

Pioneering

Merit Badge Workbook

Merit badges are earned by doing: reading the pamphlet, practicing the skills, and showing your counselor what you have learned.
This workbook gives you a place to organize your notes and track your progress along the way.
Merit badge counselors may not require the use of this or any similar workbook.
You still must satisfy your counselor that you can demonstrate each skill and have learned the information.
Use the space under each requirement to note what you have done and what you want to talk about, not to write out full answers.
When a requirement says discuss, show, tell, explain, or demonstrate, that is what you must do.
No one may add to or subtract from the official requirements found on scouting.org (Guide to Advancement 7.0.4.8).

Scouting America last updated this badge's requirements page on September 19, 2025.
Requirements change from time to time. Double-check scouting.org before you start.

Scout's name: _____ Unit: _____ Date started: _____

Counselor's name: _____ Phone no.: _____ Email: _____

Links marked "Scouting America resources" are the ones Scouting America shares on its official badge page.
This workbook is unofficial and not endorsed by Scouting America.

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1. Do the following:

(a) Explain to your counselor the most likely hazards you might encounter while participating in pioneering activities and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.

Scouting America resources: Safe Pioneering (video)

Pioneering hazards

Hazard	How I anticipate and help prevent it	How I mitigate and respond

(b) Discuss the prevention of, and first-aid treatment for, injuries and conditions that could occur while working on pioneering projects, including rope splinters, rope burns, cuts, scratches, insect bites and stings, hypothermia, dehydration, heat exhaustion, heatstroke, sunburn, and falls.

Scouting America resources: Pioneering Safety Checklist (PDF) · Sunburn (video) · First Aid for Rope Burns (website)

Prevention and first aid

Injury or condition	How to prevent it	First aid
rope splinters		
rope burns		
cuts		
scratches		
insect bites and stings		
hypothermia		
dehydration		
heat exhaustion		
heatstroke		
sunburn		
falls		

Requirement 1 completed on _____ counselor initials _____

2. Do the following:

(a) Demonstrate the West Country method of whipping a rope.

Scouting America resources: How to Tie a Half Knot (West Country) Whipping (video) · How to Tie a Sailmaker's Whipping (video)

Date _____ Demonstrated to _____

(b) Demonstrate how to tie a rope tackle and the following knots: clove hitch formed as two half hitches, clove hitch on a bight, butterfly knot, roundturn with two half hitches, and rolling hitch.

Scouting America resources: How to Tie a Rope Tackle (video) · How to Tie and Apply a Clove Hitch and Half Hitches (video) How to Tie a Clove Hitch on a Bight (video) · How to Tie a Butterfly Knot (video) · How to Tie a Roundturn with Two Half Hitches (video) How to Tie a Rolling Hitch (video)

Date _____ Demonstrated to _____

- ☐ rope tackle
- ☐ clove hitch formed as two half hitches
- ☐ clove hitch on a bight
- ☐ butterfly knot
- ☐ roundturn with two half hitches
- ☐ rolling hitch

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(c) Demonstrate and explain when to use the following lashings: square, diagonal, round, shear, tripod, and floor lashing.

Scouting America resources: How to Tie the Mark II Square Lashing (video) · How to Tie a Diagonal Lashing (video) How to Tie a Round Lashing (video) · How to Tie a Shear Lashing (video) · How to Tie a Tripod Lashing (with Plain Turns) (video) How to Tie a Floor Lashing (video)

Date _____ Demonstrated to _____

Lashings

Lashing	When to use it
square	
diagonal	
round	
shear	
tripod	
floor lashing	

Requirement 2 completed on _____ counselor initials _____

3. Do the following:

(a) Using square and tripod lashings from requirement 2(c), build a Tripod Wash Station (or with your counselor's permission, another camp gadget of your own design).

Scouting America resources: Tripod Hand Wash Station: The Ideal First Class Camp Gadget! (video)

Date _____ Where _____ What I built _____

How the build went

(b) Using rolling hitches or roundturns with two half hitches, and round lashings from requirements 2(b) and 2(c), build a 15-foot Scout Stave Flagpole (or with your counselor's permission, another camp gadget of your own design).

Scouting America resources: Patrol Challenge - 15 Foot Scout Stave Flagpole (video)

Date _____ Where _____ What I built _____

How the build went

(c) Using shear, square, and floor lashings, clove hitches on a bight, and rope tackles from requirements 2(b) and 2(c), build a Simple Camp Table (or with your counselor's permission, another camp gadget of your own design).

Scouting America resources: Simple Camp Table (video)

Date _____ Where _____ What I built _____

How the build went

Requirement 3 completed on _____ counselor initials _____

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.

Scouting America resources: How to Prepare and Preserve Lashing Ropes and Pioneering Spars (video)

How synthetic and natural-fiber ropes differ

Synthetic ropes	Natural-fiber ropes

Which ropes suit pioneering work, and why

Topic	My notes
breaking strength	
safe working loads	
care and storage of rope	

Requirement 4 completed on _____ counselor initials _____

5. Explain the uses for the back splice, eye splice, and short splice. View a demonstration on forming each splice.

Scouting America resources: How to Create a Back Splice (video) · How to Create an Eye Splice (video)
How to Create a Short Splice (video)

Splices

Splice	What it's used for	Demonstration viewed (date)
back splice		
eye splice		
short splice		

Demonstrations shown by _____

Requirement 5 completed on _____ counselor initials _____

6. Using a rope-making device or machine, make a rope at least 6 feet long consisting of three strands, each having three yarns. Whip the ends.

Scouting America resources: Making a Rope from Twine (video)

Date _____ Rope-making device used _____ Length of my rope _____

- ☐ At least 6 feet long
- ☐ Three strands
- ☐ Three yarns in each strand
- ☐ Ends whipped

Requirement 6 completed on _____ counselor initials _____

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7. Explain the importance of effectively anchoring a pioneering project. Describe to your counselor the 3-2-1 anchoring system and the log-and-stake anchoring system.

Scouting America resources: Anchoring Pioneering Projects (video)

Why anchoring a pioneering project matters

The 3-2-1 anchoring system

The log-and-stake anchoring system

Requirement 7 completed on _____ counselor initials _____

8. Describe the lashings that are used when building a trestle, how the poles are positioned, and how X braces contribute to the overall structural integrity of a pioneering project.

Scouting America resources: Making a Trestle (video)

Building a trestle

Topic	My notes
Lashings used	
How the poles are positioned	
How X braces contribute to structural integrity	

Requirement 8 completed on _____ counselor initials _____

9. Working in a group, (or individually with the help of your counselor) build a full size pioneering structure, using one of the following designs in the Pioneering merit badge pamphlet: Double A-Frame Monkey Bridge, Single A-Frame Bridge, Single Trestle Bridge, Single Lock Bridge, 4x4 Square Climbing Tower, Four Flag Gateway Tower, Double Tripod Chippewa Kitchen, or another type of structure approved in advance by your counselor. Carefully plan the project, assembling and organizing all the materials, referring to the points under Safe Pioneering, and complying with the height restrictions in the Guide to Safe Scouting.

Scouting America resources: Making a Trestle (video) · Building Pioneering Projects (video) · Double A-Frame Monkey Bridge (video) Single Trestle Bridge (video) · Double Tripod Chippewa Kitchen (video)

- ☐ Double A-Frame Monkey Bridge
- ☐ Single A-Frame Bridge
- ☐ Single Trestle Bridge
- ☐ Single Lock Bridge
- ☐ 4x4 Square Climbing Tower
- ☐ Four Flag Gateway Tower
- ☐ Double Tripod Chippewa Kitchen
- ☐ Another type of structure approved in advance by my counselor

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Date _____ Where _____ Built with _____

Materials list

Item	Size or length	How many

My safety plan (Safe Pioneering points and height limits)

How the build went

Requirement 9 completed on _____ counselor initials _____

Counselor sign-off

Your counselor signs your blue card or approves the badge in Scoutbook, and your unit records it. This line is for your own records.

Counselor's signature _____ Date completed _____

Official Scouting America resources

Scouting America resources: Pioneering merit badge page (requirements and resources) · Pioneering merit badge pamphlet (free PDF)
All merit badges

Made by Cole at ScoutSmarts.com, an Eagle Scout who loves helping Scouts.
Spot an error or a requirement change? Tell me at scoutsmarts.com/contact.
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