



# Small-Boat Sailing

## Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet (book). No one can add or subtract from the Boy Scout Requirements #33215.

. Requirements revised: 2005, Workbook updated: April 2008.

Scout's Name: \_\_\_\_\_ Unit: \_\_\_\_\_

Counselor's Name: \_\_\_\_\_ Counselor's Ph #: \_\_\_\_\_

### 1. Do the following:

a. 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. \_\_\_\_\_

b. 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. \_\_\_\_\_

2. Before doing the following requirements, successfully complete the ESA swimmer test. \_\_\_\_\_

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

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4. Before going afloat, do the following:

a. Discuss the nine points of the BSA Safety Afloat plan.

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b. Explain the rules of the road in general and any specific rules or laws that apply to your area or state. \_\_\_\_\_

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c. Explain how water conditions, \_\_\_\_\_

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\_\_\_\_\_  
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the hazards of weather, \_\_\_\_\_

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\_\_\_\_\_  
\_\_\_\_\_

and heavy winds can affect both safety and performance in sailing. \_\_\_\_\_



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

- a. Prepare a boat for sailing, including a safety inspection. \_\_\_\_\_
- b. Get underway from a dock, mooring, or beach. \_\_\_\_\_
- c. 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 helmsman ship skills. \_\_\_\_\_
- d. Change direction by tacking; change direction by jibing. \_\_\_\_\_
- e. Demonstrate getting out of irons. \_\_\_\_\_
- f. Demonstrate the safety position. \_\_\_\_\_
- g. Demonstrate capsize procedures and the rescue of a person overboard. † *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 tom- this requirement. Extreme care should be taken to avoid personal injury and damage to the boat or equipment.*
- h. Demonstrate the procedure to take after running aground.
- i. 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.

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

- a. 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.

- b. Show how to heave a line, coil a line, and fake down a line.
- c. Discuss the kinds of lines used on sailboats and the types of fibers used in their manufacture. Explain the advantages and disadvantages of each.

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

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9. With your counselor, review sailing terminology and the points of sail. \_\_\_\_\_

Discuss various types of sailboats in use today and explain their differences. \_\_\_\_\_

**Online Resources** (Use any Internet resource with caution and only with your parent's or guardian's permission.)

- Boy Scouts of America: ▶ [scouting.org](http://scouting.org) ▶ [Guide to Safe Scouting](#) ▶ [Age-Appropriate Guidelines](#) ▶ [Safe Swim Defense](#)
- ▶ [Scout](#) ▶ [Tenderfoot](#) ▶ [Second Class](#) ▶ [First Class](#) ▶ [Rank Videos](#) ▶ [Safety Afloat](#)
- Boy Scout Merit Badge Workbooks: [usscouts.org](http://usscouts.org) -or- [meritbadge.org](http://meritbadge.org) Merit Badge Books: [www.scoutstuff.org](http://www.scoutstuff.org)
- ▶ [Leave No Trace](#) ▶ [Outdoor Code](#) ▶ [Wilderness Use Policy](#) ▶ [Youth Protection Training](#)

**Requirement Resources**

- 1: **First Aid:** See [http://meritbadge.org/wiki/index.php/First\\_Aid](http://meritbadge.org/wiki/index.php/First_Aid) for these links and more:  
[First Aid Videos: Basics](#) - [Basics2](#) [Wilderness First Aid](#) [CPR Basics](#) [Venomous Snake Bite](#) [First Aid Kits](#)  
 Other First Aid Links: [Mayo Clinic First Aid Guide](#) [Class 1 Exam](#) [Class 3](#) [Warning Signs of Cancer](#) - [Heart Disease](#)
- 2: **Swimming:** See <http://meritbadge.org/wiki/index.php/Swimming> for these links and more:  
[Swimming Lesson Videos: Stretching](#) - [Tread Water](#) - [Float](#) - [How to Swim](#) - [Survival Floating](#)  
[Freestyle](#) - [Breaststroke](#) - [Backstroke](#) - [Trudgeon](#) - [Butterfly](#) - [Diving Safety](#) - [Racing Dive](#) - [Snorkeling](#) - [SCUBA Diving](#)  
 Other Links: [Swimming Merit Badge](#) - [Safe Swim Defense](#) - [Safety Afloat](#) - [BSA Swim Test](#) - [Buddy System](#) - [Trudgeon](#)
- 3: **Sailing Basics:** <http://en.wikipedia.org/wiki/Sailing> ▶ [Parts of a Sailboat](#)  
 Nautical Terms: [http://en.wikipedia.org/wiki/Glossary\\_of\\_nautical\\_terms](http://en.wikipedia.org/wiki/Glossary_of_nautical_terms)
- 4: **Safety Afloat:** [http://meritbadge.org/wiki/index.php/Safety\\_Afloat](http://meritbadge.org/wiki/index.php/Safety_Afloat)
- 5: **Weather:** See <http://meritbadge.org/wiki/index.php/Weather>
- 6: [How to Sail Video Lessons](#) ▶ [Steering](#) ▶ [Rigging](#) ▶ [Knots](#) ▶ [Much more...](#)
- 7: **Knots & Lashings:** See <http://meritbadge.org/wiki/index.php/Pioneering> for these links and more:  
[Knot Videos: Basics](#) - [Basics2](#) - [USScouts Knots](#) - [Animated knots](#) - [More Animated Knots](#) - [Still more](#)  
 Other Knot Links: [Knots](#) - [Sea Scout Knots](#) - [Ropers Knots Page](#) - [Climbing Knots](#) - [Fishing knots](#) - [Knots Index](#)

**General Resources**

- Am. Sailing Assn: <http://www.american-sailing.com>
- Online Small-Boat Sailing Course: <http://www.smallboat.sailingcourse.com>
- Sailing Magazine: <http://www.sailmag.com>
- Sailing World: <http://www.sailingworld.com/>
- U.S. Sailing Association: <http://www.ussailing.org>
- N. Am. Safe Boating: <http://www.safeboatingcampaign.net>
- Sailing: <http://www.sailnet.com/>
- U.S. Coast Guard Auxiliary: <http://www.cgaux.org>
- U.S. Coast Guard Regulations: <http://www.uscgboating.org>

U.S. Coast Guard Office of Boating Safety: [http://www.uscgboating.org/safety/metlife/water\\_ski.htm](http://www.uscgboating.org/safety/metlife/water_ski.htm)

## SAFETY AFLOAT

Safety Afloat has been developed to promote boating and boating safety and to set standards for safe unit activity afloat. Before a BSA group may engage in an excursion, expedition, or trip on the water (canoe, raft, sailboat, motorboat, rowboat, floating in an inner tube, or other craft), adult leaders for such activity must complete Safety Afloat Training, No. 34159, have a commitment card, No. 34242, with them, and be dedicated to full compliance with all nine points of Safety Afloat.

### **1. 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 well-being and safety of the children in his or her care, who is experienced and qualified in the particular watercraft skills and equipment involved in the activity, and who is committed to compliance with the nine points of BSA Safety Afloat. One such supervisor is required for each 10 people, with a minimum of two adults for any one group. At least one supervisor must be age 21 or older, and the remaining supervisors must be age 18 or older. All supervisors must complete BSA Safety Afloat and Safe Swim Defense training and rescue training for the type of watercraft to be used in the activity, and at least one must be trained in CPR. It is strongly recommended that all units have at least one adult or older youth member currently trained as a BSA Lifeguard to assist in the planning and conducting of all activity afloat. For Cub Scouts: The ratio of adult supervisors to participants is one to five.

### **2. Physical Fitness**

All persons must present evidence of fitness by a complete health history from a physician, parent, or legal guardian. Adjust all supervision, discipline, and protection to anticipate any risks associated with individual health conditions. In the event of any significant health conditions, a medical evaluation by a physician should be required by the adult leader.

### **3. Swimming Ability**

A person who has not been classified as a "swimmer" may ride as a passenger in a rowboat or motorboat with an adult swimmer, or in a canoe, raft, or sailboat with an adult who is trained as a lifeguard or a lifesaver by a recognized agency. In all other circumstances, the person must be a swimmer to participate in an activity afloat. Swimmers must pass this test:

Jump feetfirst into water over your head. 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. This qualification test should be renewed annually.

### **4. Personal Flotation Equipment**

Properly fitted U.S. Coast Guard-approved personal flotation devices (PFDs) must be worn by all persons engaged in activity on the open water (rowing, canoeing, sailing, boardsailing, motorboating, waterskiing, rafting, tubing, kayaking, and surfboarding). Type II and III PFDs are recommended.

### **5. Buddy System**

All activity afloat necessitates using the buddy system. Not only must every individual have a buddy, but every craft should have a "buddy boat" when on the water.

### **6. Skill Proficiency**

All participants in activity afloat must be trained and experienced in watercraft handling skills, safety, and emergency procedures. (a) For unit activity on white water, all participants must complete special training by a BSA Aquatics Instructor or qualified whitewater specialist. (b) Powerboat operators must be able to meet requirements for the Motorboating merit badge or

equivalent. (c) Except for whitewater and powerboat operation as noted above, either a minimum of three hours' training and supervised practice or meeting requirements for "basic handling tests" is required for all float trips or open-water excursions using unpowered craft. (d) Motorized personal watercraft, such as the Jet Ski? and SeaDoo?, are not authorized for use in Scouting aquatics, and their use should not be permitted in or near BSA program areas.

For Cub Scouts: Canoeing, kayaking, rowing, and rafting for Cub Scouts (including Webelos Scouts) are to be limited to council/district events on flat water ponds or controlled lake areas free of powerboats and sailboats. Prior to recreational canoeing and kayaking, Cub Scouts are to be instructed in basic handling skills and safety practices.

### **7. Planning**

**Float Plan** — Obtain current maps and information about the waterway to be traveled. Know exactly where the unit will "put in" and "pull out" and what course will be followed. Travel time should be estimated generously. Review the plan with others who have traveled the course recently.

**Local Rules** — Determine which state and local regulations are applicable, and follow them. Get written permission to use or cross private property.

**Notification** — File the float plan with parents or participants and a member of the unit committee. File the float plan with the local council office when traveling on running water. Check in with all those who should be notified when returning.

**Weather** — Check the weather forecast just before setting out, and keep an alert weather eye. Bring all craft ashore when rough weather threatens.

**Contingencies** — Planning must identify possible emergencies and other circumstances that could force a change of plans. Appropriate alternative plans must be developed for each.

For Cub Scouts: Cub Scout canoeing, kayaking, rowing, and rafting do not include "trips" or "expeditions" and are not to be conducted on running water (i.e., rivers or streams); therefore, some procedures are inapplicable. Suitable weather requires clear skies, no appreciable wind, and warm air and water.

### **8. Equipment**

All equipment must be suited to the craft, to water conditions, and to the individual; must be in good repair; and must satisfy all state and federal requirements. Spare equipment or repair materials must be carried. Appropriate rescue equipment must be available for immediate use.

### **9. Discipline**

All participants should know, understand, and respect the rules and procedures for safe unit activity afloat. The applicable rules should be presented and learned prior to the outing, and should be reviewed for all participants at the water's edge just before the activity begins. When Scouts know and understand the reasons for the rules, they will observe them. When fairly and impartially applied, rules do not interfere with the fun. Rules for safety, plus common sense and good judgment, keep the fun from being interrupted by tragedy.

Note: For cruising vessels (excluding rowboats, canoes, kayaks, and rafts, but including sailboats and powerboats greater than 20 feet long) used in adult-supervised unit activities by a chartered Venturing crew/ship specializing in watercraft operations, or used in adult-supervised program activity in connection with any high-adventure program or other activity under the direct sponsorship and control of the National Council, the standards and procedures in the Sea Scout Manual may be substituted for the Safety Afloat standards.

