



Hot Air from EEOP – A Newsletter

Environmental Education Outreach Program (EEOP)
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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, educators, and tribal professionals that are interested in learning more about environmental issues with a focus on air quality. The newsletter will also contain information about EEOP programs and activities.

Indoor Air Quality – Radon

Over the past year there have been several articles about the leading cause of lung cancer in the EEOP newsletter – cigarette smoke. The second leading cause of lung cancer is less well known and more difficult to detect. By the way, the combination of cigarette smoke with high radon levels is synergistic, with a much higher death rate than either one alone.

Radon is a cancer-causing natural radioactive gas that you can't see, smell or taste. Its presence in your home can pose a danger to you and your family's health. Radon is the leading cause of lung cancer among non-smokers and claims more than 20,000 lives annually.

Two studies show definitive evidence of an association between residential radon exposure and lung cancer. The two studies, a North American study and a European study, both combined data from several previous residential studies. These two studies go a step beyond earlier findings. They confirm the radon health risks predicted by occupational studies of underground miners who breathed radon for a period of years. Early in the debate about radon-related risks, some researchers questioned whether occupational studies could be used to calculate risks from exposure to radon in the home environment. "These findings effectively end any doubts about the risks to Americans of having radon in their homes," said Tom Kelly, Director of EPA's Indoor Environments Division. "We know that radon is a carcinogen. This research confirms that breathing low levels of radon can lead to lung cancer."

Radon is an odorless, tasteless and invisible gas produced by the decay of naturally occurring uranium in soil and water. Radon is a form of ionizing radiation and a proven carcinogen. Lung cancer is the only known effect on human health from exposure to radon in air.

Radon in air is ubiquitous. Radon is found in outdoor air and in the indoor air of buildings of all kinds. EPA recommends homes be fixed if the radon level is 4 pCi/L (pico Curies per Liter) or more. Because there is no known safe level of exposure to radon, EPA also recommends that Americans consider fixing their home for radon levels between 2 pCi/L and 4 pCi/L. The

average radon concentration in the indoor air of America's homes is about 1.3 pCi/L. The average concentration of radon in outdoor air is .4 pCi/L or 1/10th of EPA's 4 pCi/L action level.

For smokers the risk of lung cancer is significant due to the synergistic effects of radon and smoking. For this population about 62 people in a 1,000 will die of lung-cancer, compared to 7.3 people in a 1,000 for never smokers. Put another way, a person who never smoked (never smoker) who is exposed to 1.3 pCi/L has a 2 in 1,000 chance of lung cancer; while a smoker has a 20 in 1,000 chance of dying from lung cancer.

Radon is a radioactive gas. It comes from the natural decay of uranium that is found in nearly all soils. It typically moves up through the ground to the air above and into your home through cracks and other holes in the foundation. Your home traps radon inside, where it can build up. Any home may have a radon problem. This means new and old homes, well-sealed and drafty homes, and homes with or without basements.

Many Navajo communities are familiar with the impacts of radon. Many Navajo uranium miners from the 50s, 60s, and 70s died from lung cancer. Although there is limited quantitative data on the radon exposure levels for miners, it is well known that one of the leading hazards to the miners was exposure to radon. Many of the miners worked in mine shafts with inadequate ventilation.

For more information about radon, contact the EEOP staff.

Preparation for College – Financial Aid Myth Busters

College is expensive, but don't let concerns about money stop you from pursuing a college education. There are several myths about financing a college education.

Myth 1: You cannot afford a college education.

Truth: The truth is that most students receive some kind of financial aid. Nearly 75% of high school students who took the ACT test reported that they needed help to pay for college. A combination of grants, scholarships, work study and loans will cover the expenses of a college education.

Myth 2: You have to be very poor, very smart, or very talented to qualify for financial aid.

Truth: Financial aid comes in many forms. Scholarships are based on merit, so getting those good grades and good test scores can pay off. However, you don't have to get good grades to get a scholarship. There are many types of scholarships with many different criteria. Many scholarship funds are not distributed because no-one applies. (Editors Note: I am currently trying to give away \$1,000 and I have zero applicants.) There are also funds available to students based on need. (Even middle income families can qualify for assistance. When I had four children in college at once, each of my children received a couple thousand dollars.) You will need to complete a FAFSA application to see if you are eligible for assistance from the federal government.

Myth 3: You can get more scholarships by paying someone to search for you.

Truth: Be careful of the scams! There are lots of resources on the Internet to help you find scholarships. Web pages such as www.fastweb.com or www.ftnaid.org are excellent starting points. You should also check with your school counselors and the college financial aid office. Part of their job is to help you find money for college.

Myth 4: The parents' income doesn't matter.

Truth: Most need-based financial aid is partially based on the parents' income and assets. Most schools use the FAFSA (Free Application for Federal Student Aid, www.fafsa.ed.gov) to help determine need. The FAFSA requires information on the parents' income.

Myth 5: You can wait until you get accepted to a college before dealing with financial aid.

Truth: A lot of financial aid is distributed on a first-come, first-service basis. You want to be thinking and planning for financial aid while in high school. Additionally, high school grades and activities heavily influence the financial aid you will be offered.

If you have any questions about financial aid the EEOP staff is happy to get you started in the right direction.

Preparation for a Career / Job - Networking

There are many ways to find a job. However, studies have shown that many people find a job through their personal connections. Networking is an important activity to develop new connections and bring you new opportunities in education and work.

Networking guidelines:

- **Attend.** You can't meet people sitting at your office or at home.
- **Take business cards and a pen.** Always take your business cards, even when you are attending a purely social function.
- **Wear a name tag.** People will be able to remember your name if they see it as well as hear it.
- **Approach people.** Even if you have been a wallflower all your life, now is the time to get over it. Talk to people
- **Have a clear, concise statement ready.** Be prepared to tell people what you do and who you do it for. Make the statement appropriate for the group you are with.
- **Actively Listen.** Ask questions and listen
- **Give people your business card.** You don't have to wait for someone to ask. If you have some common connections, give them your card.
- **Ask others for their business card.** If they don't have one, give them a pen and paper to provide you their contact information.
- **Move on.** Don't stay with just one or two people for the entire event. Move around, meet people.
- **Follow up.** Send a follow-up email or make a phone call to reconnect following the event.

The EEOP staff is happy to be a part of your network. We want to help you make the connections for your next environmental job.

Preparation - Today's Students for Tomorrow's Workforce

The *National Science Teachers' Association (NSTA) Reports* and the *Time* magazine recently addressed work force preparation. The two publications provided an overview of several studies recently released, along with a review of recommendations for preparing students for the future.

The recommendations from "*Tough Choices or Tough Times*"

(<http://skillscommission.org/executive.htm>) detail what the future workforce will need, including:

“Strong skills in English, mathematics, technology, and science, as well as literature, history, and the arts, will be essential for many; beyond this, candidates will have to be comfortable with ideas and abstractions, good at both analysis and synthesis, creative and innovative, self-disciplines and well organized, able to learn quickly and work well as a member of a team and have the flexibility to adapt quickly to frequent changes in the labor market as the shifts in the economy become ever faster and more dramatic.”

In “*Tough Choices or Tough Times*” the commission presented a series of recommendations on how to change the educational system to respond to the new needs of students. They emphasize that the problem is not the educators, but rather the system they work in.

In the *Time* article, “*How to Bring Our Schools Out of the 20th Century*”, (<http://www.time.com/time/magazine/article/0,9171,1568480,00.html>) Claudia Wallis and Sonja Steptoe provide several specific recommendations. Today’s economy demands go beyond a high-level competence in the traditional academic disciplines. The authors suggest the following skills:

Knowing more about the world. Today’s students are global citizens. Future employees need to be global trade literate, sensitive to foreign cultures and conversant in different languages.

Thinking outside the box. Jobs in the new economy put an enormous premium on creative and innovative skills, as well as seeing patterns where others only see chaos. Currently US schools have become even less daring in the back-to-the-basics climate of No Child Left Behind. Students must also learn to think across disciplines, since that is where most new breakthroughs are made.

Becoming smarter about new sources of information. In an age of overflowing information and proliferating media, students need to rapidly process what is coming at them and distinguish between what is reliable and what is not.

Developing good people skills. Most innovations today involve large teams of people. We have to emphasize communication skills, the ability to work in teams and with people from different cultures.

Future Issues

We are also interested in publishing articles from you. We are interested in articles sharing stories from students, teachers, or tribal professionals influenced by ITEP or EEOP activities.

Credits and Contacts

The US Environmental Protection Agency (USEPA) Office of Air and Radiation provides part of the funding to make this newsletter possible. The newsletter is disseminated on various list serves, however, 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.

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