



The Bear Claw



The Sandia Mountain Natural History Center Newsletter

January 2008

Leave No Trace: Principle 2

The second principle of Leave No Trace outdoor ethics is to "Travel and Camp on Durable Surfaces," of which the objective is to minimize our impact in outdoor activities. The organisms (flora and fauna) that we all go to enjoy in outdoor activities are an interconnected ecosystem and need our help in areas where we interact directly. Our activities can lead to substantial damage of local flora and create areas that are uninhabitable; destroying the area for future growth and leaving a barren area highly susceptible to erosion and other disruptive environmental factors.

We can split up our outdoor activities into two categories: high-use areas and little/no use areas. High-use areas are those that are frequented and are generally improved for public use: picnic tables, restrooms, docks, camp grounds, parking lots, roads, and trails are all examples. Little/no use areas are those thought to be pristine and have fewer visitors – usually due to remoteness.

Outdoor activities in both of these areas are different. Further, they can differ in each category depending on where you are visiting. For example, in the Grand Canyon you are asked to camp in areas where you will have the

least impact and this may be within 200 feet of the trail, whereas, in most high-use Parks and Forests you are asked to camp 200 away feet from the trail and water sources.

High-use areas are well marked and the expectations of the land managers are highly visible, such as, signs at use areas, websites with information, and personnel with the latest use information. In little/no use areas often times the information is only posted at entry points to the pristine area. The best information for these areas can often be obtained via web or telephone the local land manager. No matter where you are going in the outdoors or what your activity is, there is always something we can do as far as LNT is concerned. Next time we discuss how we dispose of our waste that we may accumulate in the outdoors.

FUN FACT: THE EARS OF A CRICKET ARE LOCATED ON THE FRONT LEGS, JUST BELOW THE KNEE.

Outreach Kicks Off for 2008

The Sandia Mountain Natural History Center is just beginning the 2008 Outreach year and already have plans to travel to various areas around the state.

January took the SMNHC staff to Dixon Elementary in Dixon, Logan Elementary in Ute Lake, Alta Vista Elementary in Questa, and Hagerman Elementary in Roswell. We are excited to be providing our Traveling Ecology Field Program to both Logan Elementary

at Ute Lake and Hagerman Elementary at Bottomless Lakes.

So far in February, the SMNHC is scheduled to travel to Mountain Elementary in Los Alamos, Harrison Schmidt in Silver City, and nearby Rio Rancho Elementary School.

We are excited to begin our Outreach for the year and look forward to scheduling more of our Outreach programs around the State.

In the spotlight...



The Sandia Mountain Natural History Center has partnered with the Sierra Club's Building Bridges to the Outdoors Project in an effort to get more New Mexico students in the outdoors.

The Sierra Club has provided the Center with a grant that not only supports our 2008 Outreach program but also gives students around New Mexico a chance to experience an outdoor area near where they live.

The SMNHC is proud to be working with Sierra Club helping to bring new outdoor experiences to students all around the State.

NUMBER OF PEOPLE SERVED AT SMNHC:

**SINCE JULY 1ST: 693
THIS MONTH: 374**

Upcoming Events at SMNHC:

March 1, 9-3:00

Spend the day in the Mountains hiking our trails, visiting two hands on exhibit rooms and observing birds and animals from our wildlife observation deck. March will offer an hour-long *Leave No Trace* education session at 10:00 a.m.

March 8, 9:30-3:00

Wild Sandias! Short Course- Come experience the Sandias! Hike with us and learn about the natural history and ecology of the area. Take home hands-on activities and facts that you can share with your students. (Most activities are aimed at a 5th grade audience) **Level:** All teachers, pre-teachers, non teachers. **Cost:** Free!

April 5, 9-3:00

Spend the day in the Mountains hiking our trails, visiting two hands on exhibit rooms and observing birds and animals from our wildlife observation deck. April will offer an hour-long *Mammals of the Sandias* education session at 10:00 a.m.

May 3, 9-3:00

Spend the day in the Mountains hiking our trails, visiting two hands on exhibit rooms and observing birds and animals from our wildlife observation deck. May will offer an hour-long *Birds of the Sandias* education session at 10:00 a.m.

For more information on our upcoming programs call us at (505) 281-5259 or visit our website:

www.nmnaturalhistory.org/SMNHC

The Sandia Mountain Natural History Center (SMNHC) is a natural history and environmental education facility located on the east side of the Sandia Mountains in Cedar Crest, New Mexico. The SMNHC is owned by Albuquerque Public Schools and operated by the New Mexico Museum of Natural History and Science.

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For more information about the Center, visit our website at: www.nmnaturalhistory.org/SMNHC

Sleeping Through the Cold: Coping with Winter

Most of us deal with winter by curling up inside, turning up the heat, and cozying up by a fire. Wild animals, of course, have none of these options. Instead, they deal with the winter scarcity of food and cold in several ways.

Many insects lay eggs in fall and the adults die in the winter (a phenomenon which most people appreciate!). These species are carried on by young which hatch in the spring.

Some animals continue activity throughout winter: coyotes, foxes, rabbits, and deer are often seen mid-winter in the Sandias. These animals survive on the food they find and extra fat stored from the summer.

There's also the retiree "snowbird" method of dealing with winter: migration! Birds are the best-known migrators, but bats, Monarch butterflies,

caribou, and other animals migrate too (as well as people)!

One of the most fascinating animal adaptations to winter's severe conditions is hibernation. Hibernators find a secure place and go into a dormant state (between sleep and death): breathing and heart rate slow down, temperature drops, and all body processes slow or stop. There is a continuum of the depth of dormancy: different states of dormancy include "hibernation," "aestivation," and "torpor." A hibernating animal is slow to react to danger, but also needs very little energy to survive, (and so can go long periods without food).

One of the most well-known winter sleepers is the bear, but many other animals experience dormant periods, including reptiles, amphibians, insects, and hummingbirds!

Activity of the month: **New Mexico Life Zones**

Overview: Students learn about New Mexico "Life Zones" (ecological communities) by using charts, cutting and pasting to create a mountain diagram.

Time: 1 hour and 30 minutes

Procedure: The activity begins with an introductory discussion about climate change with elevation. Each pair of students receives a diagram of mountain life zones and elevations. They color thermometer and rain gauge pictures to reflect chart data and paste each in the appropriate life zone on the diagram. Native plant and animal pictures are also pasted onto the appropriate life zone according to their descriptions.

Closure: Class discusses graphs of elevation, precipitation, and temperature and the life zone location of particular plants and animals.

Note: In winter students can immediately connect this classroom learning to real-world experience when they see snow on the mountaintop.

The complete activity can be found in the Ecosystems Explorations Curriculum on our website; Come to our workshop on January 30th to experience more great ecology activities like this one!

Teacher resource spotlight...



Outreach Programs

Are you looking for a way to spice up your 4th – 6th grade ecology unit without a lot of extra work? Wouldn't it be great if you could have *experts* teach ecology to your students in an interactive, engaging manner? Your wish has come true! The SMNHC staff will meet your class at a wild area near your school (or your classroom if a wild area is not an option) and teach them ecology. Our programs are exciting and strongly tied to 5th grade science standards for ecology.

During the Traveling Ecology Field Program we meet your students at a wilderness area near your school and spend 2-4 hours in the field. The program includes a natural history hike (where we use the natural history of the area to emphasize ecological concepts like energy flow and interconnectedness), activities and an introduction or review of ecology terms.

The Ecology Road Show is an alternative for those schools not able to visit a wild area. This two hour program consists of a series of hands-on activities which teach your students about natural history, ecosystem components (producers, consumers, decomposers, and non-living things), and how they are interconnected.

Both programs are offered FREE! Contact A.J. LaPre, Outreach Co-ordinator, today to register! Call (505) 281-5259, e-mail aj.lapre@state.nm.us.

ECOLOGY TEACHING TIP:

Many tiny animals that over winter have anti-freeze chemicals to prevent winter damage; try freezing a cockroach or tick, then letting it thaw; it's usually fully functional!

