

# MERIT BADGE SERIES



# WHITEWATER



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*"Enhancing our youths' competitive edge through merit badges"*



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## **Whitewater**

1. Do the following:

(a) Explain to your counselor the most likely hazards you may encounter while participating in whitewater activities, including branches and trees in water along a shore and stretching across the stream, rocks, hydraulics over ledges or low-head dams, strong wind, low water or air temperature, and thunder and lightning storms. Explain what you should do to anticipate, help prevent, mitigate, and respond to these hazards.

(b) Review with your counselor the prevention, symptoms, and first-aid treatment for the following injuries or illnesses that could occur while participating in whitewater activities including cold-water shock; hypothermia; head, neck, and back injuries; heat-related illnesses; sunburn; dehydration; blisters; bruises; cuts; sprains and strains; shoulder dislocation; and submersion injuries.

(c) Discuss with your counselor the BSA Safety Afloat policy and the American Whitewater safety guidelines, including the use of helmet and life jackets.

2. Do the following:

(a) Demonstrate understanding of the following river features by drawing lines to show the flow of water: upstream V, downstream V, eddy with an eddy line, ledge, river bend, current at different depths, drop, horizon line, and hydraulic.

(b) Describe how waves form including standing waves and wave trains.

(c) Explain how to tilt or edge the boat without leaning your body

(1) When entering and exiting an eddy.

(2) When ferrying in downstream and upstream directions.

(d) Explain when, why, and how you should scout a river while ashore and while on the river and when you should portage your boat.

3. Before doing requirements 4 through 12, 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 merit badge. Then do the following:

(a) If you will be using a canoe to earn this merit badge, demonstrate strokes and maneuvers from the Canoeing merit badge to the satisfaction of your merit badge counselor.

OR

(b) If you will be using a kayak to earn this merit badge, demonstrate strokes and maneuvers from the Kayaking merit badge to the satisfaction of your merit badge counselor.

4. Do ONE of the following:

(a) If you are completing these requirements as a tandem canoeist, perform the following on calm water:

(1) Demonstrate the following strokes in the bow: cross forward, bow draw, cross bow draw, bow pry, and sculling draw.

(2) Demonstrate the following strokes in the stern: stern draw, stern pry, sculling draw, and forward with stern pry.

(3) Demonstrate a high brace, low brace, and righting pry.

OR

(b) If you are completing these requirements as a solo canoeist, perform the following on calm water:

(1) Demonstrate the following strokes: cross forward, bow draw, cross bow draw, stern draw, pry, stern pry, sculling draw, and forward with stern pry.

(2) Demonstrate a high brace, low brace, and righting pry.

OR

(c) If you are completing these requirements as a solo kayaker, perform the following on calm water:

(1) Demonstrate the following strokes: bow draw, rudder, and sculling draw.

(2) Demonstrate a high brace and low brace.

5. Do the following:

(a) Explain the International Scale of River Difficulty and apply the scale to the stretch of river approved by your counselor.

(b) Identify the specific characteristics of the river that are factors in your classification according to the International Scale.

(c) Discuss how the level of flow changes a river from one class to another and what effects different flow rates have on the features of a river and its hazards.

6. Explain the importance of communication during every whitewater outing. Demonstrate knowledge and ability to use the following American Whitewater Universal River Signals, both visual and auditory: “Stop,” “Are you OK?,” “Help/emergency,” “Run river right,” “Run river left,” and “All clear—come ahead.”

7. Do ONE of the following:

(a) If completing this merit badge in a canoe, describe the various types of canoes used on moving water and how they differ in design, materials, and purpose.

OR

(b) If completing this merit badge in a kayak, describe the various types of kayaks used on moving water and explain how they differ in design, materials, and purpose.

8. 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.

9. Demonstrate your ability to read a Class II section of river approved by your counselor. Describe the most desirable paths or lines of travel as well as alternative routes and options. Point out how to use the existing water features to your advantage, and explain how to best avoid the hazards present.

10. Wearing a proper life jacket 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.

(a) Launch and land.

(b) Paddle forward in a straight line at least 10 boat lengths.

(c) Backpaddle in a straight line at least five boat lengths.

(d) Ferry upstream from both sides of the river.

(e) Ferry downstream from both sides of the river.

- (f) Eddy turn from both sides of an eddy.
  - (g) Peel out from both sides of an eddy.
11. Explain and demonstrate the following to your counselor:
- (a) Self-rescue and procedures when capsized in moving water, including a wet exit if necessary
  - (b) Proper use of a throw rope to rescue a swimmer in whitewater
  - (c) Proper technique for receiving a throw rope as a swimmer
  - (d) Portaging—where portaging would be appropriate, and when and how to do it
  - (e) The whitewater buddy system using at least three persons and three craft
12. Participate in one or more whitewater trips using either a canoe or kayak on a Class I and/or Class II river. The trip(s) must involve at least six hours of paddling time. For each trip:
- (a) Help to prepare a written plan, specifying the route (put-ins and take-outs), schedule, equipment, safety precautions, and emergency procedures.
  - (b) Determine local rules and obtain permission from landowners and land managers in advance.
  - (c) Explain what steps have been taken to comply with BSA Safety Afloat and the American Whitewater safety guidelines.
  - (d) Show how to protect personal and group equipment from water and how to load and secure the containers in boats to be used in the trip. Execute the plans with other paddlers.
  - (e) Explain to your counselor how well your plans worked for each trip taken.

# Whitewater Resources

## Scouting Literature

*Boy Scout Handbook; Fieldbook; Deck of First Aid; Emergency First Aid pocket guide; Be Prepared First Aid Book; Kayaking BSA Award application; Canoeing, Rowing, and Small-Boat Sailing merit badge pamphlets*

Visit the Boy Scouts of America's official retail Web site (with your parent's permission) at <http://www.scoutstuff.org> for a complete listing of all merit badge pamphlets and other helpful Scouting materials and supplies.

## Books

- Bennett, Jeff. *The Complete Whitewater Rafter*. International Marine/Ragged Mountain Press, 1996.
- . *The Essential Whitewater Kayaker*. International Marine/Ragged Mountain Press, 1999.
- Blaine, Mark. *Whitewater: The Thrill and Skill of Running the World's Great Rivers*. Black Dog and Leventhal Publishers, 2001.
- Bechdel, Les. *River Rescue: A Manual for Whitewater Safety*. Appalachian Mountain Club Books, 1997.
- Grant, Gordon. *Trailside Guide: Canoeing*. W. W. Norton & Company, 2003.
- Harrison, Dave. *Canoeing: The Complete Guide to Equipment and Technique*. Stackpole Books, 1996.
- Jackson, Eric. *Whitewater Paddling: Strokes & Concepts*. Stackpole Books, 1999.
- Krauzer, Steven M. *Trailside Guide: Kayaking*. W. W. Norton & Company, 2003.
- Mason, Bill. *Path of the Paddle: An Illustrated Guide to the Art of Canoeing* (revised and updated by Paul Mason). Firefly Books, 1999.
- Mason, Paul. *Thrill of the Paddle: The Art of Whitewater Canoeing*. Firefly Books, 1999.
- Nealy, William. *Kayak: A Manual of Technique*. Menasha Ridge Press, 1986.
- Ray, Slim. *The Canoe Handbook: Techniques for Mastering the Sport of Canoeing*. Stackpole Books, 1992.

## Magazines

### **Canoe & Kayak**

10526 NE 68th St., Suite 3  
 Kirkland, WA 98033  
 Telephone: 425-827-6363  
 Web site: <http://www.canoeandkayak.com>

### **Paddler**

12040 98th Ave. NE, Suite 205  
 Kirkland, WA 98034  
 Toll-free telephone: 425-814-4140  
 Web site:  
<http://www.paddlermagazine.com>

## Organizations and Web Sites

### **American Canoe Association**

7432 Alban Station Blvd., Suite B-232  
 Springfield, VA 22150  
 Telephone: 703-451-0141  
 Web site: <http://www.acanet.org>

### **American Whitewater**

P.O. Box 1540  
 Cullowhee, NC 28723  
 Toll-free telephone: 866-262-8429  
 Web site:  
<http://www.americanwhitewater.org>

### **USA Canoe/Kayak**

301 S. Tryon St., Suite 1750  
 Charlotte, NC 28282  
 Telephone: 704-348-4330  
 Web site: <http://www.usack.org>

### **United States Canoe Association**

53 Ross Road  
 Preston, CT 06365  
 Web site: <http://www.uscanoe.com>

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