

VENTURING RANGER AWARD

Date

Initials

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

<p>1. First Aid. Complete a standard first-aid course or the American Red Cross Wilderness First Aid Basics or equivalent course.</p>		
<p>2. Communications. Do 2(a), 2(b), or 2(c).</p>		
<p>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.</p>		
<p>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.</p>		
<p>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.</p>		
<p>AND</p>		
<p>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.</p>		
<p>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.</p>		
<p>e. Prepare and present an audio/video presentation at least 15 minutes long to your crew or other group approved by your Advisor.</p>		
<p>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.</p>		
<p>AND</p>		
<p>Do 2(g).</p>		
<p>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.</p>		

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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/coal, 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.		

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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: <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> i. Hypothermia ii. Frostbite iii. Sunburn iv. Heat exhaustion v. Heat cramps vi. Heatstroke 		

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<p>e. Hydration.</p> <p>i. Explain dehydration and the necessity of conserving fluids in a survival situation.</p> <p>ii. Explain at least four methods of obtaining water in the outdoors, and demonstrate at least two ways to treat that water.</p>		
<p>f. Fire-making.</p> <p>i. Demonstrate at least two different fire lays—one for cooking and one for warmth.</p> <p>ii. Learn and discuss the use of fire starters, tinder, kindling, softwoods, and hardwoods in fire making.</p>		
<p>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.</p>		
<p>h. Knots and lashings.</p> <p>i. Explain the different rope materials and thicknesses that are best for wilderness use and how to care for them.</p> <p>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.</p>		
<p>i. Food.</p> <p>i. Explain the usefulness and drawbacks of obtaining food in the wilderness, including things to avoid.</p> <p>ii. Prepare and eat at least one meal with food you have found in the outdoors.</p>		
<p>j. Survival kit.</p> <p>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.</p> <p>ii. Using your list, make a wilderness survival kit. Explain the use of each item you have included.</p>		
<p>k. Outpost camp. (Remember to use the Leave No Trace principles you learned.)</p> <p>i. Set up a wilderness survival outpost camp and spend at least two nights and two days in your site.</p> <p>ii. Use and demonstrate several knots and lashings from requirement 7(h) in your wilderness survival campsite demonstration.</p> <p>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.</p>		

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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

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. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> i. List at least 20 items of group backpacking gear. Include a group cleanup kit. 		

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<ul style="list-style-type: none"> 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. 		
<p>e. Environmental impact.</p> <ul style="list-style-type: none"> 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. 		
<p>f. Three treks.</p> <ul style="list-style-type: none"> 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. 		
<p>g. Outerwear.</p> <ul style="list-style-type: none"> 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. 		
<p>h. Health and first aid.</p> <ul style="list-style-type: none"> 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. 		

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<p>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.</p>		
10. Cave Exploration.		
<p>a. Learn about caving.</p> <p>i. Write the National Speleological Society (NSS) to request information about caving and information about caves and cavers near you.</p> <p>ii. Learn about the different types of caves.</p> <p>iii. Learn about caving courtesy, caving do's and don'ts, and what the BSA policy is on cave exploring.</p> <p>iv. Read at least one book about caving.</p>		
<p>b. Knots.</p> <p>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.</p> <p>ii. Teach these knots to your crew, another crew, a Cub Scout or Boy Scout unit, or another group.</p>		
<p>c. Ropes.</p> <p>i. Learn about the different types of ropes available for climbing and caving and explain the uses of each and the characteristics of each.</p> <p>ii. Learn proper climbing rope care. Know and practice proper coding and storage.</p> <p>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.</p> <p>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.</p>		
<p>d. Rappelling and belaying.</p> <p>i. Demonstrate that you know how to properly and safely rappel a distance of at least 30 feet.</p> <p>ii. Demonstrate that you know how to ascend a rope using mechanical ascenders or Prusik or other ascending knots. Ascend at least 30 feet.</p> <p>iii. Know and explain the differences, advantages, and disadvantages of single rope (SRT) and double rope (DRT) for rappelling and belaying.</p>		

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<p>e. Outfitting.</p> <p>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.</p> <p>ii. Find out what the American National Standards Institute requirements are for helmets.</p>		
<p>f. First aid.</p> <p>i. Make a list of what you need in your personal cave pack. Include your personal first-aid kit and cave survival gear.</p> <p>ii. Learn what crew equipment is, including a first aid-kit, caving ropes, and ascending equipment.</p> <p>iii. Help make a first-aid kit for your crew or group and demonstrate that you can keep it up.</p> <p>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.</p>		
<p>g. Caves.</p> <p>i. Learn about the many types of cave formations.</p> <p>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.</p>		
<p>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.</p>		
<p>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.</p>		
<p>j. Maps.</p> <p>i. Using a three-dimensional cave map, learn what the standard map symbols represent.</p> <p>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.</p>		

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11. Cycling/Mountain Biking.		
a. Describe the difference between cycling (touring) and mountain biking.		
b. Laws and safety. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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. 		
d. Maintenance checklist and journal. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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, downhill, climbs, rocks, drops, log hops, and portages. 		

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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.		
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.		

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<p>d. Riding attire.</p> <p>i. Present yourself properly attired for the riding style you prefer.</p> <p>ii. Explain the clothing and safety equipment a rider must have for your preferred style of riding.</p>		
<p>e. Horse handling.</p> <p>i. Demonstrate how to properly catch, bridle, and saddle a horse.</p> <p>ii. Demonstrate and explain at least three steps in proper mounting and two ways of dismounting.</p>		
<p>f. Stirrup length.</p> <p>i. Show how to test your correct stirrup length while you are dismounted and when you are mounted.</p> <p>ii. Explain short stirrup length, medium stirrup length, long stirrup length, and why stirrup length is important.</p>		
<p>g. Riding position.</p> <p>i. Explain and demonstrate the correct position of your body, feet, hands, arms, and legs while mounted.</p> <p>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.</p>		
<p>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.</p>		
<p>i. Tack and cool down.</p> <p>i. Properly remove tack from your horse and store it.</p> <p>ii. Demonstrate proper care of your tack after riding.</p> <p>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.</p>		
<p>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.</p>		
14. First Aid.		
<p>a. First-aid kit.</p> <p>i. Build a personal first-aid kit or help build a group first-aid kit.</p> <p>ii. Know how to use everything in the kit.</p> <p>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.</p> <p>Do b, c, or d.</p>		

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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. <ul style="list-style-type: none"> 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.		
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: <ul style="list-style-type: none"> i. Plan or assist with a National Fishing Week or National Hunting and Fishing Day event (see www.gofishing.org and www.nhfd.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.
- 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 turtle 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).
- 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.

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<p>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.</p> <p>Option C—Salt Water</p> <p>i. Catching and cooking.</p> <p>A. Catch two different species of fish by surf fishing, casting from a boat, and/or trolling, using proper equipment.</p> <p>B. Learn the proper technique to release fish and release at least one fish, ensuring that it will recover and safely swim away.</p> <p>C. Catch another fish, which you will clean, cook, and eat. Study and note several cleaning and cooking options.</p> <p>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.</p> <p>ii. Learn and teach the following to someone else:</p> <p>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.</p> <p>B. Study and explain how a reel drag should be used. Teach the proper use and function of drag settings.</p> <p>C. Teach how to properly play a fish under several situations.</p> <p>D. Study and present the use of basic fishing knots, making sure you can teach at a minimum:</p> <ul style="list-style-type: none"> • An improved clinch knot • The Palomar knot or a turler knot • A blood knot or barrel knot <p>Tie each knot with ease and explain how it is used.</p>		
<p>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.</p>		
<p>j. Do ONE of the following:</p> <p>i. Build a fishing rod of your choice.</p> <p>ii. Design and make several fishing lures and explain the fish-attracting principle of each lure.</p>		

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<ul style="list-style-type: none"> 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.		
<ul style="list-style-type: none"> a. Hunter education and enforcement. <ul style="list-style-type: none"> 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. 		
<ul style="list-style-type: none"> b. Do b(i), b(ii), or b(iii). <ul style="list-style-type: none"> 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. iii. Participate in a National Rifle Association-International Hunter Education Association Youth Hunter Education Challenge event sponsored by your state. 		
<ul style="list-style-type: none"> c. Do c(i), c(ii), or c(iii). <ul style="list-style-type: none"> 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. 		
<ul style="list-style-type: none"> d. Plan and carry out a hunting trip approved by an Advisor. 		
<ul style="list-style-type: none"> 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.		
<ul style="list-style-type: none"> a. Do a(i), a(ii), or a(iii). <ul style="list-style-type: none"> 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. 		

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b. First-aid kit. <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> i. Explain the classification and grades of climbing difficulty in technical rock climbing. ii. Tell how weather can change the difficulty of any ascent. 		
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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. 		

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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.		
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.		

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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.		
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.		

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<ul style="list-style-type: none"> 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. 		
<ul style="list-style-type: none"> c. Species study. <ul style="list-style-type: none"> 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. 		
<ul style="list-style-type: none"> 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. 		
<ul style="list-style-type: none"> e. Do e(i) or e(ii). <ul style="list-style-type: none"> 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. 		
22. Project COPE. Do a, b, or c.		
<ul style="list-style-type: none"> a. Complete and teach courses. <ul style="list-style-type: none"> 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. 		
<ul style="list-style-type: none"> b. Attend the BSA's National Camping School and successfully complete the COPE director's course. 		
<ul style="list-style-type: none"> c. Complete a hands-on outdoor education course through a college or university of at least 80 hours. 		

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23. Scuba.		
a. Become certified as an Open Water Diver by the Professional Association of Diving Instructors (PADI) or the National Association of Underwater Instructors (NAUI). If PADI or NAUI instruction and certification are not available, certification may be accepted from other agencies that comply with the Recreational Scuba Training Council (RSTC) guidelines, provided that such acceptance has been expressly approved by your local BSA council in consultation with the BSA national Health and Safety Service.		
b. Make a presentation to your crew, another crew, or a Cub Scout or Boy Scout unit on what it takes to become certified and some other subject related to scuba diving.		
c. Assist with a Discover Scuba or Scuba BSA program. (Note: An Open Water Diver may assist with logistics under the guidance of the instructor conducting the program, but is not qualified to and is not expected to perform as a professional-level assistant such as a divemaster or assistant instructor.)		
24. Shooting Sports.		
a. General knowledge. <ul style="list-style-type: none"> i. Recite, explain, and demonstrate the three primary shooting safety rules. ii. Recite and explain the range commands. iii. Identify the parts of a pistol, rifle, or bow (whichever one you select) and explain the function of those parts. iv. If you chose air pistol, air rifle, muzzle-loading rifle, pistol, or small-bore rifle for your shooting discipline, explain how “minute of angle” is used to “zero” the airgun or firearm. v. If you chose muzzle-loading rifle as your shooting discipline, recite the proper steps for loading a muzzle-loading rifle and the proper sequence of firing the shot. Explain each step. vi. If you chose archery as your shooting discipline, recite and explain the nine steps to the 10 ring. vii. If you chose shotgun as your shooting discipline, explain how you sight a shotgun differently than you would a rifle. 		
b. Complete a basic training course and the course of fire for one of the following shooting disciplines: i, ii, iii, iv, v, vi, or vii. (Restrictions: Telescopic sights, electronic sights, and laser sights are prohibited in all disciplines except archery.) <p>For this elective, shooting must be under the supervision of a certified instructor/coach and with equipment approved by that instructor.</p>		

i. Air Pistol

Sporter Course: Shoot five shots each at eight TQ7 targets at a distance of 25 feet for a total of 40 shots. You must score 240 out of a possible 400. (You may use any .177 air pistol with a maximum retail value of \$75 and may use a one-hand grip, two-hand grip, or a combination of both.)

OR

International Course: Shoot five shots each at eight bull's-eye B-40 targets at a distance of 33 feet for a total of 40 shots. You must score 220 points of a possible 400. You may use any .177 air pistol. All targets must be fired in the standing position only using only one hand to support the pistol.

ii. Air Rifle

Sporter Course: Shoot two shots at each bull (10 shots per target) from a distance of 33 feet using six AR5/5 targets. Of the 60 shots total, shoot 20 shots in each position—prone, standing (off-hand), and kneeling. You must score 225 of a possible 600. (You may use any stock, out-of-the-box .177 air rifle.)

OR

Precision Course: Shoot two shots at each bull (10 shots per target) from a distance of 33 feet. Of the 60 shots total, shoot 20 shots in each position—prone, standing (off-hand), and kneeling. You must score 420 of a possible 600. (You may use any .177 air rifle.)

iii. Archery (Magnifying sights are OK to use in this discipline.)**Recurve Bow**

Indoor: Shoot 30 arrows at 18 meters on a 60-centimeter five-color target. You must score 150 of a possible 300.

Outdoor: Shoot 30 arrows at 40 meters on a 122-centimeter five-color target. You must score 200 of a possible 300.

OR

Compound Bow

Indoor: Shoot 30 arrows at 18 meters on a 40-centimeter five-color target. You must score 150 of a possible 300.

Outdoor: Shoot 30 arrows at 40 meters on a 122-centimeter five-color target. You must score 210 of a possible 300.

iv. Muzzle-Loading Rifle:

Shoot one shot at each bull's-eye on 10 targets (M02400-NMLRA) for a total of 50 shots from the standing (off-hand) position at a distance of 25 yards. You must score 250 of a possible 500.

Then, shoot five shots at one target (M02406-NMLRA) from the standing (off-hand) position at a distance of 50 yards. You must score 25 of a possible 50.

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<p>Then, shoot five shots at one target (M02406-NMLRA) from the sitting position, resting the rifle on “crossed sticks” at a distance of 50 yards. You must score 25 of a possible 50.</p> <p>(Total shots for muzzle loading is 60 shots.) (NMLRA = National Muzzle Loading Rifle Association)</p> <p>v. Pistol</p> <p>Shoot 10 shots at each of six targets (B-2) from the standing (off-hand) position in a maximum time of 10 minutes per target from a distance of 50 feet. You must score 360 of a possible 600. (You may use any .22-caliber pistol or revolver and can use either the one- or two-hand grip or both.)</p> <p>(Total shots for pistol is 60 shots.)</p> <p>vi. Shotgun</p> <p>Break 25 clay birds of a possible 50 on a skeet course and 25 clay birds of a possible 50 on a trap course.</p> <p>OR</p> <p>Break 50 clay birds of a possible 100 on a skeet course.</p> <p>OR</p> <p>Break 50 clay birds of a possible 100 on a trap course.</p> <p>vii. Small Bore Rifle</p> <p>Sporter Course: Using six A17 targets, shoot one shot at each record bull from a distance of 50 feet for a total of 60 shots. Of the 60 shots, you must shoot 20 shots in each position—prone, standing (off-hand), and kneeling. You must score 225 of a possible 600. (You may use any .22 rifle with a maximum retail value of \$235.)</p> <p>OR</p> <p>Precision Course: Using six A36 targets, shoot one shot at each record bull from a distance of 50 feet for a total of 60 shots. Of the 60 shots, shoot 20 shots in each position—prone, standing (off-hand), and kneeling. You must score 420 of a possible 600. (You may use any .22 rifle.)</p>		
<p>c. Make a tabletop display or presentation for your crew, another crew, a Cub Scout or Boy Scout unit, or another youth group about what you have learned about shooting sports. Include information about shooting sports in the summer and winter Olympics.</p>		
25. Watercraft.		
<p>a. Take BSA Safety Afloat training.</p> <p>i. Explain the BSA Safety Afloat plan.</p> <p>ii. Demonstrate during a watercraft activity that you know the BSA Safety Afloat plan.</p>		
<p>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.</p>		

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<p>c. Rescue and hypothermia.</p> <p>i. Learn and demonstrate water rescue techniques, including self-rescue, group rescue, boat-assisted rescue, short-line rescue, and boat-over-boat rescue.</p> <p>ii. Learn and demonstrate that you know the rules for avoiding water-caused hypothermia and what to do in case of hypothermia.</p>		
<p>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.</p>		
<p>e. Paddle craft.</p> <p>i. Learn the American Whitewater Affiliation Safety Code and demonstrate your knowledge during a paddle craft activity.</p> <p>ii. Learn about the International Scale of River Difficulty by describing the six classifications of rivers.</p> <p>iii. On a whitewater river map of your choice, be able to show why different sections are classified the way they are.</p> <p>iv. Learn and describe the differences of the following paddle craft and explain which are appropriate for one, two, or more paddlers:</p> <ul style="list-style-type: none"> • 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 <p>v. Learn and use paddling techniques and maneuvers for one of the following craft:</p> <ul style="list-style-type: none"> • Canoe, both single and double passenger • Kayak, single or double passenger • Raft, be the paddling captain <p>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.</p>		
<p>f. Boardsailing.</p> <p>i. Learn and demonstrate the BSA rules for boardsailing.</p> <p>ii. Learn how to boardsail.</p>		
<p>g. Sailboating. Become certified as a US Sailing Small Boat Sailor or US Sailing Instructor.</p>		
26. Winter Sports.		
<p>a. Be familiar with cold weather–related injuries and how to avoid and treat them.</p>		

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<p>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.</p>		
<p>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.</p>		
<p>d. Choose one of the following winter sports and complete the requirements for that sport.</p> <p>Alpine Skiing</p> <p>i. During a winter season, participate in at least six recreational ski sessions totaling 40 hours.</p> <p>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.</p> <p>iii. Give instruction and assistance to a group of beginner skiers. Teach them basic turns and stops.</p> <p>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.</p> <p>Nordic Skiing</p> <p>i. During a winter season, participate in at least six recreational ski sessions totaling 40 hours.</p> <p>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.</p> <p>iii. Give instruction and assistance to a group of beginner Nordic skiers.</p> <p>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.</p> <p>Snowboarding</p> <p>i. During a winter season, participate in at least six recreational snowboarding sessions totaling 40 hours.</p> <p>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.</p> <p>iii. Give instruction and assistance to a group of beginner snowboarders.</p> <p>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.</p>		

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<p>Snowmobiling</p> <ul style="list-style-type: none"> 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. <p>Ice Skating</p> <ul style="list-style-type: none"> 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. 		