



Baaa, Kabobs and Blankets

Objective: Students will understand how sheep are used in various cultures.

Summary: Students will spin wool into yarn, see a demonstration of weaving, knitting or crocheting, then read stories and articles about sheep and wool production in various cultures.

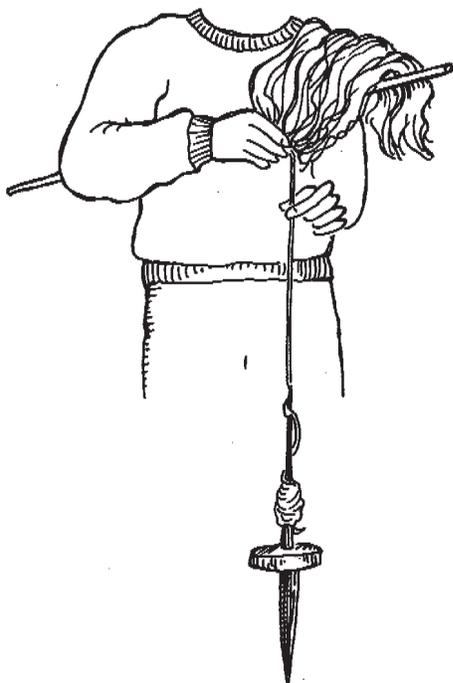
Time: 3 hours over several days

Student Grouping: Three to six students per group

Materials: Books and articles on wool, some unspun wool (see Resources Directory).

Background Information: Humans have recognized the benefits of sheep for over 12,000 years. Today typical sheep ranchers raise sheep for both meat and wool. Older sheep meat, tough and strongly flavored, is sold as mutton for soups and pet foods; lamb meat, which is tender and mild-flavored, is marketed in grocery stores. An important by-product from sheep is a natural oil secreted by their skin called “lanolin.” Collected as the wool is cleaned, lanolin is used primarily in cosmetics. Several other commonly used by-products are leather, waxes, fertilizer, medicines and stearin.

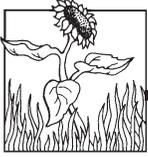
Prehistoric people probably collected wool shed in clumps by wild animals and caught on branches. Over the years sheep have been bred to grow thicker, longer coats. Since the invention of shears in the Iron Age, clumps are no



longer collected nor fleeces plucked and combed. Wool's big secret is the tiny scales on each hair. These scales, visible only with a microscope, lock fibers together. The core of the fiber absorbs moisture, keeping wetness away from the wearer's skin. The fibers trap a layer of air that keeps heat in for winter and out for summer. Wool is an excellent insulating substance. Wool is naturally fire resistant and retains its shape. When made into felt by being worked vigorously with water into a dense mat, it serves as a fabric and building material that holds in warmth and repels water.

Sheep are typically shorn once a year. In warmer climates like Marin County, they are shorn twice a year. The wool is sorted, washed and combed before it is ready to be spun into yarn. Yarn is made by twisting hairs together into a strand. Wool can be spun into yarn completely by hand by pulling some fibers partially away from a mass of wool (see illustration) and twisting them together. By pulling more fibers and continuing to twist, anyone can begin a strand of yarn. Today most yarn is made mechanically. If a fine grade of yarn is desired, fewer strands are spun. Thicker yarn is made when thicker bunches of wool are spun together. Wool versatility, durability and feel have made it a popular material for clothing and carpets for centuries all over the world.

Marin Ag. Facts: In Marin County there are approximately 23 ranches raising about 13,700 sheep. Our county produces 1,000,000 lbs. of meat and 71,000 lbs. of wool each year. Sheep ranching began in Marin 100 years ago and annually contributes more than \$580,000 to the local economy. Marin County has a damp climate, so ranchers grow sheep with a coarse wool which dries readily. This rough wool is used for carpets and blankets, not for clothing.



Preparation:

1. Collect and peruse the reading materials to be used. Obtain some raw wool (see Resources Directory index under “Merchandise” and “Sheep and sheep products”), preferably a sample of raw fleece, and samples of cleaned and carded fleece. One half pound is plenty for 30 students to try hand spinning some yarn.
2. Try hand spinning (see illustration) some yarn so you can demonstrate it to students.
3. Decide how you will group the students and when their reports will be due. Decide if they will be given class time to read or must do it as homework. Schedule class time to coordinate/write their report.
4. Locate and schedule someone to come to the classroom who can demonstrate any or all the phases of wool production and use. Please see the Resources Directory index under “Sheep and sheep products” or “Speaker/classroom demonstrations.” There is likely also a parent or grandparent who could demonstrate knitting and/or crocheting.

Procedure:

1. On the first day, demonstrate spinning wool by hand and let the whole class try. Have the demonstrator come in. Group the students and have them select (or assign them) a book to read together.
2. Tell student groups they are to read their book/article and write a report. Give them a due date.
3. Have students submit their book reports. Conduct an informal discussion on this day using the “Questions for Discussion” following.

Questions for Discussion:

- What have you learned?
- What were your favorite parts of what you read?
- Has anyone seen sheep? Shearing? Spinning? Weaving?
- Has anyone tasted lamb meat? How was it cooked and did you like it?
- What countries eat a lot of lamb?
- Are there sheep products in the classroom? How many?

Extensions:

- Take a field trip to a sheep ranch and/or butcher.
- Collect wool garments, sheepskin slippers or garments, a lamb-meat dish, a container of pet food with mutton in the ingredients, candy or gum with stearin in the ingredients, a lamb skin, wool felt, bristles in artist paint brushes, strings for musical instruments, wool carpet scrap, a baseball (150 yards of yarn is packed inside an official one), some lotion that contains lanolin and any other sheep product you can think of and find. Display these items for the class to explore and talk about. Encourage them to figure out how they all came from sheep.



Sheep, Wool and Weaving Bibliography

See the Resources Directory for local sources of wool for classroom spinning.

American Sheep Industry Association, 6911 S. Yosemite St., Englewood CO 80112-1414, (303) 771-3500
www.sheepusa.org

California Wool Grower's Association, 1225 H. St., Ste. 101, Sacramento, CA 95814-1910, (916) 444-8122
www.woolgrowers.org

Pendleton Woolen Mills, P.O. Box 3030, Portland OR 97208-3030, (503)253-2579
www.pendleton-usa.com

Books:

The Sheep Book by Dorothy Hinshaw Patent, Dodd, Mead & Co., 1985

Maggie, A Sheep Dog by Dorothy Hinshaw Patent, Dodd, Mead & Co., 1986

The Weaver's Gift by Kathryn Lasky, Frederick Warne and Co., Inc.

Annie and the Olone by Miska Miles, Little Brown and Co.

Pele's New Suit Translated by Marion Letcher Woodburn, Scholastic Book Service, Harper and Row

The Little Weaver of Agato by Bernard Wolf, Cowles Book Company

The Goat in the Rug, as told to Charles L. Blood and Martin Link by Geraldine, Four Winds Press, New York

"Wool, Fabric of History" by Nina Hyde in May, 1988 issue of *National Geographic*, Vol. 173, No. 5

Spinning and Weaving with Wool by Paula Simmons, Pacific Search Press

The First Book of Wool by Betty Cavanna, Franklin Watts, 1966

Lambs by Weaver Martin, Knopf, 1970

Sheep: Everything about Housing, Care, Feeding and Sickness by Hans Muller, Barrons, 1989 (63 pgs)

The Sheep Book by Dorothy Patent, Dodd Mead, 1985

Beginning Shepherd's Manual by Barbara Smith, Iowa State University Press, 1983

The Souls of Lambs by Don Mitchell, Houghton Mifflin Co., 1979

