

**WinterTrek Environmental Education Program
US Forest Service- Lake Tahoe Basin Management Unit
Revised February 2007**

WinterTrek PowerPoint Slideshow Script

Slide 1: WinterTrek

Welcome to WinterTrek. We are Rangers Jean & Lindsay, working for the Forest Service. Heavenly Ski Resort allows us to ride the gondola and use the resort for snowshoeing, while the City of South Lake Tahoe provides this classroom for our program.

Slide 2: What to Expect

Here is a brief outline of our program today. After the slideshow we will break into groups to ride the gondola. We'll get off at the mid-station to discuss our view of Lake Tahoe, then head all the way to the top where we'll receive snowshoes. After our snowshoe adventure, we'll go all the way back down on the gondola, come back to the classroom, have lunch, cocoa, and load back on the bus.

Slide 3: Gondola Ride

For the Gondola, we'll break into groups of 5-6 students with one adult per car. Please sit on the benches; standing is okay quickly to take a picture. Occasionally the gondola stops to give people with strollers, wheelchairs, supplies, etc. extra time to get on. This is nothing to worry about, the cars will start moving soon. Keep voices low in the car, and enjoy the view while answering scavenger hunt questions and looking for animal tracks in the snow. If you are afraid of heights, you'll probably still enjoy the ride, just sit facing the mountain, rather than the lake. (Show gondola cable) This gondola is very safe. With a very strong cable holding the cars up, there have not been any major problems since the start of operation in 2000.

Slide 4: Mid-Station Stop

Be sure take all your belongings off the gondola car. Gondola tickets are your souvenirs; they won't be scanned again so keep them in a zippered pocket. It can be very windy on the viewing deck, so bundle up and walk carefully in case it is icy.

Slide 5: What is a Basin?

Why do we call this the Lake Tahoe Basin? Keep this in mind for our discussion on the deck.

Slide 6: What to Look For

Along with defining a basin, we will discuss the lake's water, the geologic processes that formed the Lake Tahoe Basin and the three states of matter as they pertain to water.

Slide 7: Made It to the Top

With so many skiers around, we need to be careful where we walk. After getting off the gondola, we'll walk as a group down the middle set of stairs, using the handrails. One of the rangers will lead the group to where we'll receive the snowshoes.

Slide 8: Putting on Snowshoes Requires Patience

After handing you the snowshoes, a ranger will lead the group to the hard-packed snow where we'll listen carefully to directions and put the snowshoes on together.

Slide 9: Proper Procedure

(Turn on lights and demonstrate procedure with available snowshoe)

Point out basic orientation: toe, heel, window, bindings. There is no difference between a right and left snowshoe.

With the bearpaw snowshoes, start by pinching the alligator clips and pulling the strap loose until there is just a few inches of tail. Some straps have knots at this point to prevent you from pulling the strap all the way out. Do the same thing to the heel strap. Then begin plucking the binding straps loose so there is plenty of space for large snow boots. Next, insert your foot so that your toes are halfway through the window. This is very important. If your toes touch the top of the window, you won't be able to walk very well, but if your toes barely come past the binding, your boot will likely slip out of the whole binding. Once your foot is in the proper place, begin tightening the straps from the toe, holding them through each ring. When you are at the very top, tug the strap through the alligator clip, and try sliding a finger between the top of your boot and the straps. If there is any space here, tighten the straps until you get rid of the space. Now tighten the heel strap with one easy tug. The heel strap should fit right around the heel, not too close the ankle, or bottom of the foot. Finally, get rid of the loose ends. Tie the straps around your ankle, to each other, or tuck them into your boots or

snowpants. Loose straps are a great tripping hazard so make sure they are out of the way.

Slide 10: Ask For Help

We will all put the snowshoes on together, so don't worry about it now, we'll help you at the top, step by step. This requires patience, so be respectful of the group and ask for help.

Slide 11: Safety Rules for Snowshoeing

We want everyone to stay safe while we're snowshoeing so we can really enjoy our trek. Be careful not to step near tree wells where there is a large gap around the trunk of the tree. Don't walk under "widow makers" which are dead trees that might fall down. Mounds of snow usually are rocks or logs covered with a thin layer of snow. Stepping on rocks or logs could break our wooden snowshoes, and stepping on other snowshoes could cause students to get hurt or deal with broken snowshoes.

We'll stay together as a group, always within eyesight of an adult. At all times we'll have a "Ranger Sandwich" where a ranger will lead and follow with all the students and adults in between.

Keep gloves on at all times so we don't get hurt from falling, and let an adult know if you don't feel well while we're moving.

Slide 12: Let the Adventure Begin

With all these safety messages in mind, we'll also be enjoying nature.

Slide 13: What Animals Will I See?

Will we see hibernating animals? No, these animals are deep in hibernation. Migrators? These animals have already left for the winter. Adaptors? We could see these animals if we are quiet and alert.

Slide 14: Won't Find Hibernators

Hibernating animals include ground squirrels, reptiles, and amphibians.

Slide 15: True Hibernators

True hibernators enter a deep dormant state. Their heart rate drops, nervous system basically shuts down. Their body temperature drops close to the outside temperature. These animals don't urinate or defecate at this time. They are dormant for six week cycles until the days get longer, temperatures rise, and they can wake up for the spring.

However, bears are not "true hibernators."

Slide 16: Our Black Bears Experience Torpor

Black bears find dens and enter a state of torpor for the winter. This is a deep sleep, however, bears give birth to their cubs in the den between January and March. They need to be able to feel, their body needs to be warm and functional to nurse and keep their cubs warm through the cold winter months. Torpor is not as deep a state as hibernation, so the bears occasionally wake up and wander around in the snow, marking their territory by scratching into trees.

Slide 17: Won't Find Migratory Animals

Migrators in Tahoe include mostly birds. Some mammals like the Little Brown Bat and Mule Deer also migrate out of Tahoe.

Slide 18: Migratory Animals Get Out Of Town

These animals travel to a mild climate to survive the winter. From Tahoe, many animals head to the Central or Carson Valley, where the elevation is lower and the weather is better. Many migratory birds fly close the equator to survive the winter. Migrating, however, is not an easy task. This requires a great deal of energy.

Slide 19: May Find Winter Adaptors

Adaptors include tree squirrels (who have bushy tails), deer mice, and American martens, a carnivore in the weasel family.

Slide 20: And More Adaptors

A few birds and coyotes are also active throughout the winter. Mountain Chickadees are also known as “cheeseburger birds” because of their distinct “cheese-burger” mating call in the spring. In the Lodgepole trees these birds fly through the trees making a “chick-chick-chick-a-dee” call. The Clark’s Nutcracker is a high elevation bird similar to a jay with a loud “squak”-ing call.

Slide 21: Signs of Adaptors

If we don't see the actual animals, we could find signs of animal activity. Black bears will scratch trees to mark territory. We could also find animal homes, such as holes in the snow, trees or down logs.

Slide 22: Footprints in the Snow

We can also see the activity of animals by looking for their tracks in the snow. American martens bound through the snow leaving a set of two small,

round prints, spaced about a foot apart. Gray squirrel tracks are larger than Chickaree tracks, but both have long back feet near two small, round front feet. These may look like rabbit tracks, however, squirrels are much more common than snowshoe hares at the top of the mountain. If squirrels are traveling very quickly from tree to tree, their long back feet can land in front of their small front feet. Black bear tracks are about the size of people tracks, walking “pigeon-toed” so their toes point in towards each other. Coyote tracks are also seen in the snow, looking very much like dog tracks.

Slide 23: Adaptors Change to Survive

Adaptors make changes to survive the winter. They can add layers of fat or fur to survive the cold temperatures. Some adaptors change their behavior in the winter, such as the marten, to be able to find food. The snowshoe hare, and other adaptor change their color to blend into the changing environment. Other adaptors stock up and store food for the winter or eat in excess in the fall to bulk up and store fat.

Slide 24: Let’s Explore and Have Some Fun

Keeping all our safety messages and animals in mind, we’re ready to start our adventure.