



Pioneering

Merit Badge Workbook

This workbook is not required but is designed to help you with this merit badge. No one can add or subtract from the Boy Scout Requirements #33215. Use page backs & add pages as needed. Please send comments to: craig@craiglincoln.com. Requirements revised: 2006, Workbook updated: January 2006.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Ph #: _____

1. **Show** that you know first aid for injuries or illness that could occur while working on pioneering projects, including
minor cuts and abrasions, _____

bruises, _____

rope burns, _____

blisters, _____

splinters, _____

sprains, _____

heat and cold reactions, _____
dehydration, _____
and insect bites or stings. _____
2. Do the following:
 - a. Successfully complete Tenderfoot requirements 4a and 4b and First Class requirements 7a, 7b, and 7c. (These are the rope-related requirements.) _____
 - b. **Tie** the following: square knot, bowline, sheepshank, sheet bend, and roundturn with two half hitches. _____
 - c. **Demonstrate** the following: tripod and round lashings. _____
3. Explain why it is useful to be able to throw a rope, then **demonstrate** how to coil and throw a 40-foot length of 1/4- or 3/8-inch rope. Explain how to improve your throwing distance by adding weight to the end of your rope. _____

4. Explain the differences between synthetic ropes and natural-fiber ropes. _____

Discuss which types of rope are suitable for pioneering work and why. Include the following in your discussion: breaking strength, safe working loads, and the care and storage of rope.

Type of rope: _____

Why suitable: _____

Breaking strength _____

Safe working loads _____

Care & storage _____

Type of rope: _____

Why suitable: _____

Breaking strength _____

Safe working loads _____

Care & storage _____

Type of rope: _____

Why suitable: _____

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Safe working loads _____

Care & storage _____

Type of rope: _____

Why suitable: _____

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Safe working loads _____

Care & storage _____

5. Explain the uses for the back splice, _____

eye splice, _____

and short splice. _____

Using 1/4- or 3/8-inch three-stranded rope, **demonstrate** how to form each splice. _____

- 6. Using a rope-making device or machine, make a rope at least 6 feet long consisting of three strands, each having three yarns. _____
- 7. Build a scale model of a signal tower or a monkey bridge. Correctly anchor the model using either the 1-1-1 anchoring system or the log and stake anchoring method. Describe the design of your project and explain how the anchoring system works.

- 8. Demonstrate the use of rope tackle to lift a weight of 25 pounds and pulling a log at least 6 inches in diameter and 6 feet long with the tackle. Use the tackle to put tension on a line. _____

Explain the advantages _____

and limitations of using a rope tackle. _____

In your explanation, describe the potential damage that friction can do to a rope. _____

- 9. By yourself, build an A-trestle OR X-trestle OR H-trestle using square and diagonal lashings. _____

Explain the application of the trestle you build. _____

Demonstrate how to tie two spars together using a shear lashing. _____

- 10. With a group of Scouts, OR on your own, select a pioneering project. With your counselor's guidance, create a rough sketch of the project. Make a list of the ropes and spars needed, then build the project. (Note: This requirement may be done at summer camp, at district or council events, or on a troop camp outing.) _____
