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. Workbook developer: craig@craiglincoln.com. Requirements revised: 2003, Workbook updated: April 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: ____________________________
      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, 

tyarn,
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.

1 ________________________________________________________________

2 ________________________________________________________________
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.

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.)


Boy Scout Merit Badge Workbooks: usscouts.org -or- meritbadge.org

Merit Badge Books: www.scoutstuff.org

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


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

American Wool Council: http://www.americanwool.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/


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


Textile Colleges: http://www.eng.auburn.edu/department/tfe/

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

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

Institute of Textile Technology: http://www.itt.edu/

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

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

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

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

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


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

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

Textile Research Institute: http://www.triprinceton.org/

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