



EEOP Newsletter

Environmental Education Outreach Program (EEOP)
Volume 1, Issue 3 (December 2005)

Web version @
<http://www.nau.edu/eeop/newsletter>

The Newsletter

This newsletter is a service of the Institute for Tribal Environmental Professionals (ITEP) Environmental Education Outreach Program (EEOP). We've created this newsletter specifically for K-16 students and educators that are interested to learn more about environmental issues with a focus on air quality. There will also be information and articles directed towards tribal environmental professionals.

We still need a title for the newsletter. Students are encouraged to submit their ideas to Mansel A. Nelson at mansel.nelson@nau.edu. Please provide your suggested title and any explanation that you think is necessary. A committee of ITEP staff will review the suggestions and select a title. The person that submits the winning title will receive a \$30 gift card. If more than one person submits the same title, the first one to send the email will receive the award.

Internship Update

December has proven to be an effective month for soliciting applications from Summer Internship Host sites. We have received host site applications from environmental organizations in Washington D.C. (2 positions), Washington State (3 positions), Colorado, Arizona, and Oregon. Final selection of the host sites will be made after March 1, 2006 so please keep those applications coming.

The deadline to submit an application to be a Summer Intern is coming up fast. The deadline is January 31, 2006. If you know of any college students, please let them know about this wonderful opportunity to gain meaningful experience to further their careers in the environmental fields.

We are currently working on placing our first group of Short Intern Program (SIP) candidates around the nation. We have received applications from as far away as Minnesota and as close to home as Flagstaff. We have had an overwhelmingly positive response to this program and we are really excited to help students take advantage of this opportunity. If there are high school students or college students in your community that could benefit from a one-week experience working in an environmental office, please have them apply for a SIP internship at www.nau.edu/eeop/. Although you can submit your SIP application on-line, we still encourage you to check your spelling and grammar before submitting the application. If you are interested in hosting one of these students in your office, please contact Matthew Zierenberg at matthew.zierenberg@nau.edu or 928 523 8864

EEOP Shoots for the Stars with the AIMER Program

The Environmental Education Outreach Program has a new trick in its bag. In collaboration with Northern Arizona University's [Department of Physics and Astronomy](#), in the [College of Engineering & Natural Sciences](#), the EEOP staff will be taking the lead on delivering the American Indian Mobile Educational Resources (AIMER) program to reservation schools.

The AIMER classroom is a mobile computer laboratory that is used to teach concepts of physics, astronomy, and engineering to pre-college Native American students at K-12 schools on reservations throughout Arizona. In addition to the astronomical programs, AIMER offers students the opportunity to learn the basics of programming using [various robots](#) (including the Lego Mindstorms, Pbasic Arobot and ICH Rugwarrior). The robots have proven to be very effective teaching tools and come in handy during overcast star parties.

The AIMER classroom can be requested by any reservation school in Arizona to supplement their science classes during the academic year at no charge to the school. Scheduling of AIMER is on a first-come, first-served basis. The computer facility is set up on the school grounds, where it resides long enough to give participating [students](#) a 30 to 45 minute session with some astronomy software programs. Astronomy programs such as "Dance of the Planets" and "Starry Night" give students experience in astronomical simulations and provide hands-on experience in exploring the universe.

Community Star Parties allow the community members to get involved in the AIMER program. Star Party participants will have an opportunity to view the immensity of space through several different telescopes.

For more information or to schedule an AIMER event, please contact, Matthew Zierenberg, EEOP Program Coordinator at matthew.zierenberg@nau.edu or 928-523-8864. You can also visit our new AIMER website at <http://www.nau.edu/eeop/aimer/>.

GLOBE training for teachers in the Four Corners Region

Global Learning and Observation to Benefit the Environment (GLOBE) is a hands-on, school-based science and science education program that unites students, teachers, and scientists in study and research about the dynamics of the Earth's environment. Over a million GLOBE students in thousands of schools located in over 100 countries are taking important environmental measurements. Their data are used in their own research activities and also by scientists around the world. For more information about GLOBE, visit the GLOBE website at <http://www.globe.gov/>.

“GLOBE is the quintessentially ideal program for involving kids in science.”
Nobel Laureate Dr. Leon Lederman.

In an effort to meet the needs of teachers in the Four Corners Region, the EEOP staff is planning a GLOBE workshop for February or March of 2006. If you are interested in participating in this training opportunity, please complete the questionnaire found on the EEOP website: http://www4.nau.edu/eeop/eeop_workshops.html

If you have any questions about the workshop or want to learn more about GLOBE, contact Matthew Zierenberg at matthew.zierenberg@nau.edu or 928 523 8864.

Air Quality – Indoor Air Pollution

Increasingly, indoor air pollution is becoming a health concern; recently it was ranked one of the top five risks to public health by the EPA and the EPA Science Advisory Board. Indoor air pollutants contribute to many health problems such as respiratory irritation and disease, allergic reactions, and cancers. Children are the most vulnerable to these pollutants. Poor indoor air quality in schools can result in decreased academic performance and days lost due to illness.

Hazardous pollutants come from many different sources, including many building products, gas stoves, oil and gas heaters, carpet, cleaning products, radon, pesticides, paints, resins, mold, cigarette smoking, animals, and cooking. Poor ventilation allows the pollutants to accumulate to dangerous levels.

One of the most effective ways to improve indoor air quality is to decrease and eliminate the hazardous pollutant sources: for example, adjusting gas stoves and not smoking indoors. Projects that use paint or other chemicals that emit fumes can be done outdoors or in a well-ventilated area.

Another important step to ensuring good indoor air quality is proper maintenance of the building ventilation systems. Inspect the air ducts for mold, dust, debris, and animals. If any problems are identified, eliminate the cause of the problem. Ventilation dilutes the indoor air pollutants by introducing outside air into the building while carrying out some of the polluted indoor air.

Commercial air fresheners just add more chemicals to the air, covering up smells, without improving air quality. Table-top air cleaners and plants do not remove a significant amount of the hazardous pollutants, so the focus for improving indoor air should be on proper ventilation and removing sources of pollutants.

One source of indoor air pollution gaining increased attention is mold. The best way to control mold is to avoid it all together. Mold requires moisture to grow. Keeping the roof in good repair, fixing all leaky plumbing, and proper regulation of the temperature and moisture will reduce mold issues.

Another indoor pollutant that is commonly overlooked is Radon, the second leading cause of lung cancer. Radon is an odorless, colorless, tasteless chemical which seeps into buildings from the rocks, soil, and water. All buildings should be tested for radon levels. Radon testing is inexpensive and easy to do. If the radon levels are determined to be unsafe, mitigation may include sealing the cracks on floors and in walls, or installing a ventilation system in the building crawl space.

The EPA offers resources such as “Tools for Schools”, which give ideas for improving indoor air quality in public buildings. You can obtain a copy of this program at no cost by visiting the EPA website at <http://www.epa.gov/iaq/schools/>. Some simple measurements and observations can lead to better indoor air quality and to better health of the occupants.

This is part two of a series on air quality. Next month we will take a brief look at global warming. For more information on air quality visit the EEOP website at <http://www.nau.edu/eeop/>.

Air Quality Web-Quest

Want to learn more about air quality? You are invited to participate in an EEOP web-quest on air quality. If you are interested, visit the EEOP website to participate – <http://www.nau.edu/eeop/aqwebquest/>.

EEOP Staff Spotlight

Student workers play a critical role in supporting the EEOP programs. Student staff act as mentors for younger students, provide instructional support, and help coordinate events.

In the staff spotlight for this issue is an EEOP student worker, Graylynn Whiterock. Graylynn has been working for EEOP since 2001; she has been involved at different levels with many EEOP programs like the Summer Scholars Program, Saturday Academy, Campus Visits, and E-mentoring programs. One rewarding aspect of working for EEOP is having the opportunity to create mentoring friendships with the students from the schools EEOP serves. To her, helping others is among the most important requirements of anything she does. Graylynn has enjoyed her time at EEOP and looks forward to what the future holds.

Outside of work, school keeps Graylynn busy. In May 2003, Graylynn received her Bachelors of Science in Health Sciences degree. She is proud to say that she is the first to graduate with a college degree from her family and will be graduating in May with her Masters degree. After graduating, she plans on working fulltime while pursuing another degree.

When Graylynn is not in school or working, she enjoys spending time with her family. Graylynn has three brothers (two older and one younger) and six nephews! She loves spoiling her family and adores all her nephews. Graylynn also enjoys spending time with her long-time boyfriend, Loren, who is an exceptional teacher at two local Flagstaff high schools. He teaches Navajo History, Government, and Language. Eventually, Graylynn and Loren plan on getting married, starting a family, and moving back to the reservation. In the meantime, they enjoy spending time with his sisters, her brothers, and the kids he coaches in chess.

Credits and Contacts

The US Environmental Protection Agency (USEPA) Office of Air and Radiation provides part of the funding to make this newsletter possible. Contact us with your ideas for future issues of the newsletter at mansel.nelson@nau.edu.

The newsletter is disseminated on various list serves. If you would like to join the newsletter list serve, contact mansel.nelson@nau.edu.

Our staff looks forward to providing new services and developing new programs, as well as continuing existing programs. We especially look forward to hearing from you. So please visit our website at <http://www.nau.edu/eeop> or contact us via telephone or email.

Mansel A. Nelson
928 523 1275
mansel.nelson@nau.edu

Matthew Zierenberg
928 523 8864
matthew.zierenberg@nau.edu

Christine DeCarlo
928 523 1496
christine.decarlo@nau.edu