MERIT BADGE SERIES







HIKING



BOY SCOUTS OF AMERICA®

How to Use This Pamphlet

The secret to successfully earning a merit badge is for you to use both the pamphlet and the suggestions of your counselor.

Your counselor can be as important to you as a coach is to an athlete. Use all of the resources your counselor can make available to you. This may be the best chance you will have to learn about this particular subject. Make it count.

If you or your counselor feels that any information in this pamphlet is incorrect, please let us know. Please state your source of information.

Merit badge pamphlets are reprinted annually and requirements updated regularly. Your suggestions for improvement are welcome.

Send comments along with a brief statement about yourself to Youth Development, S209 • Boy Scouts of America • 1325 West Walnut Hill Lane • P.O. Box 152079 • Irving, TX 75015-2079.

Who Pays for This Pamphlet?

This merit badge pamphlet is one in a series of more than 100 covering all kinds of hobby and career subjects. It is made available for you to buy as a service of the national and local councils, Boy Scouts of America. The costs of the development, writing, and editing of the merit badge pamphlets are paid for by the Boy Scouts of America in order to bring you the best book at a reasonable price.



BOY SCOUTS OF AMERICA
MERIT BADGE SERIES

HIKING



BOY SCOUTS OF AMERICA®

Requirements

1. Show that you know first aid for injuries or illnesses that could occur while hiking, including hypothermia, heatstroke, heat exhaustion, frostbite, dehydration, sunburn, sprained ankle, insect stings, tick bites, snakebite, blisters, hyperventilation, and altitude sickness.
2. Explain and, where possible, show the points of good hiking practices including the principles of Leave No Trace, hiking safety in the daytime and at night, courtesy to others, choice of footwear, and proper care of feet and footwear.
3. Explain how hiking is an aerobic activity. Develop a plan for conditioning yourself for 10-mile hikes, and describe how you will increase your fitness for longer hikes.
4. Make a written plan for a 10-mile hike. Include map routes, a clothing and equipment list, and a list of items for a trail lunch.
5. Take five hikes, each on a different day, and each of 10 continuous miles. Prepare a hike plan for each hike.*
6. Take a hike of 20 continuous miles in one day following a hike plan you have prepared.*
7. After each of the hikes (or during each hike if on one continuous "trek") in requirements 5 and 6, write a short report of your experience. Give dates and descriptions of routes covered, the weather, and any interesting things you saw. Share this report with your merit badge counselor.

*The hikes in requirements 5 and 6 can be used in fulfilling Second Class (2a) and First Class (3) rank requirements, but only if Hiking merit badge requirements 1, 2, 3, and 4 have been completed to the satisfaction of your counselor. The hikes of requirements 5 and 6 *cannot* be used to fulfill requirements of other merit badges.

35907
ISBN 978-0-8395-3407-8
©2007 Boy Scouts of America
2010 Printing

BANG/Brainerd, MN
4-2010/059530

Contents

Hiking Now and Then 5
Get Ready! 11
Get Set! 31
Go! 39
Minimizing Risk 45
Hiking Resources 61


VASQUE

Hiking Now and Then

Have you ever wanted to roam all day through forests and fields, climb a high hill, and look far across the land? Maybe you want to explore busy city streets, dusty farm roads, and beaches. Perhaps you are eager to see what's around the next corner and beyond the distant horizon. If so, then hiking is for you.



Hiking gives you the freedom to travel under your own power to the places you most want to go.

Hiking is also a terrific way to keep your body and mind in top shape, both now and for a lifetime. Walking packs power into your legs and makes your heart and lungs healthy and strong. Exploring the outdoors challenges you with discoveries and new ideas. Your senses will improve as you use your eyes and ears to gather information along the way.

Hiking with others builds friendships. Sharing good times together and watching out for one another deepens your bonds with other people.



Lastly, hiking brings you closer to the earth. As the miles roll beneath your feet, you will sense the lay of the land—hills tumbling into valleys, prairies flowing toward the mountains, rivers bending the shapes of cities and towns. Earning the Hiking merit badge will prepare you for exciting journeys. Hikes of 10 and 20 miles will give you the experience and confidence to enjoy hiking as a lifetime hobby.

Your pace allows you to see the plants and animals, like these ladybird beetles, that are important parts of every environment.

A Short History of Hiking

Hiking has always been a part of the human experience. When the first settlers arrived in North America, they were on foot, probably walking across the Bering land mass or on floes of ice from Asia to what is now Alaska. Their descendants made their way to every corner of the continent, one footstep at a time. They knew that going on foot would be the only way that many of them could get from place to place. They went far and wide, sometimes crossing large portions of what would become the United States.



Hiking the Pacific Northwest, 1906

By the 1800s, railroads, ships, and stagecoach lines began to offer Americans ways to travel with little physical effort. Even though hiking was no longer a necessity, many people chose to keep walking anyway. Some wanted the exercise and fresh air. Others enjoyed the leisurely pace or the scenery. Many found hiking relaxing.



Hiking on Mount Rainier, Washington, 1906



Climbing the Sunset Trail near Asheville, North Carolina, 1912

Hiking for fun took off in a big way in the late 1800s and early 1900s. Hiking clubs encouraged people to get out and walk. Long-distance hikers made their way from the Atlantic Ocean to the Pacific Ocean. Construction of the Appalachian Trail, the Pacific Crest Trail, Continental Divide Trail, and hundreds of other routes provided the public with pathways to walk on for a day, for a week, or even for months at a time.







Lord Robert Baden-Powell, the founder of world Scouting, was a great supporter of exploring the outdoors on a hike, as evidenced by some of his sketches.



Over the years the requirements for the Hiking merit badge have changed less than those for any other Scouting award.

While hiking clothing and gear have changed with the times, what has not changed is the joy of hiking. It is still as simple as lacing up your shoes and taking off under your own power. Since the Boy Scouts of America began in 1910, Scouts have known the freedom and rewards of setting out along a trail, down a quiet country road, or across a bustling urban landscape. Now it is your turn to do that, too.



Get Ready!

The adventure of hiking awaits you. All you have to do is take the first step.

Kinds of Hiking

Where do you want to go? What do you want to see? Hiking opportunities are all around you—in cities, on backroads, across deserts and tundra, on trails, and where there are no pathways at all. Each kind of hiking has its own challenges and delights.



Urban Hiking

Of all Scouting adventures, city hikes can be among the most interesting and easiest to plan. Set a course that will take you through parts of town you would like to see, or to a zoo, an exhibit, a museum, or a historical site. There may be a fair, a cultural celebration, or another civic activity you can attend. Many metropolitan areas have parks, arboretums, and greenbelts that are made for wandering on foot. You might also be able to plan a route that takes advantage of public transportation.

Always hike with at least one buddy.

The principles of Leave No Trace apply in the city just as they do in other areas. Leave a good impression wherever you go. Greet people along the way. If you are hiking with a dog, keep your pet on a leash and pick up and properly dispose of pet waste. Obey traffic signals. Lend a hand whenever you can.





Prepare for urban hiking as carefully as you would for a backcountry journey. Review your trip plan with your Scout leaders and parents or guardian. Pack rain gear and extra clothing if there is a chance the weather will change, and take along food and water. Carry a cell phone or enough coins to make several telephone calls, too, and money for a bus, subway, or taxi if you discover you must get home quickly.

Backroads Hiking

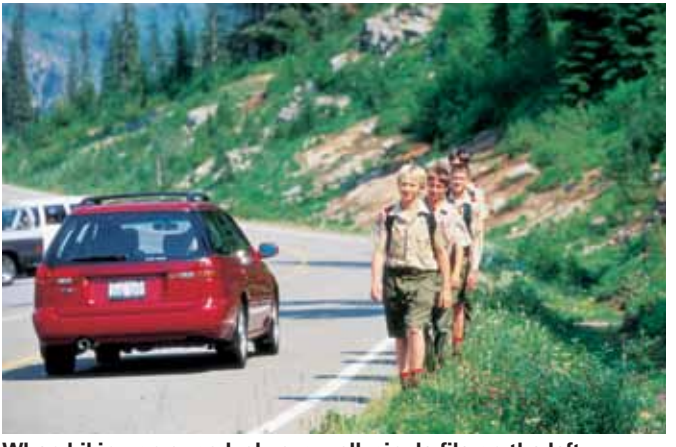
America's quiet backroads can offer miles of wonderful hiking. They may lead through farm fields, hug riverbanks, drift along in a shady forest, or head out into open prairie.

Whenever you hike on a road, a few simple precautions will help keep you safe.



A backroads hike will present unique opportunities to observe wildlife, such as this moose.

- Walk single file on the left shoulder so that you can see oncoming traffic.
- Wear light-colored and reflective clothing to help drivers notice you. Even better are bright orange vests such as those worn by highway workers and hunters.
- Be ready, if necessary, to step onto the shoulder of the road to give vehicles plenty of room.
- When you want to cross a road, line up alongside one another and have everyone cross at the same time.



When hiking on a road, always walk single file on the left shoulder—facing oncoming traffic.

Never hitchhike. It can be dangerous, it is most likely illegal, and it spoils the spirit of a hike.

Snow Hiking

A winter hike can be a terrific way to enjoy cold-weather adventures. Anticipate the conditions you are likely to encounter, select routes with obvious landmarks, and plan well. Remember that territory familiar in the summer can look very different when it is blanketed with snow. A map and compass or GPS receiver may come in handy for helping you stay on course.

See the *Boy Scout Handbook* and *Fieldbook* for information about layering clothing for comfort.



Sunglasses are important for snow hikers, especially on clear or hazy days, to protect your eyes from the glare. Leather boots that have been treated to repel water can keep your feet dry and warm, and gaiters will prevent snow from getting into your boots. You might even need snowshoes to travel through the deep snow. Choose clothing that is appropriate for the season. Take along high-energy food to power you through the day, and drink plenty of fluids to prevent dehydration. Oh, and don't forget the sunscreen.



Snow that is frozen after a cold night can be easy to hike across in the morning. By afternoon, though, the sun's warmth may soften the snow enough that your legs plunge through with each step. *Postholing* that way can be exhausting, so allow plenty of time to reach your destination.

To travel across snow that is too deep and soft to support your weight, you may need snowshoes or cross-country skis. If you are on foot, try to avoid established trails used by cross-country skiers and snowshoers. Deep footprints punched into the snow can make it more difficult for those on snowshoes or skis to fully enjoy their sport.





Tundra Hiking

Hike high enough in mountainous regions and you will reach an elevation where conditions are too harsh for forests to survive. The territory above this tree line is called alpine tundra. A tundra hike can take you up among the summits and surround you with tremendous scenery.



In tundra territory, vegetation is buffeted by the wind, and moisture can be in short supply.

Be alert for changes in the weather, too. Afternoon thunderstorms are common at high elevations. Turn back if the weather begins to worsen, pacing your hike so that you will be down in the trees before lightning threatens.

Alpine tundra is a magnificent and fragile landscape that requires your utmost efforts to cause it no harm. Growing seasons are usually quite short, and plants are easily damaged if people walk on them. The weight of a hiker may compress the soil, leaving it difficult for roots to penetrate. Protect tundra by staying on trails whenever possible.

Tundra tips: Careless footsteps can disturb the burrows of animals and the ground nests of birds. Watch for cairns—piles of stone used to mark routes. During cross-country travel, try to stay on snow or bare rocks.



Cairns

Global Positioning System



Modern technology has provided hikers with a powerful electronic means of navigation—the global positioning system. A GPS receiver accurately calculates the longitude and latitude of any spot on the globe by taking bearings on satellites orbiting 12,000 miles above Earth.

If you decide to use one, study the manufacturer's instructions and practice using the GPS before you go hiking. Once you learn to operate a GPS receiver, you can use it to identify precise locations, determine elevations above sea level, and plot the path of a trek. Inputting this information will create a history in the receiver that can be used if you need to retrace your steps.

Electronic navigational instruments will surely continue to improve in accuracy, versatility, and ease of use. But a GPS receiver (especially one with dead batteries) is no substitute for being able to navigate the backcountry with traditional tools. Develop confidence in your ability to use maps and compasses and then, if you wish, add to them with a GPS receiver.

Desert Hiking

Hiking across arid country will bring you close to remarkable vegetation, wildlife, and land formations. Carry lots of drinking water—at least two quarts per person, and more if the day might be hot. A broad-brimmed hat for warm-weather use will shade your head, and light-colored clothing can help you stay cool. Consider doing desert hiking in the early morning and evening; spend the hottest part of the day relaxing in the shade.



The blackish crust of cryptobiotic soil is home to many living microorganisms and is especially delicate. This living soil, which can take hundreds of years to develop, can be destroyed by a single footprint.





Storms can quickly fill dry streambeds with raging torrents, so seek higher ground during desert downpours.

Desert vegetation can be as fragile as it is interesting. Stay on trails so that you do not trample small plants or compact the soil around them. Be on the lookout for lizards, snakes, and other desert creatures. Step lightly, observe from a safe distance, and enjoy your encounters with them.

Flash flooding is a potential danger for hikers in arid country. If your route becomes blocked by rushing water, wait until the stream returns to safe levels before attempting to cross.

Cross-Country Hiking

Cross-country hiking invites you to escape everything made by humans, trails included. You might cross a river or a lakeshore beach, or the crest of a hill. Or your way might be determined by a series of compass readings and a map to keep your bearings.

Staying with your group is as important while hiking cross-country as it is for any other outdoor adventure. You can share in all the fun, and be there if anyone needs your help.

Smart hikers are always willing to turn around if a route becomes dangerous.

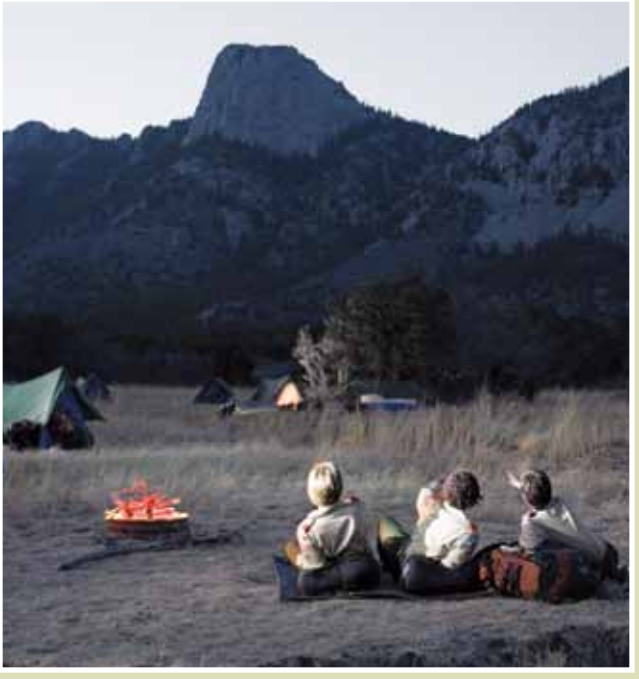


Plot your route carefully before you begin a cross-country hike, and you should not be surprised by rivers, cliffs, or other barriers. If you run into terrain that you are not sure you can safely cross, stop and figure out a better way or go back the way you came.

Night Hiking

Hiking during daylight hours is usually the best way to go. You can see where you are headed, and others, especially motorists, can easily see you. There may be times, however, when you are delayed and need to complete a journey in the dark. Use extra care to stay on your route, and keep the members of your group together.

If you are caught out after dark and cannot safely continue—perhaps the trail is difficult to follow, or group members have become tired, hungry, and chilled—it may be best to stop for the night. Use your Outdoor Essentials, good sense, and any other resources to keep your group safe and comfortable until you can move on in the morning light. See the *Wilderness Survival* merit badge pamphlet for more information on making do with what you have.



Trail Hiking

Scouts do much of their hiking on trails. They may choose pathways leading deep into the backcountry, or shorter routes connecting points of interest in a Scout camp or a city. A trail can lead to a mountaintop, a lake, a neighborhood park, or a prairie.



Trails are opportunities. If everyone stays on that pathway, vegetation on either side will not be trampled and erosion is less likely to occur. (By contrast, hikers going cross-country may spread out to avoid creating unwanted trails.)

Trails often have structures to help travelers stay safe. Retaining walls made of rocks or logs strengthen the sides of trails. Water bars set across the tread divert water from the pathway before it can cause erosion. Bridges constructed of lumber or logs carry trails over streams and gorges. Staircases of wood or stone can ease steep ascents. Culverts channel water from rain, springs, and melting snow under the tread.

Trail Corridors and Switchbacks. Every pathway passes through a trail corridor—the space cleared of branches and vegetation above and to each side of the tread. The corridor gives trail users room to pass with ease. A trail shared with horseback riders will have a higher and wider corridor than will a simple foot pathway.

Because water from rainstorms and melting snow can rush down a pathway and transform it into a gully, trails climbing a steep hill or a mountain may zigzag at a gentle grade that is easy on the land and on you. These turns are called switchbacks. Stay on the pathway and always go completely around a switchback; don't take a shortcut from the upper leg of the trail to a lower leg. Cutting across switchbacks can crush vegetation and loosen soil. Before long, water from rainstorms or melting snow can gouge out a trench that ruins the switchback, exposing the hillside to further erosion.

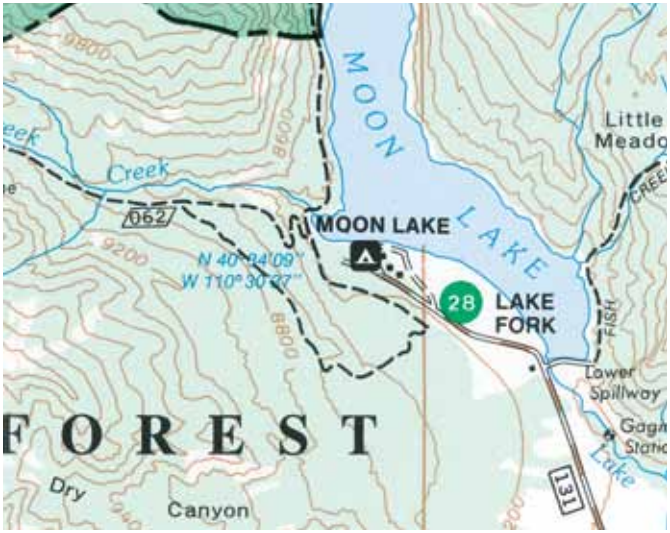


Canada geese

As you hike a trail, try to figure out why it was built where it is. Perhaps it swings around the edge of a meadow rather than leaving a scar through the middle of a clearing. It might stay back from a lakeshore to help protect fragile vegetation and nesting grounds. Take a good look at trail structures, footbridges, retaining walls, drainage devices, etc. Try to determine how they were constructed and the roles they play.

Many Scout units adopt pathways and take responsibility for seeing that trails are kept in good shape. Trail maintenance service projects include cutting back brush, repairing tread, cleaning out drainage structures, and restoring areas damaged by erosion.





Trip Plans

For more on the Outdoor Essentials, see the "Get Set!" chapter.

A trip plan prepares you for the challenges of a hike, a campout, or any other outdoor activity. Write down the five W's of a trip plan:

- ***Where* are you going?** Decide on a route to your destination and back. For backcountry trips, include a copy of a map with your route marked in pencil.
- ***When* will you return?** If you are not back reasonably close to the time on your trip plan, Scout leaders and family members can take steps to locate you and, if necessary, provide assistance.
- ***Who* is hiking with you?** List the names of your partners. If you need a ride to or from a trail, write down who will do the driving.
- ***Why* are you going?** To fish in a lake? Climb a peak? Explore a new area? Write a sentence or two about the purpose of your journey.
- ***What* are you taking?** Always carry the Outdoor Essentials. If you are camping out, you may need additional food, gear, and shelter.

TRIP PLAN OF Josh Haynes

DATE AND TIME OF DEPARTURE: Saturday, June 19, 8:00 A.M.

DESTINATION: Locust Grove

ROUTE GOING: Route 10 to Bluegrass Hill, then on Forester's Trail north to Locust Grove

ROUTE RETURNING: By way of Flat Rock Creek across Larsen's Farm to Route 10

DISTANCE GOING: 6 miles DISTANCE RETURNING: 4½ miles

BUDDY WHO'S GOING WITH ME: Wayne Jones

PURPOSE OF THIS HIKE: To take pictures of birds in Locust Grove and do some fishing

PERMISSIONS NEEDED: From Mr. Larsen to cross his farm and to get fresh water

SOURCE OF DRINKING WATER: Taking water bottle full from home. Plan to refill at Larsen's farm.

EQUIPMENT NEEDED:
- camera and film
- first-aid kit
- flashlight
- water bottle
- field glasses
- insect repellent
- notebook and pencil
- fishing tackle
- map and compass
- pocketknife
- matches, fire starters
- sunscreen
- sunglasses

CLOTHING NEEDED:
- summer Scout uniform
- sweater
- rain gear
- extra pair of socks
- broad-brimmed hat

HIKE MENU:
- sandwiches
- chocolate drink
- apples, candy bar

ESTIMATED TIME OF RETURN: 4:30 P.M.



Be sure to leave copies of your trip plan with at least two responsible adults.

Leave No Trace Hiking

Caring for the environment is an important responsibility of every hiker. The principles of Leave No Trace can help you live up to that responsibility and enjoy the outdoors fully by knowing that you are respecting the environment.

Leave No Trace Principles

As you and your group plan a hike, ask yourselves how you can follow each of the principles of Leave No Trace.

Plan Ahead and Prepare. When planning your hike, contact the land managers of the area you intend to visit or the Leave No Trace Center for Outdoor Ethics (see the resources section for contact information). Explain your desired route and ask how you can best implement Leave No Trace. Here are some additional guidelines to remember.

- Know the regulations and special concerns for the area you will visit.
- Prepare for extreme weather, hazards, and emergencies.
- Schedule your trip to avoid times of high use.
- Visit the backcountry in small groups no larger than parties of four to six hikers.

In pristine areas, disperse use to prevent the creation of new trails. Avoid places where impacts are just beginning.

Travel on Durable Surfaces. Stay on existing pathways to help protect the surrounding landscape from being trampled, eroded, and compacted.

- In popular areas, hike on durable surfaces such as established trails, rock, gravel, dry grasses, and snow.
- Protect shoreline vegetation.
- Walk single file in the middle of the trail, even if it is wet or muddy.
- Conduct activities in areas where vegetation is absent.



Dispose of Waste Properly. Remember this solid guideline: Pack it in, pack it out. Make it easier on yourself by limiting the amount of potential trash you take.

Especially important is the disposal of human waste. Use toilet facilities whenever possible. Otherwise, urinate away from trails, camps, and other gathering places. Choose rocks or bare ground; animals may strip vegetation in order to consume the salts left by concentrations of urine. Pack out solid waste, or use a cathole. Check with the land agency for the area you will visit to find out the preferred method.

To dig a cathole, choose a remote spot at least 200 feet from camps, trails, water, and dry gullies. With a trowel, dig a hole 6 to 8 inches deep in the topsoil. Take care of business, re-cover the hole, and disguise the site with leaves or other ground cover. Organic material in the topsoil will slowly break down the waste, making it harmless.





Leave What You Find. A cluster of flowers beside an alpine trail. Bricks from a historic homestead. A bird's nest on a low bush. Every hike will bring with it a new discovery to see and enjoy. Here are some reasons why you should leave what you find.

- Future hikers will have the excitement of discovering for themselves what you have found.
- Plant and wildlife environments will not be harmed. Leave rocks and other natural objects as you find them. Avoid introducing or transporting nonnative species.
- Archaeological, cultural, and historic structures and artifacts preserve a record of America's past; some are sacred to American Indians and other Native Americans. Observe, but do not touch or take.

Minimize Campfire Impacts. Most hikers are prepared to spend a day outdoors without needing a campfire. If you do expect to cook or get warm, plan ahead with options that do not depend on kindling a blaze. In any case, it is wise to know when a campfire can be lit and when a fire could scar the land. In many areas, fires are discouraged, prohibited, or allowed by permit only. If you must make a campfire:

- Use established fire rings, fire pans, or mound fires.
- Keep fires small. Use only sticks from the ground that can be broken by hand.
- Burn all wood and coals to ash, make sure the ashes are cold out, then scatter the cool ashes.

Respect Wildlife. Sharing the outdoors with wildlife is one of the great pleasures of hiking. Respect wildlife by always traveling quietly and observing animals from afar. You are too close if your actions cause an animal to change its activities. Always avoid wildlife when they are mating, nesting, raising young, and during other sensitive times.



Antelope ground squirrel



Mallard



Prairie dog



Raccoon

Never feed wild animals. Doing so damages their health, alters natural behaviors, and exposes them to predators and other dangers. Store all your food and trash securely.



Be Considerate of Other Visitors. Extending courtesy to other outdoor visitors is a natural habit of hikers. Speak softly and respect their desire for quiet and solitude. Leave radios and electronic devices at home. If you carry a mobile telephone for emergency communication, turn it off and stow it in your pack until you need it. Appreciate the company of those you meet on the trail and at campsites near yours.

Observe proper trail etiquette. If you encounter horseback riders or pack animals, stop and ask the lead rider what you should do. The lead rider will probably ask you to step a few paces downhill from the trail and stand quietly while the animals pass. If you encounter other hikers or backpackers going uphill when you are going downhill, give them the right-of-way. Step aside on a rock or a log to minimize your impact, and watch your footing when you step below the trail.

Control pets at all times, or leave them at home.













Get Set!

Setting off on a hike without properly preparing can have disastrous results. Make sure you are ready, from your physical condition to the best gear for the trip.

Conditioning

To enjoy hiking to the fullest, you will want to be in good shape. That is why requirement 3 calls for developing a plan for conditioning yourself. Begin with short trips, increasing the length of your journeys as you become more fit. A good way to prepare for Scout hikes is to walk whenever you can rather than riding in a car or relying on public transit.

Walking a couple of miles to school or a friend's home may take a little longer than driving there, but it is fun, economical, and good for your body.

Aerobic Activities

The word *aerobic* means "with oxygen." Aerobic activities increase the rate of your breathing and your heartbeat, and push your body to use oxygen more efficiently. Aerobic training can strengthen your circulatory and respiratory systems, add mass to muscles and bones, burn excess fat, and lead to improvements in overall fitness. For aerobic activities to be effective, you must take part in them for half an hour or more at least three times a week, maintaining enough intensity to break a light sweat.



Swimming might appear to be unrelated to hiking, but it will help you keep in shape for future hikes.

Hiking is one of many aerobic activities you can use to stay healthy and fit. Other activities include bicycling, snowboarding, jogging, and swimming. Soccer, basketball, tennis, and other sports involving constant motion can have a role in aerobic training, too. The success of aerobic conditioning lies not so much in the mix of activities you choose, but rather in enjoying them regularly and pushing yourself each time to achieve a little more.



Leather boots are a good choice if you will be traveling on rugged trails, or in snow, or carrying a heavy pack.



Footwear and Foot Care

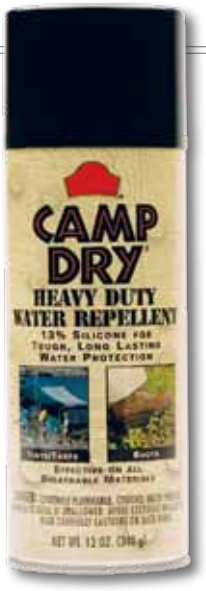
Almost any shoes will do for short walks on easy terrain. Lightweight boots with uppers made of nylon or other tough fabric are fine for most hiking in good weather. Avoid heavy boots. Leather boots will give your feet and ankles added protection and support, and will keep snow and rain from soaking your socks. Boots made for mountaineering or serious winter use are probably more than you will need for everyday hikes.

Whatever shoes or boots you choose, they must fit well. Your heels should not slip much when you walk, and your toes should have a little wiggle room. Break in new boots before you use them on a long hike. Wear them around at home whenever you can, and then on walks of increasing length. If your feet seem slow to adapt to new boots, wear them with socks that are thinner or thicker than you usually use; see if that works.

Caring for Shoes and Boots

Clean your footwear after a hike, especially if they have become caked with mud. You can use a brush to remove dried dirt, or wash the uppers with warm water and a cloth.





Your feet will carry you more than 100,000 miles in your lifetime. Be kind to them and they should cover most of those miles without much complaint.

Allow wet boots and shoes to dry at room temperature. Too much heat can melt nylon and cause leather to harden, so do not put your boots too close to a heat source. Treat leather with boot dressing containing beeswax, silicone, natural oils, or other protective ingredients that keep it flexible and water-repellent. Warm leather absorbs dressing well. Set your boots or shoes in the sun for an hour, then rub the dressing into the leather with a clean cloth or your fingers.

Socks

Socks cushion your feet and help keep them dry. They protect feet against blisters by reducing the friction between your skin and your footwear.



When you hike in athletic shoes, cotton socks may be just right. With boots, try wearing hiking socks made of wool or a blend of wool and nylon. Many hikers like to put on a thin pair of wool or synthetic-blend socks underneath their hiking socks. The inner socks wick moisture from the skin and slide against heavier outer socks.

Carry an extra pair or two of socks on your hikes. Changing into clean, dry socks during the day will refresh your feet. Tie damp socks on the outside of your pack to dry.

Clothing for Hiking

Dress for the outdoors by wearing layers so that you can adjust your clothing to meet changing weather conditions.

For more on layering and on foul-weather clothing, see the *Boy Scout Handbook* and *Fieldbook*.

Clothing for Warm-Weather Hiking

- ❑ Scout shirt
- ❑ T-shirt
- ❑ Hiking shorts
- ❑ Long pants
- ❑ Sweater or warm jacket
- ❑ Sturdy shoes or hiking boots
- ❑ Socks
- ❑ Hat with a brim for shade
- ❑ Bandanna
- ❑ Rain gear (poncho or parka, pants, gaiters)



Clothing for Cold-Weather Hiking

- ❑ Long-sleeved shirt
- ❑ Long pants (fleece or wool)
- ❑ Sweater (fleece or wool)
- ❑ Long underwear (polypropylene)
- ❑ Sturdy shoes or hiking boots
- ❑ Socks (wool or synthetic blend)
- ❑ Warm hooded parka or jacket
- ❑ Stocking hat (fleece or wool)
- ❑ Mittens or gloves (fleece or wool) with water-resistant shells
- ❑ Bandannas

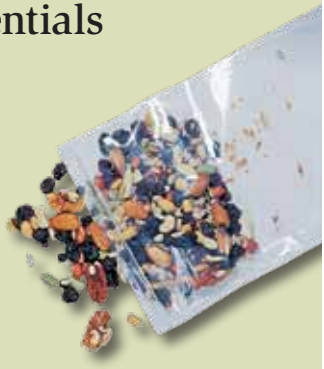


Hiking Gear

Take the Outdoor Essentials with you on every outdoor adventure. The items on the list may help you avoid emergencies, and they can make a pleasant hike even better.

The Outdoor Essentials

- ❑ Pocketknife
- ❑ First-aid kit
- ❑ Extra clothing
- ❑ Rain gear
- ❑ Water bottle
- ❑ Flashlight
- ❑ Trail food
- ❑ Matches and fire starters
- ❑ Sun protection
- ❑ Map and compass





At least one person in each hiking group should carry a watch so that you can pace your travels, stick to your trip plan, and return home when you are expected.

Pack

A fanny pack or day pack will hold everything you need during a hike. If you use a small pack to carry your books to school, it will probably be fine to use for hiking, too.



Fanny pack



Day pack



Telescoping trekking poles

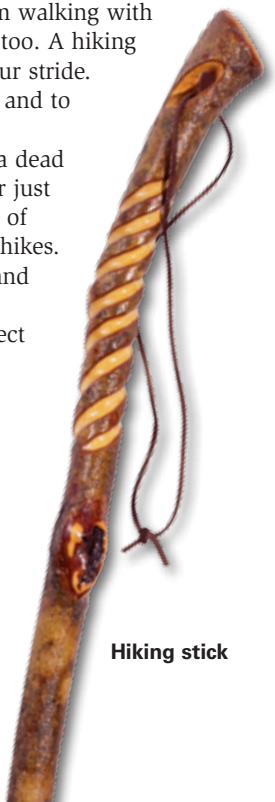


Sticks and Trekking Poles

Pictures of early Scouts often show them walking with hiking sticks. You may want to try one, too. A hiking stick can add rhythm and balance to your stride. Use it to measure the depth of a stream and to help maintain better balance.

A hiking stick can be as simple as a dead branch found on a trailside and used for just a mile or two. Or, select a straight piece of ash, oak, or hickory to take on all your hikes. Whittle your name into it if you want, and cut a notch for every 10 miles you hike.

A pair of trekking poles has the effect of putting a hiking stick in each of your hands. They are a great aid to balance, especially over rough ground, on snow, or when you are tired. If you no longer need them during a hike, trekking poles that telescope can be reduced to a size that can be strapped neatly to the outside of your pack.



Hiking stick

Food and Water

Hiking burns energy. Keep your body well-fueled by having a nutritious breakfast before a hike, and then carrying food that will provide the calories you need throughout the day.



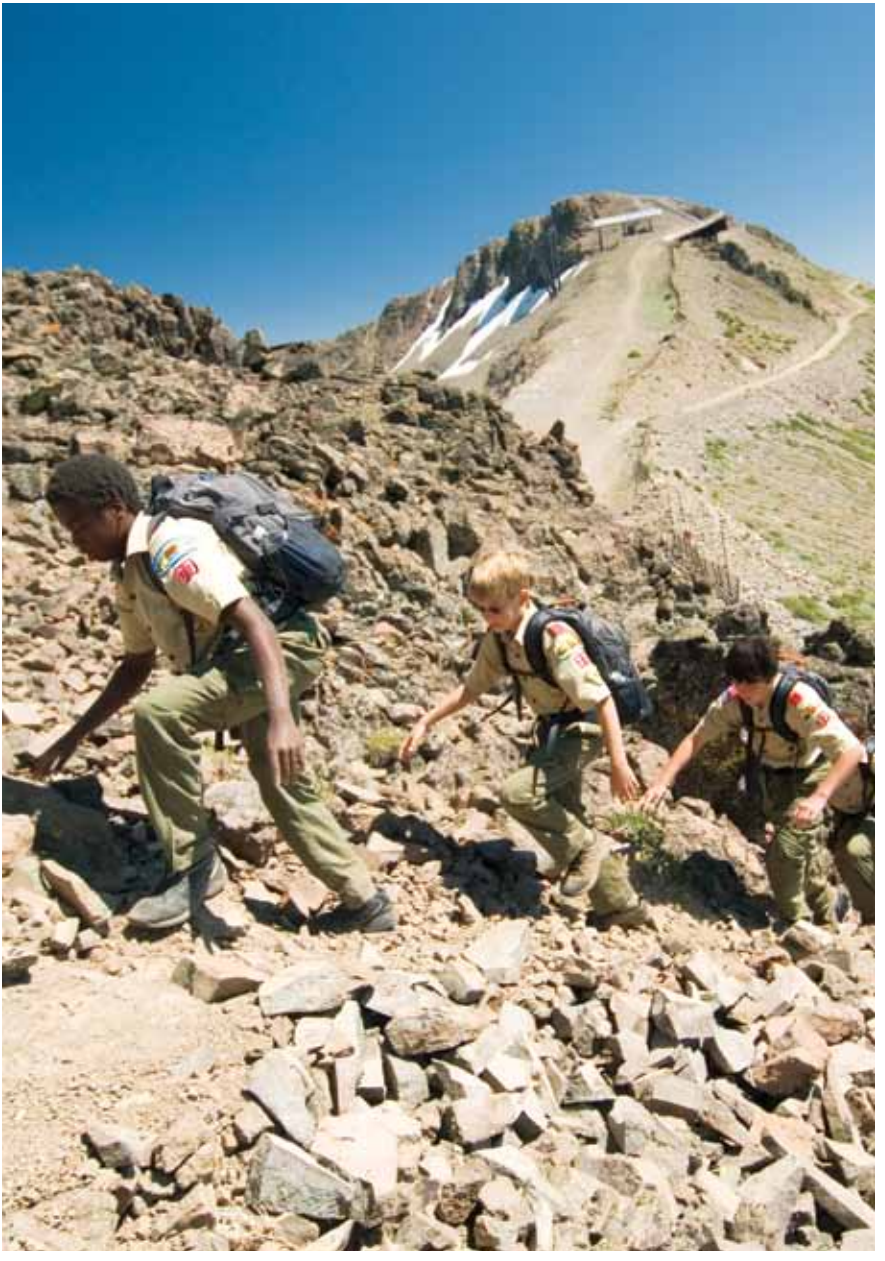
For a boost of energy along the trail, snack on some GORP—good old raisins and peanuts.

The *Cooking* merit badge pamphlet has recipes and ideas for trail lunches. For information on treating water collected during a hike, see the *Boy Scout Handbook* and *Fieldbook.*

You may want to take a bag of trail food to nibble on while you walk. Granola is the choice of many hikers. So is GORP—good old raisins and peanuts. Apples, oranges, carrots, and bananas are fine snacks, too. A solid lunch will see you through the middle of the day. Sandwiches, fruit, carrots, nuts, and raisins are all tasty. Instead of sandwiches, you might try crackers with cheese or peanut butter.

Water is even more important to a hiker than food. Fill at least one water bottle before you start out, and sip from it often. In hot weather, you may need to carry several water containers. Treat any water taken from streams, lakes, or springs before you drink it.





Go!

As part of requirement 4, you have chosen a good route and packed your Outdoor Essentials. You and your hiking buddies have shared your trip plan with your parents or guardian and with your Scout leader. You have thought about how you will apply the principles of Leave No Trace. It is time to hit the trail.

10-Mile Hikes

Set an easy pace for your first 10-mile hike. Hike at the pace of your slowest companion so your group stays together. Rest when you get tired. Eat when you are hungry, and drink water frequently to stay hydrated. Soon you will know what it feels like to hike for much of a day.

Whether you are on a mountain path or walking through a city park, there will be plenty to see. Watch the land around you for interesting scenery and signs of wildlife. If you are using a map, check it often to discover how far you have come and where you are going. Keep an eye on the sky, too. The shapes and motions of clouds can warn you of changes in the weather.

If your prehike training is adequate, 10 miles should be a comfortable distance for you.



Bobwhite quail

Be observant of your body's condition as well as your companions'.



Now and then, look back the way you came. If you return by the same route, you will be familiar with the appearance of the trail as it looks when you are going in that direction.

For requirement 7, write a report of your hike when you get home. Do it while the adventure is fresh in your mind. Then start planning your next adventure.

Your hiking record can be as simple as a notebook for writing the highlights of each journey. Where did you go? What did you take? Who went with you? What did you do? What did you see and hear? How might you prepare differently for your next hike? Include a copy of your trip plan and, if you wish, photographs, drawings, and maps. As you complete the hikes required for the Hiking merit badge, think about what you might want to include in your hiking record. It can serve as a source of information for the reports you present to your merit badge counselor. Later on, it will become a cherished reminder of the great adventures you had while hiking.



Porcupine

20-Mile Hike

Twenty miles is a long way, but with five 10-mile hikes behind you, you will be ready.

Plan your 20-mile hike carefully. It is wise to mark on a map any places you can cut your trip short if weather, weariness, or injuries surprise you along the way. Where will you be able to find telephones? A ranger station? Roads?

Have a good breakfast and get an early start so that you can finish your hike before dark. Carry extra socks that you can change into during the day. Pack plenty of high-energy foods for lunch, trail snacks, and perhaps a few extra sandwiches for late in the afternoon. Be sure to plan for an adequate water supply for the trail.

Set out on every hike with the right attitude. Enjoy your time on the trail. Get the most you can from every opportunity to explore the outdoors. There is no better adventure in Scouting than heading out with your friends to discover the freedom of the open trail.

Hiking Courtesy



Hiking should be a friendly activity. Your adventures may bring you in contact with other hikers and with people living and working alongside the routes you choose.

Greet people you meet with a cheerful hello and step to the side of the trail so that they can pass. Horses and mules may be spooked by hikers; if you meet people on horseback, stop where you are and ask the lead rider what to do. You may need to step a few paces downhill and stand quietly while the animals pass. Hikers may also share a trail with bicyclists. Step to the side of the pathway and give them room to pedal by.

Hiking courtesy includes the way you treat others in your group. Walk at a pace that is comfortable for the slowest hiker. No one likes to be left behind or be shut out of the fun. Travel single file on most trails, leaving some space between you and the Scout ahead of you. You can see where you are going and you will not run into him if he suddenly stops. Finally, take whatever comes your way as an opportunity for new adventures, and share your excitement with those around you.

Pace

Hiking 10 or 20 miles in a day is a good challenge. You may need to maintain a steady pace, conserving your energy and using your wisdom to cover the distance.

However, a hike is much more than simply covering a certain number of miles or reaching a destination. Whether your route is short or long, remember to enjoy the sights and sounds around you. The journey is every bit as important as its completion.

A good hiking buddy also makes sure that everyone else in the group is keeping well-fed and hydrated.



The safety and good fellowship of all the hikers in your group are important. Set a pace that is comfortable for the slowest member of your group.

If you are hiking at an easy pace and stop often to look at plants, animals, and scenery, you may not need any rest stops. However, if you are pushing steadily along, a five-minute break every half hour or so is a good idea. It will give you a chance to adjust your clothing, examine your feet for hot spots, take a drink, and have a snack. Make sure others in your group are doing well and that the pace is appropriate for them.

Crossing Streams

As adventures take you farther into the backcountry, your intended routes may sometimes lead you to streams that have no bridges. Study a stream before you attempt to cross. How wide is it? How deep? Is the streambed slippery or full of loose rocks? Wading can be difficult in rushing water, especially in cold water. Is there any chance you could be swept downstream into rocks or rapids if you lose your footing? Do not attempt to wade across water that is knee-deep or higher. Find a safe place to cross or do not cross at all. If you do decide to walk into a stream, keep the following in mind.



Before crossing a stream, unbuckle the waist belt of your backpack and loosen the shoulder straps. Doing so will enable you to quickly escape the load if you fall into the water.

Wear shoes for traction and protection from sharp stones. If you know that your hike will involve wading, bring along water slippers or old sneakers for that purpose. Otherwise, remove your socks and pull on your boots or hiking shoes over your bare feet. When you reach the far shore, dry your feet and put your dry socks back on.

Use a hiking stick or trekking poles for balance as you ford a stream, or form a human tripod with two other hikers. Facing inward, form a circle and put your arms around each other's shoulders. Lean on one another as you cross.



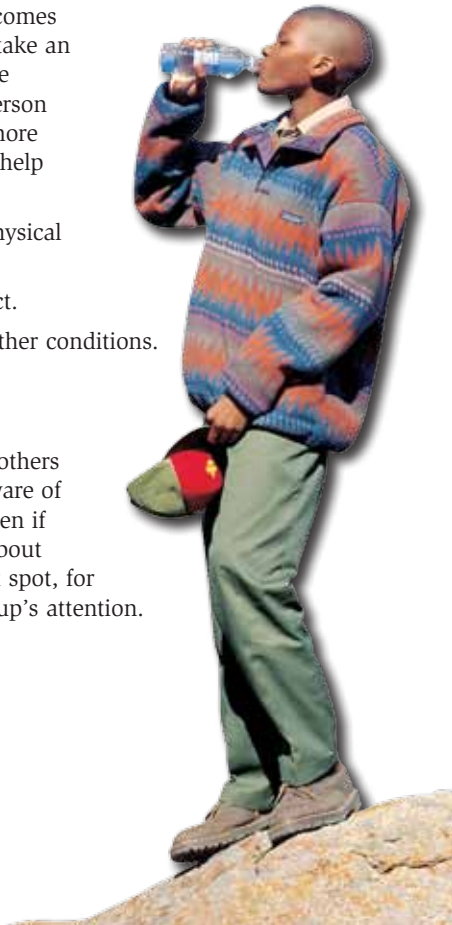
Minimizing Risk

Minimizing risk is so much a part of outdoor adventures that often we hardly notice we are doing it. When you fill bottles with water from streams and lakes, you deal with the risk of parasites by treating the water to rid it of microorganisms. When you share the outdoors with wildlife, you protect them and yourself by hanging your food out of their reach, eliminating odors from sleeping areas, and keeping campsites spotless.

A truly effective approach to reducing risk comes from the willingness of every group member to take an active role in maximizing personal safety and the safety of others. The more responsibility each person takes for his or her own health and safety, the more everyone can contribute to a successful trek. To help minimize risk:

- Stay in good shape so you are ready for the physical demands of a trek.
- Know where you are going and what to expect.
- Adjust clothing layers to match changing weather conditions.
- Drink plenty of water.
- Take care of gear.

A critical aspect of managing risk is letting others know when you are having difficulties or are aware of a concern that might affect you or the group. Even if you feel hesitant to speak up, voicing concern about questionable route decisions or a developing hot spot, for example, can bring important matters to the group's attention.



Dealing With Health Issues and Injuries

Getting injured while out on the trail is one the biggest risks for which you need to be prepared. Fortunately, many trail injuries—scrapes, bruises, blisters, and sunburn—usually are not very troublesome. Soap, water, bandages, and other items in your first-aid kit will take care of the majority of medical problems you may encounter.

Personal First-Aid Kit

Carrying a personal first-aid kit can help you minimize any injuries that could occur on a hike. Everything listed below can fit into a self-sealing plastic bag and be placed in your day pack.

- ❑ 6 adhesive bandages
- ❑ 2 3-by-3-inch sterile gauze pads
- ❑ 1 small roll of adhesive tape
- ❑ 1 3-by-6-inch piece of moleskin
- ❑ Small bar of soap
- ❑ Small tube of antiseptic
- ❑ Pair of nonlatex gloves
- ❑ Mouth-barrier device (for rescue breathing)
- ❑ Pencil and paper (for documenting symptoms and treatments)



However, the danger of a more serious injury is magnified by your distance from emergency response. Miles up a trail, you must rely on your own resources and those of your companions. Know how to prevent, recognize, and treat the health hazards that may arise during a backpacking trip. The brief discussions that follow are intended only to alert you to the dangers. Consult a first-aid manual for complete information. Other good sources of hiking first-aid information are the *First Aid, Backpacking,* and *Wilderness Survival* merit badge pamphlets; the *Boy Scout Handbook;* and the *Fieldbook*.

The Boy Scouts of America Recommends…

The BSA has some general first-aid guidelines for the treatment of minor injuries. Do not use bare hands to stop bleeding. Treat all blood as if it were contaminated with bloodborne viruses. This means always using a protective barrier, preferably nonlatex gloves, and always washing exposed skin areas with hot water and soap immediately after treating the victim. Include the following equipment in all first-aid kits, ready for use when rendering first aid:

- Nonlatex gloves, to be used when stopping bleeding or dressing wounds
- A mouth-barrier device, for rendering rescue breathing or CPR
- Plastic goggles or other eye protection, to prevent a victim's blood from getting into the rescuer's eyes in the event of serious arterial bleeding

Blisters

For hikers, blisters on the feet are the most common injury—and they often cause the most trouble. A "hot spot" on your foot signals the beginning of a blister. *Stop immediately* and protect the tender area by covering the hot spot with a piece of moleskin or molefoam slightly larger than the hot spot. Use several layers if necessary. Blisters are best left unbroken. If a blister does break, treat the broken blister as you would a minor cut or abrasion. Many find a product called Second Skin® very helpful in treating blisters.

To prevent blisters, wear boots that fit properly and are broken in well. Wear a pair of thin synthetic socks under regular hiking socks for extra protection. Keep your feet clean and dry, and change your socks frequently. Toughen your feet with short hikes before embarking on an extended trek.



Pay attention to your feet as you hike. Deal with discomfort immediately.



Diabetics who develop blisters should see a doctor as soon as possible after the trip.

Dehydration

Water is essential for nearly every bodily function, including digestion, respiration, brain activity, producing heat, and staying cool. A person who loses more water than he takes in risks becoming dehydrated. The first sign of dehydration usually is dark urine. Other signs can include weariness, headache, body aches, and confusion. Heat exhaustion, heatstroke, and hypothermia may all be caused in part by dehydration.

Prevent dehydration and heat reactions by drinking plenty of fluids. That is easy to do on hot summer days when you are thirsty. It is just as important in cold weather when you may not feel thirsty. Drink enough so that your urine stays clear.

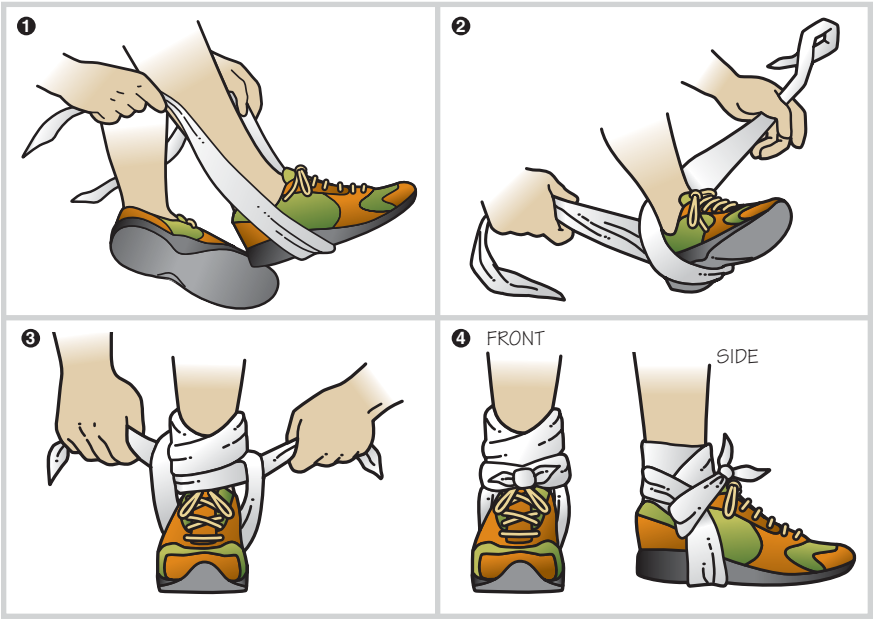
Hyperventilation

An injured person might become anxious or frightened and react by breathing too quickly and deeply. If the rapid breathing continues for too long, it can lead to *hyperventilation,* an abnormal loss of carbon dioxide from the bloodstream. The victim might feel suffocated, dizzy, and disoriented. Treat someone who is hyperventilating by speaking calmly and encouraging slow breathing. Having the person breathe into a paper bag might help restore carbon dioxide to the body.

Sprains and Strains

If you suffer a sprained ankle while hiking and you need to keep walking, it is best to leave your boot on to support the injury. If the boot is removed, the injury could swell so much that you will not be able to put the boot back on. Reinforce the ankle by wrapping it, boot and all, with a triangle bandage.





Wrapping for a sprained ankle

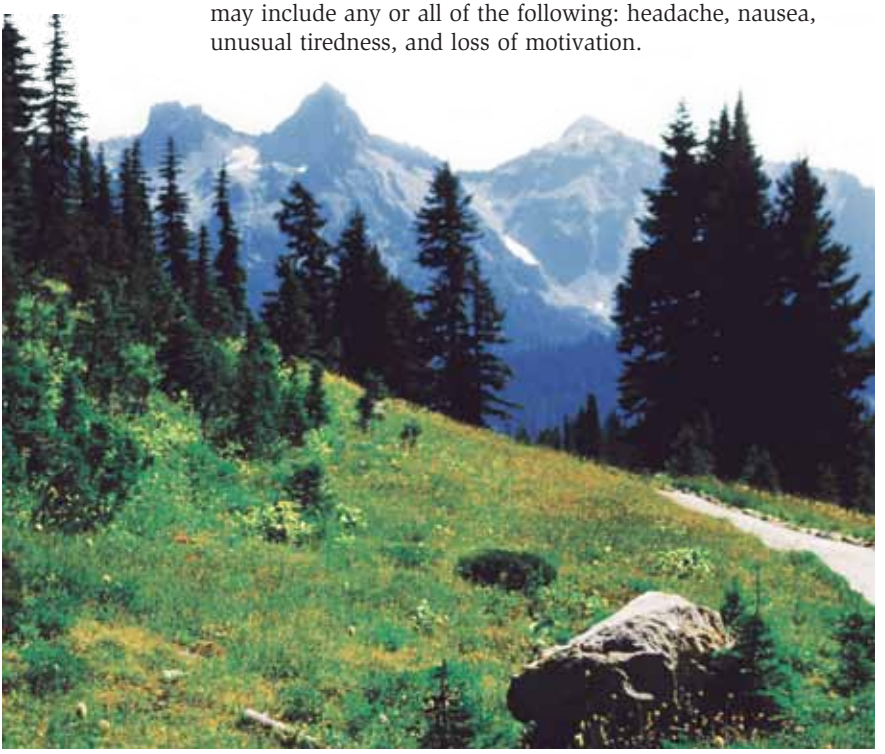
Don't Take a Tumble

Keeping safe from falling will make your hiking adventures much more enjoyable from beginning to end. Trails often are bumpy and have loose rocks, gravel, and other debris, so watch where you step, every step of the way. This is especially important if you are hiking along a steep incline. Stay within the boundaries of the trail, behind any protective railing, and obey all signage. Don't get distracted when you take photographs, talk with companions, or drop something. Paying attention will help you avoid the pitfalls of injuries such as a sprained ankle or scrapes and bruises from a tumble.

Altitude Sickness

If you live near an ocean, your home is probably not much above sea level. Scouts in the prairie states may be accustomed to elevations of just 1,000 or 2,000 feet. Going to a place that is much higher may leave you short of breath because as you go up in elevation, the atmosphere around you becomes thinner and contains less oxygen. Within a few days, your body will acclimate itself by producing extra red blood cells to carry more oxygen to your tissues and organs, and you should feel fine.

Hikers ascending even higher without allowing time for their bodies to adjust to the new elevations—perhaps climbing Philmont's 12,000-foot Baldy Mountain soon after arriving at the ranch—can develop headaches and may suffer from nausea. They may develop AMS, or acute mountain sickness. Symptoms may include any or all of the following: headache, nausea, unusual tiredness, and loss of motivation.



Whenever you hike at a high altitude, take precautions against acute mountain sickness. Fortunately, AMS is seldom a problem for people at elevations of less than 8,000 feet above sea level.



"Climb high, sleep low" is good advice for hikers, skiers, snowshoers, and other mountain travelers. While adjusting to thinner air, after hiking upward during the day, descend to a lower camp for a good night's rest.

Taking steps to prevent altitude sickness is far better than suffering from it during a hike. The following suggestions can make a big difference in how well you are able to function during journeys to high elevations.

- **Drink plenty of fluids.** As a rule, take in enough water so that your urine remains clear rather than dark yellow.
- **Ascend gradually.** Spending a few days at 5,000 to 7,000 feet and then a few more at 8,000 to 10,000 feet will permit your body to acclimate before you go higher.

These symptoms can also be warning signs of hypothermia, a far more common first-aid emergency among hikers. Address hypothermia first by making sure that the person is warm, is wearing dry clothing, is sheltered from the wind and chilly or wet weather, and has had enough to eat and drink. If the person does not rapidly improve and he or she is at an elevation above 8,000 feet, treat for altitude sickness as well.

Treating altitude sickness can be summed up in three words: Descend, descend, descend! Going down even a few thousand feet in elevation will almost always relieve the symptoms. Rest, fluids, and food may also help. If symptoms persist or worsen, get the person to a doctor.

Hypothermia

When a person's body is losing more heat than it can generate, hypothermia sets in. Simple exposure to cold is seldom the only cause. Exposure to wind and rain, and hunger, exhaustion, and dehydration are common contributing factors. A hypothermia victim might feel cold, numb, fatigued, irritable, and increasingly clumsy. Uncontrollable shivering, slurred speech, poor judgment, and loss of consciousness might also occur.

Treat a victim of hypothermia by preventing the person from getting colder. If necessary, use any or all of the following methods to help warm the body to its normal temperature.

- Move the person into a tent or other shelter and get him into dry, warm clothes.
- Zip the person into a dry sleeping bag, or wrap him in blankets or anything handy that will warm him. Cover the head with a warm hat or sleeping bag hood.
- If the person is able to drink, offer small amounts of warm liquids (cocoa, soup, fruit juices, water; no caffeine or alcohol).
- Provide water bottles filled with warm fluid to hold in the armpit and groin areas.

Monitor the person closely for any change in condition. Do not rewarm the person too quickly (for instance, by immersing in warm water); doing so can cause irregular and dangerous heartbeat.

To help prevent hypothermia, carry spare clothing in case you get wet or if temperatures drop. Be alert for early symptoms of hypothermia in yourself and others. Take action to keep full-blown hypothermia from developing.

If you suspect someone is suffering from hypothermia, challenge the person to walk, heel to toe, a 30-foot line scratched on the ground. If the person shows unsteadiness, loss of balance, or other signs of disorientation, take immediate action to get the victim warm and dry.



Frostbite



A frostbite victim may complain that his ears, nose, fingers, or feet feel painful and then numb, but sometimes he will not notice any such sensation. You may see grayish-white patches on the skin—called frostnip—the first stage of frostbite.

Only frostnip can be treated out on the trail. If you suspect that frostbite is deep (extending below skin level), remove any wet clothing and wrap the injured area in a dry blanket. Do not rub the injury. Get the victim under the care of a doctor.

To treat frostnip, move the victim into a shelter, then warm the injured area. If an ear or cheek is affected, warm the injury with the palm of your bare hand. Slip a frostnipped hand under your clothing and tuck it beneath an armpit. Treat frostnipped toes by putting the victim's bare feet against the warm skin of your belly.

Help prevent frostbite by wearing layers of clothing, keeping dry, and staying hydrated.

Rewarm any frostbitten area only if there is no chance of refreezing.

Heat Exhaustion

Heat and dehydration can lead to heat exhaustion. Symptoms can include pale, clammy skin; nausea and headache; dizziness and fainting; muscle cramps; and weakness and lack of energy.

If a member of your group is suffering from heat exhaustion, get the person in the shade and encourage him to drink small amounts of fluids. Cool water is best. Apply cool, wet cloths to his skin and fan him to hasten the cooling process. Activities can resume when the person feels better, although it can take a day or more for full recovery.



Cool down victims of heat exhaustion as quickly as possible.

Heatstroke

When a person's core temperature rises to life-threatening levels (above 105 degrees), heatstroke occurs. Dehydration and overexertion in hot environments can be factors. Symptoms include hot, sweaty, red skin; confusion; disorientation; and a rapid pulse.

Heatstroke is life-threatening; summon medical help immediately. To treat a heatstroke victim while awaiting help, work to lower the person's temperature quickly. Move him to a shady location and loosen tight clothing. Fan the person and apply wet towels. If you have ice packs, wrap them in a thin barrier (such as a thin towel) and place them under the armpits and against the neck and groin. If the person is able to drink, offer small amounts of cool water. Monitor the victim closely to guard against a relapse.

Sunburn

Sunburn is a common but potentially serious result of overexposure to the sun. Long-term exposure can result in an increased risk of skin cancer. Treat sunburn by getting the person under shade. If no shade is available, have him wear a brimmed hat, pants, and a long-sleeved shirt for protection from the sun. Treat painful sunburn by applying cool, wet cloths.

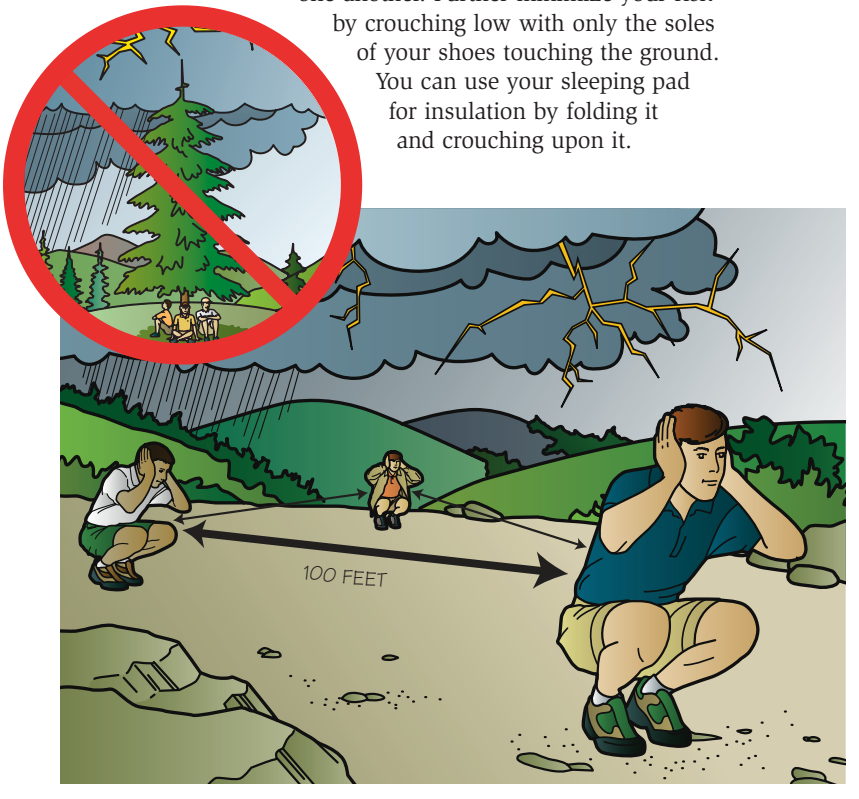


Prevent sunburn by limiting exposure to the sun, covering up, and wearing a broad-brimmed hat. Use a sunscreen with a sun protection factor (SPF) of at least 15. Apply it liberally and often.

Lightning Safety

Open water, mountaintops, the crests of ridges, the bases of tall or solitary trees, and large meadows can be hazardous places during lightning storms. Plan to be off peaks and other exposed locations before afternoon, when thunderstorms are more prevalent. If you are caught in a dangerous area, quickly move to shore or descend to a lower elevation, ideally away from the direction of the approaching storm. A dense forest located in a depression offers the greatest protection. Stay clear of shallow caves and overhanging cliffs—ground currents might arc across them. Avoid bodies of water and metal fences, too, and anything else that might conduct electricity. In tents, stay away from metal tent poles.

If a lightning storm catches your group in the open, spread out so that people are at least 100 feet from one another. Further minimize your risk by crouching low with only the soles of your shoes touching the ground. You can use your sleeping pad for insulation by folding it and crouching upon it.



Insect Stings

To treat bee stings, scrape away the stinger with the edge of a knife blade, but don't squeeze the sac attached to the stinger—that might force more venom into the skin. Applying an ice pack to the area can reduce pain and swelling caused by insect stings.



Chiggers are almost invisible. These tiny insects bite the skin, causing small welts and itching. Try not to scratch chigger bites. Covering the bites with hydrocortisone cream will provide some relief.



If a tick has been embedded for more than a day or poses difficulties in removal, see a doctor.

Tick Bites

Ticks are small, blood-sucking creatures that bury their heads in the skin. Protect yourself in tick-infested woodlands and fields. Wear long pants and a long-sleeved shirt. Button your collar and tuck your pant legs into your boots or socks. Inspect yourself daily, especially the hairy parts of your body; immediately remove any ticks you find.

If a tick has attached itself, remove it immediately. Grasp it with tweezers close to the skin and gently pull until it comes loose. Do not squeeze, twist, or jerk the tick, as that may leave its mouth parts buried in the skin. Wash the wound with soap and water, and apply an antiseptic. After handling a tick, thoroughly wash your hands.

Only some ticks carry Lyme disease. A red ring might appear around the bite. A victim might feel tired and have flulike symptoms. Anyone having such symptoms in the days and weeks following a trek should see a physician.

Snakebites

There are two types of venomous snakes in the United States. Pit vipers (rattlesnakes, copperheads, and cottonmouths) have triangular heads with pit marks on either side of the head. Coral snakes have black snouts and bands of red and yellow separated by bands of black. Coral snakes inject powerful venom that works on the victim's nervous system; pit-viper venom affects the circulatory system.

The bite of a nonvenomous snake causes only minor puncture wounds. If a crew member has been bitten by a snake that you are certain is nonvenomous, clean the wound with soap and water, then treat with an antiseptic.

The bite of a venomous snake may cause sharp, burning pain. If you are not certain whether a snake is venomous, assume that it is venomous. Get the victim under medical care as soon as possible so that physicians can neutralize the venom. The venom might not affect the victim for an hour or more. Within that time, the closer to medical attention you can get the victim, the better.

Snakes are not warm-blooded and therefore cannot carry rabies.



Milk snake

Remember: Red and black, friendly jack; red and yellow, deadly fellow.

Snakebite Don'ts

- Don't make any cuts on the bite, apply suction, apply a tourniquet, or use electric shock (such as from a car battery). All of these so-called remedies can cause more harm to the victim and are not proven to be effective.
- Don't apply ice to a snakebite. Ice will not help the injury but may damage the skin and tissue.
- Don't give the victim alcohol, sedatives, or aspirin. Doing so could hasten the absorption of venom, aggravate nausea, or fuel fear and panic in the victim.

Do all you can to prepare for a mishap before it occurs. Study the *First Aid* merit badge pamphlet and the chapters on first aid in the *Boy Scout Handbook* and *Fieldbook.* Practice rescue techniques with your patrol and troop. Check with your BSA local council office for training opportunities in your area such as those offered by the American Red Cross and other local groups.



Safety Around Dogs

It is not unusual to come upon dogs as you walk through cities, towns, and near farms. You may meet them on trails, too. Since you are a stranger to them, they might snarl and bark at you. Avoid eye contact; talk to the dogs you encounter in a calm, quiet voice and give them plenty of room as you pass. Do not threaten them, but if you have a hiking stick or trekking poles, keep them between you and the animals. Cross to the far side of the road or trail if you can, or avoid a dog's territory by taking another route.

Safety Around Wild Animals

Seeing deer, raccoons, skunks, squirrels, and other animals that make their homes in the outdoors is a special part of any hike. If wild animals must alter their normal habits, you are too close. They are not likely to become aggressive unless they feel threatened. Enjoy watching wild animals, but keep your distance. Do not disturb nests or burrows.



Striped skunk

Mountain lion



Be aware of the kinds of predatory animals you might meet during your adventures. Wolves, coyotes, and cougars (mountain lions, panthers, pumas) are curious. If you meet such an animal, do not approach the animal, run, or play dead. Face the creature and slowly retreat. Make yourself "big"—wave your arms and clothing above your head. Be noisy; throw rocks and sticks. If you encounter a bear, do not run or shout. Stay calm, back away, and avoid eye contact with the animal.



Hiking Resources

Scouting Literature

Boy Scout Handbook; Fieldbook; Deck of First Aid; Basic Illustrated Wilderness First Aid; Emergency First Aid pocket guide; *Be Prepared First Aid Book; Conservation Handbook; Backpacking, Camping, Cooking, First Aid, Orienteering,* and *Wilderness Survival* merit badge pamphlets

Visit the Boy Scouts of America's official retail Web site at *http://www.scoutstuff.org* for a complete listing of all merit badge pamphlets and other helpful Scouting materials and supplies.

Instruction and Guidebooks

Anderson, Kristi. *Wilderness Basics.* Mountaineers Books, 2004.

Berger, Karen. *Everyday Wisdom: 1001 Expert Tips for Hikers.* Mountaineers Books, 1997.

———. *Hiking and Backpacking.* DK Publishing, 2005.

———. *Hiking Light Handbook: Carry Less, Enjoy More.* Backpacker Magazine, Mountaineers Books, 2004.

Birkby, Robert. *Lightly on the Land: The SCA Trail Building and Maintenance Manual,* 2nd ed. Mountaineers Books, 2006.

Burns, Bob. *Wilderness Navigation: Finding Your Way Using Map, Compass, Altimeter and GPS*. Mountaineers Books, 2004.

Carline, Jan. *Mountaineering First Aid: A Guide to Accident Response and First Aid Care*. Mountaineers Books, 2004.

Fleming, June. *Staying Found: The Complete Map and Compass Handbook,* 3rd ed. Mountaineers Books, 2001.

Fletcher, Colin, and Chip Rawlins. *The Complete Walker IV.* Knopf, 2002.

Forgey, William. *Basic Essentials: Wilderness First Aid,* 3rd ed. Falcon Guides, 2006.

Foster, Lynne. *Take a Hike! The Sierra Club Kid's Guide to Hiking and Backpacking*. Little Brown, 1991.

Graham, John. *Outdoor Leadership: Technique, Common Sense, and Self-Confidence.* Mountaineers Books, 1997.

Grubbs, Bruce. *Basic Essentials: Using GPS*. Falcon, 2005.

Hampton, Bruce, and David Cole. *NOLS Soft Paths: How to Enjoy the Wilderness Without Harming It.* Stackpole Books, 2003.

Hodgson, Michael. *The Basic Essentials of Minimizing Impact on the Wilderness*. Globe Pequot Press, 1998.

Hooks, Christine. *Essential Hiking for Teens*. Children's, 2000.

Jacobson, Cliff. *Basic Essentials: Map and Compass*. Globe Pequot Press, 1999.

Jacobson, Cliff, Scottie Barnes, and James Churchill. *The Ultimate Guide to Wilderness Navigation*. Lyons Press (Globe Pequot Press), 2002.

Kals, W. S., and Clyde Soles. *Land Navigation Handbook: The Sierra Club Guide to Map, Compass, and GPS*. Sierra Club Books, 2005.

Lanza, Michael. *The Day Hiker's Handbook: Get Started With the Experts.* Mountaineers, 2003.

Logue, Victoria. *Hiking and Backpacking: Essential Skills, Equipment, and Safety.* Menasha Ridge Press, 2005.

———. *Kids Outdoors: Skills and Knowledge for Outdoor Adventures*. Ragged Mountain, 1996.

McGivney, Annette. *Leave No Trace: A Guide to the New Wilderness Etiquette,* 2nd rev. ed. Mountaineers Books, 2003.

McKinney, John. *The Joy of Hiking: Hiking the Trailmaster Way.* Wilderness Press, 2005.

McVey, Vicki. *The Sierra Club Wayfinding Book.* Little Brown, 1989.

Musnick, David, and Mark Pierce. *Conditioning for Outdoor Fitness.* Mountaineers Books, 2004.

Robbins, Michael W. *The Hiking Companion.* Storey Books, 2003.

Schimelpfenig, Tod, and Linda Lindsey. *NOLS Wilderness First Aid.* Stackpole Books, 2000.

Tilton, Buck. *Outdoor Safety Handbook.* Stackpole Books, 2006.

Organizations and Web Sites

American Hiking Society

1422 Fenwick Lane
Silver Spring, MD 20910
Telephone: 301-565-6704
Web site: *http://www.americanhiking.org*

Leave No Trace Center for Outdoor Ethics

P.O. Box 997
Boulder, CO 80306
Toll-free telephone: 800-332-4100
Web site: *http://www.LNT.org*

Local Hikes

Web site: *http://www.localhikes.com*

Sierra Club

85 Second St., Second Floor
San Francisco, CA 94105-3441
Telephone: 415-977-5500
Web site: *http://www.sierraclub.org*

Student Conservation Association

P.O. Box 550
Charlestown, NH 03603
Telephone: 603-543-1700
Web site: *http://www.thesca.org*

Magazines

Backpacker Magazine
Web site: *http://www.backpacker.com*

Camping Life Magazine
Web site: *http://www.campinglife.com*

Acknowledgments

We appreciate the Quicklist Consulting Committee of the Association for Library Service to Children, a division of the American Library Association, for its assistance with updating the resources section of this merit badge pamphlet.

Photo and Illustration Credits

Hansell F. Cross, Georgia State University, *Bugwood.org,* courtesy—page 56 *(left)*

Jerald E. Dewey, USDA Forest Service, *Bugwood.org,* courtesy—page 13 *(top)*

Library of Congress Prints and Photographs Division, courtesy—pages 6 *(bottom)* and 7 *(both)*

©Photos.com—cover *(day pack, fanny pack, knife, sunglasses);* pages 6 *(top),* 12 *(both),* 14 *(bottom),* 15 *(right),* 16, 17 *(top left),* 19 *(both),* 23 *(top),* 26, 27 *(left),* 28 *(all),* 35 *(bottom, both),* 36 *(left),* 37 *(bottom),* 39, 40 *(bottom),* 50, and 58–59 *(all)*

USDA Agricultural Resource Service/Scott Bauer, courtesy—page 56 *(right)*

U.S. Fish and Wildlife Service/Ken Hammond, courtesy—page 13 *(top)*

All other photos and illustrations not mentioned above are the property of or are protected by the Boy Scouts of America.

Dan Bryant—page 34 *(bottom)*

Daniel Giles–page 52

Roy Jansen—pages 41–42

John McDearmon—pages 49 *(all)* and 55 *(both)*

Brian Payne—cover *(milk snake);* pages 4, 10, 14 *(top),* 15 *(left),* 18, 30 *(center right, bottom left),* 31, 32 *(bottom),* 36 *(top right),* 38, 40 *(top),* 43, 51, 57, and 60

Notes

MERIT BADGE LIBRARY

Though intended as an aid to Boy Scouts, Varsity Scouts, and qualified Venturers in meeting merit badge requirements, these pamphlets are of general interest and are made available by many schools and public libraries. The latest revision date of each pamphlet might not correspond with the copyright date shown below, because this list is corrected only once a year, in January. Any number of merit badge pamphlets may be revised throughout the year; others are simply reprinted until a revision becomes necessary.

If a Scout has already started working on a merit badge when a new edition for that pamphlet is introduced, *he may continue to use the same merit badge pamphlet to earn the badge and fulfill the requirements therein.* In other words, the Scout need not start all over again with the new pamphlet and possibly revised requirements.

Merit Badge Pamphlet	Year
American Business	2002
American Cultures	2005
American Heritage	2005
American Labor	2006
Animal Science	2006
Archaeology	2006
Archery	2004
Architecture	2008
Art	2006
Astronomy	2004
Athletics	2006
Automotive Maintenance	2008
Aviation	2006
Backpacking	2007
Basketry	2003
Bird Study	2005
Bugling (*see* Music)	
Camping	2005
Canoeing	2004
Chemistry	2004
Cinematography	2008
Citizenship in the Community	2005
Citizenship in the Nation	2005
Citizenship in the World	2005
Climbing	2006
Coin Collecting	2008
Collections	2008
Communication	2009
Composite Materials	2006
Computers	2009
Cooking	2007
Crime Prevention	2005
Cycling	2003
Dentistry	2006
Disabilities Awareness	2005
Dog Care	2003
Drafting	2008
Electricity	2004
Electronics	2004
Emergency Preparedness	2008
Energy	2005
Engineering	2008
Entrepreneurship	2006
Environmental Science	2006
Family Life	2005
Farm Mechanics	2008
Fingerprinting	2003
Fire Safety	2004
First Aid	2007
Fish and Wildlife Management	2004
Fishing	2009
Fly-Fishing	2009
Forestry	2005
Gardening	2002
Genealogy	2005
Geology	2005
Golf	2002
Graphic Arts	2006
Hiking	2007
Home Repairs	2009
Horsemanship	2003
Indian Lore	2008
Insect Study	2008
Journalism	2006
Landscape Architecture	2008
Law	2003
Leatherwork	2002
Lifesaving	2008
Mammal Study	2003
Medicine	2009
Metalwork	2007
Model Design and Building	2003
Motorboating	2008
Music and Bugling	2003
Nature	2003
Nuclear Science	2004
Oceanography	2009
Orienteering	2003
Painting	2008
Personal Fitness	2006
Personal Management	2003
Pets	2003
Photography	2005
Pioneering	2006
Plant Science	2005
Plumbing	2004
Pottery	2008
Public Health	2005
Public Speaking	2002
Pulp and Paper	2006
Radio	2008
Railroading	2003
Reading	2003
Reptile and Amphibian Study	2005
Rifle Shooting	2001
Rowing	2006
Safety	2006
Salesmanship	2003
Scholarship	2004
Scuba Diving	2009
Sculpture	2007
Shotgun Shooting	2005
Skating	2005
Small-Boat Sailing	2004
Snow Sports	2007
Soil and Water Conservation	2004
Space Exploration	2004
Sports	2006
Stamp Collecting	2007
Surveying	2004
Swimming	2008
Textile	2003
Theater	2005
Traffic Safety	2006
Truck Transportation	2005
Veterinary Medicine	2005
Water Sports	2007
Weather	2006
Whitewater	2005
Wilderness Survival	2007
Wood Carving	2006
Woodwork	2003

BOY SCOUTS OF AMERICA • SUPPLY GROUP

NATIONAL DISTRIBUTION CENTER
2109 Westinghouse Boulevard
P.O. Box 7143
Charlotte, NC 28241-7143

www.scoutstuff.org

DIRECT MAIL CENTER
P.O. Box 909
Pineville, NC 28134-0909
For fast credit card orders—
VISA, MasterCard, American Express—
call BSA operators toll-free
1-800-323-0732



EAGLE SCOUT



FLORIDA SEA BASE



PHILMONT SCOUT RANCH



NORTHERN TIER

ON THE ROAD TO HIGH ADVENTURE

The Supply Group is ready to be a partner on your trail to Eagle through high adventure. The adventure is yours, and we are ready with the gear you will need. You can depend on the latest in lightweight, durable, quality gear that will meet and surpass your toughest requirements.

SATISFACTION SUPPLY GROUP GUARANTEED

www.scoutstuff.org

SKU 35907

7 30176 35907 6

35907 2010 Printing