



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: _____

Breaking strength _____

Safe working loads _____

Care & storage _____

Type of rope: _____

Why suitable: _____

Breaking strength _____

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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.) _____

