



Textile

Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet (book). No one can add or subtract from the Boy Scout Requirements #33215. Merit Badge Workbooks and much more are below: [Online Resources](#).

Send comments to: craig@craiglincoln.com. Requirements revised: 2003, Workbook updated: February 2008.

Scout's Name: _____ Unit: _____

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

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 2(a).

Swatch type: _____ Origin: _____

Major characteristics: _____

General content: _____

Swatch type: _____ Origin: _____

Major characteristics: _____

General content: _____

Swatch type: _____ Origin: _____

Major characteristics: _____

General content: _____

Swatch type: _____ Origin: _____

Major characteristics: _____

General content: _____

Swatch type: _____ Origin: _____

Major characteristics: _____

General content: _____

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

1 _____

2 _____

3 _____

4 _____

6. Explain to your merit badge counselor, either verbally or in a written report, five career possibilities in the textile industry.

1 _____

2 _____

3 _____

4 _____

5 _____

Tell about two positions that interest you the most and the education, cost of training, and specific duties those positions require.

Position: _____

Education: _____

Cost of Training: _____

Specific Duties: _____

Position: _____

Education: _____

Cost of Training: _____

Specific Duties: _____

Online Resources (Use any Internet resource with caution and only with your parent's or guardian's permission.)

Merit Badge Workbooks: usscouts.org -or- merithub.org

► **Merit Badge Books:** www.scoutstuff.org

Boy Scouts of America: <http://www.scouting.org/> ► [Requirements](#) ► [Intro to Merit Badges](#) ► [Guide to Safe Scouting](#)

All Fiber Arts: <http://www.allfiberarts.com>

Amer. Fiber Manf. Assn: <http://www.fibersource.com/>

Amer. Sheep Industry Assn: <http://www.sheepusa.org/>

Amer. Textile History Museum: <http://www.athm.org>

American Wool Council: <http://www.americanwool.org/>

Center for Traditional Textiles: <http://www.incas.org>

Fabrics.net: <http://www.fabrics.net>

Fiberlinks: <http://www.fibersource.com/links.htm>

FiberWorld: <http://www.fiberworld.com>

Mohair Council: <http://www.mohairusa.com/>

Nat. Cotton Council: <http://www.cotton.org/>

Phi Psi Textile Fraternity: <http://www.ttu.edu/PhiPsiFraternity/>

Books, Videos, and Plans: <http://www.woolery.com/books.html>

Textile Colleges: <http://www.eng.auburn.edu/department/te/>

Clemson University: <http://mse.clemson.edu/stfps/>

Georgia Inst of Tech: <http://www.tfe.gatech.edu/tfehome.html>

Institute of Textile Technology: <http://www.it.edu/>

North Carolina State University: <http://www.tx.ncsu.edu/>

Philadelphia University: <http://fibers.philau.edu/>

Clemson Apparel Research: <http://car.clemson.edu/>

International Textile Center: <http://www.itc.ttu.edu/>

Texas A&M University: <http://sanangelo.tamu.edu>

Navy Clothing and Textile Research Facility: http://www.navy-nex.com/uniform/research/index_body.html

Textile Research Institute: <http://www.tri.princeton.org/>

Yocom-McColl Testing Laboratories Inc.: <http://www.ymccoll.com/>