitat and outdoor learning environment with the assistance of about 120 students, ages 4 to 12. They will assist with the wildlife inventory and mapping of the site, soil studies, researching native plants, investigating the history of the site, identifying needed animal and plant resources and designing, planning and constructing the habitat.

Grant funds will be used for tools, plants and related materials, wood for birdhouses, bird baths and pond building materials.

- 13. Town of Sturbridge Conservation Commission; Sturbridge, Mass.
Lakes, Streams and Wetlands Monitoring** **\$5,000**
Environmental studies classes at a local high school will study, monitor, identify, document and protect several lakes, streams, rivers, vernal pools and wetlands in Sturbridge. Field studies will be conducted and wildlife and plant species will be documented. The compiled data will be evaluated and accessible to all schools and the community at large.

Funds will help provide lab supplies, portable laboratory and testing materials.

New Jersey

- 14. Panther Academy – Paterson Public Schools; Haskell, N.J.
City of Paterson and Passaic River Environmental Study** **\$4,900**
About 200 students, ages 13 to 18, will conduct an environmental study to discover what real science is and what tools are available to conduct an authentic scientific investigation. Using scientific probes and other field equipment, students will take air and water samples – including an analysis of conditions in the local Passaic River. A student-created and maintained website will serve as a forum to report findings and analysis of the local region’s environmental issues as identified from student collected data.

Funding will be used to help purchase data collection software, probes, a global positioning system field monitor and other lab equipment.

New York

- 15. Brooklyn Botanic Garden; Brooklyn, N.Y.
Science Apprenticeship, New York Metropolitan Flora** **\$5,000**
Brooklyn public high school students will experience hands-on “in the field” environmental science. Students will conduct research with the Brooklyn Botanic Garden’s scientists, applying classroom studies to actual scientific questions, while learning about the bio-diversity of the local region.

Funding will cover costs for 24 students, ages 13 to 18, to study as science apprentices.

- 16. Catskill Elementary School; Catskill, N.Y.
Outdoor Learning Center** **\$5,000**
An outdoor learning center with a nature trail, outdoor classroom and amphitheater for school and public environment education will be created. The living lab also will provide activities such as studying plants to teach measurement, charting and classification; developing observation and measurement skills using simple experiments; and, identifying how humans have affected the environment. About 850 students, ages 4 to 12, are expected to benefit from the center.

Funding will provide lab tables, books, teachers’ guides and other resources to run the center.

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17. **Educational Broadcasting Corporation; New York, N.Y.**
OnLine Mentor Program – *What’s Up in the Environment* **\$5,000**
An online mentoring component to the program, *What’s Up in the Environment*, will be developed, allowing 50 classrooms across the country with students, ages 11 to 15, to communicate with environmental experts on one of 10 long-term classroom projects. Ten experts will serve as online mentors from five different environment disciplines – land, water, air, education/media and energy. Students will learn the scientific inquiry process – researching their topic, formulating a hypothesis, gathering data, conducting experiments, interpreting and representing their findings and displaying results.

Funds will help develop the online program.

Oregon

18. **Alpha High School Conservation Corps; Portland, Ore.**
Raising Salmon in the Classroom **\$4,500**
About 50 students, ages 8 to 18, will learn about the lifecycle of salmon and basic watershed ecology. Over six weeks, they will incubate and raise salmon to the fry stage, then they will be released. Raising the salmon will allow students to understand the habitat needs of the fish by comparing water quality and overall habitat conditions of the area, the aquarium and the site of release.

Funds will help purchase aquarium equipment, outreach materials, water testing equipment and other resources to complete the project.

19. **Crater High School; Central Point, Ore.**
Rogue Ecology Academy **\$5,000**
About 300 elementary, middle and high school students will be taught about environmental issues revolving around the Rogue River basic ecosystem. They will study fish and wildlife habitats, forest ecology, pollution and fish rearing.

Funds will help purchase items to finish building a hatchery and pond filtration pump system, which students will assist in building and operating upon completion.

20. **Eastham Community School Linkup Program; Oregon City, Ore.**
Neighborhood Ecology Tours **\$4,987**
About 60 home-schooled students, ages 4 to 18, will develop a neighborhood tour in which students can teach neighbors about the plants and animals that live in the community. Documenting the findings, students will be expected to research the history and importance of land conservation; discover how trees affect air quality and energy conservation and whether any endangered species might live in the area.

Grant money will provide students with field and computer equipment and resource materials.

21. **Estacada Future Farmers of America and Estacada High School; Estacada, Ore.**
Natural Science Outdoor Classroom **\$5,000**
An outdoor lab will be created for native plants after students clear the land on school property. The plants, eventually to be part of a nature trail, will be grown and propagated by the high school horticulture class. Students will identify and remove non-native plants on a continuous basis until there is no further re-growth. As the project moves forward, a curriculum will be developed and coordinated with various classes at different area schools. About 2,500 students, ages 4 to 18, are expected to participate in this project.

Funding will help purchase trees, insulation, barkdust and other materials.

22. **Oregon 4-H Education Center and Oregon 4-H Foundation; Salem, Ore.**
Up Close Science 4-H Outdoor Education Program **\$5,000**
The program will provide high school and elementary youth a unique educational opportunity to take a look at the micro-biotic world. Students will be engaged in scientific inquiry, documentation and presentation of findings. They will learn to understand the structure, functions and interactions of living organisms and the environment.

Grant funds will help purchase a video microscope system, water sampling equipment, microscopes with carrying cases, field books and a digital camera with accessories.

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Pennsylvania

23. Lourdesmont High School; Clarks Summit, Pa.

Nature Trail

\$4,000

About 100 students, ages 13 to 18, will help build and maintain a nature hiking/walking trail. The completed trail will be used for educational purposes, primarily in the discipline of science and environmental studies, as well as physical education, life skills training, art and English. Practical application of environmental issues will be implemented on an ongoing basis through yearly maintenance of the trail, focusing on conservation, wildlife habitat and erosion control.

Funding will help purchase habitat supplies, tools and building supplies.

24. The Village of Arts and Humanities; Philadelphia, Pa.

Native Urban Life Initiative

\$5,000

About 1,500 students, ages 4 to 12, will help investigate, transform and conserve the local landscape of Philadelphia through education and hands-on projects. They will study birds, insects, shrubs and trees native to the area. Through weekly workshops, students will learn the major principles of biology and botany, bio-diversity and interdependence of ecosystems. Local horticulturists will teach students about the effects of air pollution, ozone depletion, extinction of native life and soil toxicity on the overall environment. A vacant land site will be turned into a children's tree nursery, designed and constructed by neighborhood children.

Funding will help purchase supplies and tools and pay for program supervision.

Rhode Island

25. Roger Williams Park Zoo; Providence, R.I.

Acting Locally

\$5,000

ZooPower, a youth program between the Roger Williams Park Zoo Education Department and the Hebb Waterfowl Trust, will help students develop an understanding of threats to local wildlife and the value of restoring habitat to ensure long term survival of native species. An indoor and outdoor classroom will be created with the help of students. They will research and collect objects from the property including feathers, nests, bones, skulls and eggs to be labeled and used as instructive materials. Students also will transform a small pond by emptying and cleaning it, reworking the water filtration and aeration systems, reintroducing and testing water and eventually introducing native wildlife species into the pond to be used for education programs on native fish, reptiles and amphibians.

Funding will help with renovation materials, pond supplies, water equipment and other supplies.

Texas

26. City of Brownsville; Brownsville, Texas

Adopt a Resaca Project

\$5,000

This project, incorporated into the local ecology curriculum, will teach students about the types of native shrubs and environmental benefits with presentations and classroom seminars. More than 100 student volunteers, ages 8 to 18, will plant a butterfly garden with native shrubs along the banks of several resacas. Project planners expect to have improved water quality by capturing pollution, serving as an aesthetic enhancement, while providing a habitat for birds, butterflies, small animals and insects.

Funding will help supply shrubs and equipment.

27. Donna Independent School District; Donna, Texas

Young Farmworkers' Academy

\$5,000

About 35 fourth- and fifth-grade students will participate in a composting program. They will learn to use the internet to research waste management, composting practices, soil quality and the science of composting. Field trips to organic farms and presentations from master gardeners will be part of the curriculum. The program also will help re-establish a composting program at a local elementary school in cooperation with the school cafeteria, continuing organic flower and vegetable gardens already in existence.

Funding will go toward the purchase of gardening supplies, books and transportation to field sites.

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Vermont

28. Readsboro Central School; Readsboro, Vt.

The Deerfield River – Our Neighborhood

\$5,000

In a multi-disciplinary approach mixing science, social studies and math, about 80 students, ages 4 to 18, will learn that they are living next to a unique and fragile natural environment on the Deerfield River. By studying the river and its watershed, students will learn to appreciate the value of this resource by becoming acquainted with the natural and man-made forces that impact it.

Funding will help with the purchase of books, equipment and software.

Washington

29. Deer Park High School; Deer Park, Wash.

Preservation of Ponderosa Pine Woodland

\$4,870

Designed to preserve ponderosa pine woodland, this project will create a nature trail. During the development, high school students will focus on ecosystem analysis and environmental education. They will design a web page to highlight the trail's development. Eventually the trail will serve as a living classroom.

Funding will provide global positioning system units, digital cameras and a laptop computer.

30. Environmental and Adventure School; Kirkland, Wash.

Native Plant Repository, Cultivation and Restoration

\$5,000

This program will help establish the school's own native plant repository where salvaged plants from construction sites can be stored and propagated from stem and root cuttings. More than 130 students, ages 8 to 18, will help plan and construct a repository to include a greenhouse, storage shed, raised planting beds, compost and worm bins. Students will receive horticulture training in native plant propagation and greenhouse/nursery practices from master gardeners.

Grant money will help with the purchase of a greenhouse and storage shed, planting beds and fencing, soil, tools and other materials needed for the repository.

31. West Valley High School; Spokane, Wash.

Environmental Clean Up Utilizing Oil-Eating Microbes

\$5,000

Nearly 300 students, ages 13 to 18, will participate in environmental protection and clean-up while learning various scientific concepts that encourage critical thinking and view interconnected impacts. Students will implement ongoing experiments by taking oil-contaminated soil samples from various sites around Spokane and adding them to a medium that contains micro-organisms that feed on oil. They will place the samples in a warm incubator and then examine for microbial growth. As the microbes become present, students will analyze them to determine which species of oil-eating microbes are present in each area.

Funding will help provide an incubator, petri dishes, magnifier lamps and other testing materials to complete the study.