

ART AND SCIENCE FLOW TOGETHER AT MADISON SOUTHERN HIGH

Students in Margaret Soto's science class are getting first hand experience with water quality. Students in 9th through 12th grades traveled to Maywoods, ECU's environmental education laboratory, for a day in the woods. PRIDE educator Pattie Stivender led the students in activities about aquatic plants' effectiveness in cleaning water and their practical uses. Students also learned to identify trees, journaled, and practiced water color techniques.

PRIDE visited the school beforehand to share background knowledge on water quality and demonstrate how the health of a stream can be determined. The students performed pH, nitrate, and dissolved oxygen tests. They also learned to identify macroinvertebrates and how their presence, or lack thereof, is an indicator of the quality of stream health.

The students will be working with local artist Pat Banks to create a wall mural of The Kentucky River Watershed. Learning about its health and the factors that affect water quality will give the students a better understanding of human interactions within the watershed. The project is funded by the Kentucky Arts Council.



Nature Art, led by Margaret Soto



Students posing on tree stump that had been submerged since the 1970s

POWELL COUNTY STUDENTS CONTRIBUTE TO STREAM RESTORATION

Powell County Environmental Science students, under the instruction of Steve Colwell, are working in collaboration with the Forest Service, Fish and Wildlife and Bluegrass PRIDE to conduct a service project in the Red River Gorge.

The West Fork of Indian Creek is an area that is typically known for its great recreational opportunities. Fish and Wildlife stock the creek with Rainbow Trout once per year and open this area for sport fishing. Typically this area is highly travelled and there are two large concrete culverts that visitors can drive across to access the other side of the creek. The problem is, these culverts are changing the flow of the stream and causing channelization, erosion, and degradation of habitat. That is why these groups are teaming up to remove the culverts and help restore the stream.



The main bulk of the restoration project is scheduled for the spring of 2011 and the Powell County Environmental Science students' contribution will be studying stream conditions before and after the removal of the culverts. They will be creating sampling plans and monitoring stream quality with chemical tests, conducting macroinvertebrate and amphibian surveys, and with calculating sediment load at different times using sediment traps that they constructed. Mr. Colwell will keep this information so that the class that follows them can continue the project while the full restoration is taking place and then upon completion.

Once the culverts have been removed the students will also aid the Forest Service with native plant selections and placement along the stream bank. They will be logging and keeping data on what already exists there as well as helping to design the stream bank layout. Wetlands will also be planted to help the flood plain deal with large quantities of water without being washed away.

MADISON COUNTY HOUSEHOLD HAZARDOUS WASTE COLLECTION

On September 25, 2010, a Household Hazardous Waste Collection was held in Richmond at the Madison County Road Department Site from 8am-2pm. It was sponsored by the Madison County Solid Waste Department, Scott Tussey, Solid Waste Coordinator. Scott was joined by three other staff members, and eight volunteers, including Deb Larkin, Environmental Educator at Bluegrass PRIDE. It was a record turnout for Madison County, with 151 cars and trucks passing through, representing many more households. The collection gathered 12,000 lbs. of oil based paint, 1,250 lbs. of flammables and poisons, 850 lbs. of solvents, 20 lbs. of mercury devices, 400 lbs. of inorganic caustics, 3,000 lbs. of electronics and 2,000 lbs. of batteries. 500 bags of paint crystals (used to harden latex paint) were passed out, and when they ran out, orders were taken for more. The participants said that they had been saving these items, anticipating an opportunity to dispose of them appropriately, and most said that they had seen the event advertised in their local papers, the "Richmond Register" and the "Berea Citizen".

GRANT OPPORTUNITIES

Bluegrass PRIDE (PRIDE) is a nonprofit organization that provides environmental resources and information to schools, community groups, local governments and citizens in Central Kentucky. Through a partnership with the Appalachian Regional Commission (ARC), PRIDE will provide funding in the form of community, education, and educator workshop grants to applicants from seven Central Kentucky counties to improve the quality of their local environment. By offering a variety of grants, each of these PRIDE/ARC counties will be able to combine the needs and priorities of their community with an appropriate grant program.

What are the levels of funding?



Environmental Education Grants are up to \$3000, with one \$10,000 award.

Educator Workshop Grants are up to \$2000. There is no minimum amount associated with any of the grants.

Environmental Education Grant Program (applications available March 7, 2011)
These grants will be awarded to schools, teachers, groups of teachers and other nonprofit education groups working within the elementary, secondary and post-secondary education systems for the advancement of environmental literacy and education projects. Examples of these projects include expansion or establishment of outdoor classrooms, water quality testing, computer-based environmental education

activities, and wildlife and aquatic habitat restoration and protection. Funds may also be used to purchase environmental models or other materials designed to enhance environmental literacy. Numerous grants up to \$3,000 will be awarded. One grant, totaling \$10,000, will also be awarded. Roughly \$50,000 will be available for distribution.

Educator Workshop Grant Program (applications available January 14, 2011)

To further support the promotion and advancement of environmental education throughout its service region, PRIDE will offer grants to support environmental education workshops. Workshop attendees may be formal or non-formal educators working in the seven eligible Central Kentucky counties. The workshops may focus on general environmental education or they may facilitate interdisciplinary use of the environment as a learning tool within a school or school district. Multiple grants up to \$2,000 will be awarded, with roughly \$10,000 available for distribution.

How can I find out more information about these grants?

Bluegrass PRIDE's Grants Administrator will be available to aide in the development of projects and to provide assistance throughout the duration of each grant. Feel free to contact Gene Slusher at (866) 222-1648, or gene@bgPRIDE.org, for more details.

K.E.L.P NEEDS YOU!

A task force appointed by Commissioner Terry Holliday is in the process of developing a K-12 Environmental Literacy Plan for Kentucky. Without this plan, Kentucky would be ineligible to apply for funding that may be allocated by the No Child Left Inside Act (NCLI). NCLI is a proposed amendment to the Elementary and Secondary Education Act which, if passed, would provide funding for teacher professional development in environmental education. It would also help teachers to use their local environments as an extension of the classroom.

In order to ensure that Kentucky's plan best meets the needs of students, teachers, and the larger school community, it is important to have your input. Please take a few moments out of your busy schedule to answer these questions about environmental literacy education by clicking on the following websites:
<http://www.zoomerang.com/Survey/WEB22BE6U4Z8EQ> (Administrators)
<http://www.zoomerang.com/Survey/WEB22BDQZKQS8H> (Teachers)

Elements of Kentucky's Environmental Literacy Plan

- Element 1:** Specific content standards, content areas, and courses or subjects where instruction takes place.
- Element 2:** High school graduation requirements will ensure that graduates are environmentally literate.
- Element 3:** Programs for professional development of teachers to improve their environmental content knowledge, skill in teaching about environmental issues, and field-based pedagogical skills.
- Element 4:** How will the environmental literacy of students be measured.
- Element 5:** How the state education agency will implement the plan, including securing funding and other necessary support.
- Element 6:** How the state education agency will encourage school districts to "green" the buildings and grounds.
- Element 7:** How the state education agency will encourage teachers and administrators to provide significant outdoor experiences for their students

For more information about Kentucky's Environmental Literacy Plan, contact Billy Bennett, william.bennett@eku.edu or Melinda Wilder, Melinda.wilder@eku.edu.

Information on the No Child Left Inside Act can be found at <http://www.cbf.org/Page.aspx?pid=948>



PROFESSIONAL DEVELOPMENT WORKSHOPS

Bluegrass PRIDE has had the pleasure of successfully hosting three professional development teacher workshops for nine central Kentucky counties, including Powell, Montgomery, Clark, Estill, Madison, Nicholas, Lincoln and Garrard. The workshops were a component of a grant Bluegrass PRIDE received from the Application Regional Commission. The workshops were completed at Bluegrass Christian Camp in Clark County, Kirksville Elementary School in Madison County and Garrard County High School. The workshops included curriculum to teach about the importance of water quality, watersheds, storm water, wetlands, rain gardens, population and much more. All participants received a plethora of curriculum material including a copy of, "Wonders of Wetlands", a Population Connection curriculum DVD and video on world population growth; rain garden lesson plans; and a manual and hands on experience with LaMotte water testing kits and macroinvertebrate sampling.



GIRL SCOUT EVENT AT CAMP RICHARD CLARK

On Saturday, October 16, 90 area Girl Scouts attended an outdoor event at Camp Richard Clark.



Bluegrass PRIDE co-sponsored this litter free event, and 35 adults and Senior Girl Scouts volunteered for the project. The Daisy, Brownie and Junior Girls Scouts participated in a series of activities designed to increase awareness of and responsibility for caring for our natural environment, as part of the "It's Your Planet – Love It!" Leadership Journey.

Three activities were led by Bluegrass PRIDE educators:

- 1) The Incredible Journey, a game that teaches the students about the water cycle;
- 2) Recycled art, making bead necklaces and magnets using recycled paper; and
- 3) Recycle relay, a competition between teams to deposit items in the proper recycling or trash bins.

Senior Girl Scouts assisted the younger girls in planting three new gardens on the property with native plants: a butterfly garden, a hummingbird garden and an edible plant/tea garden, which included Wild Mountain Mint and Wild Strawberries. The older scouts also led hikes to the newly created bird blind on the property. The gardens and bird blind serve as outdoor classrooms for the scouts, and were funded by a Bluegrass PRIDE Environmental Education Grant awarded to the Girl Scouts of Kentucky's Wilderness Road Council. A good time was had by all, and the girls "left only footprints behind", carrying off all the trash and recyclables collected after their picnic lunch.

ENVIRONMENTAL STEWARDS

The Appalachian Regional Commission (ARC) grant provides funding for a water education program for eight PRIDE counties: Clark, Estill, Garrard, Lincoln, Madison, Montgomery, Nicholas, and Powell. The program includes classroom activities, teacher workshops, service projects, community outreach, and displays at community festivals. Participants completing the knowledge component and a service project are recognized as Environmental Stewards for their community.

Knowledge Components

- Watersheds
- Water cycle
- Water quality indicators
- Nonpoint Source Pollution/Best Management Practices

Service Projects (examples)

- Community presentations
- Storm drain stenciling
- Rain garden construction
- Stream cleanups
- School-wide water festival
- Peer teaching/mentoring

During the 2009-10 school year 215 students earned the title of Environmental Stewards. Service projects included a stream cleanup, storm drain stenciling, school ground cleanup, and PowerPoint presentations of stream studies.

Seventy-five students have already been recognized as Environmental Stewards this school year. Students at Kit Carson Elementary in Richmond have completed the knowledge component by studying nonpoint source pollutants, mapping their school's pervious and impervious surfaces, making posters, and performing The Stormdrain Gang skit as a service project for their school.



Students from Estill County Middle School stenciled storm drains to earn their Environmental Steward certification.

Students at Camargo Elementary participated in the EnviroScape activity and performed The Stormdrain Gang



PRIDE IN THE CLASSROOM

To schedule classroom activities on topics such as recycling, composting, litter, water quality, soil erosion, and many more contact Bluegrass PRIDE's education staff at 859-266-1572 or email the following:

Carol Bradford (Fayette, Anderson, Lincoln, Jessamine, and Garrard Counties) carol@bgpride.org

Kara Benge (Fayette, Powell, Montgomery, Jessamine and Franklin Counties) kara@bgpride.org

Pattie Stivender (Fayette, Estill, Madison, and Scott Counties) pattie@bgpride.org

Chris Muesing (Fayette, Jessamine, and Harrison Counties) chris@bgpride.org

Leah Anderson (Fayette, Bourbon, and Mercer Counties) leah@bgpride.org

Blair Owens (Bourbon, Harrison, Scott, Woodford, Franklin, Anderson, Mercer, Jessamine, Boyle Counties) americorps@bgpride.org

Deb Larkin (Fayette, Clark, Nicholas, Woodford, and Boyle Counties) deborah@bgpride.org

ARC IN ACTION



Contact PRIDE at 866.222.1648 or PRIDEinfo@bgPRIDE.org to schedule an activity in your school or community.