May 2012

May is Clean Air Month

We have mountains and the magnificent Mojave outside our doors with all their unique flowers, shrubs and trees. When temperatures rise into the nineties and above, we tend to recede into our air-conditioned caves – house to car to job site, and back again. Indoors, we need to have some control over what we breathe.

In energy efficient homes and offices, there are often many toxic substances, such as formaldehyde, benzene and other volatile organic compounds, or VOC's. Paint, plastic, particleboard, even carpeting and cleaning products can be sources of compounds that must be kept to a minimum for good health. Our very low humidity can also be a problem.

Of course, there are many humidifiers and air purifying systems on the market, but in addition, you might consider bringing potted plants into your house or to your job.

A NASA scientist named Dr. B. C. Wolverton investigated potential air purification systems for space travel in the 1980s. He found that a number of plants are very effective air scrubbers. Several indoor palms, as well as common plants including dracaena, Boston fern, English ivy, and rubber tree, as well as the lovely spathephyllum (peace lily), are among the most useful “living filters.”

Of course, this means more than simply putting a fern into the corner and watering it when and if you remember. It means creating discrete zones of healthy plants within the environment. The whole plant – the soil, the roots and of course the leaves – absorbs the toxins and apparently breaks them down, taking them out of circulation.

A hundred square feet, say a ten by ten room, would need two or three medium to large size plants, each in a ten-inch pot. In order to maximize the amount of air that is cleaned, group an assortment of plants together; research indicates that different species are more efficient at removing one toxin or another.

Continued on page 4
The Children’s Demonstration Garden
By Karyn Johnson, johnsonk@unce.unr.edu

The Outdoor Education Center at Cooperative Extension has a new feature—a Children’s Demonstration Garden. This circular garden, which is 40’ in diameter, is intended to be multi-faceted and serve multiple purposes, too. The garden is built primarily of landscape stones which were donated by the Pavestone Company. The garden is built on a base of manufactured soil that is 12” deep, with an additional 10” of soil on top. This gives a total depth of 22”, which is deep enough to grow many different kinds of fruits and vegetables. The soil inside the planters was donated by the Gro-Well Company, who has been a very generous benefactor to many schools in the Clark County area. The circular design of the garden structure is built to have all pathways laid out as a compass. This will allow students to see which direction they are facing as they plant. We will also have a living sundial and examples of both a compass and sundial for the students to use for comparison.

In addition to the circular garden, the location will be home to a variety of fun and creative features that were chosen by the students. Some of these will include a grapevine tunnel, music and percussion, stepping stones that are made from tree stumps, blackberries, vertical growing apparatus for cucurbits (squash family plants), a sunflower playhouse and a living fence that will be comprised of Nevada native plants. The items that are being developed in the garden are intended to stimulate creativity, inquiry and allow students to use multiple senses as they explore the outdoors and learn about the environment.

The intended audiences of this garden are people of all ages. Teachers may come to the garden to find examples of different forms of gardening, or bring students for field trips and get ideas for their own school garden projects. The circular garden will introduce raised beds of multiple levels and depths which have half-barrels display container gardening. So that people can see examples of gardening by several different methods, some of the plants will also be growing in the ground.
The gardens will be home to a children’s gardening class called Junior Master Gardeners, a nation-wide program that originated at Texas A&M University. Children, ages 7 to 12, can enroll in this 2-year program which is service-learning based. Students are encouraged to taste the foods that are grown, and two-thirds of the produce will be donated to local shelters. Students will be introduced to basic information about bugs, plant growth and organic gardening, among other topics.

They will work with earthworms, organic methods of pest control and square foot gardening. The Junior Master Gardener program is currently offering enrollment to students, ages 7 to 12. The cost is $30 per semester for this four semester program which begins classes in February for the spring semester.

The Children’s Demonstration Garden will be open to all teachers and parents who want to learn how to garden with children. The gardens are located within the 3.3-acre on the north side of the Lifelong Learning Center. Within the Outdoor Education Center many different features are available, such as, a walking and exercise course, irrigation demonstration area, a team building course and outdoor learning centers. For more information about the Children’s Demonstration Gardens, please contact Dr. Angela O’Callaghan, Southern Area Social Horticulture Specialist (ocallaghana@unce.unr.edu) at 702-257-5581, or the Master Gardener Help Desk at 702-257-5555 (lvmastergardeners@unce.unr.edu).
Some critics have voiced a concern that the high humidity right around plants, the foliage and, more importantly, any water sitting in a saucer underneath the pot, might encourage fungal spores. That would be another interior pollutant. You can prevent this by growing healthy plants. Make sure that they have access to light so they can grow properly. Most of these air-scrubbing plants are from environments more like a rainforest than a desert, so they would be most successful in an east or southeast window, rather than a west or southwestern exposure. Feed and water them regularly. Do not let them dry out of course, nor let them stand in water. The plants do not do well under those conditions, and stagnant water would certainly be unpleasant.

The worst outcome is that there will be happy, healthy plants around. The best is that anyone in the room will be breathing cleaner air and will have happy, healthy plants around. This type of system has been tested on a large scale in a place that has desperately needed both cleaning and cheering.

At Cooperative Extension, information is available that covers the basics of putting plants to work cleaning your air. It is called “Growing your own clean air,” and you can stop by or call the office for it. For more in-depth information, Dr. Wolverton’s book, “How To Grow Fresh Air” is available from Penguin Books. ~Dr. Angela O’Callaghan

Area Extension Social Horticulture Specialist, Cooperative Extension

---

**4-H Camp at Lake Tahoe ~ July 29-August 4, 2012**

**Registration is underway!**

$350 includes $75 non-refundable deposit for campers registered before **June 25, 2012**

Registration fee includes lodging, transportation, meals and activities.

4-H Camp is open to all youth ages 9-15 from any area of Nevada.

4-H membership is not required.

INFO: Mary Regan, 702-257-5524 reganm@unce.unr.edu

---

University of Nevada Cooperative Extension Southern Area has offices and offers programming in Clark, Lincoln and Southern Nye counties. Office locations and phone numbers are:

- **Caliente 775-726-3109**
  360 Lincoln Street
  P.O. Box 728, 89008

- **Logandale 702-397-2604**
  1897 N. Moapa Valley Blvd.
  P.O. Box 126, 89021

- **Las Vegas 702-222-3130**
  8050 Paradise Road, 89123

- **Pahrump 775-727-5532**
  1651 E. Calvada Blvd., 89048

- **Laughlin 702-299-1333/1334**
  55 Civic Way, 89029

For more information on University of Nevada Cooperative Extension Southern Area programming, please call 702-222-3130 or visit the website at [www.unce.unr.edu/areas/southern](http://www.unce.unr.edu/areas/southern).