

AQUATICS RESOURCE GUIDE





Where To Go

The following are suggested aquatic activity locations and tips from some of our council's merit badge counselors.

CANOEING

California Canoe & Kayak (Oakland and Half Moon Bay) - Rent canoes and kayaks of all kinds. (Canoes are hard to find.) Oakland location is perfect launching point for bay/estuary excursions and intro classes. Half Moon Bay location for instruction, tours, workshops. CCK is first rate and very Scout-friendly. Always gives discounts to Scouting units. www.calkayak.com

Del Valle Reservoir (Livermore) - En route to Rancho Los Mochos BSA. Campgrounds near the Lake, rentals available. Open water similar to Lexington, trade off is distance for camping access. Plenty to see by spending the entire day on the lake, windy usually in the afternoon.

Engelbright Lake (Yuba River east of Marysville) - Expedition style, boat-in only camping.

We've done several trips using different camp sites and reach lengths (a reach is how far you will paddle in a given time). Overall length is about 9 miles. Our preference seems to be two or three days up, and two days back. Only drawback is lack of vehicle access makes it high adventure similar to a backpacking trip with respect to first aid, discipline, etc.

What with camping, cooking, loading and unloading, as well as canoe merit badge activities, we have tried to do our expedition canoeing from one camp to the next in the mornings. Then we spend the afternoons on other canoeing (without camping gear in canoes) activities and merit badge skills. 3-4 miles of expedition canoeing a day works well, even for our youngest scouts.

Lexington Reservoir (Los Gatos) - Recently boating has resumed. Best local open water training, no speed boats, etc allowed.

Tip - Plenty to see by spending the entire day on the lake, usually windy in the afternoon.

Marlin Park - (Redwood City)

Shoreline Aquatic Center (Mountain View) - I have used this location a couple of times for canoeing merit badge work. It's a big pond. The whole shoreline complex includes golf course, amphitheater, restaurant, trails, and what they call a lake (to me, a pond). They do windsurfing, kayaking, pedal boats, canoeing, etc. You can Google them to see.

Stanislaus River (Knight's Ferry) - Canoe the Stanislaus River from Knight's Ferry to Orange Blossom Bridge. Bring your own canoe (CCK Oakland rents canoes). Camp at Tulloch Lake. Check flows on <http://www.cacreeks.com/stan-oak.htm>

Stevens Creek (Cupertino) - an hour to paddle all the way up the lake from the launch at the dam.

Stevens Creek Reservoir (near Cupertino) - Picnic spots nearby, best place to introduce our Scouts to canoeing unless you need canoes.

Sugar Pine Reservoir (near Colfax) - Scouts canoe across the lake, drive the other supplies over the dam and car camp. Campsites can be reserved.

FISHING

Anderson & Uvas Lakes (near Morgan Hill)

Chabot Lake (near San Leandro)

Lake Del Valle (near Livermore)

FLY FISHING

Highway 4, Stanislaus River. Fraser Flat Campground - Practice right at the camp, fish downstream with flies or lures (not sure about bait).

Los Gatos Creek Park (Campbell) - Practice your casting at the casting ponds here. Operated by the San Jose Flycasters, who also offer flycasting lessons and periodically the flyfishing merit badge.

SAILING

Camp Oljato (Lakeshore) - is the best summer camp for sailing. Huntington Lake is one of the best sailing lakes in the country, with good wind naturally funneled down its length.

SCUBA DIVING

Any Water Sports - (San Jose) Dive shop and lessons is the best in the south Bay for scuba diving lessons. They bring lots of divemasters along to their ocean instructional dives, so the ratio of experienced divers to students is better than 2:1, which is unusual and very helpful. <http://www.anywater.com/>

Camp Emerald Bay - (Catalina Island, West Los Angeles Council) is the best summer camp for scuba diving, BSA snorkeling, BSA aquarist, oceanography: it's Disneyland for Scouts. Outstanding scuba program. Real experts in marine biology teaching oceanography and aquarist badge. I was there this summer with my troop (2011) and they knocked themselves out to help some of the younger Scouts who were struggling with scuba. Emerald Bay's minimum age is 12, and we had a couple Scouts who weren't strong or mature enough to pull it off with all the heavy gear. If you have a recommendation section, I would state that many scouts who are under than 14 or under 100 pounds really struggle with scuba.

Diver Dans (Santa Clara) - is a dive shop and has a pool. We did a discover scuba course there and plan on doing the merit badges as well.

Wallin's Dive Shop (San Carlos) - Very helpful; they also helped our Venture Patrol when they were interested in diving.

SWIMMING

Abilities United - (Palo Alto) We've had a number of swimming merit badge and pre-Oljato swim test sessions at the Abilities United pool on Middlefield Road in Palo Alto.

WHITEWATER

South Fork American, Middle Fork American, Chili Bar to Coloma, Coloma to Folsom (The Gorge) all in one day. Or, run two trips for varying abilities on the same day which all get back to camp at the same time: South Fork (class III) and Middle Fork (class IV). Yuba River North Fork: (Goodyear Bar): <http://www.cacreeks.com/yuba-nfg.htm>

Some outfitters have camping near the put-in: **Whitewater Voyages** shares a site with another company right on the Yuba.

WINDSURFING

Shoreline Park (Mountain View) - Great place for observing wildlife from a kayak or canoe. Elkhorn Slough adjacent to Moss Beach, rentals available at <http://www.kayakconnection.com>

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Safety Afloat

BSA groups shall use Safety Afloat for all boating activities. Adult leaders supervising activities afloat must have completed Safety Afloat training within the previous two years. Cub Scout activities afloat are limited to council or district events that do not include moving water or float trips (expeditions). Safety Afloat standards apply to the use of canoes, kayaks, rowboats, rafts, floating tubes, sailboats, motorboats (including water-skiing), and other small craft, but do not apply to transportation on large commercial vessels such as ferries and cruise ships. Parasailing (being towed airborne behind a boat using a parachute), kite-surfing (using a wakeboard towed by a kite), and recreational use of personal watercraft (small sit-on-top motorboats propelled by water jets) are not authorized BSA activities.

Safety Afloat training may be obtained from the BSA Online Learning Center at www.scouting.org, at council summer camps, and at other council and district training events. Confirmation of training is required on local and national tour permits for trips that involve boating. Additional guidance on appropriate skill levels and training resources is provided in the Aquatics Supervision guide available from council service centers.

Qualified Supervision

All activity afloat must be supervised by a mature and conscientious adult age 21 or older who understands and knowingly accepts responsibility for the wellbeing and safety of those in his or her care and who is trained in and committed to compliance with the nine points of BSA Safety Afloat. That supervisor must be skilled in the safe operation of the craft for the specific activity, knowledgeable in accident prevention, and prepared for emergency situations. If the adult with Safety Afloat training lacks the necessary boat operating and safety skills, then he or she may serve as the supervisor only if assisted by other adults, camp staff personnel, or professional tour guides who have the appropriate skills. Additional leadership is provided in ratios of one trained adult, staff member, or guide per

10 participants. For Cub Scouts, the leadership ratio is one trained adult, staff member, or guide per five participants. At least one leader must be trained in first aid including CPR. Any swimming done in conjunction with the activity afloat must be supervised in accordance with BSA Safe Swim Defense standards. It is strongly recommended that all units have at least one adult or older youth member currently trained in BSA Aquatics Supervision: Paddle Craft Safety to assist in the planning and conduct of all activities afloat.

Personal Health Review

A complete health history is required of all participants as evidence of fitness for boating activities. Forms for minors must be signed by a parent or legal guardian. Participants should be asked to relate any recent incidents of illness or injury just prior to the activity. Supervision and protection should be adjusted to anticipate any potential risks associated with individual health conditions. For significant health conditions, the adult supervisor should require an examination by a physician and consult with parent, guardian, or caregiver for appropriate precautions.

Swimming Ability

Operation of any boat on a float trip is limited to youth and adults who have completed the BSA swimmer classification test. Swimmers must complete the following test, which should be administered annually.

Jump feetfirst into water over the head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.

For activity afloat, those not classified as a swimmer are limited to multiperson craft during outings or float trips on calm water with little likelihood of capsizing or falling overboard. They may operate a fixed-seat rowboat or pedal boat accompanied by a buddy who is a swimmer. They may ride in a canoe or other paddle craft with an adult swimmer skilled in that craft as a buddy. They may ride as part of a group on a motorboat or sailboat operated by a skilled adult.

Life Jackets

Properly fitted U.S. Coast Guard–approved life jackets must be worn by all persons engaged in boating activity (rowing, canoeing, sailing, boardsailing, motorboating, waterskiing, rafting, tubing, and kayaking). Type III life jackets are recommended for general recreational use.

For vessels over 20 feet in length, life jackets need not be worn when participants are below deck or on deck when the qualified supervisor aboard the vessel determines that it is prudent to abide by less-restrictive state and federal regulations concerning the use and storage of life jackets, for example, when a cruising vessel with safety rails is at anchor. All participants not classified as swimmers must wear a life jacket when on deck underway.

Life jackets need not be worn when an activity falls under Safe Swim Defense guidelines—for example, when an inflated raft is used in a pool or when snorkeling from an anchored craft.

Buddy System

All participants in an activity afloat are paired as buddies who are always aware of each other's situation and prepared to sound an alarm and lend assistance immediately when needed. When several craft are used on a float trip, each boat on the water should have a "buddy boat." All buddy pairs must be accounted for at regular intervals during the activity and checked off the water by the qualified supervisor at the conclusion of the activity. Buddies either ride in the same boat or stay near each other in single-person craft.

Skill Proficiency

Everyone in an activity afloat must have sufficient knowledge and skill to participate safely. Passengers should know how their movement affects boat stability and have a basic understanding of self-rescue. Boat operators must meet government requirements, be able to maintain control of their craft, know how changes in the environment influence that control, and undertake activities only that are within their personal and group capabilities.

Content of training exercises should be appropriate for the age, size, and experience of the participants, and should cover basic skills on calm water of limited extent before proceed-

Safety Afloat



ing to advanced skills involving current, waves, high winds, or extended distance. At a minimum, instructors for canoes and kayaks should be able to demonstrate the handling and rescue skills required for BSA Aquatics Supervision: Paddle Craft Safety. All instructors must have a least one assistant who can recognize and respond appropriately if the instructor's safety is compromised.

Anyone engaged in recreational boating using humanpowered craft on flatwater ponds or controlled lake areas free of conflicting activities should be instructed in basic safety procedures prior to launch, and allowed to proceed after they have demonstrated the ability to control the boat adequately to return to shore at will.

For recreational sailing, at least one person aboard should be able to demonstrate basic sailing proficiency (tacking, reaching, and running) sufficient to return the

boat to the launch point. Extended cruising on a large sailboat requires either a professional captain or an adult with sufficient experience to qualify as a bareboat skipper.

Motorboats may be operated by youth, subject to state requirements, only when accompanied in the boat by an experienced leader or camp staff member who meets state requirements for motorboat operation. Extended cruising on a large power boat requires either a professional captain or an adult with similar qualifications.

Before a unit using human-powered craft controlled by youth embarks on a float trip or excursion that covers an extended distance or lasts longer than four hours, each participant should receive either a minimum of three hours training and supervised practice, or demonstrate proficiency in maneuvering the craft effectively over a 100-yard course and recovering from a capsized.

Unit trips on whitewater above Class II must be done with either a professional guide in each craft or after all participants have received

American Canoe Association or equivalent training for the class of water and type of craft involved.

Planning

Proper planning is necessary to ensure a safe, enjoyable exercise afloat. All plans should include a scheduled itinerary, notification of appropriate parties, communication arrangements, contingencies in case of foul weather or equipment failure, and emergency response options.

Preparation. Any boating activity requires access to the proper equipment and transportation

of gear and participants to the site. Determine what state and local regulations are applicable. Get permission to use or cross private property. Determine whether personal resources will be used or whether outfitters will supply equipment, food, and shuttle services. Lists of group and personal equipment and supplies must be compiled and checked. Even short trips require select-

ing a route, checking water levels, and determining alternative pull-out locations. Changes in water level, especially on moving water, may pose significant, variable safety concerns. Obtain current charts and information about the waterway and consult those who have traveled the route recently.

Float Plan. Complete the preparation by writing a detailed itinerary, or float plan, noting put-in and pullout locations and waypoints, along with the approximate time the group should arrive at each. Travel time should be estimated generously.

Notification. File the float plan with parents, the local council office if traveling on running water, and local authorities if appropriate. Assign a member of the unit committee to alert authorities if prearranged check-ins are overdue. Make sure everyone is promptly notified when the trip is concluded.

Weather. Check the weather forecast just before setting out, and keep an alert weather eye. Anticipate changes and bring all craft ashore

when rough weather threatens. Wait at least 30 minutes before resuming activities after the last incidence of thunder or lightning.

Contingencies. Planning must identify possible emergencies and other circumstances that could force a change of plans. Develop alternative plans for each situation. Identify local emergency resources such as EMS systems, sheriff's departments, or ranger stations. Check your primary communication system, and identify backups, such as the nearest residence to a campsite. Cell phones and radios may lose coverage, run out of power, or suffer water damage.

Equipment

All craft must be suitable for the activity, be seaworthy, and float if capsized. All craft and equipment must meet regulatory standards, be properly sized, and be in good repair. Spares, repair materials, and emergency gear must be carried as appropriate. Life jackets and paddles must be sized to the participants. Properly designed and fitted helmets must be worn when running rapids rated above Class II. Emergency equipment such as throw bags, signal devices, flashlights, heat sources, first-aid kits, radios, and maps must be ready for use. Spare equipment, repair materials, extra food and water, and dry clothes should be appropriate for the activity. All gear should be stowed to prevent loss and water damage. For float trips with multiple craft, the number of craft should be sufficient to carry the party if a boat is disabled, and critical supplies should be divided among the craft.

Discipline

Rules are effective only when followed. All participants should know, understand, and respect the rules and procedures for safe boating activities provided by Safety Afloat guidelines. Applicable rules should be discussed prior to the outing and reviewed for all participants near the boarding area just before the activity afloat begins. People are more likely to follow directions when they know the reasons for rules and procedures. Consistent, impartially applied rules supported by skill and good judgment provide stepping-stones to a safe, enjoyable outing.

For additional information on Safety Afloat, go to www.scouting.org/HealthandSafety/Aquatics/safety-afloat.aspx.





The Sweet 16 of BSA Safety

SWEET 16 OF BSA SAFETY

Few youth organizations encompass the breadth, volume and diversity of physical activity common to Scouting, and none enjoy a better safety record. The key to maintaining and improving this exemplary record is the conscientious and trained adult leader who is attentive to safety concerns.

As an aid in the continuing effort to protect participants in Scout activity, the BSA National Health & Safety Committee and the Council Services Division of the BSA National Council have developed the “Sweet Sixteen” of BSA safety procedures for physical activity. These 16 points, which embody good judgement and common sense, are applicable to all activities.

1. Qualified Supervision

Every BSA activity should be supervised by a conscientious adult who understands and knowingly accepts responsibility for the well-being and safety of the children and youth in his or her care. The supervisor should be sufficiently trained, experienced and skilled in the activity to be confident of his/her ability to lead and to teach the necessary skills and to respond effectively in the event of an emergency. Field knowledge of all applicable BSA standards and a commitment to implement and follow BSA policy and procedures are essential parts of the supervisor’s qualifications.

2. Physical Fitness

For youth participants in any potentially strenuous activity, the supervisor should receive a complete health history from a health care professional, parent or guardian. Adult participants and youth involved in higher-risk activity (e.g., scuba) may require professional evaluation in addition to the health history. The supervisor should adjust all supervision, discipline and protection to anticipate potential risks associated with individual health conditions. Neither youth nor adults should participate in activity for which they are unfit. To do so would place both the individual and others at risk.

3. Buddy System

The long history of the “buddy system” in Scouting has shown that it is always best to have at least one other person with you and aware at all times as to your circumstances and what you are doing in any outdoor or strenuous activity.

4. Safe Area or Course

A key part of the supervisor’s responsibility is to know the area or course for the activity and to determine that it is well-suited and free of hazards.

5. Equipment Selection & Maintenance

Most activity requires some specialized equipment. The equipment should be selected to suit the participant and the activity and to include appropriate safety and program features. The supervisor should also check equipment to determine that it is in good condition for the activity and is properly maintained while in use.

6. Personal Safety Equipment

The supervisor must ensure that every participant has and uses the appropriate personal safety equipment. For example, activity afloat requires a PFD properly worn by each participant; bikers, horseback riders, and whitewater kayakers need helmets for certain activity; skaters may need protective gear; and all need to be dressed for warmth and utility depending on the circumstances.

7. Safety Procedures & Policies

For most activities there are common sense procedures and standards that can greatly reduce the risk. These should be known and appreciated by all participants, and the supervisor must ensure compliance.

8. Skill Level Limits

There is a minimum skill level requirement for every activity, and the supervisor must identify and recognize this minimum skill level and be sure that none are put at risk by attempting activity beyond their ability. A good example of skill levels in Scouting is the venerable “swim test” which defines conditions for safe swimming based on individual ability.

9. Weather Check

The risk factors in many outdoor activities vary substantially with weather conditions. These variables and the appropriate response should be understood and anticipated.

10. Planning

Safe activity follows a plan that has been conscientiously developed by the experienced supervisor or other competent source. Good planning minimizes risks and also anticipates contingencies that may require emergency response or a change of plan.

11. Communications

The supervisor needs to be able to communicate effectively with participants as needed during the activity. Emergency communications also need to be considered in advance for any foreseeable contingencies.

12. Plans & Notices

BSA tour plans, council office registration, government or landowner authorization, and any similar formalities are the supervisor’s responsibility when such are required. Appropriate notification should be directed to parents, enforcement authorities, landowners, and others as needed, before and after the activity.

13. First Aid Resources

The supervisor should determine what first aid supplies to include among the activity equipment. The level of first aid training and skill appropriate for the activity should also be considered. An extended trek over remote terrain obviously may require more first aid resources and capabilities than an afternoon activity in the local community. Whatever is determined to be needed should be available.

14. Applicable Laws

BSA safety policies generally parallel or go beyond legal mandates, but the supervisor should confirm and ensure compliance with all applicable regulations or statutes.

15. CPR Resource

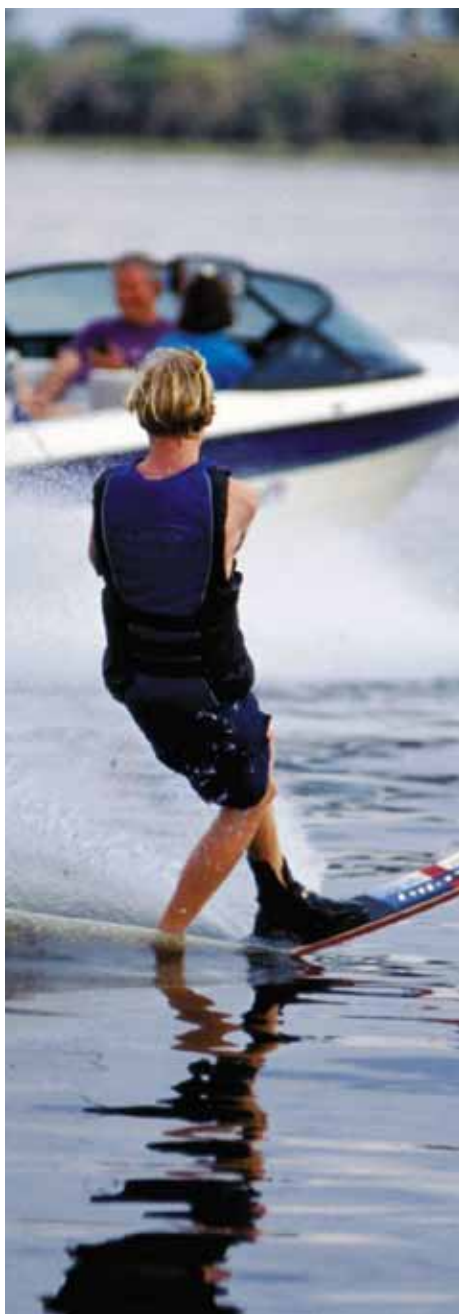
Any strenuous activity or remote trek could present a cardiac emergency. Aquatic programs may involve cardiopulmonary emergen-



cies. The BSA strongly recommends that a CPR-trained person (preferably an adult) be part of the leadership for any BSA program. Such a resource should be available for strenuous outdoor activity.

16. Discipline

No supervisor is effective if he or she cannot control the activity and the individual participants. Youth must respect their leader and follow his or her direction.



AQUATICS LEADERSHIP TRAINING PROGRAMS

Safe Swim Defense and Safety Afloat training programs are available online at scouting.org and may be offered locally by instructors approved by the council aquatics committee or other council authority.

Aquatics Supervision: Swimming and Water Rescue and Aquatics Supervision: Paddle Craft Safety cover skills needed to meet Safe Swim Defense and Safety Afloat policies applied at the unit level. These training courses are provided locally by qualified instructors who are authorized by the local council.

BSA Lifeguard provides professional-level training for lifeguards at unit or summer camp swimming activities and is provided locally by qualified instructors who are authorized by the local council.

Cub Scout Aquatics Supervisor training prepares adults for leadership at Cub Scout day and resident camps where basic swimming is conducted. Cub Scout Aquatics Supervisor training is offered at a National Camping School conducted by the regions or by a BSA Aquatics Instructor with region approval.

BSA Aquatics Instructor prepares adults for leadership roles in year-round aquatics programs and is recommended for a least one member of the council aquatics committee. Those with BSA Aquatics Instructor training may serve as aquatics directors at Boy Scout or Cub Scout summer camps. The training is available at National Camping Schools.

RESPONSIBILITIES OF SUPERVISORY PERSONNEL

Safe Swim Defense and Safety Afloat govern BSA swimming and boating activities. Both specify that the activities are supervised by a mature and conscientious adult age 21 or older who

- Understands and knowingly accepts responsibility for the well-being and safety of youth members in his or her care
- Is experienced in the particular activity

- Is confident in his or her ability to respond appropriately in an emergency
- Is trained and committed to the nine points of BSA Safety Afloat and/or the eight points of Safe Swim Defense.

Unit leadership that accompanies the unit on an outing is always responsible for the first and last bulleted points above. However, under appropriate circumstances, the unit leader may delegate responsibility to trained individuals within the unit or to on-site professionals for the second and third bulleted points above. For example, a Scout troop at a water park with trained lifeguards on duty need not assign separate unit personnel to perform water rescue. A Venturing crew on a whitewater excursion may rely on a licensed outfitter to provide the necessary equipment and trained guides.

Every possible contingency will not be covered with a hard-and-fast rule, and rules are poor substitutes for experience. Ultimately, each responsible adult leader must personally decide if he or she understands the risk factors associated with the activity and is sufficiently experienced and well-informed to make the rational decisions expected of a “qualified supervisor.” The BSA training programs listed above help provide the skills, experience, and guidance for making such a determination.

TOW SPORTS

All participants in towed activity afloat (water-skiing, wakeboarding, kneeboarding, tubing, etc.) must have successfully completed the BSA swimmer classification test and must wear a life jacket with an impact rating consistent with the activity. Supervision must include both a skilled boat driver currently trained in Safety Afloat and a separate observer. Participants should observe the Water-skiers Safety Code and the Boat Drivers Safety Code found in Aquatics Supervision, No. 34346. Use only floats specifically designed for towing that provide secure handholds for each rider.



Safe Swim Defense

BSA groups shall use Safe Swim Defense for all swimming activities. Adult leaders supervising a swimming activity must have completed Safe Swim Defense training within the previous two years. Safe Swim Defense standards apply at backyard, hotel, apartment, and public pools; at established waterfront swim areas such as beaches at state parks and U.S. Army Corps of Engineers lakes; and at all temporary swimming areas such as a lake, river, or ocean. Safe Swim Defense does not apply to boating or water activities such as waterskiing or swamped boat drills that are covered by Safety Afloat guidelines. Safe Swim Defense applies to other nonswimming activities whenever participants enter water over knee deep or when submersion is likely, for example, when fording a stream, seining for bait, or constructing a bridge as a pioneering project. Snorkeling in open water requires each participant to have demonstrated knowledge and skills equivalent to those for Snorkeling BSA in addition to following Safe Swim Defense. Scuba activities must be conducted in accordance with the BSA Scuba policy found in the Guide to Safe Scouting.

Safe Swim Defense training may be obtained from the BSA Online Learning Center at olc.scouting.org, at council summer camps, and at other council and district training events. Confirmation of training is required on local and national tour permits for trips that involve swimming. Additional information on various swimming venues is provided in the Aquatics Supervision guide available from council service centers.

Qualified Supervision

All swimming activity must be supervised by a mature and conscientious adult age 21 or older who understands and knowingly accepts responsibility for the well-being and safety of those in his or her care, and who is trained in and committed to compliance with

the eight points of BSA Safe Swim Defense. It is strongly recommended that all units have at least one adult or older youth member currently trained in BSA Aquatics Supervision: Swimming and Water Rescue or BSA Lifeguard to assist in planning and conducting all swimming activities.

Personal Health Review

A complete health history is required of all participants as evidence of fitness for swimming activities. Forms for minors must be signed by a parent or legal guardian. Participants should be asked to relate any recent incidents of illness or injury just prior to the activity. Supervision and protection should be adjusted to anticipate any potential risks associated with individual health conditions. For significant health conditions, the adult supervisor should require an examination by a physician and consult with the parent, guardian, or caregiver for appropriate precautions.

Safe Area

All swimming areas must be carefully inspected and prepared for safety prior to each activity. Water depth, quality, temperature, movement, and clarity are important considerations. Hazards must be eliminated or isolated by conspicuous markings and discussed with participants.

Controlled Access: There must be safe areas for all participating ability groups to enter and leave the water. Swimming areas of appropriate depth must be defined for each ability group. The entire area must be within easy reach of designated rescue personnel. The area must be clear of boat traffic, surfing, or other nonswimming activities.

Bottom Conditions and Depth: The bottom must be clear of trees and debris. Abrupt changes in depth are not allowed in the non-swimmer area. Isolated underwater hazards should be marked with floats. Rescue personnel must be able to easily reach the bottom. Maximum recommended water depth in clear water is 12 feet. Maximum water depth in turbid water is 8 feet.

Visibility: Underwater swimming and diving are

prohibited in turbid water. Turbid water exists when a swimmer treading water cannot see his feet. Swimming at night is allowed only in areas with water clarity and lighting sufficient for good visibility both above and below the surface.

Diving and Elevated Entry: Diving is permitted only into clear, unobstructed water from heights no greater than 40 inches. Water depth must be at least 7 feet. Bottom depth contours below diving boards and elevated surfaces require greater water depths and must conform to state regulations. Persons should not jump into water from heights greater than they are tall, and should jump only into water chest deep or greater with minimal risk from contact with the bottom. No elevated entry is permitted where the person must clear any obstacle, including land.

Water Temperature: Comfortable water temperature for swimming is near 80 degrees. Activity in water at 70 degrees or less should be of limited duration and closely monitored for negative effects of chilling.

Water Quality: Bodies of stagnant, foul water, areas with significant algae or foam, or areas polluted by livestock or waterfowl should be avoided. Comply with any signs posted by local health authorities. Swimming is not allowed in swimming pools with green, murky, or cloudy water.

Moving Water: Participants should be able to easily regain and maintain their footing in currents or waves. Areas with large waves, swiftly flowing currents, or moderate currents that flow toward the open sea or into areas of danger should be avoided.

Weather: Participants should be moved from the water to a position of safety whenever lightning or thunder threatens. Wait at least 30 minutes after the last lightning flash or thunder before leaving shelter. Take precautions to prevent sunburn, dehydration, and hypothermia.

Life Jacket Use: Swimming in clear water over 12 feet deep, in turbid water over 8 feet

Safe Swim Defense



deep, or in flowing water may be allowed if all participants wear properly fitted, Coast Guard–approved life jackets and the supervisor determines that swimming with life jackets is safe under the circumstances.



Response Personnel (Lifeguards)

Every swimming activity must be closely and continuously monitored by a trained rescue team on the alert for and ready to respond during emergencies. Professionally trained lifeguards satisfy this need when provided by a regulated facility or tour operator. When lifeguards are not provided by others, the adult supervisor must assign at least two rescue personnel, with additional numbers to maintain a ratio of one rescuer to every 10 participants. The supervisor must provide instruction and rescue equipment and assign areas of responsibility as outlined in *Aquatics Supervision*, No. 34346. The qualified supervisor, the designated response personnel, and the lookout work together as a safety team. An emergency action plan should be formulated and shared with participants as appropriate.

Lookout

The lookout continuously monitors the conduct of the swim, identifies any departures from Safe Swim Defense guidelines, alerts rescue personnel as needed, and monitors the weather and environment. The lookout should have a clear view of the entire area but be close enough for easy verbal com-

munication. The lookout must have a sound understanding of Safe Swim Defense but is not required to perform rescues. The adult supervisor may serve simultaneously as the lookout but must assign the task to someone else if engaged in activities that preclude focused observation.

Ability Groups

All youth and adult participants are designated as swimmers, beginners, or nonswimmers based on swimming ability confirmed by standardized BSA swim classification tests. Each group is assigned a specific swimming area with depths consistent with those abilities. The classification tests should be renewed annually, preferably at the beginning of the season.

Swimmers pass this test: Jump feetfirst into water over the head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.

Beginners pass this test: Jump feetfirst into water over the head in depth, level off, and swim 25 feet on the surface. Stop, turn sharply, resume swimming and return to the starting place.

Anyone who has not completed either the beginner or swimmer tests is classified as a nonswimmer.

The nonswimmer area should be no more than waist to chest deep and should be enclosed by physical boundaries such as the shore, a pier, or lines. The enclosed beginner area should contain water of standing depth and may extend to depths just over the head. The swimmer area may be up to 12 feet in depth in clear water and should be defined by floats or other markers.

Buddy System

Every participant is paired with another.

Buddies stay together, monitor each other, and alert the safety team if either needs assistance or is missing. Buddies check into and out of the area together.

Buddies are normally in the same ability group and remain in their assigned area. If they are not of the same ability group, then they swim in the area assigned to the buddy with the lesser ability.

A buddy check reminds participants of their obligation to monitor their buddies and indicates how closely the buddies are keeping track of each other. Roughly every 10 minutes, or as needed to keep the buddies together, the lookout, or other person designated by the supervisor, gives an audible signal, such as a single whistle blast, and a call for “Buddies.” Buddies are expected to raise each other’s hand before completion of a slow, audible count to 10. Buddies that take longer to find each other should be reminded of their responsibility for the other’s safety.

Once everyone has a buddy, a count is made by area and compared with the total number known to be in the water. After the count is confirmed, a signal is given to resume swimming.

Discipline

Rules are effective only when followed. All participants should know, understand, and respect the rules and procedures for safe swimming provided by Safe Swim Defense guidelines. Applicable rules should be discussed prior to the outing and reviewed for all participants at the water’s edge just before the swimming activity begins. People are more likely to follow directions when they know the reasons for rules and procedures. Consistent, impartially applied rules supported by skill and good judgment provide stepping-stones to a safe, enjoyable outing.

For more information regarding Safe Swim Defense, go to www.scouting.org/HealthandSafety/Aquatics/safe-swim.aspx.



BSA Scuba Policy

The BSA scuba policy recognizes scuba industry standards and implements them by using outside agencies for training and certification.

Training and Supervision

Any person possessing, displaying, or using scuba (self-contained underwater breathing apparatus) in connection with any Scouting-related activity must be either currently certified by a recognized agency or enrolled in an instructional scuba program, such as Scuba BSA or Scuba Diving merit badge, which must be conducted by an insured recreational diving instructor in good standing with a recognized agency and approved by the council.

Recreational diving activities by BSA groups must be supervised by a responsible adult currently certified (renewed) as a divemaster, assistant instructor, or higher rating from a recognized agency. Dive environments, equipment, depths, procedures, supervision, and buddy assignments must be consistent with each individual's certification.

Because dives by recreational divers may be infrequent, the divemaster or instructor supervising a BSA scuba activity should screen participants prior to open-water activities and provide remedial instruction and practice as appropriate. Such remedial instruction and practice should be in accordance with the policies and standards of the divemaster's or instructor's agency for Scuba Review, Scuba Refresher, or similar program.

Diving using surface-supplied air systems is not authorized in connection with any BSA activity or facility except when done under contract by commercial divers.

Age-Appropriate Restrictions

Youth members in Cub Scouting, including Webelos Scouts, are not authorized to use scuba in any activity.

Boy Scouts may participate in the introductory Scuba BSA program and may obtain open-water certification as part of Scuba Diving merit badge.

Varsity and Venturing groups may participate in introductory and certification scuba programs conducted by recognized agencies appropriate to their age and current level of certification.

Standards of the recognized scuba agencies require students for open-water certification programs to be at least 15 years of age but allow special certification programs for younger students. Since all instruction for BSA scuba programs must be conducted by professionals certified by a recognized agency, additional agency-specific, age-related restrictions and protocols apply to students under 15 years of age.

Boy Scouts, Varsity Scouts, and Venturers may participate in recreational group dives as unit, district, or council activities, provided such dives are consistent with their certifications and under direct, on-site supervision of a responsible adult currently certified as a divemaster, assistant instructor, or higher rating from a recognized agency.

The divemaster or instructor supervising a recreational dive by a BSA group must implement the following policies for all divers under 15 years of age, as well as any additional junior diver restrictions and protocols adopted by that person's certifying agency:

- Depths are limited to 40 feet for divers under 12 years of age and to 60 feet for divers 12 to 14 years of age.
- Each diver under 15 years of age must have an adult buddy certified as an open-water diver who is either the junior diver's parent or an adult approved by the parent.
- Additional divemasters or instructors are present to maintain a ratio of one trained supervisor to four buddy pairs (eight divers) containing one to four divers under 15 years of age.

Medical Contraindications

Each scuba training agency recognized by the BSA requires a specific health history form prior to enrollment in a certification program. The BSA requires review and approval of the

completed form by a physician even if the scuba agency itself does not require physician approval. Various risk factors identified on the forms may exclude a person from scuba training, either temporarily or permanently. Risk factors include, but are not limited to, ear and sinus problems, recent surgery, spontaneous pneumothorax, asthma or reactive airway disease (RAD), seizure disorders, diabetes, leukemia, sickle-cell disorder, pregnancy, panic disorders, and active psychosis.



The divemaster or instructor supervising a BSA recreational scuba activity must review the health information for each participant that is required annually of all BSA members and evaluate risk conditions using medical standards consistent with those used by his or her certifying agency. Additional tests or physician consultations may be required to confirm fitness for diving. Consultation with medical specialists knowledgeable about diving medicine also may be needed for participants taking psychotropic drugs for treatment of attention deficit disorder, depression, or other conditions.

Scuba diving is prohibited for the following conditions.

- Use of medication to control seizures or seizure occurrence within the past five years
- Use of insulin to control diabetes
- History of asthma or RAD unless resolution confirmed by methacholine testing (Persons who have been asymptomatic and medication free for the previous five

BSA Scuba Policy



years are exempt from the methacholine testing requirements.)

The scuba agencies recognized by the BSA may allow exceptions to general medical prohibitions based on individual diving fitness evaluations by a medical specialist who is knowledgeable about diving medicine. Scouts, parents, dive supervisors, and physicians with questions or concerns about diving with specific medical conditions should consult the Recreational Scuba Training Council (RSTC) Guidelines for Recreational Scuba Diver's Physical Examination and the Divers Alert Network (DAN) at www.diversalertnetwork.org. DAN medical professionals are available for nonemergency consultation by telephone at 919-684-2948 during business hours or via e-mail.

Council Programs

When scuba diving is taught in connection with any local council program, instructors should provide the training on a contract basis. Such instructors should have dive store or other commercial affiliation that provides liability insurance coverage. Direct employment of scuba instructors is not recommended.

Local council programs may not compress or sell air for scuba use, or sell, rent, or loan scuba equipment (scuba cylinders, regulators, gauges, dive computers, weights, or BCDs). All air and equipment for local council program use must be obtained from professional sources (dive stores, resorts, dive boats, etc.) affiliated with a scuba agency recognized by the BSA.

Scuba equipment may be used by certified summer camp aquatics program personnel for installation and maintenance of waterfront equipment, or for search and recovery operations. Search and recovery could include lost equipment, as well as rescue efforts.

Recognized Agencies

Recognized agencies are:

- PADI: Professional Association of Diving Instructors
- NAUI: National Association of Underwater Instructors
- SSI: Scuba Schools International
- IDEA: International Diving Educators Association
- PDIC: Professional Diving Instructors Corporation
- SDI: Scuba Diving International
- YMCA Scuba Program (discontinued in 2008, but certification cards are still recognized)
- NASDS: National Association of Scuba Diving Schools (merged with SSI, but certification cards are still recognized)

In addition to the agencies listed by name, any current member of the World Recreational Scuba Training Council (WRSTC), which includes all RSTC members, is also recognized.

Other agencies wishing to be recognized by the BSA may contact the Outdoor Programs Team of the national office. Recognition by a certifying body such as the RSTC or EUF that the agency adheres to ANSI/CEN/ISO standards would be expected.





Classification • Open Water Swimming & Snorkeling

CLASSIFICATION OF SWIMMING ABILITY

The swimmer and beginner classification tests defined in Safe Swim Defense may be administered at the unit level following procedures specified in Aquatics Supervision, No. 34346.

Swim classification tests for multiunit district and council aquatics activities, such as day or resident camps, are generally conducted on-site by supervisory personnel for those activities. Councils may arrange for swim classification tests conducted by council-approved aquatics resource people prior to camp as outlined in section V of Camp Program and Property Management, No 20-290. When swim tests are conducted off-site prior to the camp session, the camp aquatics director retains the right to review or retest any or all participants.

DISTANCE AND COMPETITIVE SWIMMING IN OPEN WATER

The following policies apply when distance swimming is conducted outside the confines of a normal Safe Swim Defense area.

- The environment for an open-water swim must conform to Safe Swim Defense guidelines regarding hazards such as submerged trees, currents, and boat traffic, as well as water quality, depth, and clarity.
- Each individual swimmer, or at most a buddy pair, may be accompanied by a rowboat with two people onboard—one skilled in controlling the boat and the other trained in basic water rescue—equipped with a reaching device and flotation aid, continuously watching the swimmers.
- Alternatively, a closed circuit may be established where all swimmers are constantly in reach of safety personnel strategically positioned at fixed points on anchored boats, the shore, or piers. Each participant swims with a buddy, and the number and spacing of the swimmers in the water should not exceed the capacity of the watchers to easily count

the swimmers as they move from one zone to another.

- Some competitive swimming events, such as triathlons, also cover long distances. Long-distance swimming races are not approved for Cub Scouts or Boy Scouts, but Varsity Scouts and Venturers may participate in triathlon training and competitive events. All swimming activities conducted by Varsity Scout teams or Venturing crews must conform to Safe Swim Defense guidelines. Individual Varsity Scouts and Venturers may participate in outside triathlon events sanctioned by USA Triathlon.



SNORKELING IN OPEN WATER

All ability groups may use snorkeling equipment within confined areas when following all Safe Swim Defense policies, including visibility for underwater swimming.

Snorkeling is a swimming activity in which one must abide by Safe Swim Defense policies, but the following additions to Safe Swim Defense

apply when snorkeling is conducted in open water. “Open water” denotes a temporary swimming area of flexible extent in a natural body of water that may or may not be close to shore.

Qualified Supervision: In addition to Safe Swim Defense training and the 21-year-old minimum age, the supervisor must be an experienced snorkeler. At a minimum, the supervisor must possess skills and knowledge matching the Snorkeling BSA Award and have experience with environments similar to those of the planned activity.

Participant Ability: All participants in open-water snorkeling must either complete Snorkeling BSA requirements or be a certified scuba diver.

Equipment: All snorkeling equipment must be properly fitted and in good repair. Use of individual flotation devices (inflatable snorkeling vests or life jackets) is required whenever there is a noticeable current or swells, when the bottom is not visible from the surface due to vegetation or limited visibility beyond 8 feet, or when the activity is greater than 50 yards from shore or craft. A dive flag is required in areas shared by boats. Local regulations specifying the size of the flag and how far snorkelers may be from it must be followed. Weight belts may not be worn unless the participant has scuba certification. Dive boats should be equipped with radios and first-aid kits, and should deploy safety lines.

Additional guidance on application of Safe Swim Defense principles to snorkeling may be found in Aquatics Supervision, No. 34346, and Snorkeling Safety, No. 19-176, at www.scouting.org/filestore/pdf/19-176.pdf.

Aquatic Merit Badges



CANOEING

For several centuries, the canoe was a primary method of travel for explorers and settlers. Today, it remains an important part of the wilderness experience and an enjoyable leisure activity that teaches communication, teamwork, and physical fitness.



Requirements

Show that you know first aid for injuries or illnesses that could occur while canoeing, including hypothermia, heat reactions, dehydration, insect stings, tick bites, and blisters.

Do the following:

1. Identify the conditions that must exist before performing CPR on a person. Explain how such conditions are recognized.
2. Demonstrate the proper technique for performing CPR using a training device approved by your counselor.
3. Before doing the following requirements, successfully complete the BSA swimmer test: Jump feetfirst into water over the head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.

Discuss the following:

1. The BSA Safety Afloat policy. Tell how it applies to canoeing activities.
2. The most common weather and water-related hazards encountered while canoeing and how to deal safely with each one.

Do the following:

1. Name and point out the major parts of a canoe.
2. Describe how the length and shape of a canoe affect its performance.

3. Discuss the advantages and disadvantages of the different materials used to make canoes.
4. Name and point out the parts of a paddle. Explain the difference between a straight and bent-shaft paddle and when each is best used.
5. Demonstrate how to size correctly a paddle for a paddler in a sitting position and a kneeling position.
6. Name the different types of personal flotation devices (PFDs), and explain when each type should be used.
7. Show how to fit and test properly a PFD of correct size.
8. Discuss the general care and maintenance of canoeing equipment.
9. Discuss what personal and group equipment would be appropriate for a canoe camping trip. Describe how personal and group equipment can be packed and protected from water.
10. Demonstrate how to load and secure equipment in a canoe.
11. Using appropriate knots, demonstrate how to secure a canoe to a rack on land, a vehicle, or a canoe trailer.

With a companion, wearing the proper PFD and appropriately dressed for the weather and water conditions, use a properly equipped canoe to demonstrate the following:

1. Safely carry and launch the canoe from a dock or shore (both, if possible).
2. Safely land the canoe on a dock or shore (both, if possible) and return it to its proper storage location.
3. Demonstrate kneeling and sitting positions in a canoe and explain the proper use for each position.
4. Change places while afloat in the canoe.
5. In deep water, exit the canoe and get back in without capsizing.
6. Capsize the canoe and demonstrate how staying with a capsized canoe will support both paddlers.
7. Swim, tow, or push a swamped canoe 50 feet to shallow water. In the shallow water, empty the swamped canoe and reenter it.
8. In deep water, rescue a swamped canoe and its paddlers by emptying the swamped canoe and helping the paddlers safely reenter their boat without capsizing.

With a companion, wearing the proper PFD and appropriately dressed for the weather and water conditions, demonstrate the following paddling strokes as both a bow and stern paddler:

1. Forward stroke
2. Backstroke
3. Draw
4. Pushaway
5. Forward sweep
6. Reverse or back sweep
7. J-stroke (For stern paddling only)

Using the strokes in requirement 7, demonstrate the following tandem maneuvers while paddling on opposite sides and without changing sides. Repeat after switching positions and paddling sides:

1. Pivot or spin the canoe in either direction.
2. Move the canoe sideways or abeam in either direction.
3. Stop the canoe.
4. Move the canoe in a straight line for 50 yards.

Wearing the proper PFD and appropriately dressed for the weather and water conditions, demonstrate solo canoe handling:

1. Launch from shore or a pier (both, if possible).
2. Using a single-blade paddle and paddling only on one side, demonstrate proper form and use of the forward stroke, backstroke, draw stroke, pushaway stroke, forward sweep, reverse or back sweep, and J-stroke. Repeat while paddling on the other side.
3. While paddling on one side only, paddle a 50-yard course making at least one turn underway and one reverse of direction. Repeat while paddling on the other side.
4. Make a proper landing at a dock or shore (both, if possible). Store canoe properly (with assistance, if needed).
5. In deep water, exit the canoe and then get back in without capsizing.

Discuss the following types of canoeing:

1. Olympic flatwater
2. Outrigger
3. Marathon
4. Freestyle
5. Whitewater
6. Canoe poling



Aquatic Merit Badges

FISHING

In Scouting for Boys, Baden-Powell offers this advice: “Every Scout ought to be able to fish in order to get food for himself. A tenderfoot [beginner] who starved on the bank of a river full of fish would look very silly, yet it might happen to one who had never learned to catch fish.”

Requirements

Do the following:

1. Discuss the prevention of and treatment for the following health concerns that could occur while fishing, including cuts and scratches, puncture wounds, insect bites, hypothermia, dehydration, heat exhaustion, heatstroke, and sunburn.
2. Explain how to remove a hook that has lodged in your arm.
3. Name and explain five safety practices you should always follow while fishing.

Discuss the differences between two types of fishing outfits. Point out and identify the parts of several types of rods and reels. Explain how and when each would be used. Review with your counselor how to care for this equipment.

Demonstrate the proper use of two different types of fishing equipment.

Demonstrate how to tie the following knots: clinch, Palomar, turl, blood loop (barrel knot), and double surgeon’s loop. Explain how and when each knot is used.

Name and identify five basic artificial lures and five natural baits and explain how to fish with them. Explain why baitfish are not to be released.

Do the following:

1. Explain the importance of practicing Leave No Trace techniques. Discuss the positive effects of Leave No Trace on fishing resources.
2. Discuss the meaning and importance of catch and release. Describe how to properly release a fish safely to the water.

Obtain and review the regulations affecting game fishing where you live. Explain why they were adopted and what is accomplished by following them.

Explain what good outdoor sportsmanlike behavior is and how it relates to anglers. Tell how the Outdoor Code of the Boy Scouts of America relates to a fishing sports enthusiast, including the aspects of littering, trespassing, courteous behavior, and obeying fishing regulations.

Catch at least one fish. If regulations and health concerns permit, clean and cook a fish you have caught. Otherwise, acquire a fish and cook it.



FLY-FISHING

Fly-fishing is a specialized form of fishing that combines skill and artistry. Because it is so rich with tradition, it is a passion for millions of people. The beauty of the water, the solitude, and the skills that the sport requires have made fly-fishing very important in the lives of many notable people.

Requirements

Do the following:

1. Discuss the prevention of and treatment for health concerns that could occur while fly-fishing, including cuts and scratches, puncture wounds, insect bites, hypothermia, dehydration, heat exhaustion, heatstroke, and sunburn.
2. Explain how to remove a hook that has lodged in your arm.
3. Name and explain five safety practices you should always follow while fly-fishing.

Demonstrate how to match a fly rod, line, and leader to achieve a balanced system. Discuss several types of fly lines, and explain how and

when each would be used. Review with your counselor how to care for this equipment.

Demonstrate how to tie proper knots to prepare a fly rod for fishing:

1. Tie a backing to a fly reel spool using the arbor knot.
2. Attach backing to fly line using the nail knot.
3. Attach a leader to fly line using the needle knot, nail knot, or a loop-to-loop connection.
4. Add a tippet to a leader using a loop-to-loop connection or blood knot.
5. Tie a fly onto the terminal end of the leader using the improved clinch knot.

Explain how and when each of the following types of flies is used: dry flies, wet flies, nymphs, streamers, bass bugs, poppers, and saltwater flies. Tell what each one imitates. Tie at least two types of the flies mentioned in this requirement.

Demonstrate the ability to cast a fly 30 feet consistently and accurately using both overhead and roll cast techniques.

Go to a suitable fishing location and observe what fish may be eating both above and beneath the water’s surface. Explain the importance of matching the hatch.

Do the following:

1. Explain the importance of practicing Leave No Trace techniques. Discuss the positive effects of Leave No Trace on fly-fishing resources.
2. Discuss the meaning and importance of catch and release. Describe how to properly release a fish safely to the water.

Obtain and review a copy of the regulations affecting game fishing where you live or where you plan to fish. Explain why they were adopted and what is accomplished by following them.

Discuss what good outdoor sportsmanlike behavior is and how it relates to anglers. Tell how the Outdoor Code of the Boy Scouts of America relates to a fishing enthusiast, including the aspects of littering, trespassing, courteous behavior, and obeying fishing regulations.

Catch at least one fish and identify it. If local fishing and health regulations allow, clean and cook a fish you have caught. Otherwise, acquire a fish and cook it.

Aquatic Merit Badges



LIFESAVING

No Boy Scout will ignore a plea for help. However, the desire to help is of little use unless one knows how to give the proper aid. The main purpose of the Lifesaving merit badge is to prepare Scouts to assist those involved in water accidents, teaching them the basic knowledge of rescue techniques, the skills to perform them, and the judgment to know when and how to act so that they can be prepared for emergencies.

Requirements

Complete requirements in box first:

1. Complete Second Class rank requirements 8a through 8c and First Class rank requirements 9a through 9c.

Second Class rank requirements 8a through 8c:

(8a) Tell what precautions must be taken for a safe swim.

(8b) Demonstrate your ability to jump feetfirst into water over your head in depth, level off and swim 25 feet on the surface, stop, turn sharply, resume swimming, then return to your starting place.

(8c) Demonstrate water rescue methods by reaching with your arm or leg, by reaching with a suitable object, and by throwing lines and objects. Explain why swimming rescues should not be attempted when a reaching or throwing rescue is possible, and explain why and how a rescue swimmer should avoid contact with the victim.

First Class rank requirements 9a through 9c:

(9a) Tell what precautions must be taken for a safe trip afloat.

(9b) Successfully complete the BSA swimmer test.

(9c) With a helper and a practice victim, show a line rescue both as tender and as rescuer. (The practice victim should be approximately 30 feet from shore in deep water.)

2. Swim continuously for 400 yards using each of the following strokes in a strong manner for at least 50 continuous yards: front crawl, sidestroke, breaststroke, and elementary backstroke.

Explain the following:

1. Common drowning situations and how to prevent them.
2. How to identify persons in the water who need assistance.
3. The order of methods in water rescue.
4. How rescue techniques vary depending on the setting and the condition of the person needing assistance.
5. Situations for which in-water rescues should not be undertaken.

Demonstrate “reaching” rescues using various items such as arms, legs, towels, shirts, paddles, and poles.

Demonstrate “throwing” rescues using various items such as lines, ring buoys, rescue bags, and free-floating supports. Successfully place at least one such aid within reach of a practice victim 25 feet from shore.

Show or explain the use of rowboats, canoes, or other small craft in performing rescues.

List various items that can be used as rescue aids in a noncontact swimming rescue. Explain why buoyant aids are preferred.

Perform the following equipment-based rescues for a conscious practice subject 30 feet from shore. Use a proper entry and a strong approach stroke. Speak to the subject to determine his condition and to provide instructions and encouragement.

1. Present a rescue tube to the subject, release it, and escort the victim to safety.
2. Present a rescue tube to the subject and use it to tow the victim to safety.
3. Present a buoyant aid other than a rescue tube to the subject, release it, and escort the victim to safety.
4. Present a buoyant aid other than a rescue tube to the subject and use it to tow the victim to safety.
5. Remove street clothes in 20 seconds or less and use a nonbuoyant aid, such as a shirt or towel, to tow the subject to safety. Explain when it is appropriate to remove heavy clothing before attempting a swimming rescue.

Explain the importance of avoiding contact with an active victim and describe lead-and-wait tactics.

Perform the following nonequipment rescues for a conscious practice subject 30 feet from shore. Begin in the water from a position near

the subject. Speak to the subject to determine his condition and to provide instructions and encouragement.

1. Provide a swim-along assist for a calm, responsive, tired swimmer moving with a weak forward stroke.
2. Perform an armpit tow for a calm, responsive, tired swimmer resting with a back float.
3. Perform a cross-chest carry for an exhausted, passive victim who does not respond to instructions to aid himself.

In deep water, show how to escape from a victim’s grasp on your wrist. Repeat for front and rear holds about the head and shoulders.

Perform the following rescues for an unconscious practice subject at or near the surface 30 feet from shore. Use a proper entry and strong approach stroke. Speak to the subject and splash water on him to determine his condition before making contact. Remove the victim from the water, with assistance if needed, and position for CPR.

1. Perform an equipment assist using a buoyant aid.
2. Perform a front approach and wrist tow.
3. Perform a rear approach and armpit tow.

Describe how to respond if a victim submerges before being reached by a rescuer, and do the following:

1. Recover a 10-pound weight in 8 to 10 feet of water using a feetfirst surface dive.
2. Repeat using a headfirst surface dive.

Demonstrate knowledge of resuscitation procedures:

1. Describe how to recognize the need for rescue breathing and CPR.
2. Demonstrate proper CPR technique for at least 3 minutes using a mannequin designed to simulate ventilations and compressions.

Demonstrate management of a spinal injury:

1. Explain the signs and symptoms of a spinal injury.
2. Support a faceup victim in calm, shallow water.
3. Turn a subject from a facedown to a faceup position while maintaining support.

Show that you know first aid for other injuries or illnesses that could occur while swimming or boating, including hypothermia, heat reactions, muscle cramps, sunburn, stings, and hyperventilation.



Aquatic Merit Badges

MOTORBOATING

With the fun of operating a motor boat comes the responsibility for keeping that boat in first-class condition, knowing and obeying the nautical “rules of the road,” and gaining the general knowledge and skills to operate a boat safely.

Requirements

Do the following:

1. Explain first aid for injuries or illnesses that could occur while motorboating, including hypothermia, heat reactions, dehydration, motion sickness, insect stings, tick bites, and blisters.
2. Identify the conditions that must exist before performing CPR on a person, and explain how such conditions are recognized. Demonstrate proper technique for performing CPR using a training device approved by your counselor.

Do the following:

1. Before doing requirements 3 through 6, successfully complete the BSA swimmer test.
2. Name the different types of personal flotation devices (PFDs), and explain when each type should be used. Show how to choose and properly fit a PFD.

Do the following:

1. Explain inboard, outboard, and inboard/outboard motors, and the uses and advantages of each. Discuss the special features of a bass boat and a ski boat.
2. Explain the safety procedures and precautions involving handling fuel and engine servicing, and equipment storage and placement.
3. Explain how to winterize a boat motor and tell why this procedure is necessary.
4. Explain the safety procedures and precautions involving swimmers and skiers in the water, passenger positions under way, and boat wakes.

Show you know safety laws for motorboating by doing the following:

1. Have a permit to run a motorboat, if needed.
2. Explain the rules or laws that apply to recreational boating in your area or state.
3. Discuss how the hazards of weather and heavy water conditions can affect both safety and performance in motorboating.
4. Promise that you will follow BSA Safety Afloat guidelines. Explain the meaning of each point.
5. Discuss with your counselor the nautical rules of the road and describe the national and your state’s aids to navigation.
6. Explain and show the correct use of equipment required by both state and federal regulations to be carried aboard a motorboat.
7. Explain federal and state rules for a ventilation system, and tell why these rules are required.

Demonstrate proper boat-handling procedures and skills by doing the following:

1. Board and assist others in boarding.
2. Fuel the boat and complete a safety check.
3. Get under way from dockside or from a beach launch.
4. Run a course for at least a mile, showing procedures for overtaking and passing slower craft, yielding right-of-way, passing oncoming traffic, making turns, reversing direction, and using navigation aids.
5. Stop and secure the boat in position on the open water using anchors; get under way.
6. Land or dock; get out and assist others.
7. Moor the boat and secure all gear.

Point out and explain the mechanical and safety features of a boat trailer. With others assisting, do the following:

1. Launch a boat from a trailer.
2. Remove a boat from the water using a trailer.



Aquatic Merit Badges



ROWING

Rowing is the use of oars as a means of propelling boats, has grown from a basic method of transportation to a competitive sport and an enjoyable method of exercising.



Requirements

Show that you know first aid for injuries or illnesses that could occur while rowing, including cold and heat reactions, dehydration, contusions, lacerations, and blisters.

Do the following:

1. Identify the conditions that must exist before performing CPR on a person. Explain how such conditions are recognized.
2. Demonstrate proper technique for performing CPR using a training device approved by your counselor.

Before doing the following requirements, successfully complete the BSA swimmer test. Jump feetfirst into water over your head in depth. Level off and swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.

Review and discuss Safety Afloat and demonstrate the proper fit and use of personal flotation devices (PFDs).

Do ONE of the following:

1. Alone or with a passenger, do the following correctly in either a fixed-seat or sliding-seat rowboat:

- Launch.
 - Row in a straight line for a quarter mile. Stop, make a pivot turn, and return to the starting point.
 - Backwater in a straight line for 50 yards. Make a turn under way and return to the starting point.
 - Land and moor or rack your craft.
 - Tie the following mooring knots—clove hitch, roundturn with two half-hitches, bowline, Wellman's knot, and mooring hitch.
2. Participate as a rowing team member in a competitive rowing meet. The team may be sponsored by a school, club, or Scout unit. The meet must include competition between two or more teams with different sponsors. Complete at least 10 hours of team practice prior to the meet.

Do one of the following:

1. In a fixed-seat rowboat, come alongside a dock and help a passenger into the boat. Pull away from the dock, change positions with your passenger, and scull in good form over the stern for 10 yards, including at least one 180-degree turn. Resume your rowing position, return alongside the pier, and help your passenger out of the boat.

2. In a sliding-seat rowboat, come alongside a pier and, with your buddy assisting you, get out onto the pier. Help your buddy into the boat. Reverse roles with your buddy and repeat the procedure.

Participate in a swamped boat drill

including righting and stabilizing the craft, reboarding in deep water, and making headway. Tell why you should stay with a swamped boat.

Alone in a rowboat, push off from the shore or a dock. Row 10 yards to a swimmer. While giving instructions to the swimmer, turn the boat so that the swimmer can hold on to the stern. Tow him to shore.

Show or explain the proper use of anchors for rowboats.

Describe the following:

1. Types of crafts used in commercial, competitive, and recreational rowing.
2. Four common boatbuilding materials. Give some positive and negative points of each.
3. Types of oarlocks used in competitive and recreational rowing.

Discuss the following:

1. The advantage of feathering oars while rowing
2. Precautions regarding strong winds and heavy waves, and boat-handling procedures in rough water and windstorms
3. How to properly fit out and maintain a boat in season, and how to prepare and store a boat for winter
4. How to calculate the weight a boat can carry under normal conditions
5. The differences between fixed-seat and sliding-seat rowing
6. The different meanings of the term sculling in fixed- and sliding-seat rowing
7. The health benefits from rowing for exercise



Aquatic Merit Badges

SCUBA DIVING

Note to the Counselor

Counselors for the Scuba Diving merit badge must be registered with the Boy Scouts of America and be approved by the district/council advancement committee.

Like other merit badges, the Scuba Diving merit badge has been developed to teach and train youth in a manner consistent with the overall goals and values of the Boy Scouts of America.

The merit badge counselor should be fair and consistent when presenting and evaluating the knowledge and skills specified by the requirements. None of the requirements may be modified or omitted.

Unlike many other merit badges, the Scuba Diving critical prerequisites, knowledge, and skills are not itemized in the requirements nor adequately covered in the pamphlet. The requirement to earn Open Water Diver Certification means the Scout must meet training requirements set by outside agencies and must supplement the material in this pamphlet with an entry-level scuba diver manual.

All phases of scuba instruction—classroom, pool, and open water training—must comply with the minimum training standards for entry-level scuba certification adopted by the American National Standards Institute (ANSI) or the U.S. Recreational Scuba Training Council (RSTC). The RSTC is recognized as the ANSI Accredited Standards Developer for recreational diving instructional standards. The BSA acknowledges those standards by limiting scuba instruction only to instructors trained and sanctioned by recognized scuba agencies.

Agencies recognized by the BSA for scuba training are **PADI** (Professional Association of Diving Instructors); **NAUI** (National Association of Underwater Instructors); **SSI** (Scuba Schools International); **IDEA** (International Diving Educators Association); **PDIC** (Professional Diving Instructors Corporation); and **SDI** (Scuba Diving International). In addition



to the agencies listed by name, any current member of the World Recreational Scuba Training Council (WRSTC) is also recognized.

Each approved instructor must follow the training protocols established by his or her authorizing agency, including limitations and special provisions based on medical conditions and age. For Scout divers under age 15, this will include restrictions for maximum depth, buddies, and supervision ratios.

Scuba industry standards for Open Water Diver Certification require the student to be at least 15 years of age. Students under the minimum age who meet open water scuba performance requirements may qualify for a special certification that allows them to dive with an adult buddy who has, as a minimum, an open water scuba certification. Several of the scuba organizations recognized by the BSA offer “junior” open water certifications for those as young as 10; others have a minimum age of 12. Such junior open water diver certifications satisfy Scuba Diving merit badge requirement 4.

When scuba diving is taught in connection with any local council program, such as offering the Scuba Diving merit badge at summer camp, instructors should provide the training on a contract basis. Such instructors should have dive store or other commercial affiliation that provides liability coverage. Direct employment of scuba instructors is not recommended.

Local council programs may not compress or sell air for scuba use, or sell, rent, or loan scuba equipment (scuba cylinders, regulators, gauges, dive computers, weights, BCDs).

All air and scuba equipment for local council use must be obtained from professional sources (dive stores, resorts, dive boats, etc.) affiliated with a scuba agency recognized by the BSA.

Requirements

1. Show that you know first aid for

injuries or illnesses that could occur while scuba diving, including hypothermia, hyperventilation, squeezes, decompression illness, nitrogen narcosis, motion sickness, fatigue, overexertion, heat reactions, dehydration, injuries by aquatic life, and cuts and scrapes.

2. Identify the conditions that must exist before performing CPR on a person, and explain how to recognize such conditions. Demonstrate the proper technique for performing CPR using a training device approved by your counselor.

Before completing requirements 3 through 6, earn the Swimming merit badge.

3. Discuss the Scuba Diver’s Code with your merit badge counselor, and explain the importance of each guideline to a scuba diver’s safety.

4. Earn an Open Water Diver Certification from a scuba organization recognized by the Boy Scouts of America scuba policy.

5. Explain what an ecosystem is, and describe four aquatic ecosystems a diver might experience.

6. Find out about three career opportunities in the scuba industry. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.

The Boy Scouts of America is not a dive certification agency. Your merit badge counselor can help you find a scuba agency recognized by the Boy Scouts of America scuba policy so that you can fulfill requirement 4.

Scouts who have already earned an Open Water Diver Certification outside of a BSA activity from a scuba agency recognized by the Boy Scouts of America scuba policy may still earn the Scuba Diving merit badge by earning the Swimming merit badge and completing all other listed requirements.

Aquatic Merit Badges



SMALL-BOAT SAILING

Sailing is one of the most enjoyable pastimes on the open water. The quiet and peacefulness of the water can provide a pleasant break from everyday life. However, smooth sailing requires paying careful attention to safety.



Requirements

Do the following:

1. Explain first aid for injuries or illnesses that could occur while small-boat sailing, including hypothermia, dehydration, heat reactions, motion sickness, cuts, scratches, abrasions, contusions, puncture wounds, and blisters.
2. Identify the conditions that must exist before performing CPR on a person, and explain how to recognize such conditions. Demonstrate proper technique for performing CPR using a training device approved by your counselor.

Before doing the following requirements, successfully complete the BSA swimmer test.

Describe the boat you will be using for the sailing requirement, naming all of the major parts and the function of those parts.*

Before going afloat, do the following:

1. Discuss the nine points of the BSA Safety Afloat plan.
2. Explain the rules of the road in general and any specific rules or laws that apply to your area or state.
3. Explain how water conditions, the hazards of weather, and heavy winds can affect both safety and performance in sailing.
4. Discuss the warning signs of inclement weather and what to do should heavy winds develop or a storm approach.
5. Prepare a typical float plan.
6. Discuss the proper clothing, footwear, and personal gear required for small-boat sailing in warm weather and in cool weather. Explain how choosing the proper clothing, footwear, and personal gear will help keep you comfortable and safe while sailing.

Discuss with your counselor how to identify the wind direction and wind indicators. Explain the importance of this task before setting sail.

Following the BSA Safety Afloat plan, show that you and a buddy can sail a boat properly. Do the following:

1. Prepare a boat for sailing, including a safety inspection.
2. Get underway from a dock, mooring, or beach.
3. Properly set sails for a round-trip course approved by your counselor that will include running, beating, and reaching—the basic points of sail. While sailing, demonstrate good helmsmanship skills.
4. Change direction by tacking; change direction by jibing.
5. Demonstrate getting out of irons.
6. Demonstrate the safety position.

7. Demonstrate capsize procedures and the rescue of a person overboard.**
8. Demonstrate the procedure to take after running aground.
9. Upon returning to the dock, mooring, or beach, properly secure all equipment, furl or stow sails, and prepare the craft for unattended docking or beaching overnight or longer.

Demonstrate a working knowledge of marlinespike seamanship. Do the following:

1. Show how to tie a square (reef) knot, clove hitch, two half hitches, bowline, cleat hitch, and figure-eight knot. Demonstrate the use of each.
2. Show how to heave a line, coil a line, and fake down a line.
3. Discuss the kinds of lines used on sailboats and the types of fibers used in their manufacture. Explain the advantages and disadvantages of each.

Describe how you would care for and maintain a sailboat and its gear throughout the year.

With your counselor, review sailing terminology and the points of sail. Discuss various types of sailboats in use today and explain their differences

* The skills may be demonstrated on any boat available to the Scout; sailboards are not acceptable. While no specific sail plan is recommended, it is suggested that the craft be smaller than 20 feet. The boat must be capsizable and have the capability of sailing to windward.

** Capsize procedures should be conducted under the close supervision of the counselor. A rescue boat should be standing by to assist, if necessary, and to tow the capsized craft to shore. Self-bailing boats are acceptable for this requirement. Extreme care should be taken to avoid personal injury and damage to the boat or equipment.



Aquatic Merit Badges

SWIMMING

Swimming is a leisure activity, a competitive sport, and a basic survival skill. Scouts who earn this badge will learn about safety when swimming and diving, how swimming can contribute to overall fitness and health, and gain some basic competitive swimming skills.

Requirements

Discuss the prevention of and treatment for health concerns that could occur while swimming, including hypothermia, dehydration, sunburn, heat exhaustion, heatstroke, muscle cramps, hyperventilation, spinal injury, stings and bites, and cuts and scrapes.

Do the following:

1. Identify the conditions that must exist before performing CPR on a person. Explain how to recognize such conditions.
2. Demonstrate proper technique for performing CPR using a training device approved by your counselor.

Before doing the following requirements, successfully complete Second Class rank requirements 8a through 8c and First Class rank requirements 9a through 9c.

Second Class rank requirements 8a through 8c:

(8a) Tell what precautions must be taken for a safe swim.

(8b) Demonstrate your ability to jump feetfirst into water over your head in depth, level off and swim 25 feet on the surface, stop, turn sharply, resume swimming, then return to your starting place.

(8c) Demonstrate water rescue methods by reaching with your arm or leg, by reaching with a suitable object, and by throwing lines and objects. Explain why swimming rescues should not be attempted when a reaching or throwing rescue is possible, and explain why and how a rescue swimmer should avoid

contact with the victim.

First Class rank requirements 9a through 9c:

(9a) Tell what precautions must be taken for a safe trip afloat.

(9b) Before doing the following requirement, successfully complete the BSA swimmer test:

Jump feetfirst into water over your head in depth, swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be swum continuously and include at least one sharp turn. After completing the swim, rest by floating.

(9c) With a helper and a practice victim, show a line rescue both as tender and as rescuer. The practice victim should be approximately 30 feet from shore in deep water.

Alternate requirements for the Second Class and First Class ranks are available for Scouts with physical or mental disabilities. [Click here](#) for more information.

Demonstrate survival skills by jumping feetfirst into deep water wearing clothes (shoes, socks, swim trunks, long pants, belt, and long-sleeved shirt). Remove shoes and socks, inflate the shirt, and show that you can float using the shirt for support. Remove and inflate the pants. Swim 50 feet using the inflated pants for support, then show how to reinflate the pants while still afloat.

Swim continuously for 150 yards using the following strokes in good form and in a strong manner: front crawl or trudgen for 25 yards, back crawl for 25 yards, sidestroke for 25 yards, breaststroke for 25 yards, and elementary backstroke for 50 yards.

Do the following:

1. Float faceup in a resting position for at least one minute.
2. Demonstrate survival floating for at least five minutes.
3. While wearing a properly fitted personal

flotation device (PFD), demonstrate the HELP and huddle positions. Explain their purposes.

4. Explain why swimming or survival floating will hasten the onset of hypothermia in cold water.

In water over your head, but not to exceed 10 feet, do each of the following:

1. Use the feetfirst method of surface diving and bring an object up from the bottom.
2. Do a headfirst surface dive (pike or tuck), and bring the object up again.
3. Do a headfirst surface dive to a depth of at least five feet and swim underwater for three strokes. Come to the surface, take a breath, and repeat the sequence twice.

Do ONE of the following:

1. Demonstrate snorkeling and scuba diving knowledge:
 - Demonstrate selection and fit of mask, snorkel, and fins; discuss safety in both pool and open-water snorkeling.
 - Demonstrate proper use of mask, snorkel, and fins for underwater search and rescue.
 - Describe the sport of scuba diving or snorkeling, and demonstrate your knowledge of BSA policies and procedures relating to that sport.

- OR -
2. Demonstrate the following competitive swimming skills:
 - Racing dive from a pool edge or dock edge (no elevated dives from racing platforms or starting blocks)
 - Racing form for 25 yards on one competitive stroke (front crawl, back crawl, breaststroke, or butterfly)
 - Racing turns for the stroke that you chose in 8b(2), OR, if the camp facilities cannot accommodate the racing turn, repeat 8b(2) with an additional stroke.
 - Describe the sport of competitive swimming.

Aquatic Merit Badges



Following the guidelines set in the BSA Safe Swim Defense, in water at least 7 feet deep, show a standing headfirst dive from a dock or pool deck. Show a long shallow dive, also from the dock or pool deck.

Do the following:

1. Explain the health benefits of regular aerobic exercise, and explain why many people today do not get enough of the beneficial kinds of exercise.
2. Discuss why swimming is favored as both a fitness and a therapeutic exercise.
3. Write a plan for a swimming exercise program that will promote aerobic/vascular fitness, strength and muscle tone, body flexibility, and weight control for a person of Scout age. Identify resources and facilities available in your home community that would be needed for such a program.
4. Discuss with your counselor the incentives and obstacles for staying with the fitness program you identified in requirement 10c. Explain the unique benefits that could be gained from this program, and discuss how personal health awareness and self-discipline would relate to your own willingness and ability to pursue such a program.





Aquatic Merit Badges

WATER SPORTS

Water sports are a fun and exhilarating way to enjoy being outdoors while developing strength, coordination, and fitness. By developing experience with water sports and practicing good judgment, Scouts will gain skills that will serve them well for a lifetime and have extreme fun while they do.

Requirements

Show that you know first aid for injuries or illnesses that could occur while participating in water sports, including hypothermia, heat exhaustion, heatstroke, dehydration, sunburn, minor cuts and bruises, and blisters.

Do the following:

1. Identify the conditions that must exist before performing CPR on a person. Explain how such conditions are recognized.
2. Demonstrate proper technique for performing CPR using a training device approved by your counselor.

Before doing the following requirements, successfully complete the BSA swimmer test.

Do the following:

1. Discuss the BSA Safety Afloat policy. Tell how it applies to water sports.
2. Name the different types of personal flotation devices (PFDs), and explain when each type should be used. Show how to choose and properly fit a PFD.
3. Know the Water Sports Safety Code. Promise that you will live up to it and follow it in all water work for this badge. Know the safety precautions that must be used by the boat operator in pulling water-skiers and wakeboarders.

Show the following skier signals to the safety observer in the boat: skier safe, faster,

slower, turns, back to dock, cut motor, skier in water.

Showing reasonable control while using two skis, one ski, or a wakeboard, do EACH of the following:

1. Show how to enter the water from a boat and make a deepwater start without help.
2. Show you can cross both wakes four times and return to the center of the wake each time, without falling.
3. Show you can fall properly to avoid an obstacle. Also show that you can drop handle and coast to a stop without losing your balance.

While on shore, show that you know how to properly adjust the bindings of your ski(s) or wakeboard to fit yourself. Then, in deep water, show you can adjust bindings to fit. Recover and put on your ski(s) or wakeboard that has come off during a fall.

WHITewater

Canoeing or kayaking through whitewater rapids can be a thrilling experience. Safe whitewater fun requires each participant to understand the the equipment and techniques and to have a firm respect for the power of nature's waterways.

Requirements

Do the following:

1. Review with your counselor the first aid for injuries or illnesses that could occur while working on the Whitewater merit badge, including hypothermia, heat reactions, dehydration, insect stings, blisters, bruises, cuts, and shoulder dislocation.
2. Identify the conditions that must exist before performing cardiopulmonary



Aquatic Merit Badges



resuscitation (CPR) on a person. Explain how such conditions are recognized.

3. Demonstrate proper technique for performing CPR using a training device approved by your counselor.

Do the following:

1. Review and compare BSA Safety Afloat and the American Whitewater safety guidelines and demonstrate your understanding of these principles by answering questions from your counselor.
2. Identify and explain the use and importance of safety equipment on moving water. Include in your explanation a discussion about throw ropes, whistles, and how to choose and properly fit PFDs (personal flotation devices) and helmets.

Before doing requirements 4 through 13, earn the Canoeing merit badge if you will be using a canoe to earn this merit badge. If you will be using a kayak, earn the Kayaking BSA Award.

Do ONE of the following:

1. If you are completing these requirements as a tandem canoeist, demonstrate basic canoe-handling skills by completing the Scout gate test within 160 seconds while paddling tandem with a buddy. Then demonstrate the following strokes: cross forward, cross draw, bow pry, Duffek, high brace, and low brace.
2. If you are completing these requirements as a solo canoeist, demonstrate basic solo canoe-handling skills by completing the Scout gate test within 160 seconds. Then demonstrate the following strokes: cross forward, cross draw, stern pry, Duffek, high brace, and low brace.
3. If you are using a kayak to complete these requirements, demonstrate basic kayak-handling skills by completing the Scout gate test within 160 seconds. Demonstrate the following strokes: Duffek, high brace, low brace, and sculling draw. Then do the following:
 - Move the kayak forward in a reasonably straight line for 10 yards.
 - Move the kayak sideways to the

right and to the left.

- Pivot 360 degrees to the right and left.
- Stop the kayak.

Do the following:

1. Explain the importance of scouting before committing to running a rapid, and discuss good judgment when evaluating a stretch of river or a particular rapid.
2. Explain the terms downstream V, riffle, strainer, eddy, eddy line, pillow, ledge, bend, shallows, falls, low-head dam, current, rock, drop, horizon line, wave, standing wave, hydraulic, and sleeper.
3. Explain how to scout and read a river while ashore and while afloat, and discuss the importance of hazard recognition.
4. Demonstrate your ability to read the river where you are practicing and demonstrating your whitewater skills.

Explain the International Scale of River Difficulty and apply the scale to the stretch of river where you are practicing and demonstrating your whitewater skills. Identify the specific characteristics of the river that are factors in your classification according to the International Scale.

Explain the importance of communication during every whitewater outing. Explain and then demonstrate using the following river signals: “Run right,” “Run left,” “Run down the center,” “Stop,” “Are you OK?” and “Help!”

Do the following:

1. Explain the differences between flat-water and whitewater canoes. Identify the different materials used in modern whitewater canoe construction and the advantages and disadvantages of each.
2. Describe the various types of kayaks and how they differ in design, materials, and purpose.
3. Identify the advantages and special uses for kayaks and decked canoes in moving water.
4. Discuss the construction, safety, and

functional features of paddles used in whitewater activities.

Discuss the personal and group equipment necessary for a safe whitewater outing and how and why it is used. Explain how to pack and protect these items.

Wearing the proper personal flotation device (PFD) and being appropriately dressed for the weather and water conditions, perform the following skills in moving water in a properly equipped whitewater craft of your choice (tandem canoe, solo canoe, or solo kayak). If a tandem canoe is used, the skills must be demonstrated from both the bow and stern positions.

1. Launch and land
2. Paddle forward in a straight line
3. Backpaddle
4. Sideslip, both sides
5. Ferry upstream and downstream
6. Eddy turn
7. Peel out

Explain and demonstrate:

1. Self-rescue and procedures when capsized in moving water, including a wet exit if necessary
2. Safe rescue of others in various whitewater situations using a throw rope
3. Portaging--when and how to do it
4. The whitewater buddy system using at least three persons and three craft

Discuss the use of inflatable rafts on moving water. In your discussion, explain the special safety precautions that should be taken when using an inflatable raft and the risks of “tubing” on moving water.

Participate in a whitewater trip using either a canoe or kayak on a Class I or Class II river. Help to prepare a written plan, specifying the route, schedule, equipment, safety precautions, and emergency procedures. Determine local rules and obtain permission from landowners and land managers in advance. Explain what steps you have taken to comply with BSA Safety Afloat and the American Whitewater safety guidelines. Execute the plan with others.



Special Awards

BSA LIFEGUARD

To be trained as a BSA Lifeguard, you must successfully complete the BSA Lifeguard course and demonstrate the ability to perform each of the skills taught in the course.

Before doing requirements 6 through 25, complete the following:

1. Submit proof of age. You must be at least 15 years old to participate.
2. Submit written evidence of fitness for swimming activities (signed health history).
3. Swim continuously for 550 yards, including at least 100 yards each of the following strokes in good form: front crawl, breaststroke, elementary backstroke, and sidestroke.
4. Immediately following the above swim, tread water for two minutes.
5. Starting in the water, swim 20 yards using a front crawl or breaststroke, surface dive 7 to 10 feet, retrieve a 10-pound object, surface, swim with the object 20 yards back to the starting point, and exit the water, all within 1 minute, 40 seconds.

Requirements

Complete the following requirements within a 120-day period:

6. Demonstrate reaching assists from the deck using an arm, a rescue tube, and a pole.
7. Demonstrate throwing assists using a throw bag and a ring buoy with line attached. Throw each device such that the line lands within reach of a conscious subject 30 feet from shore.
8. Demonstrate:
 - Rescue of a conscious subject in deep water using a rescue board, kayak, rowboat, canoe, or other rescue craft that would be available at your local facility.
 - Repeat for an unconscious subject.
9. Demonstrate an entry and front approach with a rescue tube to a conscious subject in deep water 30 feet away from shore. Extend the rescue tube within the grasp of the subject and then tow the subject back to the entry point, providing direction and reassurance throughout.
10. Demonstrate an entry and rear approach with a rescue tube to a conscious subject in deep water 30 feet away from shore. Grasp the victim from behind using a scoop technique under the arms to support the subject against a rescue tube squeezed between the victim's back and the rescuer's chest. Reassure the subject and tow the subject to shore.
11. Demonstrate use of a rescue tube to assist two subjects grasping each other.
12. Demonstrate both front and rear headhold escapes from a subject's grasp.
13. Demonstrate a feet-first entry in deep water with a rescue tube and swim an approach stroke 25 yards within 25 seconds while trailing the tube.
14. Demonstrate an entry and front approach with a rescue tube to a face-down unconscious subject at or near the surface in deep water. Use a wrist tow to place the subject face-up on the rescue tube and use a one-arm tow to the closest point of safety.
15. Demonstrate an entry and rear approach with a rescue tube to a face-down unconscious subject at or near the surface in deep water. Use a scoop technique to position the rescue tube between the subject and the rescuer's chest, then either lean back or rotate to bring the subject face-up. Tow the subject to the nearest point of safety using either a two-arm tow or switching to a one-arm tow.
16. Demonstrate an entry and approach with a rescue tube to an unconscious subject submerged face-down at or near the bottom in 6 to 8 feet of water. Bring the subject to the surface and tow to the nearest point of safety.
17. Remove a subject from the water using each of the following techniques in the appropriate circumstances with the aid of a second rescuer:
 - Vertical lift at the edge of a pool or pier using a backboard
 - Walking assist
 - Beach drag
18. Participate in multiple-rescuer search techniques appropriate for a missing subject in murky water:
 - Line search in shallow water
 - Underwater line search in deep water without equipment
 - Underwater line search in deep water with mask and fins



Special Awards



19. Demonstrate head-splint (extended arm rollover) in-line stabilization for a face-down subject with suspected spinal injury in very shallow water (18 inches or less).
20. Demonstrate head-splint in-line stabilization for a suspected spinal injury in shallow water (waist to chest deep):
 - For a face-up subject
 - For a face-down subject
21. Demonstrate head and chin support in-line stabilization for a suspected spinal injury in shallow water (waist to chest deep):
 - For a face-up subject
 - For a face-down subject
22. Demonstrate in-line stabilization for a suspected spinal injury in deep water, swim the subject to shallow water, confirm vital signs, and, with the assistance of three others, remove the subject from the water using a backboard with straps and a head immobilization device.
23. Correctly answer 80 percent of the questions on the BSA Lifeguard written test covering Safe Swim Defense, aquatics procedures at BSA camps, guard duties, emergency action plans, surveillance, and water rescue. Review any incomplete or incorrect answers.
24. Show evidence of current training in American Red Cross First Aid (valid for three years) and American Red Cross CPR/AED for the Professional Rescuer (valid for one year) or equivalent (includes any training for a camp health officer recognized by BSA national camp standards).
25. Serve as a lifeguard, under supervision, for at least two separate BSA swimming activities for a combined time of two hours. Afterward, discuss the experience with the lifeguarding instructor.

Completion Options

Course completion cards are valid only when signed by either a current BSA Aquatics Instructor or BSA Lifeguard Instructor approved by the local council. Training is valid for three

years provided First Aid and CPR/AED for the Professional Rescuer training are kept current during that period.

There are four ways to obtain a course completion card:

1. **Course Completion**—Complete all requirements in the instructor manual during a scheduled course of instruction. The participant must attend all course sessions. Makeup sessions are allowed at the instructor's discretion. If an individual is unable to complete all requirements during the scheduled course, the instructor may elect to continue training until the participant is able to complete all the requirements provided the total elapsed time from start to finish does not exceed the 120-day period.
2. **Renewal Challenge**—Anyone with a BSA Lifeguard completion card that is current or has expired within six months may renew or extend the training by performing requirements 2 through 24 without attending the standard course sessions. Prior to the testing, the instructor may provide a renewal training session to review and update skills and information. Summer camp aquatics directors should renew training for aquatics staff members during precamp training while emphasizing local camp facilities, procedures, and emergency action plans.

3. **Crossover Challenge**—Anyone who holds current training in American Red Cross Lifeguarding, American Red Cross Waterfront Lifeguarding, or other lifeguard training programs may obtain a BSA Lifeguard completion card by performing requirements 1 through 25 without attending the standard course sessions. The lifeguard training program that issued the training certificate must be recognized by the local or state regulatory agency that sets standards for lifeguards at youth camps. The instructor may provide a crossover training session to review and update skills and information prior to the testing. The applicant may receive credit for requirement 25 if within the past 18 months he or she has served as a lifeguard, under supervision, or has supervised lifeguards, for at least two separate BSA swimming activities for a combined time of two hours. Otherwise, due to BSA procedures not implemented at other lifeguarding venues, the applicant must accomplish requirement 25.
4. **Coinstructors** (BSA Aquatics Instructor or BSA Lifeguard Instructor) may each sign a completion card for the other at the conclusion of a BSA Lifeguard course if they satisfy requirements 2–22 and 24.

See the [Application for BSA Lifeguard, No. 430-033](#), for detailed requirements.





Special Awards

Note: these awards are not merit badges and are not worn on the uniform

BOARDSAILING BSA

Requirements

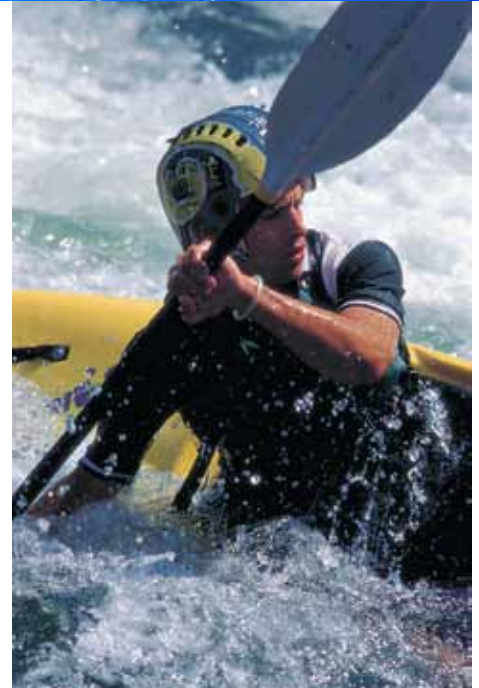
1. Review the BSA guidelines for boardsailing and explain steps you have taken to follow each of the 11 guidelines found in section V of Camp Program and Property Management, No. 20-920.
2. Explain precautions to be taken for boardsailing on each of the following:
 - Lakes
 - Rivers
 - Ocean or bay areas
3. What is hypothermia? Describe to your counselor the symptoms of hypothermia. What special considerations in preventing hypothermia are necessary for boardsailing?
4. Properly rig and prepare the sailboard you are using. Point out and explain the function of each of the following: uphaul, outhaul, downhaul, cleat, leach, tack, clew, foot, skeg, centerboard, wishbone boom, universal, luff, and center of effort. Explain how to steer the sailboard.
5. Demonstrate your ability to uphaul the sail, find the neutral position to the wind (sail luffing), and control the board's position with foot movement.
6. With supervision from your instructor, sail a course that involves beating, reaching, and running. Change tack by coming about.



KAYAKING BSA

Requirements

1. Before fulfilling the following requirements, successfully complete the BSA swimmer test.
2. Do the following:
 - Describe various types of kayaks and how they differ in design, materials, and purpose.
 - Name the parts of the kayak you are using for this exercise.
 - Demonstrate how to choose an appropriately sized kayak paddle and how to position your hands.
3. Do the following:
 - Tell what precautions must be taken for a safe trip afloat.
 - Demonstrate how to select and properly fit a PFD.
 - Explain the importance of safety equipment such as PFDs, air bags, grab loops, and helmets.
4. Demonstrate your ability to aid yourself and others in the event of a capsize:
 - Capsize your kayak in water at least seven feet deep, perform a wet exit if necessary, and swim the boat to shore.
 - With assistance, if needed, ready the capsized craft for use.
 - Show how to approach a capsized paddler in your kayak and tow him to shore.
 - While upright in your kayak, right a capsized kayak, empty it of water, and assist the paddler aboard without returning to shore.
5. As a solo paddler, demonstrate the following:
 - Entering and launching a kayak from shore or dock
 - Landing or docking and exiting a kayak
 - Forward stroke
 - Sweep stroke
 - Reverse sweep
 - Draw stroke
 - Rudder stroke
 - Back stroke
6. As a solo paddler, do the following:
 - Paddle forward in a reasonably straight line.
 - Move the kayak sideways to the right and to the left.
 - Pivot 360 degrees to the right and left.
 - Stop the kayak.





Special Awards

Note: these awards are not merit badges and are not worn on the uniform

MILE SWIM BSA

Requirements

1. Explain how regular exercise contributes to good health and why swimming is one of the best forms of exercise.
2. Tell what precautions and procedures a swimmer and escort must follow for distance swimming over open water.
3. Under the supervision of a currently qualified certified aquatics instructor or equivalent, participate in four hours of training and preparation for distance swimming (one hour a day maximum).
4. Swim one mile over a measured course that has been approved by the trained instructor who will supervise the swim.

NOTE: Swim-trunks emblem only.



SCUBA BSA

Requirements

1. Before doing other requirements, successfully complete the BSA swimmer test. To begin the test, jump feetfirst into water over the head in depth, level off, and begin swimming. Swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.
2. Discuss the importance of using the buddy system at all times while scuba diving. Explain that a dive buddy is there to assist with the donning and doffing of equipment, to lend assistance in case of emergency, and to share in the underwater experience. Remember, always dive with a buddy—Never dive alone!
3. Review hazards associated with scuba diving, including causes of decompression incidents, and safety procedures to avoid them. Explain the importance of never using scuba equipment unless you are enrolled in a training exercise, or have completed a diver certification program, taught by a certified instructor.
4. By the end of a Water Skills Development session, the participants will be able to meet the following requirements in clear, confined water:
 5. State the purpose of the following pieces of basic diving equipment: mask, fins, BCD, BCD inflator, regulator, air gauge, and alternate air source.
 6. Describe how to locate the air gauge, and explain how to recognize the “caution zone” on it.
 7. Don and adjust mask, fins, snorkel, BCD, scuba, and weights with the assistance of a buddy, instructor, or certified assistant.



8. While underwater, demonstrate and recognize the following hand signals: Okay?/Okay!; Stop; Up; Down; Out of air; Come here; Ear problem; Slow down/Take it easy; Something is wrong; Watch me; Check your air supply.
9. Inflate/deflate a BCD at the surface using the low-pressure inflator.
10. In shallow water, demonstrate proper compressed air breathing habits; remember to breathe naturally and not hold the breath.
11. Clear the regulator while underwater using both exhalation and purge-button methods, and resume normal breathing from it.
12. In shallow water, recover a regulator hose from behind the shoulder while underwater.
13. In shallow water, clear a partially flooded mask while underwater.
14. Swim underwater with scuba equipment while maintaining control of both direction and depth, properly equalizing the ears and mask to accommodate depth changes.
15. While underwater, locate and read submersible pressure gauge and signal whether the air supply is adequate or low based on the gauge’s caution zone.
16. In shallow water, breathe underwater for at least 30 seconds from an alternate air source supplied by the instructor.
17. Demonstrate the techniques for a proper ascent.

NOTE: The counselor for Scuba BSA must hold an instructor rating and be in current teaching status with PADI, NAUI, SSI, or other member of the RSTC in accordance with BSA scuba policies. Instruction must meet the minimum training standards for introductory scuba experiences set by the RSTC and guidelines provided in the Scuba BSA Brochure, No. 14-515. BSA scuba policies are provided in that brochure and also in the Guide to Safe Scouting.



Special Awards

Note: these awards are not merit badges and are not worn on the uniform

SNORKELING BSA

Requirements

1. Before doing other requirements, successfully complete the BSA swimmer test: Jump feetfirst into water over the head in depth, level off, and begin swimming. Swim 75 yards in a strong manner using one or more of the following strokes: sidestroke, breaststroke, trudgen, or crawl; then swim 25 yards using an easy, resting backstroke. The 100 yards must be completed in one swim without stops and must include at least one sharp turn. After completing the swim, rest by floating.
2. Discuss the importance of using the buddy system at all times while snorkeling and list duties of a buddy, beginning with equipment checks.
3. Explain the function, fit, and selection of mask, fins, and snorkel. Discuss the use of inflatable flotation vests and PFDs when snorkeling in open water.
4. In confined, shallow water (about waist deep), demonstrate use of mask and snorkel:
5. Show how to prevent the mask from fogging and how to equalize pressure in mask, ears, and sinus cavities. With your head underwater, flood the mask, observe the effect on your vision, surface, and drain the water from the mask.
6. With your face in the water, breathe through the snorkel. Then submerge, surface, clear water from the snorkel, and resume free breathing without removing the snorkel from your mouth.
7. In confined, shallow water, demonstrate the use of swim fins: Do first using only fins, and then repeat with a mask and snorkel.
8. Fit and adjust fins to feet.
9. Walk with fins as if entering from a beach.
10. Swim at the surface (10 yards) and underwater (three yards) using the flutter kick.
11. Control direction without using hands while swimming with fins at the surface and underwater.
12. In confined, deep water (six to 12 feet), demonstrate:
13. Proper techniques for entering and exiting the water with snorkeling equipment from a dock or boat.
14. Headfirst and feetfirst surface dives, including proper body position for safe ascent and descent.
15. Show knowledge of snorkeling signals:
16. Demonstrate divers' signs and signals, both audible and visual, for use at the surface and underwater.
17. Set out a diver down flag and explain its function.
18. In clear, confined water eight to 12 feet deep that has a firm bottom, while swimming with a buddy, use mask, fins, and snorkel to locate and recover an object from the bottom.
19. Demonstrate basic survival skills:
20. Float facedown for five minutes while breathing through a snorkel with a minimum of movement.
21. Demonstrate survival floating for five minutes without use of a snorkel.
22. Using fins, show how to tow an exhausted or unconscious buddy to safety.
23. Review and explain the eight points of Safe Swim Defense and BSA Snorkeling Safety. Explain training, preparations, and precautions required for snorkeling in open water. Explain environmental factors that affect snorkeling and discuss special precautions needed for oceans, streams, and lakes.
24. Explain pressure, buoyancy, and submerged optics and acoustics related to snorkel swimming and diving.
25. Discuss the effects of submersion on the body and how to handle potentially dangerous situations:
26. What is hyperventilation and how is it avoided?
27. What are the symptoms and consequences of hypothermia?
28. Why is CPR training recommended for those participating in swimming and snorkeling activities?

See Snorkeling BSA Application, No. 14-176B, for detailed requirements.



Cub Scout Aquatic Belt Loops & Sport Pins



FISHING

Requirements

Tiger Cubs, Cub Scouts, and Webelos Scouts may complete requirements in a family, den, pack, school, or community environment. Tiger Cubs must work with their parents or adult partners. Parents and partners do not earn loops or pins.



Belt Loop

Complete these three requirements:

1. Review your local fishing regulations with your leader or adult partner. Explain why they are important, and commit to following them.
2. Demonstrate how to bait a hook properly.
3. Spend at least 30 minutes trying to catch fish.

Sports Pin

Earn the Fishing belt loop and complete five of the following requirements:

1. Compete in a pack or community fishing tournament.
2. Demonstrate how to clean a fish in preparation for cooking and eating it. Properly dispose of any waste.
3. Prepare a report on three different kinds of fish. Include information on preferred habitats, feeding habits, and recommended fishing techniques, baits, and equipment needed to catch it. Tell your den or an adult family member what you learned.
4. Draw a picture of three different types of fishing reels. Explain how each works.
5. Identify three different fishing flies that are used in places you like to fish. Use at least one to fish.
6. Practice casting for 30 minutes at a target 30 feet away.
7. Select a species of fish and draw a picture of it, correctly labeling each part and its function.
8. Replace the line in a fishing reel.
9. Make a simple pole and line fishing rig. Use it to catch a fish.
10. Catch a fish using artificial bait or lures.
11. Practice fishing on five occasions, complying with local fishing regulations and the Outdoor Code.



SWIMMING

Requirements

Tiger Cubs, Cub Scouts, and Webelos Scouts may complete requirements in a family, den, pack, school, or community environment. Tiger Cubs must work with their parents or adult partners. Parents and partners do not earn loops or pins.



Belt Loop

Complete these three requirements:

1. Explain the rules of Safe Swim Defense. Emphasize the buddy system.
2. Play a recreational game in the water with your den, pack, or family.
3. While holding a kick board, propel yourself 25 feet using a flutter kick across the shallow end of the swimming area.

Sports Pin

Earn the Swimming belt loop and complete five of the following requirements:

1. Practice the breathing motion of the crawl stroke while standing in shallow water. Take a breath, place your head in the water, exhale, and turn your head to the side to take a breath. Repeat.
2. Learn and demonstrate two of the following strokes: crawl, backstroke, elementary backstroke, sidestroke, or breaststroke.
3. Learn and demonstrate the following floating skills: prone, facedown float, and back float. The purpose of the float is to provide the swimmer the opportunity to rest in the water.
4. Using a kickboard, demonstrate three kinds of kicks.
5. Pass the "beginner" or "swimmer" swim level test.
6. Visit with a lifeguard and talk about swimming safety in various situations (pool, lake, river, ocean). Learn about the training a lifeguard needs for his or her position.
7. Explain the four rescue techniques: Reach, Throw, Row, and Go (with support).
8. Take swimming lessons.
9. Attend a swim meet at a school or community pool.
10. Tread water for 30 seconds.
11. Learn about a U.S. swimmer who has earned a medal in the Olympics. Tell your den or an adult family member what you learned about him or her.
12. Demonstrate the proper use of a mask and snorkel in a swimming area where your feet can touch the bottom.

