

MERIT BADGE SERIES



CYCLING



BOY SCOUTS OF AMERICA®

STEM-Based

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"Enhancing our youths' competitive edge through merit badges"



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Requirements

1. Do the following:
 - a. Explain to your counselor the most likely hazards you may encounter while participating in cycling activities and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
 - b. Show that you know first aid for injuries or illnesses that could occur while cycling, including cuts, scratches, blisters, sunburn, heat exhaustion, heatstroke, hypothermia, frostbite, dehydration, insect stings, tick bites, and snakebite. Explain to your counselor why you should be able to identify the poisonous plants and poisonous animals that are found in your area.
 - c. Explain the importance of wearing a properly sized and fitted helmet while cycling, and of wearing the right clothing for the weather. Know the BSA Bike Safety Guidelines.
2. Clean and adjust a bicycle. Prepare it for inspection using a bicycle safety checklist. Be sure the bicycle meets local laws.
3. Show your bicycle to your counselor for inspection. Point out the adjustments or repairs you have made. Do the following:
 - a. Show all points that need regular lubrication.
 - b. Show points that should be checked regularly to make sure the bicycle is safe to ride.
 - c. Show how to adjust brakes, seat level and height, and steering tube.

4. Describe how to brake safely with foot brakes and with hand brakes.
5. Show how to repair a flat by removing the tire, replacing or patching the tube, and remounting the tire.
6. Describe your state and local traffic laws for bicycles. Compare them with motor-vehicle laws.
- 7.* Using the BSA buddy system, complete all of the requirements for ONE of the following options: road biking OR mountain biking.

Option A: Road Biking

- a. Take a road test with your counselor and demonstrate the following:
 - (1) Properly mount, pedal, and brake, including emergency stops.
 - (2) On an urban street with light traffic, properly execute a left turn from the center of the street; also demonstrate an alternate left-turn technique used during periods of heavy traffic.
 - (3) Properly execute a right turn.
 - (4) Demonstrate appropriate actions at a right-turn-only lane when you are continuing straight.
 - (5) Show proper curbside and road-edge riding. Show how to ride safely along a row of parked cars.
 - (6) Cross railroad tracks properly.
- b. Avoiding main highways, take two rides of 10 miles each, two rides of 15 miles each, and two rides of 25 miles each. You must make a report of the rides taken. List dates for the routes traveled, and interesting things seen.
- c. After completing requirement b for the road biking option, do ONE of the following:
 - (1) Lay out on a road map a 50-mile trip. Stay away from main highways. Using your map, make this ride in eight hours.

*The bicycle used for fulfilling these requirements must have all required safety features and must be registered as required by your local traffic laws.

- (2) Participate in an organized bike tour of at least 50 miles. Make this ride in eight hours. Afterward, use the tour's cue sheet to make a map of the ride.

Option B: Mountain Biking

- a. Take a trail ride with your counselor and demonstrate the following:
 - (1) Properly mount, pedal, and brake, including emergency stops.
 - (2) Show shifting skills as applicable to climbs and obstacles.
 - (3) Show proper trail etiquette to hikers and other cyclists, including when to yield the right-of-way.
 - (4) Show proper technique for riding up and down hills.
 - (5) Demonstrate how to correctly cross an obstacle by either going over the obstacle on your bike or dismounting your bike and crossing over or around the obstacle.
 - (6) Cross rocks, gravel, and roots properly.
- b. Describe the rules of trail riding, including how to know when a trail is unsuitable for riding.

- c. On trails approved by your counselor, take two rides of 2 miles each, two rides of 5 miles each, and two rides of 8 miles each. You must make a report of the rides taken. List dates for the routes traveled, and interesting things seen.

- d. After fulfilling the previous requirement, lay out on a trail map a 22-mile trip. You may include multiple trail systems, if needed. Stay away from main highways. Using your map, make this ride in six hours.



Cycling Resources

Scouting Literature

Fieldbook; *Deck of First Aid*; *Emergency First Aid* pocket guide; *First Aid* merit badge pamphlet

Visit the Boy Scouts of America's official retail website (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

- Baker, Arnie. *Smart Cycling: Successful Training and Racing for Riders of All Levels*. Fireside, 1997.
- Burke, Edmund R., and Ed Pavelka. *The Complete Book of Long-Distance Cycling: Build the Strength, Skills, and Confidence to Ride as Far as You Want*. Rodale Press, 2000.
- Clark, Nancy, and Jenny Hegmann. *The Cyclist's Food Guide*, 2nd ed. Sports Nutrition Publishers, 2011.
- Downs, Todd. *The Bicycling Guide to Complete Bicycle Maintenance and Repair: For Road and Mountain Bikes*, 6th ed. Rodale Press, 2010.
- Forester, John. *Effective Cycling*, 7th ed. MIT Press, 2012.
- Friel, Joe. *The Cyclist's Training Bible*, 4th ed. VeloPress, 2009.
- . *The Mountain Biker's Training Bible*. VeloPress, 2000.
- Glowacz, Dave. *Urban Bikers' Tricks and Tips*, 3rd ed. Wordspace Press, 2010.
- Hewitt, Ben. *Bicycling Magazine's New Cyclist Handbook*, revised ed. Rodale Press, 2005.
- . *Bicycling Magazine's Nutrition for Peak Performance: Eat and Drink for Maximum Energy on the Road and Off*, revised ed. Rodale Press, 2000.
- Lopes, Brian, and Lee McCormack. *Mastering Mountain Bike Skills*, 2nd ed. Human Kinetics Publishers, 2010.
- Mountain Bike Magazine's Complete Guide to Mountain Biking Skills: Expert Tips on Conquering Curves, Corners, Dips, Descents, Hills, Water Hazards, and Other All-Terrain Challenges*. Rodale Press, 1996.
- Pavelka, Ed. *Bicycling Magazine's Complete Book of Road Cycling Skills: Your Guide to Riding Faster, Stronger, Longer, and Safer*. Rodale Press, 1998.

Zinn, Lennard. *Zinn & the Art of Mountain Bike Maintenance*, 5th ed. VeloPress, 2010.

———. *Zinn & the Art of Road Bike Maintenance*, 3rd ed. VeloPress, 2009.

Magazines

Bicycling

400 South 10th Street
Emmaus, PA 18098
Website: <http://www.bicycling.com>

BMX Plus!

25233 Anza Drive
Valencia, CA 91355
Website: <http://www.bmxplusmag.com>

Mountain Bike

Website: <http://www.mountainbike.com>

Organizations and Websites

Adventure Cycling Association

Toll-free telephone: 800-755-2453
Website: <http://www.adventurecycling.org>

American Bicycle Association

Telephone: 480-961-1903
Website: <http://www.usabmx.com>

International Mountain Bicycling Association

Toll-free telephone: 888-442-4622
Website: <http://www.imba.com>

League of American Bicyclists

Website: <http://www.bikeleague.org>

National Highway Traffic Safety Administration

Website: <http://www.nhtsa.dot.gov>

National Off-Road Bicycle Association (NORBA)

Telephone: 719-866-4581
Website: <http://www.usacycling.org/mtb>

USA Cycling

210 USA Cycling Point, Suite 100
Colorado Springs, CO 80919
Telephone: 719-434-4200
Website: <http://www.usacycling.org>

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