

# 2010

## PIONEERING PROGRAM OVERVIEW & WORKBOOK



STUHR MUSEM

MERIT BADGE UNIVERSITY

OVERLAND TRAILS COUNCIL

7/31/2010

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FEBRUARY 2010

Information in this booklet was accurate at the time of publishing.  
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Program Overview & Workbook was reviewed by  
MBU Staff/Committee.

## PIONEERING PROGRAM OVERVIEW

**COUNSELOR:** tba

**C/O:** Overland Trails Council  
PO Box 1361  
Grand Island, NE 68802-1361

**LOCATION:** Stuhr Museum

**TRANSPORTATION:** N/A

**ADDITIONAL COSTS:** None

**CLASS SIZE:** 10

**BRING TO CLASS:** Pioneering merit badge pamphlet.  
Pioneering merit badge workbook, part one & part two.  
Signed "Application for Merit Badge", found at the end of the merit badge workbook. (This will be your only record of work completed on this merit badge.) If your Council requires the official "blue card", you must bring one with you to class.

**PRE-REQUISITES:** Complete Part One of the workbook before class (requirements 1, 2, 3, & 7).  
Complete information on the "Application for Merit Badge" including Scoutmasters signature.

**CURRICULUM:** Requirements 4, 5, 6, 8, 9, & 10 will be completed during class (part two of the workbook). Pre-requisites will also be reviewed during class.





PRE-REQUISITE REQUIREMENTS ARE PRINTED IN **ITALICS & RED** MUST BE COMPLETED BEFORE CLASS.

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.
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 a rope tackle by lifting 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 and get your counselor's approval before you begin building. 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.)

# PIONEERING WORKBOOK

## PART ONE, PRE-REQUISITIES



Name \_\_\_\_\_  
 Unit # \_\_\_\_\_ District \_\_\_\_\_  
 Council \_\_\_\_\_

Part One of the workbook must be completed before class.

Bring the entire workbook (part one and part two) with you to class.

Also bring the "Application for Merit Badge" signed by your scoutmaster (included at the end of the workbook).

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.

*Show you know first aid:*

<i>Minor cuts</i>	
<i>Abrasions</i>	
<i>Bruises</i>	
<i>Rope burns</i>	
<i>Blisters</i>	
<i>Splinters</i>	
<i>Sprains</i>	
<i>Heat and cold reactions</i>	
<i>Dehydration</i>	
<i>Insect bites or stings</i>	

**PIONEERING WORKBOOK, PART ONE, p.2**

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Name \_\_\_\_\_

- 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.)

*Tenderfoot requirements 4a and 4b*

*initial:*

*date:*

*First Class requirements 7a, 7b, and 7c*

*initial:*

*date:*

- b) Tie the following: square knot, bowline, sheepshank, sheet bend, and roundturn with two half hitches.

*Tie the following:*

*Square knot*

*Bowline*

*Sheepshank*

*Sheet bend*

*Roundturn*

*Two half-hitches*

- c) Demonstrate the following: tripod and round lashings.

*Demonstrate the following:*

*Tripod lashing*

*Round lashing*

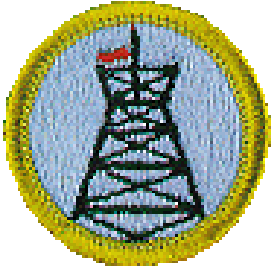
- 3. Explain why it is useful to be able to throw a rope, then demonstrate how to coil and throw a 40-foot length of 1/4- or 3/8-inch rope. Explain how to improve your throwing distance by adding weight to the end of your rope.

*Why is it useful to be able to throw a rope:*


- 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:*



# PIONEERING WORKBOOK PART TWO, CLASS CURRICULUM

Name \_\_\_\_\_  
Unit # \_\_\_\_\_ District \_\_\_\_\_  
Council \_\_\_\_\_

**Part Two of the workbook will be completed during class.**

- 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.

*Explain the differences between synthetic ropes and natural-fiber ropes:*


*Which types of rope are suitable for pioneering work and why:*


*Include in your discussion:*

<i>Breaking strength</i>	
<i>Safe working loads</i>	
<i>Care and storage of rope</i>	

Name \_\_\_\_\_

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.

*Explain the uses of the following:*

<i>Back splice</i>	
<i>Eye splice</i>	
<i>Short splice</i>	

*Demonstrate how to form each splice:*

<input type="checkbox"/> <i>Back splice</i>	<input type="checkbox"/> <i>Eye splice</i>	<input type="checkbox"/> <i>Short splice</i>
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6. Using a rope-making device or machine, make a rope at least 6 feet long consisting of three strands, each having three yarns.

*Make a rope at least 6 feet long consisting of three strands:*

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8. Demonstrate the use of a rope tackle by lifting 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.

*Demonstrate the use of a rope tackle:*


*The advantages and limitations of using a rope tackle:*


*Describe the potential damage that friction can do to a rope:*


Name \_\_\_\_\_

- 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.

*By yourself, build an A-trestle or X-trestle or H-trestle:*


*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 and get your counselor's approval before you begin building. 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.)

*To help you complete this requirement a sketch-sheet is at the end of this workbook.*

*Make a list of the ropes and spars needed:*


*Build the project:*


# PIONEERING WORKBOOK

Notes



**APPLICATION FOR MERIT BADGE**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Is a registered \_\_\_\_\_ Boy Scout,  
 \_\_\_\_\_ Varsity Scout,  
 \_\_\_\_\_ Venturer,

of \_\_\_\_\_ No. \_\_\_\_\_  
Troop, team, crew, ship

District: \_\_\_\_\_

Council: \_\_\_\_\_

**MERIT BADGE UNIVERISTY**

Merit Badge: **Pioneering**

Counselor: \_\_\_\_\_

Address: Overland Trails Council

PO Box 1361

2808 O'Flannagan

Grand Island, NE 68802-1361

Phone: 308-382-3717

email: mbuotc@yahoo.com

***and is qualified to begin working for this merit badge and has completed the following pre-requisite requirements:***

**SECTION A PRE-REQUISITE REQUIREMENTS**

Requirement No. and letter	Date of Approval	Counselor Initial	Requirement No. and letter	Date of Approval	Counselor Initial
1					
2					
3					
7					

***The applicant has personally appeared before me and demonstrated to my satisfaction that he has met all pre-requisites requirements for the above stated merit badge and is ready to attend his assigned MBU class.***

Signature of Unit Leader \_\_\_\_\_ Date \_\_\_\_\_

**SECTION B APPLICANTS RECORD**

Requirement No. and letter	Date of Approval	Counselor Initial	Requirement No. and letter	Date of Approval	Counselor Initial
4					
5					
6					
8					
9					
10					

The applicant has personally appeared before me and demonstrated to my satisfaction that he has completed all requirements in **SECTION B** above for the

Merit Badge: **Pioneering**

Name of Counselor: \_\_\_\_\_

Signature of Counselor \_\_\_\_\_ Date \_\_\_\_\_

### SCOUT INSTRUCTIONS

- Complete your name, address, city, unit type & number, district, & council on the Application for Merit Badge.
- Your unit leader must sign the Application for Merit Badge before attending class.
- All other information is already printed on the Application for Merit Badge; please make sure all information is correct.
- The merit badge counselor is registered & approved for this merit badge and is on the MBU Counselor's List.
- Read the merit badge pamphlet.
- Attend the merit badge class.
- Always meet with your counselor along with a buddy (a Scout, friend, or parent)
- Have your merit badge worksheet with you when you attend class.
- **If the merit badge pre-requisites are not completed before class, you will not be able to complete the merit badge during this weekend event, you will have to follow up with your Unit's Advancement Chair when you return home**
- **PLEASE BE AWARE THAT SOME COUNSELORS WILL NOT ALLOW YOU TO ATTEND THEIR CLASS WITHOUT PRE-REQUISITES COMPLETED—CLASS CURRICULUM IS DEPENDENT ON PRE-REQUISITE WORK BEING COMPLETED!**

### COUNSELOR INSTRUCTIONS

- Never meet alone with a Scout.
- Verify all information & merit badge name on Application for Merit Badge is correct.
- Sign your name on the line at the bottom of **"SECTION B APPLICANTS RECORD"**.

**Pioneering Project Sketch:**