

Leave No Trace

Preserving the Beauty and Maintaining Our Access to the Land

Training Summary

Participants will identify personal nature awareness and stewardship goals. Advanced skills, but simple ones, will be learned to ensure a minimum-impact (Leave No Trace) experience on all outdoor experiences.

Time Required

60 minutes

Target Audience

Training is effective for adults and youth within all families of the Boy Scouts of America: Cub Scout packs, Boy Scout troops, Varsity Scout teams, Venturing crews, and Explorer posts.

Learning Objectives

At the end of this session, participants will be able to

- Identify personal nature awareness and stewardship goals.
- Learn simple, but effective, skills related to minimum impact outdoor activities.
- Develop an action plan for implementing Leave No Trace principles on future outdoor activities.

Training Format

Training will be a lecture format with an individual goal-setting period at the end of the session. It is suggested that training take place in an outdoor setting, even if it is only on the lawn where you normally meet for training.

When possible, use photos and articles that illustrate high impact on local areas. The addition of local resources will create meaningful teaching moments that make the training real, relevant, and personal to participants.

Required Materials

Each section includes a list of training props. These can be actual items or photos of the item from magazines, the Internet, etc. It is not necessary to have all of the items. The training will be more effective with props and/or photos but will still be successful without them.

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Introduction (3 to 4 minutes)

Tell participants this story:

One day a man was walking along the beach when he noticed a boy picking something up and gently throwing it into the ocean. Approaching the boy, he asked, “What are you doing?”

The youth replied, “Throwing starfish back into the ocean. The surf is up and the tide is going out. If I don’t throw them back, they’ll die.”

“Son,” the man said, “don’t you realize there are miles and miles of beach and hundreds of starfish? You can’t make a difference!”

After listening politely, the boy bent down, picked up another starfish, and threw it back into the surf. Then, smiling at the man, he said, “I made a difference for that one.”

(Original story by Loren Easley)

So it is when we are involved in outdoor activities. We can’t control what everyone else is or is not doing, but we can make a difference with our personal actions. Let’s consider this together:

When you visit a friend, you take care to leave your friend’s home just as you found it. You would never think of trampling flower gardens, chopping down trees in the yard, putting soap in the drinking water, or marking your name on the living room wall. When you are outdoors, the same courtesies apply. Leave everything just as you found it. That is called Leave No Trace.

Leave No Trace is a nationally recognized outdoor skills and ethics awareness program that teaches us how to treat the environment. The seven principles are guidelines to follow at all times and are an awareness of and an attitude toward the land rather than a set of rules.

Leave No Trace is different from programs promoted by many conservation and environmental groups that are designed to restrict our access to outdoor resources that belong to all of us. The purpose of Leave No Trace is to help us enjoy any outdoor activity we want but to do it in a way that avoids impacts when possible and minimizes the impacts that are unavoidable. Leave No Trace principles are not about restrictions; they are about responsible enjoyment of our outdoor resources. Leave No Trace is not a simple program for visiting the outdoors; it is a way of life—and learning Leave No Trace concepts begins at home. The principles apply at home, in our neighborhoods, and in our local parks as much as in the backcountry. We should all practice Leave No Trace in our thinking and actions, wherever we go.

Leave No Trace principles might seem unimportant—just like saving only one starfish—until we consider the combined effects of millions of outdoor visitors. One poorly located campsite or campfire may have little significance, but thousands of such instances seriously degrade the outdoor experience for all. The USDA Forest Service estimates that in the year 2000

there were 8 million recreational users in the forest. By the year 2050, that number is expected to exceed 1.2 billion.

Scouting is a program of the outdoors in its very essence. The outdoors is not just the laboratory in which Scouting occurs; rather it is the testing, proving, and shaping ground in which youth learn independence, self-reliance, and appreciations for others and learn, in depth, the meaning of the Scout Oath and Scout Law.

Access to the outdoors has become far more restricted over the past few decades due to many more persons camping and hiking and the appreciation of the temporary and permanent impact which human use and overuse can have. Many past Scouting activities and styles of camping—enjoyable, rewarding, and character-building as they were—are no longer possible today. The question is not whether we will use Leave No Trace or continue as we did in the past; that option is not available. Rather, if we do not become widely known and acknowledged for our skill and practice in Leave No Trace, our ability to offer and carry out outdoor activities may be hurt or lost.

We can protect the environment whenever we are outdoors by remembering that, wherever we are, we are a visitor and by practicing the principles of Leave No Trace in all of our activities.

Principle No. 1: Plan Ahead and Prepare (4 to 6 minutes)

Teaching Aids Needed

- Brain
- Box of macaroni and cheese
- Resealable bag of macaroni and cheese (half a box)
- Compass
- Topographic map
- Backpacking stove
- Poncho
- Water treatment tablets
- Water treatment filter
- First-aid kit
- Moleskin

In this section, we will consider the first principle of Leave No Trace: Plan Ahead and Prepare. Another way to think of this principle is: “Proper prior planning prevents poor performance.”

What is the most important tool you need for a safe and fun outdoor experience? (*After participants have provided several answers hold up the brain.*)

The brain is the most important tool you have. Everything else can fail you. If you prepare for the activity, your brain will enable you to respond properly to any situation. The best response in any situation is one that will maintain your safety and minimize your impact on the environment.

Planning ahead benefits the activity, wildlife, others we may encounter, and the land we will be on. When we review problems from past activities, we generally discover that many problems could have been avoided with proper planning. Proper planning will ensure a safe and exciting activity for everyone involved. It will ensure we don't build fires in prohibited areas, that our group is the right size for the area, and so forth.

Let's consider three examples of poor planning.

- A group that is inexperienced or unfamiliar with the area that they will visit may put people at risk by traveling through areas that are susceptible to flash floods or along ridge tops that are vulnerable to lightning activity. Groups traveling arid lands often fail to carry adequate water or a way of treating water from natural sources. Check with local land managers and study maps and weather conditions to ensure a low-risk experience.
- A poorly prepared group may plan to cook meals over a campfire only to discover upon arrival at their destination that a fire ban is in effect or that there is little firewood. Such groups often build a fire anyway—breaking the law or impacting the land—simply because they did not plan for alternatives. Fire bans and scarce wood supplies are signs that an area is experiencing the effects of heavy use.
- A group that has failed to develop good travel plans may be unable to travel as fast as expected. The terrain may be too steep, trails too rugged, or packs too heavy. These groups often resort to setting up camp late at night, sometimes in an unsafe location. Poor campsite selection usually leads to unnecessary resource damage and often puts participants at risk.

Now let's review a few things to consider when we plan ahead and prepare that would help us avoid these problems.

Our first step is to check with the land-management agency responsible for the area in which we will be traveling. The agency will have important information necessary for a successful and safe experience. This information will include regulations on group size, fire or other restrictions, as well as requirements and special concerns for the area. Many agencies find it necessary to limit group size to improve everyone's experience and limit damage to the environment. These same agencies can help us schedule our activity to avoid times of high use.

Another major consideration is the experience and ability of the least capable participant on the activity. Every activity should be planned around the weakest link. For example, disaster is just around the corner when you have a 50-pound pack on a 90-pound Scout!

Meals are another element of trip planning that can cause a major impact. Repackaging saves space, weight, and garbage that has to be carried out. Let's say that we are planning on two servings of macaroni and cheese. We can carry this box (*hold up the box of macaroni and cheese*) that has four servings or we can put two servings in a resealable plastic bag (*hold up bag of macaroni and cheese*) and have no extra weight or garbage. Most food should be removed from its commercial packaging and placed in resealable plastic bags before packing. This will also eliminate the undesirable behavior of stashing or burying unwanted trash.

Proper planning includes (*hold up map and compass*) reviewing a topographical map and knowing how to use a compass. Knowing local restrictions and fuel availability will help in determining (*hold up stove*) the need for a backpacking stove. We will (*hold up poncho*) be prepared for changing weather conditions and to (*hold up water treatment tablets and filter*) treat our water if necessary. And we will be able to handle minor medical emergencies (*hold up first-aid kit and moleskin*).

Remember: Proper prior planning prevents poor performance.

Principle No. 2: Travel and Camp on Durable Surfaces (4 to 6 minutes)

Teaching Aids Needed

- Soft-soled shoes
- Backpack
- Water container
- Pictures of cryptobiotic soil
- Stick

Now let's consider how to travel and camp while avoiding damage to the land. Think of your favorite trail. Do you have it in your mind? Now think about applying this principle to that trail during our discussion. OK?

Damage occurs when surface vegetation is trampled beyond recovery. The resulting damage encourages undesirable trails and campsites. Land managers build trails and campsites to concentrate impact and reduce damage to the environment. So whenever possible, use developed trails and campsites. Never shortcut switchbacks or walk around mud puddles on developed trails.

On high-impact sites, concentrate tents, traffic routes, and kitchen areas on areas that are already damaged. We need to confine impact to places that already show use and avoid enlarging the damaged area. When leaving camp, make sure that the area is clean, attractive, and appealing to other campers who will follow.

We often leave impacted areas to take breaks, search for "bathroom" privacy, explore around our campsite, or travel in pristine areas. When we are off trail, we should travel and camp on durable surfaces.

What is a durable surface? *A surface that we cannot harm by being on it.*

What are some examples of a durable surface? *Cement, asphalt, dry grass, rock, sand, gravel, snow, ice.*

Most vegetation quickly shows the effects of trampling and forms "ghost trails" that encourage others to follow the same route. Avoid vegetation whenever possible, especially on steep slopes, where the effects of travel are magnified.

On pristine sites it is best to spread out tents, avoid using the same route twice, and move camp every night. Our goal is to minimize the number of times any part of the site is trampled. (*Hold up shoes.*) Wear soft shoes around camp. Minimize activity around the kitchen and (*hold up pack*) where packs are stashed. The durable surfaces of large rock slabs make good kitchen sites. Watch where you walk to avoid crushing vegetation. Take alternate paths to water. Minimize the number of trips to water by carrying (*hold up container*) water containers. If a highly durable site (*hold up rock or sand*) is available, consider using highly durable surfaces like rock or sand, when available for more intensive activities such as cooking.

In arid lands, camp on durable surfaces or sites that already are highly damaged. Make sure your site is large enough for your entire group. It should never be necessary to camp on cryptobiotic soil or next to desert creeks or streams.

Cryptobiotic crust (*show samples or photo*) is found in the desert and is extremely fragile. Crypto consists of tiny communities of organisms that appear as a blackish and irregular raised crust. This crust retains moisture in desert climates while providing a protective layer that prevents erosion. Travel across crypto only when absolutely necessary. In broad areas of crypto where damage is unavoidable, it is best to follow in one another's footsteps so the smallest area of crust is affected—exactly the opposite rule from travel through other forms of vegetation.

River corridors are narrow strips of land and water where there is little room to disperse human activities. It is generally best to camp on established sites located on beaches, sandbars, or nonvegetated sites below the high-water line.

All other times, camp at least 200 feet away (*show how far 200 feet is to another object*) from water, so we don't pollute the water and do allow wildlife the access they need. Select a site that is not visible to others. Even in popular areas, the sense of solitude can be enhanced by choosing an out-of-the-way site.

Never scrape away or clean sites of organic litter like leaves, and always minimize the removal of rocks and gravel. When breaking camp, take time to naturalize the site. Cover scuffed areas with pine needles or leaves, brush out footprints, and rake matted grassy areas with a stick (*demonstrate using a stick to rake the area*) to help the site recover and make it less obvious as a campsite. This extra effort will help hide where you camped and make it less likely that others will camp in the same spot.

Remember: Fatigue, bad weather, and late departure times are not acceptable excuses for damaging our natural resources and putting yourself in danger.

A key point is that there is not one right way to camp in all terrains and environments and that the right way for one environment may be very wrong for another environment. An expert in one environment does not necessarily have the skills for another environment but rather should learn from local experts and resources how Leave No Trace is best practiced locally.

Principle No. 3: Dispose of Waste Properly (4 to 6 minutes)

Teaching Aids Needed

- Bag of trash from a typical Scout outing
- Bag of macaroni and cheese
- Reusable container
- No-cook food
- Fish net
- Nylon
- Two dishpans
- Short stick
- Trowel

There are two types of waste that must be disposed of properly. One is our garbage, or trash, and the other is human waste. Think about areas you have hiked and camped where you found trash and stinky waste.

What does “Pack It In, Pack It Out” mean to you? This common saying is a simple way to encourage us to take our trash home. Most trash and litter (*hold up bag of trash*) originates from food. The easiest way to control trash is to plan ahead and prepare. Reduce trash by repackaging (*hold up bag of macaroni and cheese*) food into plastic bags and reusable containers (*hold up reusable container*). Another good idea is to keep your menu simple. For short trips, consider taking food that (*hold up no-cook food*) requires no cooking.

Under no circumstance should food scraps be buried or burned! Discarded or buried food scraps attract animals. It is common to see chipmunks, ground squirrels, and various species of birds gathering scraps around camp kitchens. A conscientious no-trace camper always keeps a clean camp.

Disposal of dishwater is easy. You can use a fish net (*hold up net and demonstrate*) to collect the food particles in the dishwater. Or you can put a nylon over the dishpan (*demonstrate*) and pour water through it into another container. Broadcast the dirty water 200 feet away from camp, cooking areas, and your water source. Broadcasting it spreads the smell of food so wildlife is not attracted to the area. You can empty the food from the fish net or nylon into your garbage bag.

Human waste disposal can be an embarrassing subject. Proper disposal of human waste is important to avoid water pollution, avoid someone else finding it, minimize spreading of disease, and aid in decomposition.

It is easy for men to properly dispose of urine. While urinating, we write our name in cursive to spread the urine. Urine is sterile, so it won't harm the soil or vegetation, but it does contain a high level of salt. When it is concentrated and dries, the smell can make the area less desirable for other visitors and attract wildlife, which can destroy plants while getting to the salts. Women can urinate on rocks, sand, gravel, pine needles and so forth that can not be damaged by animals trying to get the salt.

(*Note:* Leaders should use discretion when presenting this activity to Cub Scouts and younger participants to ensure that the giggle factor while discussing solid waste does not override learning the important skills which are needed.)

Properly disposing of solid human waste is even more important. Solid human waste must be packed out from some places, such as narrow river canyons. This is another reason for checking with agencies during your planning phase. In most locations, burying the solids properly is the most effective method of disposal.

Catholes are the most widely accepted method of waste disposal. Locate catholes at least 200 feet or about 70 adult steps (*show distance*) from water, trails, and camp. Select an inconspicuous site where other people are unlikely to walk or camp. Remove the natural litter, twigs, leaves, rocks, pinecones, and so forth. Make sure you have a short stick (*hold up stick*). Use a small garden trowel (*hold up trowel*) to dig a hole 4 to 6 inches in diameter.

The hole will be 6 to 8 inches deep in topsoil and 4 to 6 inches deep in the desert. There are no microbes to kill pathogens, so the heat from the sun will do it. South-facing slopes and ridge tops will have more exposure to sun and heat than other areas. Avoid areas where water visibly flows, such as sandy washes, even if they are dry at the moment.

Now we will make “poop soup” (*demonstrate with dirt*). Use the stick to mix the solids and the toilet paper together so everything decomposes faster. Put a few inches of soil in the hole and mix again. This mixes the natural microbes in the soil with the waste so it will break down faster. Keep mixing soil into the “soup” until you get 2 to 3 inches from the top. Fill the hole with soil and cover with natural litter.

Push the stick straight up in the hole to mark the spot so no one else gets an unpleasant surprise later. If camping in the area for more than one night, or if camping with a large group, cathole sites should be widely dispersed. Be sure to check with local land managers to learn what is expected in the region to be visited.

Principle No. 4: Leave What You Find (4 to 6 minutes)

Teaching Aids Needed

- Plastic flowers (“Plant” flowers around where you will be doing your presentation.)
- Feathers
- Photos of old pot shards and arrowheads
- Pictograph (You can make your own that looks real.)
- Camera
- Sketch pad and pencil
- Sleep pad

(*Hold up flowers, shards, pictograph, and arrowheads while asking this question.*) What do these things have in common? In this session we will discover why we should leave what we find when outdoors. Answer these questions to yourself:

- Have you been in the mountains and seen someone pick a flower for someone else because it was so pretty?
- Have you ever seen someone find something of interest, like arrowheads or pot shards, and take them home?
- Have you ever seen someone take something from the wild that came from a plant or animal?
- How would you feel if someone came into your yard and picked all your flowers?

(As you tell this story, move slowly and talk softly.) Imagine that you are out in the mountains one sunny morning on a short hike. You enjoy being in the mountains with the cool, clear air, the smell of pine trees and sage brush. During the hike, you see flowers and bees collecting pollen. You enjoy the sound of the bees as they buzz around the flowers. You listen to the breeze as it moves through the trees and the call of the birds as they fly around.

(“Pick” flowers as you tell the story by taking them from where they had been “planted.”) During the hike, you see others pick flowers, smell them, and drop them on the trail. Some people pick the flowers because they think they will look good at their campsite.

Have you ever seen people do something like that? Picking a few flowers does not seem like it would have any great impact and, if only a few flowers were picked, it wouldn't. But if many visitors thought “I'll just take a few,” a much more significant impact would result. *(Hold up camera.)* Take a picture or *(hold up pad and pencil)* sketch the flower instead of picking it. Experienced campers may enjoy an occasional edible plant, but they are careful not to deplete the surrounding vegetation or disturb plants that are rare or slow to reproduce.

When we are outdoors, we may find items from nature, like feathers or bones, or items from past history like arrowheads and pot shards *(hold up pictures of arrowheads and shards)*. Have you ever experienced the joy of discovery when you found something like this? Should we take the items for ourselves or should we leave them? Of course, we should leave them. The only exception to leaving what you find is trash. Be sure to pick up all of the trash you find.

Natural objects of beauty or interest—such as antlers, petrified wood, or colored rocks—add to the mood of the outdoors. Allow others a sense of discovery by leaving rocks, plants, archaeological artifacts and other objects of interest as you find them.

The same ethic is applies to *(hold up pictograph)* cultural artifacts found on public lands like national parks. It is illegal to remove or disturb archeological sites, historic sites, or artifacts such as pot shards, arrowheads, structures, and even antique bottles found on public lands.

Leave all areas as you find them. Do not dig trenches for tents or construct lean-tos, tables, chairs, or other improvements. If you clear an area of surface rocks, twigs, or pinecones, replace the items before leaving. On high-impact sites, it is OK to clean up the site and dismantle inappropriate user-built facilities, such as multiple fire rings and seats or tables that have been built. Consider the idea that good campsites are found, not made.

In many locations, properly located and legally constructed facilities, such as a single fire ring, should be left. Dismantling them will cause additional damage because someone else will rebuild it. Learn to evaluate all situations you find.

Avoid hammering nails into trees, hacking at branches with hatchets and saws, or tying tent guy lines to trunks and thus girdling the tree. Carving initials into trees is completely unacceptable. Cutting boughs for use as a sleeping pad creates minimal benefit and maximum impact. Inexpensive (*hold up pad*) sleeping pads are available at most stores that sell camping equipment.

Non-native plants can disrupt the normal balance of nature. We want to be careful not to move seeds from one area to another. Shake out any gear (*show gear*) before packing to return home. Clean gear again at home before your next adventure to help maintain a normal balance in nature.

Principle No. 5: Minimize Campfire Impacts (4 to 6 minutes)

Teaching Aids Needed

- Bag of white ash
- Blackened rock
- Mineral soil
- Ground cloth
- Waterproof match case
- Lighter on string to carry around your neck
- Fire pan (disposable aluminum turkey pan)
- 3 rocks
- Fuel (wood)
- Tinder
- Kindling
- Backpacking stove

In this section, we will consider the use of campfires. Campfires are often considered a necessity for cooking and warmth and are steeped in history and tradition. Some people would not think of camping without a campfire. Knowing how to build a campfire is also an important skill for every camper.

The most important consideration to be made when deciding to use a fire is the potential damage to the outdoors. Consider these questions:

- What is the fire danger for the time of year and the location you have selected?
- Are there fire restrictions?
- Is there sufficient wood?
- Do group members possess the skill to build a *Leave No Trace* campfire?

Camp in areas where wood is abundant if building a fire. Choose not to have a fire in areas where

there is little wood, like at higher elevations, in heavily used areas, or in the desert. A true Leave No Trace fire shows no evidence of there ever having been a fire.

The best place to build a fire is within an existing fire ring in a well-placed campsite. Keep the fire small and burning only for the time you are using it. Allow wood to burn (*hold up ash*) completely to ash. Put out fires with water as dirt may not completely extinguish the fire. Avoid building fires next to rock outcrops where the (*hold up blackened rock*) black scars last forever.

If there is no existing fire ring, construction of a mound fire minimizes damage to the ground. Start by collecting mineral soil like sand or gravel. (*Demonstrate.*) Lay out a ground cloth and spread the soil into a circular, flat-topped mound at least 6 to 8 inches thick. The thickness of the mound is critical to insulate the ground below from the heat of the fire. The ground cloth makes cleaning up after the fire much easier. The advantage of a mound fire is that it can be built on exposed rock or on an organic surface such as grass.

A pan fire is another good alternative for building a fire. A disposable aluminum baking pan with 3-inch-high sides is very effective and inexpensive. It can also be used as a wind shield for a backpacking stove. (*Demonstrate.*) Place the pan on rocks and lined with mineral soil so the heat does not scorch the ground.

Now, what about fuel? Standing trees, dead or alive, are home to birds and insects, so leave them alone. Fallen trees also provide bird and animal shelter, increase water capacity of the soil, and recycle nutrients back into the environment. Stripping branches from standing or fallen trees also detracts from an area's natural appearance.

- Avoid using hatchets and saws, or breaking branches off standing or downed trees. Dead and down wood burns easily, is easy to collect, and leaves less impact.
- Use small pieces of wood—no larger than the diameter of an adult wrist—that can be broken with your hands.
- Gather wood over a wide area away from camp.
- Burn all wood to white ash, grind small coals to ash between your gloved hands, thoroughly soak with water, and scatter the remains over a large area away from camp.
- Replace soil where you found it.
- Scatter unused wood to keep the area as natural looking as possible.
- Pack out any campfire litter. Plastic items, foil-lined wrappers, and leftover food should never be burned in a campfire.

Now, imagine we are camping in the mountains. The air is a bit chilly as our group begins preparation for the evening meal. We plan to build a fire to cook hot dogs and heat cans of chili. The fire will also take the chill out of the night air. As we begin to pile sticks inside the fire ring, a ranger approaches our group and informs us that there is a ban on fires due to dry weather. There will be no fire.

The development of lightweight efficient camp stoves (*show stove*) has encouraged a shift away from

the traditional fire.

- Stoves are fast and flexible.
- They eliminate the need to search for firewood.
- They operate in almost any weather condition.
- And they *Leave No Trace*.

The discussion related to stoves is short because they are so simple to use and require no special considerations. Stoves are usually the best option.

Principle No. 6: Respect Wildlife and

Principle No 7: Be Considerate of Other Visitors (4 to 6 minutes)

Teaching Aids Needed

- Binoculars
- Food scraps
- Plastic food wrapper
- Radio
- Headphones
- Bright clothes
- Bright tent

The last two principles are combined because they are so closely related in application. We have a responsibility to the wildlife and others when we are outdoors. Observe wildlife from a distance. Do not follow or approach them. Carry (*hold up binoculars*) binoculars, a spotting scope, or a telephoto lens to view wildlife from observation areas and trails.

Never feed animals. Feeding wildlife harms their health, alters natural behaviors, and exposes them to predators and other dangers. (*Hold up scraps.*) Even scraps can be harmful to wild animals. Wildlife become nuisance animals once they have had access to human food, and they are often killed by cars, dogs, or predators because they left the safety and cover of their normal habitat.

Protect wildlife and your food by storing food and trash securely. Animals often get into human trash, eating things such as (*show wrappers*) plastic food wrappers, which can clog their digestive systems. Human food also is not nutritious for wildlife and can cause tooth decay, gum infection, and ulcers. The chance of survival is slim when wardens must be called in to trap and relocate a deer or bear.

Control pets at all times, or leave them at home. Pets can be stressful to wild animals and may cause physical harm. Sick or wounded animals may bite, peck, or scratch. It is possible that the animal may have rabies or other diseases. Dogs do not fit in the wildlife category, and allowing pets to run free can be unwelcome, because they can frighten people and leave behind unwanted “presents.”

Avoid wildlife during sensitive times such as mating, nesting, raising young, or winter. Quick movements and loud noises are stressful to animals. Travel quietly and do not pursue, feed, or force

animals to flee. One noticeable exception is in bear country, where it is good to make noise so you do not startle the bears. In hot or cold weather, disturbance can affect an animal's ability to withstand the rigorous environment.

Allow animals free access to water sources by giving them the space they need to feel secure. Ideally, camps should be located at least 200 feet away (*show distance*) from existing water sources. This will minimize disturbance to wildlife and help ensure that animals have access to their drinking water.

With limited water in arid lands, desert travelers must strive to reduce their impact on the animals struggling for survival. You will be less likely to frighten animals by avoiding water holes at night.

One of the most important components of outdoor ethics is to be as courteous toward other visitors as we are to wildlife. It helps everyone enjoy their outdoor experience. Keep in mind that visits to seldom-used places require an extra effort to travel quietly.

Yield to other users on the trail. Groups leading or riding livestock have the right-of-way on trails, and bikers should yield to both equestrians and hikers. Hikers and bicyclists should move off the trail to the downhill side and stop when encountering pack stock. Horses are spooked easily, so stay motionless and talk quietly to the riders as they pass.

Take breaks and camp on durable surfaces and away from trails and other visitors. When selecting a rest area or campsite, choose a site away from the trail and away from other groups, where rocks or trees will screen you from view. Keep noise down in camp so as not to disturb other campers passing by on the trail.

Enjoy nature's sounds by letting them prevail. Avoid loud voices and noises. Many people come to the outdoors to listen to nature. Excessive noise, unleashed pets, and damaged surroundings take away from everyone's experience. So, keep the noise level down while traveling and, if you must (*hold up radio*) bring a radio, tapes, CDs, or cell phone, use (*hold up headphones*) headphones so you will not disturb others.

Bright clothing (*show examples*), equipment, and tents (*show bright tent pitched out in the distance*) that can be seen for long distances are discouraged. Especially in open natural areas, colors such as day-glow yellow are disturbing and contribute to a crowded feeling. To lessen visual impacts, choose colors that blend with the environment.

Remember, our open spaces and wildlands should be protected for future generations. It is up to us to keep them healthy, beautiful, and open to the public for recreation, reflection, and revitalization. Enjoy and learn from historical sites, but respect these sites and treasures.

Tread Lightly! Motorized Vehicle Use

Teaching Aids Needed

- Toy truck
- Toy boat
- Toy off-highway vehicle (e.g., four-wheeler, personal watercraft, snowmobile)

We have been learning about Leave No Trace, which is about nonmotorized forms of recreation. Now we will consider Tread Lightly, which concerns motorized recreation. It is important to remember that the *Guide to Safe Scouting* does not allow the use of most forms of motorized recreation during a BSA activity for youth not in the Venturing program.

Why do we talk about Tread Lightly if we can't use motorized vehicles?

According to a national survey completed by the Forest Service in 2000, 36 million individuals drove off-highway for recreation using a four-wheel drive ATV or off-highway motorcycle, with an additional 31 million going out on personal watercraft and snowmobiles. Many of us will use some form of motorized recreation outside of Scouting, so it just makes sense to include this as part of our personal outdoor ethic. An additional 79 million Americans drive some type of vehicle to their recreation destination. That means that just about everyone who participates in outdoor recreation will use motorized vehicles in some manner—including adults taking young people on an outdoor activity.

The message is simple. Preserve the land! Respect critters you see. Make the commitment to follow Tread Lightly principles as summarized in the Tread Lightly pledge. You will notice that they relate to the Leave No Trace principles.

“T” in TREAD stands for *Travel and recreate with minimum impact.*

“R” stands for *Respect the environment and the rights of others.*

“E” stands for *Educate yourself, plan, and prepare before you go.*

“A” stands for *Allow for future use of the outdoors; leave it better than you found it.*

“D” stands for *Discover the rewards of responsible recreation.*

Everything you learn about Leave No Trace applies to Tread Lightly. All hikers, bikers, horses, and motorized vehicles can leave an impact. Some people feel that motorized vehicles cause more damage than other forms of recreation because they are larger, can apply more power, and can cover more territory and should not be allowed on public lands for recreation. How would you feel if your favorite outdoor activity was not allowed on public lands?

Public lands are managed for multiple uses. That means motorized vehicles are—and should be—allowed. There is nothing wrong with motorized vehicles just as there is nothing wrong with hikers, bikers, and horsemen. We all should realize that we have responsibilities to do everything we can to minimize impact on the land while enjoying our favorite outdoor activities.

At times your choices may not impact the land but can impact other people and their outdoor experience. Always think about what you are going to do before you start your engine. Let's review

a few additional considerations when using your truck or four-wheel drive:

- Travel only in areas that are open to your type of recreation.
- Travel only on routes designated for motorized use.
- Do not create new routes or expand existing trails.
- Have the right information, maps, and equipment to make your trip safe, and know how to use them.
- Make sure your vehicle is compatible with road and trail conditions.
- Avoid sensitive areas like meadows and marshy areas.
- Cross streams only at fords where the road or trail intersects the stream.

You will need additional skills on how properly to cross obstacles, ravines, soft spots, and streams, like how to turn around and travel on switchbacks without causing damage. Some types of motorized recreation require specific clothing or safety equipment for a safe experience. When snowmobiling, wear a helmet, goggles or face shield, gloves, and warm footwear, and dress in layers.

To be safe in some activities, you need to know rules specific to that activity. When boating, for example, you should know that a motorized boat always yields the right-of-way to sailboats, canoes, rowboats and all other nonmotorized watercraft.

Please remember that in an age where outdoor recreation is the sport of choice, it is important for everyone to do all they can to protect our land, water resources, and wildlife by making good choices. As you head outside, remember that it is your responsibility to exercise responsible outdoor practices. You can do this by learning more about and following the principles of Tread Lightly and Leave No Trace and by leaving a good impression on the land and others.

Hands-On Participation (10 to 15 minutes)

Learning new skills is important, but it has no value without proper application. Each participant will need a piece of paper and something to write with.

Setup of Hands-On Activity

More than at any time in history, people are choosing to spend their leisure time involved with outdoor activities and recreation. Examples:

- More than 10 million youth camp each year.
- Family camps have increased more than 500 percent over the last 12 years.
- In 2001, 11.6 million youth age 6 to 15 participated in fishing.
- More than 44 million Americans fish.
- In 2002, 73.3 million people went hiking.
- In 2003, 72 million people participated in boating activities (44.2 percent of the U.S. population).
- In 2004, 66 million people visited Forest Service recreational sites.
- In 2004, 279,000 people visited National Park Service recreational sites.
- In 2004, 39 million people visited Fish and Wildlife Refuge wildlife refuges.
- In 2004, 90 million people visited Bureau of Reclamation recreational sites.

- 57 percent of Americans participate in at least one outdoor activity. Of this number, 63 percent participate in multiple activities.
- Most people who participate in outdoor activities range in age from 16 to 25.

We are loving our natural resources to death through irresponsible recreation. Each of us, as an individual, can make a difference—just as the boy tossing starfish back into the sea did. Be a good example of how to enjoy your outdoor activities in a responsible manner. Show others. Teach others. Encourage others. Let's do a quick activity.

Encourage participants to write down the three most important things they learned in the training, then have the participants list three ways they will implement what they have learned. This should include when and how they will complete the implementation.

Note that this is just a one-hour awareness/orientation. The BSA offers Leave No Trace and Tread Lightly Trainer and Master Educator Courses ranging from one to five days in length. These courses help unit level and district/council level leaders to learn more in depth about Leave No Trace and Tread Lightly principles and skills and learn how to create activities that are fun and exciting for youth while still being fully in line with Leave No Trace and Tread Lightly. All persons who plan for serious outdoor involvement, be it in the BSA or elsewhere, should consider such a course.

Conclusion

As time permits, ask participants to share what they have written in both areas and how implementation will address tangible local problems.

Additional Resources

Teaching Leave No Trace (official BSA manual)

<http://www.scouting.org/BoyScouts/TeachingLeaveNoTrace.aspx>

Leave No Trace Achievement Award

<http://old.scouting.org/boyscouts/resources/21-105/lntaward.pdf>

Cub Scout Leave No Trace Awareness Award

<http://www.scouting.org/CubScouts/resources/LeavenoTrace.aspx>

William T. Hornaday Awards

<http://www.scouting.org/Awards/HornadayAwards.aspx>

Leave No Trace Center for Outdoor Ethics

www.lnt.org

Tread Lightly!

www.treadlightly.org

The Center for Responsible Outdoor Activities and Recreation

www.tcfroar.org

Additional Training Opportunities

- Leave No Trace Trainer: two-day course

- Leave No Trace Master Educator: five-day course
- Tread Lightly! Tread Trainer: one-day course
- Tread Lightly! Master Tread Trainer: three-day course