



Cycling

Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet.

The work space provided for each requirement should be used by the Scout to make notes for discussing the item with his counselor, not for providing the full and complete answers. Each Scout must do each requirement.

No one may add or subtract from the official requirements found in **Boy Scout Requirements** (Pub. 33216 – SKU 34765).

The requirements were last issued or revised in 2004 • This workbook was updated in April 2012.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Phone No.: _____

<http://www.USScouts.Org> • <http://www.MeritBadge.Org>

Please submit errors, omissions, comments or suggestions about improving this workbook to: Workbooks@USScouts.org

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

Hypothermia: _____

Heat reactions: _____

Frostbite: _____

Dehydration: _____

Insect stings: _____

Tick bites: _____

Snakebite: _____

Blisters: _____

Hyperventilation: _____

- 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 for repairs you have made. _____

Do the following:

- a. Show all points that need oiling regularly.
 - 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 breaks and with hand brakes. _____

Foot brakes: _____

Hand brakes: _____

- 5. Show how to repair a flat. Use an old bicycle tire.
- 6. Take a road test with your counselor and demonstrate the following:
 - a. Properly mount, pedal, and brake, including emergency stops. _____

b. 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.

Standard Left Turn

Alternate Left Turn

c. Properly execute a right turn.

d. Demonstrate appropriate actions at a right-turn-only lane when you are continuing straight.

e. Show proper curbside and road-edge riding.

Show how to ride safely along a row of parked cars.

f. Cross railroad tracks properly.

7. Describe your state's traffic laws for bicycles. _____

Compare them with motor-vehicle laws. _____

Know the bicycle safety guidelines. _____

- 8. Avoiding main highways, take two rides of ten miles each, two rides of fifteen miles each, and two rides of twenty-five miles each. You must make a report of the rides taken. List dates, routes traveled, and most interesting things seen.*

*The bicycle must have all approved safety features. It must be registered as required by your local traffic laws.

Ride 1 – 10 Miles Date: _____ Miles: _____

Route: _____

Most interesting things seen: _____

Ride 2 – 10 Miles Date: _____ Miles: _____

Route: _____

Most interesting things seen: _____

Ride 3 – 15 Miles Date: _____ Miles: _____

Route: _____

Most interesting things seen: _____

Ride 4 – 15 Miles

Date: _____ Miles: _____

Route: _____

Most interesting things seen: _____

Ride 5 – 25 Miles

Date: _____ Miles: _____

Route: _____

Most interesting things seen: _____

Ride 6 – 25 Miles

Date: _____ Miles: _____

Route: _____

Most interesting things seen: _____

9. After fulfilling requirement 8, lay out on a road map a 50-mile trip. Stay away from main highways. Using your map, make this ride in 8 hours.

50 Mile Ride Date: _____ Miles: _____ Time: ____:_____

Route: _____

Most interesting things seen: _____

Requirement resources can be found here:
http://www.meritbadge.org/wiki/index.php/Cycling#Requirement_resources

Sample Bicycle Safety Checklist

- Frame - Clean and not bent out of shape. No cracks at Frame Joints.
- Front Fork - Clean and not bent out of shape. No cracks at Fork Joints.
- Headset Bearing - Well lubricated; turns freely with no binding. No perceptible play in the assembly.
- Bottom-Bracket Bearing - Turns freely with not more than barely perceptible play in the bearing.
- Crank Arms - Clean and not bent out of shape. Tightened securely on the Crankset Axle.
- Chainrings - Clean, not worn, and not bent out of shape. Chainring Bolts tightened securely to hold Chainrings to Crankarms.
- Pedals - Bearings well lubricated; turn freely with no play in the bearing. Pedals tightly screwed into Crankarm. Toe Clips functional.
- Fenders - Clean; tightly attached without rattling or rubbing against the Tires.
- Wheels - Run true and round. Wheel nuts tight. Closed and tight quick-releases. Centered in form or frame members.
- Wheel Bearings in hubs - Well lubricated and properly adjusted to move freely with no more than barely perceptible play.
- Spokes - None broken or bent. Tightened to a uniform tension.
- Tires - Good Tread. Valves 0 completely airtight. Properly inflated to recommended pressure.
- Rims - Clean of all oil and grime. Free of dents or kinks.
- Chain - Proper tension, allowing 1/2 inch of play. No stiff links. Clean, lubricated, and wiped of excess lubrication.
- Gearing - Clean and oiled. Three-speed gears adjusted to eliminate all slipping. Front 42a and Rear 4b derailleurs adjusted for proper shifting with Shifters 4c.
- Brakes
 - Coaster - Even braking. Operate within a 20-degree back-pedaling motion.
 - Hand - Even braking. All nuts tight. Front and rear brakes work without binding. Minimum of 3/16 inch of rubber on Brake Pads. Brake pads aligned with rims and contact rims with a minimum of movement of Hand Controls. No squeal when brakes are used.
- Cables - No frayed ends. No broken strands. All taut.
- Handlebars - Tightened securely. Grips not worn; fit snugly, adjusted to comfort of rider, ends plugged, & in line with wheel.
- Saddle - Height, tilt, and fore/aft position adjusted to rider. All adjustments securely tightened. Seatpost not extended beyond maximum mark on post.
- Lights - Front light visible for 500 feet. Generator or battery in good operating condition.
- Rear Red Reflectors/Lights - Visible for 300 feet. Lights/Blinkers functional with generator or batteries.
- Bell or Horn - In good operating condition. All accessories well tightened and securely fastened. No broken frames or fasteners.
- Bike Registration - If required by local law, must be displayed on frame.

Important excerpts from the [‘Guide To Advancement’](#), No. 33088:

Effective January 1, 2012, the ‘Guide to Advancement’ (which replaced the publication ‘Advancement Committee Policies and Procedures’) is now the official Boy Scouts of America source on advancement policies and procedures.

- [Inside front cover, and 5.0.1.4] — **Unauthorized Changes to Advancement Program**

No council, committee, district, unit, or individual has the authority to add to, or subtract from, advancement requirements. (There are limited exceptions relating only to youth members with disabilities. For details see section 10, “Advancement for Members With Special Needs”.)

- [Inside front cover, and 7.0.1.1] — The [‘Guide to Safe Scouting’](#) Applies

Policies and procedures outlined in the ‘Guide to Safe Scouting’, No. 34416, apply to all BSA activities, including those related to advancement and Eagle Scout service projects. [Note: Always reference the online version, which is updated quarterly.]

- [7.0.3.1] — **The Buddy System and Certifying Completion**

Youth members must not meet one-on-one with adults. Sessions with counselors must take place where others can view the interaction, or the Scout must have a buddy: a friend, parent, guardian, brother, sister, or other relative—or better yet, another Scout working on the same badge—along with him attending the session. When the Scout meets with the counselor, he should bring any required projects. If these cannot be transported, he should present evidence, such as photographs or adult certification. His unit leader, for example, might state that a satisfactory bridge or tower has been built for the Pioneering merit badge, or that meals were prepared for Cooking. If there are questions that requirements were met, a counselor may confirm with adults involved. Once satisfied, the counselor signs the blue card using the date upon which the Scout completed the requirements, or in the case of partials, initials the individual requirements passed.

- [7.0.3.2] — **Group Instruction**

It is acceptable—and sometimes desirable—for merit badges to be taught in group settings. This often occurs at camp and merit badge midways or similar events. Interactive group discussions can support learning. The method can also be attractive to “guest experts” assisting registered and approved counselors. Slide shows, skits, demonstrations, panels, and various other techniques can also be employed, but as any teacher can attest, not everyone will learn all the material.

There must be attention to each individual’s projects and his fulfillment of *all* requirements. We must know that every Scout—actually and *personally*—completed them. If, for example, a requirement uses words like “show,” “demonstrate,” or “discuss,” then every Scout must do that. It is unacceptable to award badges on the basis of sitting in classrooms *watching* demonstrations, or remaining silent during discussions. Because of the importance of individual attention in the merit badge plan, group instruction should be limited to those scenarios where the benefits are compelling.

- [7.0.3.3] — **Partial Completions**

Scouts need not pass all requirements with one counselor. The Application for Merit Badge has a place to record what has been finished—a “partial.” In the center section on the reverse of the blue card, the counselor initials for each requirement passed. In the case of a partial completion, he or she does not retain the counselor’s portion of the card. A subsequent counselor may choose not to accept partial work, but this should be rare. A Scout, if he believes he is being treated unfairly, may work with his Scoutmaster to find another counselor. An example for the use of a signed partial would be to take it to camp as proof of prerequisites. Partials have no expiration except the 18th birthday.--