

2010

TEXTILE  
PROGRAM OVERVIEW  
& WORKBOOK



STUHR MUSEUM

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.

## TEXTILE PROGRAM OVERVIEW

**COUNSELOR:** tba

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

**LOCATION:** Stuhr Museum

**TRANSPORTATION:** N/A

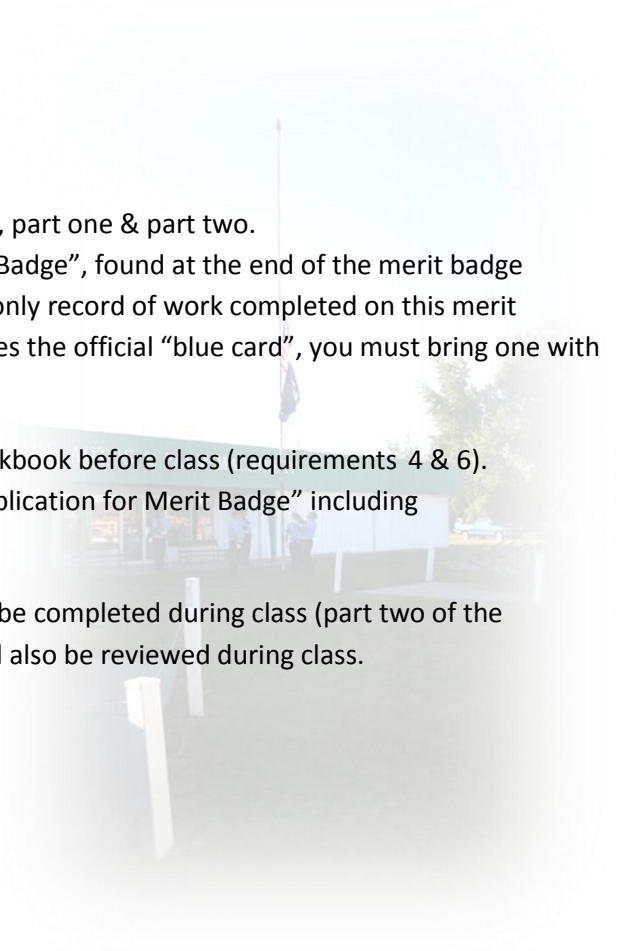
**ADDITIONAL COSTS:** None

**CLASS SIZE:** 10

**BRING TO CLASS:** Textile merit badge pamphlet.  
Textile 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 4 & 6).  
Complete information on "Application for Merit Badge" including Scoutmasters signature.

**CURRICULUM:** Requirements 1, 2, 3, & 5 will be completed during class (part two of the workbook). Pre-requisites will also be reviewed during class.





## Boy Scouts Requirements 2010

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

1. Discuss with your merit badge counselor the importance of textiles. In your discussion, define the terms *fiber*, *fabric*, and *textile*. Give examples of textiles you use every day.
2. Do the following:
  - a) Get swatches of two natural-fiber fabrics (100 percent cotton, linen, wool, or silk; no blends). Get swatches of two synthetic-fiber fabrics (nylon, polyester acrylic, olefin, or spandex). Get a sample of one cellulosic fabric (rayon, acetate, or lyocell).
  - b) Give the origin, major characteristics, and general content of each type of fiber obtained for 2a. Explain the difference between a cellulosic manufactured fiber and a synthetic manufactured fiber.
  - c) Describe the main steps in making raw fiber into yarn, and yarn into fabric.
  - d) Assume you will soon buy a new garment or other textile item. Tell your counselor what fiber or blend of fibers you want the item to be, and give reasons for your choice.
3. Do TWO of the following:
  - a) Visit a textile plant, textile products manufacturer, or textile school or college. Report on what you saw and learned.
  - b) Weave a belt, headband, place mat, or wall hanging. Use a simple loom that you have made yourself.
  - c) With a magnifying glass, examine a woven fabric, a nonwoven fabric, and a knitted fabric. Sketch what you see. Explain how the three constructions are different.
  - d) Make a piece of felt.
  - e) Make two natural dyes and use them to dye a garment or a piece of fabric.
  - f) Waterproof a fabric.
  - g) Demonstrate how to identify fibers, using microscope identification or the breaking test.
4. **Explain the meaning of 10 of the following terms: warp, harness, heddle, shed, aramid, spandex, sliver, yarn, spindle, distaff, loom, cellulose, sericulture, extrusion, carbon fibers, spinneret, staple, worsted, nonwoven, greige goods.**
5. List the advantages and disadvantages of natural plant fibers, natural animal fibers, cellulosic manufactured fibers, and synthetic manufactured fibers. Identify and discuss at least four ecological concerns regarding the production and care of textiles.
6. **Explain to your merit badge counselor, either verbally or in a written report, five career possibilities in the textile industry. Tell about two positions that interest you the most and the education, cost of training, and specific duties those positions require.**

# TEXTILE 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).**

4. Explain the meaning of 10 of the following terms: warp, harness, heddle, shed, aramid, spandex, sliver, yarn, spindle, distaff, loom, cellulose, sericulture, extrusion, carbon fibers, spinneret, staple, worsted, nonwoven, greige goods.

*Define the following:*

<i>Warp</i>	
<i>Harness</i>	
<i>Heddle</i>	
<i>Shed</i>	
<i>Aramid</i>	
<i>Pandex</i>	
<i>Sliver</i>	
<i>Yarn</i>	
<i>Spindle</i>	
<i>Distaff</i>	
<i>Loom</i>	
<i>Cellulose</i>	
<i>Sericulture</i>	
<i>Extrusion</i>	
<i>Carbon fibers</i>	
<i>Spinneret</i>	
<i>Staple</i>	
<i>Worsted</i>	
<i>Nonwoven</i>	
<i>Greige goods</i>	

Name \_\_\_\_\_

- 6. Explain to your merit badge counselor, either verbally or in a written report, five career possibilities in the textile industry. Tell about two positions that interest you the most and the education, cost of training, and specific duties those positions require.

*Career opportunities in the textile industry:*

- |    |
|----|
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |

*Pick two careers:*

<i>Career:</i>
<i>Education:</i>
<i>Cost of Training:</i>
<i>Specific Duties:</i>

<i>Career:</i>
<i>Education:</i>
<i>Cost of Training:</i>
<i>Specific Duties:</i>



## TEXTILE WORKBOOK PART TWO, CLASS CURRICULUM

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

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

1. Discuss with your merit badge counselor the importance of textiles. In your discussion, define the terms *fiber*, *fabric*, and *textile*. Give examples of textiles you use every day.

*Importance of textiles:*


*Define the terms:*

<i>Fiber</i>	
<i>Fabric</i>	
<i>Textile</i>	

*Examples of textiles:*


2. Do the following:
- a) Get swatches of two natural-fiber fabrics (100 percent cotton, linen, wool, or silk; no blends). Get swatches of two synthetic-fiber fabrics (nylon, polyester acrylic, olefin, or spandex). Get a sample of one cellulosic fabric (rayon, acetate, or lyocell).

*Swatches of two natural-fiber fabrics:*

--	--

*Swatches of two synthetic-fiber fabrics:*

--	--

*One sample of cellulosic fabric:*

--

Name \_\_\_\_\_

2. continued  
 b) Give the origin, major characteristics, and general content of each type of fiber obtained for 2a. Explain the difference between a cellulosic manufactured fiber and a synthetic manufactured fiber.

*Natural-fiber fabrics:*

<i>Fabric</i>	<i>Origin</i>	<i>Major Characteristics</i>	<i>General Content</i>

*Synthetic -fiber fabrics:*

<i>Fabric</i>	<i>Origin</i>	<i>Major Characteristics</i>	<i>General Content</i>

*Cellulosic fabric:*

<i>Fabric</i>	<i>Origin</i>	<i>Major Characteristics</i>	<i>General Content</i>

*Difference between cellulosic manufactured fiber and synthetic manufactured fiber:*


c) Describe the main steps in making raw fiber into yarn, and yarn into fabric.

*Raw fiber into yarn:*


*Yarn into fabric:*


Name \_\_\_\_\_

2. continued

- d) Assume you will soon buy a new garment or other textile item. Tell your counselor what fiber or blend of fibers you want the item to be, and give reasons for your choice.

*What fiber or blend of fibers you want the item to be:*

--

*Give reasons for your choice:*


- 3. Do TWO of the following:

- a) Visit a textile plant, textile products manufacturer, or textile school or college. Report on what you saw and learned.

*Visited:*

	<i>Initial:</i>	<i>date:</i>
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*Report what you saw and learned:*


**AND/OR**

- b) Weave a belt, headband, place mat, or wall hanging. Use a simple loom that you have made yourself.

*Weaved:*

	<i>Initial:</i>	<i>date:</i>
--	-----------------	--------------

Name \_\_\_\_\_

3. continued

**AND/OR**

- c) With a magnifying glass, examine a woven fabric, a nonwoven fabric, and a knitted fabric. Sketch what you see. Explain how the three constructions are different.

*Fabric sketches:*

<i>Woven</i>	<i>Nonwoven</i>	<i>knitted</i>

*How are the three construction different:*

<i>Woven</i>	<i>Nonwoven</i>	<i>Knitted</i>

**AND/OR**

- d) Make a piece of felt.

*Felt:*

	<i>Initial:</i>	<i>date:</i>
--	-----------------	--------------

Name \_\_\_\_\_

3. continued

**AND/OR**

- e) Make two natural dyes and use them to dye a garment or a piece of fabric.

*Dyes made:*

	<i>Initial:</i>	<i>date:</i>
--	-----------------	--------------

*Dyed a Garment or piece of fabric:*

	<i>Initial:</i>	<i>date:</i>
--	-----------------	--------------

**AND/OR**

- f) Waterproof a fabric.

*Waterproofed fabric:*

	<i>Initial:</i>	<i>date:</i>
--	-----------------	--------------

**AND/OR**

- g) Demonstrate how to identify fibers, using microscope identification or the breaking test.

*Identify fibers using microscope identification:*


*Identify fibers using the breaking test:*


Name \_\_\_\_\_

- 5. List the advantages and disadvantages of natural plant fibers, natural animal fibers, cellulosic manufactured fibers, and synthetic manufactured fibers. Identify and discuss at least four ecological concerns regarding the production and care of textiles.

<i>Fibers</i>	<i>Advantages</i>	<i>Disadvantages</i>
<i>Natural plant fibers</i>		
<i>Natural animal fibers</i>		
<i>Cellulosic manufactured fibers</i>		
<i>Synthetic manufactured fibers</i>		

*Identify and discuss ecological concerns:*

<i>1</i>
<i>2</i>
<i>3</i>
<i>4</i>

# TEXTILE 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: **Textile**

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
4					
6					

***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
1					
2					
3					
5					

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: **Textile**

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"**.