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Please submit errors, omissions, comments or suggestions about this **workbook** to: Workbooks@USScouts.Org

Comments or suggestions for changes to the **requirements** for the **merit badge** should be sent to: Merit.Badge@Scouting.Org

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1. Discuss with your merit badge counselorthe importance of textiles. In your discussion, define the terms fiber, fabric, and textile.

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| Fiber; |  |
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| Fabric; |  |
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| Textile: |  |
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Give examples of textiles you use every day.

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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.

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| Natural Swatch type: |  |
|  Origin: |  |
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|  Major characteristics: |  |
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|  General content: |  |
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| Natural Swatch type: |  |
|  Origin: |  |
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|  Major characteristics: |  |
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|  General content: |  |
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| Synthetic Swatch type: |  |
|  Origin: |  |
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|  Major characteristics: |  |
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|  General content: |  |
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| Synthetic Swatch type: |  |
|  Origin: |  |
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|  Major characteristics: |  |
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|  General content: |  |
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| Cellulosic Swatch type: |  |
|  Origin: |  |
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|  Major characteristics: |  |
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|  General content: |  |
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Explain the difference between a cellulosic manufactured fiber and a synthetic manufactured fiber.

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

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 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.

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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.

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⬜ 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.

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⬜ 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.

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| ⬜ | warp, |  |
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| ⬜ | harness, |  |
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| ⬜ | heddle, |  |
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| ⬜ | shed, |  |
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| ⬜ | aramid, |  |
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| ⬜ | spandex, |  |
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| ⬜ | sliver, |  |
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| ⬜ | yarn, |  |
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| ⬜ | spindle, |  |
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| ⬜ | distaff, |  |
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| ⬜ | loom, |  |
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| ⬜ | cellulose, |  |
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| ⬜ | sericulture, |  |
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| ⬜ | extrusion, |  |
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| ⬜ | carbon fibers, |  |
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| ⬜ | spinneret, |  |
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| ⬜ | staple, |  |
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| ⬜ | worsted, |  |
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| ⬜ | nonwoven, |  |
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| ⬜ | greige goods. |  |
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5. List the advantages and disadvantages of natural plant fibers, natural animal fibers, cellulosic manufactured fibers, and synthetic manufactured

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|  | Advantages | Disadvantages |
| Natural plant fibers,  |  |  |
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| Natural animal fibers,  |  |  |
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| Cellulosic manufactured fibers |  |  |
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| Synthetic manufactured fibers |  |  |
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Identify and discuss at least four ecological concerns regarding the production and care of textiles.

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

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

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| Position 1: |  |
|  Education: |  |
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|  Cost of Training: |  |
|  Specific Duties: |  |
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| Position 2: |  |
|  Education: |  |
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|  Cost of Training: |  |
|  Specific Duties: |  |
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**When working on merit badges, Scouts and Scouters should be aware of some vital information in the current edition of the *Guide to Advancement* (BSA publication 33088). Important excerpts from that publication can be downloaded from** [**http://usscouts.org/advance/docs/GTA-Excerpts-meritbadges.pdf**](http://usscouts.org/advance/docs/GTA-Excerpts-meritbadges.pdf)**.**

**You can download a complete copy of the *Guide to Advancement* from** [**http://www.scouting.org/filestore/pdf/33088.pdf**](http://www.scouting.org/filestore/pdf/33088.pdf)**.**