VENTURING·BSA®

Venturing Ranger Award

Ranger Award

The Venturing Ranger Award is available to all registered Venturers. The purpose of the Ranger Award is to:

- Encourage all Venturers to acquire a high level of outdoor skills proficiency.
- Recognize achievement of this high level of outdoor skills proficiency.
- Provide a path for outdoor skills training.
- Develop highly trained Venturers who will be a training and leadership resource for Scouts and other Venturers.

Goals and Outcomes

Venturers who choose to earn the Ranger Award don't just learn outdoor skills, they go on to become highly proficient in those skills. Venturers can become advanced scuba divers, technical rock climbers, deep cavers, and cross-country cyclists. Venturers learn from outside consultants with a particular outdoor skill, then practice that skill until they too become highly proficient.

Venturers can be found at the peak of the most advanced technical rock climbs, scuba diving on shipwrecks, mapping new cave passages, and supporting wilderness rescues and accident management. Earning this award declares that a Venturer has worked hard and is now proficient in a variety of outdoor skills or sports, is prepared in outdoor safety, and is ready to teach outdoor skills to others.

Few thrills are bigger than rappelling off a rock face, running a class III or IV rapid on a wild and scenic river, watching a sunset from a mountaintop, or silently listening to the eerie sound of water dripping into a subterranean pool in a cave passage never before touched by humans. The Ranger Award says a Venturer knows these experiences.

The Ranger program is designed to challenge a Venturer in the wide variety of interests available in the outdoors setting. *Challenge* is a key word. The kinds of things Rangers do are challenging. Rangers are tough and can bear up under difficult circumstances. Rangers don't give up. Here's how a Venturer can become a Ranger.

Earning the Ranger Award

This is not an easy, quick award to earn. It takes planning, time, initiative, and plenty of hard work. A Venturer will probably need more than a year to complete all the requirements, but that too will speak to the candidate's determination and staying power, two more attributes of a Ranger.

The two types of requirements are:

- Core requirements
- Electives

In the core area, the candidate will achieve a high level of proficiency in first aid; wilderness survival; emergency preparedness; communications; outdoor skills, including low-impact camping; cooking; and land navigation. Additionally, the candidate will be required to plan and complete a conservation project that benefits the outdoor environment.

Besides the eight core requirements, the candidate must complete at least four of the 18 electives. The electives are:

- Backpacking
- Cave Exploring
- Cycling/Mountain Biking
- Ecology
- Equestrian
- First Aid
- Fishing
- Hunting
- Lifesaver
- Mountaineering
- Outdoor Living History
- Physical Fitness
- Plants and Wildlife
- Project COPE
- Scuba
- Shooting Sports
- Watercraft
- Winter Sports

These requirements may be approached in various ways. The candidate must do many requirements completely on his or her own. Others, such as scuba certification, may be done individually or with other Venturers. The crew might decide to do some together, such as Project COPE. The key is to have a plan and to have initiative.

Candidates for the Ranger Award may work with outside consultants who have expertise in particular areas, such as a scuba dive instructor for the scuba diving requirement or a certified first-aid instructor for the first-aid requirement. Consultants must be preapproved by the crew Advisor. Consultants may initial and date a candidate's *Venturing Awards and Requirements* book when the candidate has completed the requirement.

The candidate who has completed all eight core requirements and at least four electives, with each initialed and dated in the *Venturing Awards and Requirements* book by the crew Advisor or the appropriate consultant, should have the Advisor review the completed requirements, certify completion of the Ranger Award requirements, and order the Ranger Award.

Safety

Whether leading or working with others in outdoor activities, trust is a key factor, and a key factor of trust is safety. No one wants to be led by or to work with someone who is unsafe. A candidate's willingness to meet the core and elective requirements is the first step toward safety. The Venturer is acquiring knowledge, is learning from specialists who know what they are doing, and should be learning in a safe manner. While working on the Ranger Award requirements, the candidate will often have the opportunity to lead and teach others outdoor and high-adventure skills. Venturers should *always* think and practice safety.

It is recommended that the candidate complete the first-aid core requirements before beginning any other core requirements or electives. In this way, the Venturer will be prepared for any worst-case scenario.

Outdoor Ethics

The tremendous rewards of high-adventure treks are drawing ever more people to the backcountry. At the same time, the territory suitable for treks is shrinking in size. More people and less land mean we all must be careful not to endanger the wild outdoors we have come to enjoy.

The Outdoor Code

As an American, I will do my best to—

Be clean in my outdoor manners. I will treat the outdoors as a heritage. I will take care of it for myself and others. I will keep my trash and garbage out of lakes, streams, fields, woods, and roadways.

Be careful with fire. I will prevent wildfire. I will build my fires only where they are appropriate. When I have finished using a fire, I will make sure it is cold out. I will leave a clean fire ring or remove all evidence of my fire.

Be considerate in the outdoors. I will treat public and private property with respect. I will use low-impact methods of hiking and camping.

Be conservation-minded. I will learn how to practice good conservation of soil, water, forests, minerals, grasslands, wildlife, and energy. I will urge others to do the same.

A High-Adventure Ethic

A good way to protect the backcountry is to remember that while you are there, you are a visitor. When you visit a friend, you are careful to leave that person's home just as you found it. You would never think of dropping litter on the carpet, chopping down trees in the yard, putting soap in the drinking water, or marking your name on the living room wall. When you visit the backcountry, the same courtesies apply. Leave everything just as you found it.

Hiking and camping without a trace are signs of a skilled outdoorsman, and of a Scout, Scouter, or Venturer who cares for the environment. Travel lightly on the land.

The Principles of Leave No Trace

Leave No Trace is a nationally recognized outdoor skills and ethics education program. The Boy Scouts of America is committed to this program. The principles of Leave No Trace are not rules; they are guidelines to follow at all times.

The Leave No Trace principles might not seem important at first glance, but their value is apparent when considering the combined effects of millions of outdoor visitors. One poorly located campsite or campfire is of little significance, but thousands of such instances seriously degrade the outdoor experience for all. Leaving no trace is everyone's responsibility.

Plan Ahead and Prepare

Proper trip planning and preparation helps hikers and campers accomplish trip goals safely and enjoyably while minimizing damage to natural and cultural resources. Campers who plan ahead can avoid unexpected situations and minimize their impact by complying with area regulations such as observing limitations on group size.

Proper planning ensures

- Low-risk adventures because campers obtained information concerning geography and weather and prepared accordingly
- Properly located campsites because campers allotted enough time to reach their destination
- Appropriate campfires and minimal trash because of careful meal planning, food repackaging, and proper equipment
- Comfortable and fun camping and hiking experiences because the outing matches the skill level of the participants

Travel and Camp on Durable Surfaces

Damage to land occurs when visitors trample vegetation or communities of organisms beyond recovery. The resulting barren areas develop into undesirable trails, campsites, and soil erosion.

Concentrate Activity or Spread Out?

- In high-use areas, campers should concentrate their activities where vegetation is already absent. Minimize resource damage by using existing trails and selecting designated or existing campsites.
- In more remote, less-traveled areas, campers should generally spread out. When hiking, take different paths to avoid creating new trails that cause erosion. When camping, disperse tents and cooking activities, and move camp daily to avoid creating permanent-looking campsites. Always choose the most durable surfaces available: rock, gravel, dry grasses, or snow.

These guidelines apply to most alpine settings and may be different for other areas, such as deserts. Learn the Leave No Trace techniques for your crew's specific activity or destination. Check with land managers to be sure of the proper technique.

Dispose of Waste Properly

"Pack it in, pack it out." This simple yet effective saying motivates backcountry visitors to take their trash home with them. It makes sense to carry out of the backcountry the extra materials taken there by your group or others. Minimize the need to pack out food scraps by carefully planning meals. Accept the challenge of packing out everything you bring.

Sanitation

Backcountry users create body wastes and wastewater that require proper disposal.

- **Wastewater.** Help prevent contamination of natural water sources: After straining food particles, properly dispose of dishwater by dispersing at least 200 feet (about 80 to 100 strides for a youth) from springs, streams, and lakes. Use biodegradable soap 200 feet or more from any water source.
- **Human Waste.** Proper disposal of human waste helps prevent the spread of disease and exposure to others. Catholes 6 to 8 inches deep and 200 feet from water, trails, and campsites are often the easiest and most practical way to dispose of feces.

Leave What You Find

Allow others a sense of discovery: Leave rocks, plants, animals, archaeological artifacts, and other objects as you find them. It may be illegal to remove artifacts.

Minimize Site Alterations

Do not dig tent trenches or build lean-tos, tables, or chairs. Never hammer nails into trees, hack at trees with hatchets or saws, or damage bark and roots by tying horses to trees for extended periods. Replace surface rocks or twigs that you cleared from the campsite. On high-impact sites, clean the area and dismantle inappropriate user-built facilities such as multiple fire rings and log seats or tables.

Good campsites are found, not made. Avoid altering a site, digging trenches, or building structures.

Minimize Campfire Impacts

Some people would not think of camping without a campfire. Yet the naturalness of many areas has been degraded by overuse of fires and increasing demand for firewood.

If you build a fire, the most important consideration is the potential for resource damage. Whenever possible, use an existing campfire ring in a well-placed campsite. Choose not to have a fire in areas where wood is scarce—at higher elevations, in heavily used areas with a limited wood supply, or in desert settings.

True Leave No Trace fires are small. Use dead and downed wood no larger than an adult's wrist. When possible, burn all wood to ash and remove all unburned trash and food from the fire ring. If a site has two or more fire rings, you may dismantle all but one and scatter the materials in the surrounding area. Be certain all wood and campfire debris is cold out.

Lightweight camp stoves make low-impact camping possible by encouraging a shift away from fires. Stoves are fast, eliminate the need for firewood, and make cleanup after meals easier. After dinner, enjoy a candle lantern instead of a fire.

Respect Wildlife

Quick movements and loud noises are stressful to animals. Considerate campers

- Observe wildlife from afar to avoid disturbing them.
- Give animals a wide berth, especially during breeding, nesting, and birthing seasons.
- Store food securely and keep garbage and food scraps away from animals so they will not acquire bad habits.
- Help keep wildlife wild.

You are too close if an animal alters its normal activities.

Be Considerate of Other Visitors

Thoughtful campers

- Travel and camp in small groups (no more than the group size prescribed by land managers).
- Keep the noise down and leave radios, MP3 players, and pets at home.
- Select campsites away from other groups to help preserve their solitude.
- Always travel and camp quietly to avoid disturbing other visitors.
- Make sure the colors of their clothing and gear blend with the environment.
- Respect private property and leave gates (open or closed) as found.
- Treat other campers with consideration and respect their privacy.

Leave No Trace Trainer Courses

Leave No Trace Trainer courses are available from BSA Leave No Trace master educators, the National Outdoor Leadership School (NOLS), and four federal agencies: Bureau of Land Management, Forest Service, National Park Service, and Fish and Wildlife Service. Courses are taught throughout the country each year in all types of environments from alpine tundra to deserts. All Venturers are encouraged to be Leave No Trace–trained.

A Venturer who wants to take the next step (as Rangers often do) should consider becoming a Leave No Trace master educator. The Leave No Trace Master Educator course has three components: (1) low-impact camping skills, (2) wild-land ethics, and (3) teaching techniques. A five-day field course provides students with a comprehensive overview of Leave No Trace techniques through practical application in a field setting comprising a short backcountry trip.

Information about attending a Leave No Trace Master Educator course is available through the Leave No Trace hotline at 800-332-4100 ext. 282. Venturers may also call that number for a list of Leave No Trace masters in their area.

Tread Lightly!

Mechanized recreation is thriving across the country. Along with the new boom in mountain bikes, all-terrain vehicles, motorcycles, four-wheelers, snowmobiles, and personal watercraft comes new ways to damage the environment. America's beautiful places will continue to degrade unless recreationists use these vehicles responsibly.

Tread Lightly! is a nonprofit organization that has developed a set of outdoor principles to help people enjoy these activities while also leaving a good impression on the outdoors. Tread Lightly! emphasizes responsible use of off-road vehicles and other forms of travel, as well as low-impact principles related to outdoor recreational activities. While the program's principles are important in all outdoor recreation, they are especially important to a Venturer working on the Ranger Award and electives. On or off motorized vehicles, a Venturer should follow these Tread Lightly! principles, also called the TREAD pledge.

Travel and Recreate With Minimum Impact

Taking the SUV out camping? Hunting on your new ATV? Make sure in any circumstance that you stay on designated trails and routes. This simple rule, often disobeyed, greatly reduces the impact of outdoor recreation.

- Travel only on land or water areas that are open to your type of recreation.
- Be sure your horse or vehicle size is compatible with the road or trail conditions.
- Avoid cutting switchbacks and taking shortcuts. It can destroy vegetation and encourage others to use the unauthorized route.
- Most trails and routes are designed to withstand the effects of recreational use. Resist the urge to create new ones.

Respect the Environment and the Rights of Others

You're not the only one out there. Remember to be courteous to other people, animals, and ecosystems around you.

- Remember, designated wilderness areas are reserved for travel by foot and horse only.
- Respect and be courteous to other users who also want to enjoy the lands and waters you are using. Set an example of courtesy for all.
- Be considerate and honor others' desire for solitude and a peaceful outdoor experience. Loud motors and noisy behavior detract from a quiet outdoor setting.
- When driving, be especially cautious around horses, hikers, and bikers. Pull off to the side of the road or trail, shut off your engine if necessary, and let them pass.

Educate Yourself; Plan and Prepare Before You Go

You've heard it before: Be prepared! Educate yourself by having the right information, maps, and equipment to make your trip safe. Land managers can tell you what areas and routes are open for your type of recreation.

- Obtain a travel map that identifies recreation opportunities.
- Know the local laws and regulations.
- On private lands, be sure to obtain the owner or land manager's permission to cross or use their lands.
- As you travel, comply with all signage. Honor all gates, fences, and barriers that are there to protect natural resources, wildlife, and livestock.

Allow for Future Use of the Outdoors; Leave It Better Than You Found It

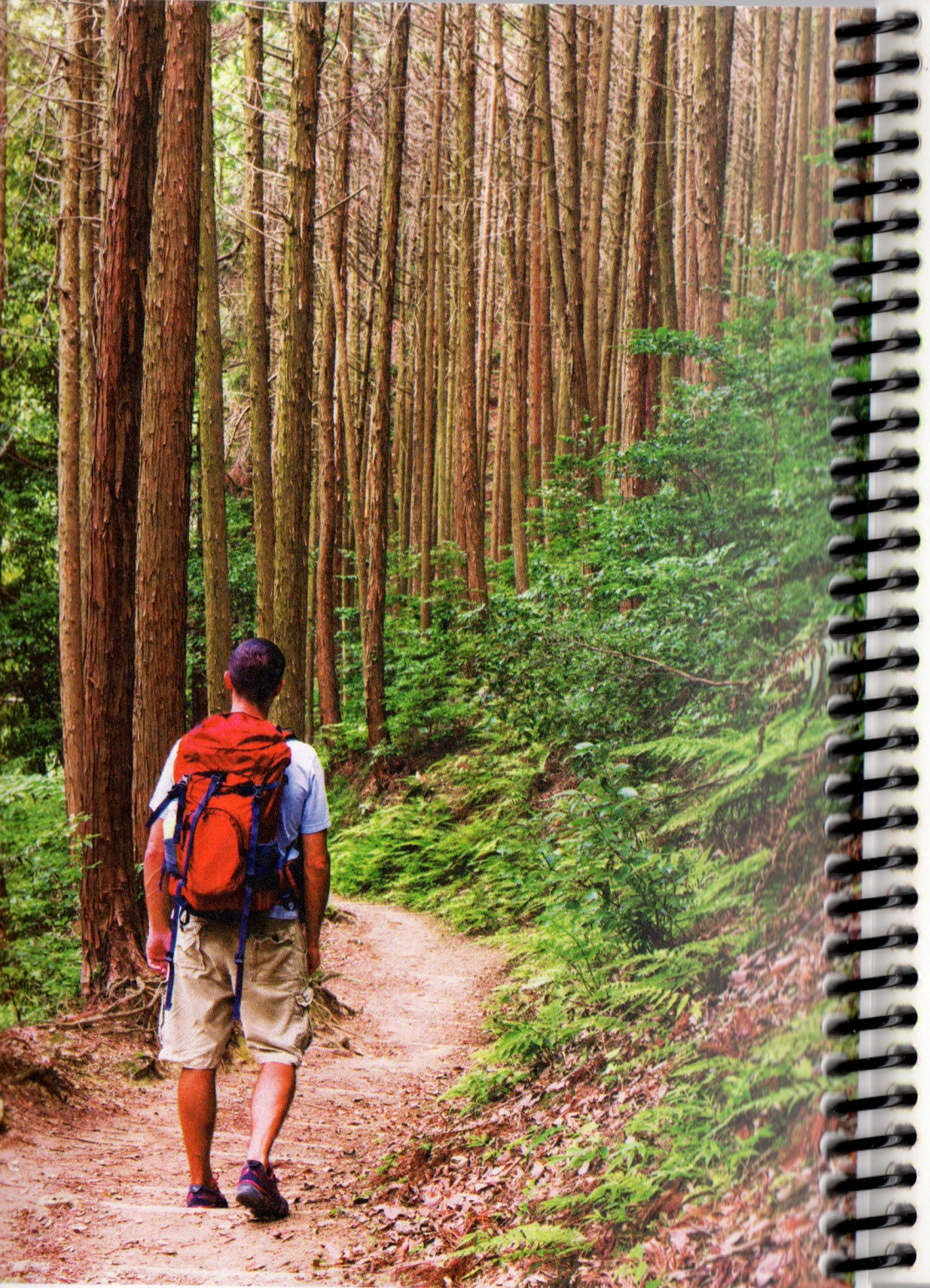
Vehicles can be destructive if not driven with some environmental sensitivity. Use the following techniques to minimize your impact and leave the area better than you found it. The future and quality of outdoor recreation depend on how we use it today.

- Stay on designated roads and trails.
- Avoid sensitive areas at all times. Especially sensitive areas susceptible to scarring are stream banks, lakeshores, and meadows. Improper horse or vehicle use can cause damage to vegetation.
- Cross streams only at fords where the road or trail intersects the stream. Traveling in a stream channel causes damage to aquatic life.
- Hill climb only in designated areas. Hillside climbing may be a challenge, but once vehicle scars are established, other vehicles follow the same ruts and cause long-lasting damage. Rains cause further damage by washing deep gullies in tire ruts. Permanent and unsightly scars result.
- While operating an off-highway vehicle, be sensitive to the life-sustaining needs of wildlife and livestock. In deep snow, stay clear of game so vehicle noise and proximity do not add stress to animals struggling to survive.

Discover the Rewards of Responsible Recreation

Venturers have scores of opportunities to enjoy the thrill of outdoor recreation, both with and without mechanized vehicles. This country has some of the most stunning landscapes in the world to explore. A Venturer will be watched as a leader among recreationists and should set the right example to ensure that these landscapes stay beautiful for generations to come.

Additional information on Tread Lightly! materials, principles, and programs is available from Tread Lightly! Inc. at 800-966-9900 or online at www.treadlightly.org.



BSA Wilderness Use Policy

All privately or publicly owned backcountry land and designated wildernesses are included in the term "wilderness areas" in this policy. The Outdoor Code of the Boy Scouts of America and the principles of Leave No Trace apply to outdoor behavior generally, but for treks into wilderness areas, minimum-impact camping methods must be used. Within the outdoor program of the Boy Scouts of America, there are many different camping skill levels. Camping practices that are appropriate for day outings, long-term Scout camp, or short-term unit camping might not apply to wilderness areas. Wherever they go, Scouts need to adopt attitudes and patterns of behavior that respect the right of others—including future generations—to enjoy the outdoors.

In wilderness areas, it is crucial to minimize human impact, particularly on fragile ecosystems such as mountains, lakes and streams, deserts, and seashores. Since our impact varies from one season of the year to the next, it becomes important for us to adjust to these changing conditions to avoid damaging the environment.

The Boy Scouts of America emphasizes these practices for all troops, teams, and crews planning to use wilderness areas:

- Contact the landowner or land management agency (U.S. Forest Service, National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, state and private agencies, etc.) well before an outing to learn the regulations for that area, including group size limits, to obtain required permits and current maps, and to discuss ways Scouts can fulfill the expectations of property owners or land managers.
- Complete a tour and activity plan (available through local council service centers), meet all of its conditions, and carry it during the trip.
- Review the appropriate BSA safety literature relating to the planned activities. See *Safe Swim Defense, Safety Afloat, Climb On Safely,* and *Trek Safely.* Also see the *Guide to Safe Scouting* online at http://www.scouting.org/scoutsource/HealthandSafety/GSS/toc.aspx for information on current BSA policies and procedures for ensuring safe activities, and see the *Fieldbook* website at http://www.bsafieldbook.org.
- Match the ruggedness of high-adventure experiences to the skills, physical ability, and maturity of those taking part. Save rugged treks for older unit members who are more proficient and experienced in outdoor skills.
- Conduct pre-trip training for your group that stresses proper wilderness behavior, rules, and skills for all of the conditions that might be encountered including lightning, missing person, wildfire, high winds, flooding, and emergency medical situations.
- Participate in training in how to apply the principles of Leave No Trace, and be proficient and experienced in the leadership and skills required for treks into wilderness areas.
- Adhere to the principles of Leave No Trace.

VENTURING RANGER AWARD

Complete requirements 1-8 and any 4 from 9-24.

	Date	Initials
1. First Aid. Complete a standard first-aid course or the American Red Cross Wilderness First Aid Basics or equivalent course.		
2. Communications. Do 2(a), 2(b), or 2(c).		
a. Take a communications-related training class that includes at least 15 hours of training. This could be a non-required course at school such as creative writing, technical writing, American Sign Language, or film production. It could also be a commercial course such as speed-reading or effective presentations.		
b. Actively participate in a communications-related club or organization for at least three months. Participate in at least three activities of the organization where you practice or improve your communications skills. Examples include Toastmasters, debate clubs, or drama clubs.		
c. Read at least two books approved by your Advisor on a communications subject of interest to you. Write or give a report to your crew on the important communications principles you learned and how you think you can apply these principles to improve your communications.		
AND Do 2(d), 2(e), or 2(f) in connection with an outdoor skill or area you are interested in. Have your Advisor approve your plan before you begin.		
d. Make a formal, oral presentation of at least 30 minutes to your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group. Include demonstrations, visual aids, or other techniques that will help you communicate more effectively.		
e. Prepare and present an audio/video presentation at least 15 minutes long to your crew or other group approved by your Advisor.		
f. Prepare a written pamphlet, set of instructions, or description and summary. It should be at least 1,000 words and provide a complete description of your chosen subject. Include pictures, charts, and/or diagrams to better communicate your topic. Have two people, one with expertise in the area you are presenting and one without expertise, read and critique your work. Make improvements to your draft based on their input. If your work is applicable to your crew, such as a work on caving skills, then share your work with your crew.		
AND Do 2(g).		
g. Make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on communications equipment used in the outdoors with emphasis on how this equipment would help in a wilderness survival situation.		

	Date	Initials
3. Cooking.		
a. Plan a menu and purchase the food for at least six people for a two-night campout with at least three meals.		
b. On the campout in requirement 3(a) above, cook the three meals using at least two of the following three methods of cooking: fire/coals, charcoal, stove.		
c. Demonstrate and explain proper safe food-handling methods for outdoor cooking.		
d. Demonstrate that you can prepare backpacking-type trail food using a backpacking-style stove.		
e. Without using any cooking utensils, prepare a meal with the four basic food groups for three people.		
f. Cook an entree, a bread, and a dessert in a Dutch oven.		
4. Emergency Preparedness.		
a. Discuss potential disasters and emergency preparedness with your family and then set up a family emergency plan.		
b. Build a family emergency kit.		
c. Make a tabletop display or presentation on what you have learned for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group.		
5. Land Navigation.		
a. Using a topographical map for your area or the area you will be navigating in, demonstrate that you know the following map symbols: index contour; vertical control station; hard-surface, heavy-duty road; railroad, single track; power transmission line; building; checked spot elevation; marsh; map scale; intermittent stream; depression; ridge; trail; stream; hard-surface, medium-duty road; bridge; cemetery; campsite; water well or spring; unimproved dirt road.		
b. Explain contour lines. Be able to tell the contour interval for your map and be able to show the difference between a steep and a gentle slope.		
c. Using a map and compass, navigate an orienteering course that has at least six legs covering at least 2.5 miles.		
d. Learn to use a global positioning system (GPS) receiver. Demonstrate that you can find a fixed coordinate or geocache at night using a GPS receiver.		
e. Teach the navigating skills you have learned in 5(a) through 5(d) above to your crew, another crew, a Cub Scout or Boy Scout unit, or another group.		

	Date	Initials
6. Leave No Trace.		
a. Recite and explain the principles of Leave No Trace.		
b. Participate in three separate camping/backpacking trips demonstrating that you know and use Leave No Trace principles.		
c. Make a tabletop display or presentation on the Leave No Trace principles and how they affect the environment and attitude of campers for your crew, another crew, a Cub Scout or Boy Scout unit, or another group, or teach a Leave No Trace Awareness course.		
7. Wilderness Survival. Note: Before you complete Wilderness Survival, you must have completed the Cooking, Land Navigation, and First Aid requirements.		
a. Write a risk management plan for an upcoming crew high-adventure activity such as a whitewater canoeing or rock-climbing trip. The plan should include nutrition, health, first aid, supervision, insurance, safety rules and regulations, proper equipment, maps and compass, in-service training, environmental considerations, emergency and evacuation procedures, and emergency contacts.		
b. From memory, list the survival priorities and explain your use of each in a survival situation.		
c. Learn about and then make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on the following subjects: i. Emergency signals used in the outdoors ii. Search-and-rescue patterns iii. Evacuation procedures and value of when to move and when not to move in a wilderness emergency		
d. Explain the following environmental exposure problems. Discuss what causes them, signs and signals, and treatment. i. Hypothermia ii. Frostbite iii. Sunburn iv. Heat exhaustion v. Heat cramps vi. Heatstroke		
e. Hydration. i. Explain dehydration and the necessity of conserving fluids in a survival situation. ii. Explain at least four methods of obtaining water in the outdoors, and demonstrate at least two ways to treat that water.		

	Date	Initials
f. Fire-making. i. Demonstrate at least two different fire lays—one for cooking and one for warmth. ii. Learn and discuss the use of fire starters, tinder, kindling, softwoods, and hardwoods in fire making.		
g. Explain and demonstrate how you can gain knowledge of weather patterns using VHF band radio and other radios, winds, barometric pressure, air masses and their movements, clouds, and other indicators.		
h. Knots and lashings. i. Explain the different rope materials and thicknesses that are best for wilderness use and how to care for them. ii. Know the use of and demonstrate how to tie the following knots and lashings: sheet bend, fisherman's knot, bowline, bowline on a bight, two half hitches, clove hitch, timber hitch, taut-line hitch, square lashing, shear lashing.		
i. Food. i. Explain the usefulness and drawbacks of obtaining food in the wilderness, including things to avoid. ii. Prepare and eat at least one meal with food you have found in the outdoors.		
j. Survival kit. i. Make a list of items you would include in a wilderness survival kit and then make copies to hand out to visitors to your wilderness survival outpost camp. ii. Using your list, make a wilderness survival kit. Explain the use of each item you have included.		
k. Outpost camp. (Remember to use the Leave No Trace principles you learned.) i. Set up a wilderness survival outpost camp and spend at least two nights and two days in your site. ii. Use and demonstrate several knots and lashings from requirement 7(h) in your wilderness survival campsite demonstration. iii. Know how to plan a wilderness shelter for three different environments and then build a shelter as part of your wilderness survival campsite demonstration. iv. Have your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group visit you in your outpost for a presentation you make on wilderness survival (at least one hour).		
8. Conservation.		
a. As a Venturer, plan, lead, and carry out a significant conservation project under the guidance of a natural resources professional.		
b. Make a tabletop display or presentation on your conservation project for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group.		

Ranger Award Electives	Date	Initials
9. Backpacking.		
a. Develop a personal exercise plan and follow it for at least three months, exercising at least three times a week. Set your goals with backpacking in mind and write them down. Keep a daily diary.		
b. Backpacks. i. Try on three types of backpacks. Learn how to choose the proper size frame for your body size. Learn and then be able to explain to others the difference between a soft pack, an internal frame pack, and an external frame pack. Tell the pros and cons of each type and what kind of trek you would take with each pack. ii. Explain the different parts of a backpack and their use. iii. Learn the proper way to lift and wear your backpack. iv. Describe at least four ways to limit weight and bulk in your backpack without jeopardizing your health and safety. v. Learn how you would load an internal frame pack versus one with an external frame.		
c. Packing gear. i. Pack your backpack with your personal gear, including outdoor essentials, additional gear, and personal extras. Pack as though you were sharing equipment with one other person for a three-day, two-night backpacking trip. ii. List at least 10 items essential for an overnight backpacking trek and explain why each item is necessary. iii. Present yourself to an experienced backpacker, unload your pack, have him or her critique your packing, then repack your pack. Have him or her critique your efforts.		
d. Cooking. i. List at least 20 items of group backpacking gear. Include a group cleanup kit. ii. Learn how and then demonstrate how to cook a meal using a backpacking stove. iii. Demonstrate proper sanitation of backpacking cook gear. iv. Learn how to properly pack and carry a backpacking stove and fuel.		
e. Environmental impact. i. List at least 10 environmental considerations that are important for backpacking and describe ways to lessen their impact on the environment. ii. Considering Leave No Trace principles, tell how to dispose of the human waste, liquid waste, and garbage you generate on a backpacking trip.		

	Date	Initials
f. Three treks. i. Participate in three different treks of at least three days and two nights each, covering at least 15 miles in distance each. ii. Plan and lead a backpacking trek (can be one of the treks in (i) above) with at least five people for at least two days. This group can be your crew, another crew, a Boy Scout troop, or another youth group. iii. Plan the menu for this trek using commercially prepared backpacking foods for at least one meal. iv. Check for any permits needed and prepare a trip plan to be left with your family. Have an emergency contact number. v. Using the map you used to chart your course, brief the crew you are leading on your trip plan. vi. Lead a shakedown for those you are leading.		
g. Outerwear. i. Learn about proper backpacking clothing for backpacking in all four seasons. ii. Learn about proper footwear, socks, and foot care. iii. Learn and then demonstrate at least three uses for a poncho in backpacking.		
h. Health and first aid. i. Learn about trail health considerations and typical backpacking injuries such as hypothermia, frostbite, heat exhaustion, heat stroke, altitude sickness, dehydration, blisters, stings and bites, and sprains and how to avoid and treat these injuries and illnesses. ii. Because fluid intake is so important to a backpacker, tell how to take care of your water supply on a backpacking trip. Include ways of treating water and why that is important.		
i. Using all the knowledge you have acquired about backpacking, make a display or presentation for your crew, another crew, a Boy Scout troop, or another youth group. Include equipment and clothing selection and use, trip planning, environmental considerations, trail health and safety considerations, food selection and preparation, and backpacking physical preparation.		
10. Cave Exploration.		
a. Learn about caving. i. Write the National Speleological Society (NSS) to request information about caving and information about caves and cavers near you. ii. Learn about the different types of caves. iii. Learn about caving courtesy, caving do's and don'ts, and what the BSA policy is on cave exploring. iv. Read at least one book about caving.		

	Date	Initials
b. Knots. i. Learn the following knots used in caving. Endline knots: bowline, figure eight, figure eight on a bight. Midline knots: bowline on a bight, butterfly. Joiner knots: water knot, fisherman, figure eight on bend. Ascending knots: Prusik knot. ii. Teach these knots to your crew, another crew, a Cub Scout or Boy Scout unit, or another group.		
c. Ropes. i. Learn about the different types of ropes available for climbing and caving and explain the uses of each and the characteristics of each. ii. Learn proper climbing rope care. Know and practice proper coding and storage. iii. Know how to keep proper records on climbing rope and how to inspect it for wear and damage. Know when to retire a rope. iv. Using the knowledge acquired above, make a tabletop display or a presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another group.		
d. Rappelling and belaying. i. Demonstrate that you know how to properly and safely rappel a distance of at least 30 feet. ii. Demonstrate that you know how to ascend a rope using mechanical ascenders or Prusik or other ascending knots. Ascend at least 30 feet. iii. Know and explain the differences, advantages, and disadvantages of single rope (SRT) and double rope (DRT) for rappelling and belaying.		
e. Outfitting. i. Visit a sporting goods store or NSS-affiliated organization or have them make a presentation to your crew so you can learn about personal caving gear, including helmets, light sources, backup lighting sources, clothing, boots, cave packs, etc. ii. Find out what the American National Standards Institute requirements are for helmets.		
f. First aid. i. Make a list of what you need in your personal cave pack. Include your personal first-aid kit and cave survival gear. ii. Learn what crew equipment is, including a first aid-kit, caving ropes, and ascending equipment. iii. Help make a first-aid kit for your crew or group and demonstrate that you can keep it up. iv. Demonstrate to your crew, another crew, a Cub Scout or Boy Scout unit, or another group how to construct both a personal and crew first-aid kit.		

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g. Caves, i. Learn about the many types of cave formations. ii. Make a tabletop display or presentation on cave formations and caving conservation for your crew, another crew, a Cub Scout or Boy Scout unit, or another group. Include practices such as proper carbide removal; care of walls, ceiling, and formations; and principles of Leave No Trace.		
h. Find a cave you would like to visit; get permission to enter it; make a trip plan including cave location, a list of participants, expected time in the cave, expected date and time of return, and an emergency contact; and then go in the cave, led by a qualified caver.		
i. From a cave expert, learn about natural and fabricated hazards such as mudslides, loose rocks, pits, deep water, critters, complex routes, wooden ladders, and flooding.		
j. Maps. i. Using a three-dimensional cave map, learn what the standard map symbols represent. ii. Using the knowledge above, make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another group.		
11. Cycling/Mountain Biking.		
a. Describe the difference between cycling (touring) and mountain biking.		
b. Laws and safety. i. Know the laws governing biking in your state. ii. Learn and know bicycle safety rules and gear for your preferred type of biking. iii. Give a presentation and safe biking session to your crew, another crew, a Cub Scout or Boy Scout unit, or another group using the knowledge you have gained. iv. Demonstrate proper first aid for head injuries.		
If you choose mountain biking as your discipline, do c(i) and c(ii). c. Rules and environmental impact. i. Learn the mountain biking rules for the trail as stated by the IMBA (International Mountain Biking Association) and explain what is meant by soft cycling. ii. Describe environmental considerations that are important for mountain biking and describe ways to lessen their impact on the environment.		

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d. Maintenance checklist and journal. i. Establish a maintenance checklist that needs to be reviewed before each tour or trip. ii. Make and keep a personal biking journal and record information on at least three tours or trips.		
e. Repair kit. i. Buy or build a bike tool and repair kit. ii. Show you know how to use each tool in the kit. iii. Repair a flat tire, adjust your brakes, properly adjust your seat and handlebars, repair a broken chain, and show you know how to temporarily repair a buckled wheel.		
f. Bike trail project. i. With the approval of the property owner or land manager, plan and lead a one-day bike trail or road maintenance project. ii. Write an article about your project for your school or community newspaper.		
g. Cycling trips. i. Take at least eight separate cycling tours 20 miles in length or eight separate mountain biking treks 10 miles in length. ii. Keep a personal journal of your eight trips, noting routes covered, weather conditions, sketches, maps, and sights seen. Also note significant things along the trails such as trail markers, downhills, climbs, rocks, drops, log hops, and portages.		
h. In addition to the tours and treks in requirement g, plan and do a two-day cycling tour 50 miles in length or mountain bike trek 40 miles in length. Your trip plan should include routes, food, proper clothing, and safety considerations. Record in your journal.		
i. Do (i) or (ii): i. Make a tabletop display or presentation on cycling or mountain biking for your crew, another crew, a Cub Scout or Boy Scout unit, or another group. II. Make a where-to-go biking guide for your area that has at least 10 trips or places to bike. Invite your crew, other crews, Cub and Scout groups, and other groups to use this guide.		
12. Ecology.		
a. Explain the basic natural systems, cycles, and changes over time and how they are evidenced in a watershed near where you live. Include the four basic elements, land use patterns, and at least six different species in your analysis and how they have changed over time. Discuss both biological and physical components.		
b. Describe at least four environmental study areas near where you live. Include the reasons for selecting these areas, their boundaries, user groups, past inventories, any outside forces that interact with them, and a list of what things could be studied at each of them.		

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c. Plan a field trip to each of the above areas, including detailed plans for conducting various investigations. Follow all of the requirements such as trip permits, safety plans, transportation plans, equipment needs, etc.		
d. Do the following: i. Under the guidance of a natural resources professional, carry out an investigation of an ecological subject approved by your Advisor. Inventory and map the area. Conduct a detailed investigation providing specific data for a specific topic. ii. Teach others in your crew, another crew, a Cub Scout or Boy Scout unit, or another group how to carry out an ecological investigation. Use the steps in requirements (b) and (c) above with the group so that they may also learn by doing.		
13. Equestrian.		
a. Explain the characteristics of each of the three distinct American riding styles.		
b. For your preferred style (one of three styles in requirement (a)), explain the equipment you would use, including parts of the saddle and bridle.		
c. Explain the difference in natural versus artificial aids used in communicating with your horse, such as use of hands, legs, weight, voice, whips, crops, martingales, bits, and auxiliary reins.		
d. Riding attire. i. Present yourself properly attired for the riding style you prefer. ii. Explain the clothing and safety equipment a rider must have for your preferred style of riding.		
e. Horse handling. i. Demonstrate how to properly catch, bridle, and saddle a horse. ii. Demonstrate and explain at least three steps in proper mounting and two ways of dismounting.		
f. Stirrup length. i. Show how to test your correct stirrup length while you are dismounted and when you are mounted. ii. Explain short stirrup length, medium stirrup length, long stirrup length, and why stirrup length is important.		
g. Riding position. i. Explain and demonstrate the correct position of your body, feet, hands, arms, and legs while mounted. ii. Demonstrate how all parts of your body should be positioned on your horse during a trot, a canter, and a gallop, and explain why this is important.		
h. Demonstrate by using a pattern that you have control of your horse. On command, be able to slow down, speed up, stop, and back up, and be able to move your horse through its gaits.		

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i. Tack and cool down. i. Properly remove tack from your horse and store it. ii. Demonstrate proper care of your tack after riding. iii. Demonstrate proper care for your horse after a ride, including cool down, brushing, and watering and feeding, and explain why each of these steps is important.		
j. Make a tabletop display or presentation on what you have learned about horsemanship for your crew, another crew, a Cub Scout or Boy Scout unit, or another group.		
14. First Aid.		
a. First-aid kit. i. Build a personal first-aid kit or help build a group first-aid kit. ii. Know how to use everything in the kit. iii. Teach another person in your crew, another crew, a Cub Scout or Boy Scout unit, or other how to make and use a personal or group first aid kit. Do b, c, or d.		
b. Complete a 25-hour emergency first-aid course.		
c. Complete a 45-hour emergency response course.		
d. Complete an EMT Basic course offered through a local hospital, college, or first-aid crew.		
15. Fishing.		
a. Become familiar with the freshwater fishing laws, regulations, and license requirements for your state.		
b. Maps. i. Using a map of your state, designate where the different varieties of water are located, such as warm fresh water, cold fresh water (include tail waters), brackish water, and salt water. ii. On the map, note the most popular game fish found in each spot you marked. iii. On the map, note any protected fish species found in your state.		
c. Develop a personal ethical code for fishing. List a variety of potential ethical situations where choices may have to be made and describe how you plan to make decisions for those situations.		
d. List at least 10 potential safety situations that you could encounter while fishing in your area and what precautions you should take to protect yourself and your fishing partners.		

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e. For two different species of game fish found in your state, learn where they are in the food chain, the types of waters they can be found in, and the type of underwater structure and temperature they might be most likely to be found in during the fall, winter, spring, and summer. Identify any special habitat requirements for spawning and/or juvenile growth.		
f. Do one of the following: i. Plan or assist with a National Fishing Week or National Hunting and Fishing Day event (see www.gofishing.org and www.nhfday.org). ii. Assist with a Hooked On Fishing, Not On Drugs program (see www.hofnod.com). iii. Organize and lead a fishing trip or event to introduce other youth to fishing.		
g. Make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on what you have learned about fishing.		
h. Pick ONE of the three following options and complete the requirements. **Option A—Fresh Water (Spinning, Spin Casting, Bait Casting)** i. Catching and cooking. A. Catch two different species of fish using spinning, spin-casting, and or bait-casting outfits. B. Learn the proper technique to release fish and release at least one fish, ensuring that it will recover and safely swim away. C. Catch another fish, which you will clean, cook, and eat. Study and note several cleaning and cooking options. D. Present to the youth in your crew, another Scouting unit, or a youth group your experience in releasing fish and the cleaning and cooking of fish. Discuss the contrasting experiences. ii. Learn and teach the following to someone else: A. Explain the difference between a spin-casting outfit, a spinning outfit, and a bait-casting outfit. Describe the benefits of each type and where and how one might be better for certain fishing situations. B. Study and explain how a reel drag should be used. Teach the proper use and function of drag settings. C. Teach how to properly play a fish under several situations.		

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D. Study and present the use of basic fishing knots, making sure you can teach at a minimum: a. An improved clinch knot b. The Palomar knot or a turle knot c. A blood knot or barrel knot Tie each knot with ease and explain how it is used. E. Show how to cast two of the three types of outfits. With each, demonstrate two ways to make effective casts using targets. Learn safety measures needed to ensure safe casting. iii. Do ONE of the following: A. Build a fishing rod of your choice. B. Design and make your own fishing lure and explain the fish attracting principle of the lure. C. With approval of the proper agency, plan and implement a fishery conservation project. Contact the local district biologist at your state fish and wildlife agency, go to the International Association of Fish and Wildlife Agencies Web site at www.iafwa.org and click on "Download State Directors Directory." Document your project with pictures and/or acknowledgment from the agency managing the waterway.		
Option B—Fly-Fishing i. Catching and cooking. A. Catch two different species of fish using a fly-fishing outfit. B. Learn the proper technique to release fish and release at least one fish, ensuring that it will recover and safely swim away. C. Catch another fish, which you will clean, cook, and eat. Study and note several cleaning and cooking options. D. Present to the youth in your crew, another Scouting unit, or a youth group your experience in releasing fish and the cleaning and cooking of fish. Discuss the contrasting experiences. ii. Learn and teach the following to someone else: A. Explain the differences among a dry fly, wet fly, streamer, nymph, and bass bugs or poppers. Describe the benefits of each type and where and how one might be better for certain fishing situations. B. Study and explain how to match rod, reel, line, and leader to develop a balanced outfit. Explain how to select the right outfit for various fishing situations. Understand the makeup of fly lines and teach the advantages of weight-forward lines versus double-taper lines. Identify and explain the various types of lines and their advantages (floating, sink-tip, and sinking lines).		

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C. Teach how to properly play a fish under several situations, recognizing that fish exhaustion is critical to catch-and-release survival. D. Study and present the use of basic fishing knots, making sure you can teach at a minimum: • An arbor backing knot • The nail knot or a tube knot • A blood knot or barrel knot • The improved clinch knot Tie each knot with ease and explain how it is used. E. Show how to cast. Demonstrate casting skills, explaining proper grip, casting arc, how to "load" the rod, and how to present the fly. Demonstrate various ways to make effective casts using targets. Learn safety measures needed to ensure safe casting. iii. Do ONE of the following: A. Build a fly rod of your choice. B. Tie SIX flies (nymph, wet fly, dry fly, and/or streamer) and explain how each pattern is used to imitate what fish eat. C. With approval of the proper agency, plan and implement a fishery conservation project. Contact the local district biologist at your state fish and wildlife agency; go to the International Association of Fish and Wildlife Agencies Web site at www.iafwa.org and click on "Download State Directors Directory." Document your project with pictures and/or acknowledgment from the agency managing the waterway.		
Option C—Salt Water i. Catching and cooking. A. Catch two different species of fish by surf fishing, casting from a boat, and/or trolling, using proper equipment. B. Learn the proper technique to release fish and release at least one fish, ensuring that it will recover and safely swim away. C. Catch another fish, which you will clean, cook, and eat. Study and note several cleaning and cooking options. D. Present to the youth in your crew, another Scouting unit, or a youth group your experience in releasing fish and the cleaning and cooking of fish. Discuss the contrasting experiences.		

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ii. Learn and teach the following to someone else: A. Explain the difference between surf fishing, casting from a boat, and trolling from a boat. Describe the benefits of each type and where and how one might be better for certain fishing situations. B. Study and explain how a reel drag should be used. Teach the proper use and function of drag settings. C. Teach how to properly play a fish under several situations. D. Study and present the use of basic fishing knots, making sure you can teach at a minimum: • An improved clinch knot • The Palomar knot or a turle knot • A blood knot or barrel knot Tie each knot with ease and explain how it is used.		
i. If you live in a coastal state, become familiar with the saltwater fishing laws, regulations, and license requirements for your state. If you live in an inland state, become familiar with the saltwater fishing laws, regulations, and license requirements for a coastal state of your choice.		
j. Do ONE of the following: i. Build a fishing rod of your choice. ii. Design and make several fishing lures and explain the fish-attracting principle of each lure. iii. With approval of the proper agency, plan and implement a fishery conservation project. Contact the local district biologist at your state fish and wildlife agency; go to the International Association of Fish and Wildlife Agencies Web site at www.iafwa.org and click on "Download State Directors Directory." Document your project with pictures and/or acknowledgment from the agency managing the waterway.		
16. Hunting.		
a. Hunter education and enforcement. i. Successfully complete a hunter education course offered by your state wildlife/conservation agency. ii. Learn and explain the requirements to become a volunteer hunter education instructor in your state. iii. Explain how to report a wildlife-related violation to the appropriate law enforcement agency.		
b. Do b(i), b(ii), or b(iii). i. Successfully complete a bowhunter education course offered by your state or the National Bowhunter Education Foundation. ii. Successfully complete a National Muzzle Loading Rifle Association Rifle Basic course.		

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iii. Participate in a National Rifle Association-International Hunter Education Association Youth Hunter Education Challenge event sponsored by your state.		
c. Do c(i), c(ii), or c(iii). i. Assist a certified hunter education instructor with a hunter education course. ii. Either plan or assist in putting on a National Hunting and Fishing Day program. iii. Talk with a game warden/conservation officer about his or her job. If possible, observe/assist at a game check station in your state.		
d. Plan and carry out a hunting trip approved by an Advisor.		
e. Make a tabletop display or presentation on what you have learned for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group.		
17. Lifesaving.		
a. Do a(i), a(ii), or a(iii). i. Complete the Boy Scout or Venturing Lifeguard requirements and hold a current certification. (Note: BSA Lifeguard certification lasts for three years from the time of certification.) ii. Complete a 45-plus–hour emergency response course or an EMT Basic course. iii. Earn the American Red Cross Lifeguard Training or Lifeguard Trainer certificate.		
b. First-aid kit. i. Help build a crew or family first-aid kit. ii. Know how to use everything in the kit. iii. Teach another person or group how to make and use a first-aid kit.		
18. Mountaineering. Note: You must complete the First Aid core requirement before you begin this elective.		
a. Do the following: i. Explain the difference between bouldering and technical climbing. ii. Tell how bouldering can help your crew get ready for more advanced climbing. iii. Demonstrate bouldering using the three-point stance and proper clothing.		
b. Do the following: i. Explain the classification and grades of climbing difficulty in technical rock climbing. ii. Tell how weather can change the difficulty of any ascent.		

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c. Learn and then teach the following climbing knots to your crew, another crew, a Scout group, or another group: figure eight on a bight, water knot, bowline on a coil, figure eight follow-through, grapevine knot.		
d. Do the following: i. Learn about the different types of ropes available for climbing and explain the uses of each and the characteristics of each. ii. Learn proper climbing rope care. Know and practice proper coiling and storage. iii. Know how to keep proper records on climbing rope and how to inspect it for wear and damage. Know when to retire a rope. iv. Using the knowledge acquired above, make a tabletop display or a presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another group.		
e. Do the following: i. Demonstrate the difference between natural and artificial anchors. ii. Be able to identify and describe the use of at least three different types of hardware and setups. iii. Tell about proper climbing safety both before and during a climb. iv. Learn about rescue equipment and techniques. v. Learn about appropriate clothing, footwear, gloves, helmets, and other climbing gear.		
f. Be able to correctly put on and then be able to teach others how to put on at least two of the following: commercially made climbing harness, diaper sling, knotted leg-loop seat, Swiss seat sling.		
g. Do the following: i. Demonstrate three types of belays. ii. Learn and then demonstrate that you know proper verbal climbing and belaying signals used between climber and belayer.		
h. Do h(i) and h(ii), or do h(iii). i. Under the supervision of a qualified rappelling or climbing instructor, rappel at least 30 feet down a natural or artificial obstacle. ii. Under the supervision of a qualified climbing instructor, climb at least 30 feet up a natural or artificial obstacle. iii. Attend a two-day rock climbing clinic/course led by a qualified climbing instructor. This course should include some instruction on technical rock climbing.		
i. Lead your crew, another crew, an older Boy Scout troop, or another teenage group on a climbing and/or rappelling activity. Recruit adequate, qualified adult instructors and assist in instruction.		

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19. Outdoor Living History.		
a. Research a historical culture and time period of interest to you, such as Native American, mountain man, pioneer, or Revolutionary/Civil War.		
b. Write a 2,000-word essay or make an outline describing the culture's dress, food, housing, customs, etc.		
c. Using your research, make an outfit that represents a person or type of person (soldier, farmer, trader, hunter, chief, etc.) from your chosen culture.		
d. Using your research, construct a working tool or weapon out of authentic materials that would have been used by the person you have chosen to represent in requirement (c) above.		
e. Once your clothing and accoutrements are complete, attend and participate in a pow wow, rendezvous, reenactment, historical trek, or other event that includes your chosen culture.		
f. Make a presentation of your chosen culture to your crew, another crew, a Cub Scout or Boy Scout unit, or another group.		
g. Tour. i. Organize a group tour to a museum, archaeological dig, or other site of significance to your chosen culture. iii. After the tour, lead your group in a discussion about what they learned.		
20. Physical Fitness.		
a. Make an appointment with your doctor for a complete physical. Explain to your doctor you are preparing to undertake an eight-week physical fitness improvement program.		
b. Explain at least six principles that guide you in developing a physical fitness program.		
c. Four components of physical fitness are endurance, strength, flexibility, and body composition. i. Explain why these components are important to your physical fitness. ii. Find a physical fitness professional to administer a fitness test based on these four components. Set physical fitness goals with the help of this professional that can be accomplished in eight weeks. The physical education teachers at school should be able to do this test.		
d. Develop an eight-week program to accomplish your goals. Use the principles of warm-up, cross-training, cool-down, and regularity.		
e. Explain the six elements of a good diet.		
f. Using the USDA MyPlate system, explain how to organize foods and portions.		
g. Learn to calculate the number of calories you need if you are sedentary, moderately active, or active.		
h. Explain the common eating disorders anorexia and bulimia and why they are harmful to athletes.		

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i. Explain the hazards of performance-enhancing drugs, including the dangers of using each of the following groups of drugs: stimulants, painkillers, anabolic steroids, beta blockers, diuretics, alcohol, marijuana, and cocaine.		
j. Prevention of injury is important to achieving peak physical performance. Pain is not a normal part of physical development. Soreness and discomfort may be expected, but not pain. Explain how to prevent injury in your fitness program.		
k. Using what you have learned about physical fitness, teach your crew, a Cub Scout or Boy Scout unit, or another group about setting up a physical fitness program.		
21. Plants and Wildlife.		
a. Write a paper or make a presentation on a plant or wildlife species. Include its value as seen from various perspectives, some of the problems various species face, and how we might be able to help.		
b. Nature observation. i. Select an area approved by your Advisor that contains several species of wildlife or plants. Observe this area thoroughly in various conditions and seasons of the year. Study the history of this area, paying particular attention to how it has changed over time, ownership, land use patterns, and landform and climatic changes. ii. Make a presentation on interaction between species; the reaction of various species to changes in conditions or outside influences; the degree to which this area provided food, shelter, materials, and protection for each species; population trends; your predictions on the future of these species; suggested actions to protect or enhance the population; and the investigation methods you used.		
c. Species study. i. Study a specific plant or wildlife species approved by your Advisor that can be found in several different areas. Observe this species thoroughly in various areas and seasons of the year. Study the history of this species, paying particular attention to how it has adapted over time. ii. Make a presentation on this species; any reactions to changes in conditions or outside influences; this species' needs for food, soil, shelter, materials, protection, assistance with propagation, etc.; population trends; your prediction for the future of this species; suggested actions to protect or enhance the population; and the investigation methods you used.		
d. Under the guidance of a resource professional, plan, lead, and carry out a project approved by your Advisor designed to benefit plants or wildlife. Involve others so that you can increase their awareness of the condition of plants and wildlife in your area.		
e. Do e(i) or e(ii). i. Make a tabletop display or presentation on your project for your crew, another crew, a Cub Scout or Boy Scout unit, or another group. ii. Submit an article about your project to a local newspaper, radio station, your school newspaper, or TV station.		

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22. Project COPE. Do a, b, or c.		
a. Complete and teach courses. i. Complete a BSA Project COPE course including both low and high initiatives. (Project COPE stands for Challenging Outdoor Personal Experience and is an outdoor course available through most BSA local councils. It usually involves a weekend of team-building using group initiative games and low and high ropes course obstacles. This is an excellent crew activity.) ii. After you have personally been through a COPE course, help run at least two other COPE courses.		
b. Attend the BSA's National Camping School and successfully complete the COPE director's course.		
c. Complete a hands-on outdoor education course through a college or university of at least 80 hours.		
23. Watercraft.		
a. Take BSA Safety Afloat training. i. Explain the BSA Safety Afloat plan. ii. Demonstrate during a watercraft activity that you know the BSA Safety Afloat plan.		
b. Complete a basic boating safety course provided by the U.S. Coast Guard Auxiliary, U.S. Power Squadrons, US Sailing, American Red Cross, or your state's boating law administrator.		
c. Rescue and hypothermia. i. Learn and demonstrate water rescue techniques, including self-rescue, group rescue, boat-assisted rescue, short-line rescue, and boat-over-boat rescue. ii. Learn and demonstrate that you know the rules for avoiding water-caused hypothermia and what to do in case of hypothermia.		
d. Present the American Canoe Association Start Smart Program or another program on boating safety to your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on boating safety. Do requirement e, f, or g.		
e. Paddle craft. i. Learn the American Whitewater Affiliation Safety Code and demonstrate your knowledge during a paddle craft activity. ii. Learn about the International Scale of River Difficulty by describing the six classifications of rivers. iii. On a whitewater river map of your choice, be able to show why different sections are classified the way they are.		

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iv. Learn and describe the differences of the following paddle craft and explain which are appropriate for one, two, or more paddlers: • Canoes: recreational, touring, whitewater, freestyle, decked, C1 • Kayaks: recreational, touring, sit-on-top, downriver, race, whitewater playboat, whitewater creek • Rafts: self-bailing, paddle, frame, cataraft, inflatable kayak v. Learn and use paddling techniques and maneuvers for one of the following craft: • Canoe, both single and double passenger • Kayak, single or double passenger • Raft, be the paddling captain vi. Using an appropriate canoe, kayak, or raft, paddle a slow river, lake, or coastal waterway a distance of at least 8 miles, or run a whitewater river a distance of 6 miles with at least one class II rapid. If using a paddle raft, be the paddle captain.		
f. Boardsailing. i. Learn and demonstrate the BSA rules for boardsailing. ii. Learn how to boardsail.		
g. Sailboating. Become certified as a US Sailing Small Boat Sailor or US Sailing Instructor.		
24. Winter Sports.		
a. Be familiar with cold weather–related injuries and how to avoid and treat them.		
b. Know and explain the safety codes for your chosen winter sport (alpine skiing, Nordic skiing, snowboarding, snowmobiling, or ice skating). Example: Skier's Responsibility Code found in the National Ski Areas Association Classroom Guide for skier education, published by the National Ski Patrol.		
c. Design a 30-day physical fitness and stretching program that will prepare you for your chosen winter sport, including exercising and stretching for at least 30 minutes three times a week for 30 days.		
d. Choose one of the following winter sports and complete the requirements for that sport. **Alpine Skiing** i. During a winter season, participate in at least six recreational ski sessions totaling 40 hours. ii. On one of your ski trips, demonstrate to the adult ski counselor approved by your Advisor that you are proficient in this sport, skiing various types of ski terrain, including moguls. iii. Give instruction and assistance to a group of beginner skiers. Teach them basic turns and stops. iv. Make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on alpine skiing.		

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Nordic Skiing i. During a winter season, participate in at least six recreational ski sessions totaling 40 hours. ii. On one of your ski trips, demonstrate to the adult ski counselor approved by your Advisor that you are proficient in this sport, skiing all types of ski terrain, and that you can use a map and compass while skiing. iii. Give instruction and assistance to a group of beginner Nordic skiers. iv. Make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on Nordic skiing.		
Snowboarding i. During a winter season, participate in at least six recreational snowboarding sessions totaling 40 hours. ii. On one of your ski trips, demonstrate to the adult snowboarding counselor approved by your Advisor that you are proficient in this sport, snowboarding all types of ski terrain, including jumps and other boarding maneuvers. iii. Give instruction and assistance to a group of beginner snowboarders. iv. Make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on snowboarding.		
Snowmobiling i. During a winter season, participate in at least six recreational snowmobiling sessions totaling 40 hours. ii. On one of your ski trips, demonstrate to the adult snowmobiling counselor approved by your Advisor that you are proficient in this sport, snowmobiling all types of terrain, and that you can navigate using maps and compass to plan and carry out a trip. iii. Give instruction and assistance to a group of beginner snowmobilers. iv. Make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on snowmobiling.		
Ice Skating i. Participate in at least 10 recreational skating sessions totaling 40 hours. ii. On one of your skating trips, demonstrate to the adult skating counselor approved by your Advisor that you are proficient in this sport. iii. Give instruction and assistance to a group of beginner skaters. iv. Make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group on ice skating.		