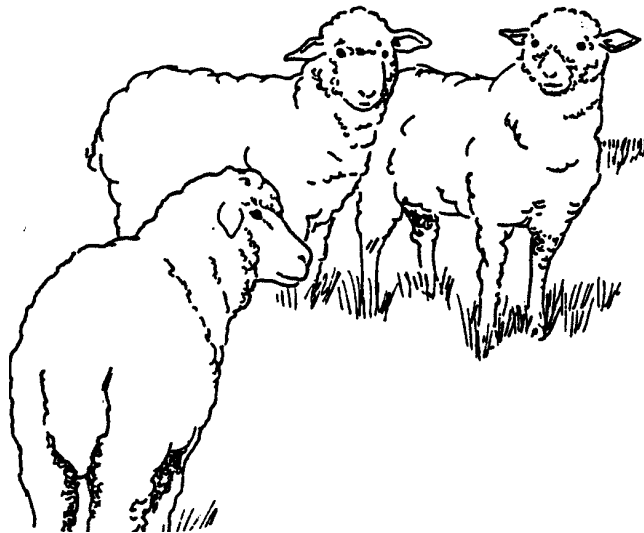


Three Bags Full

Sheep:
Classroom Activities for K-5



Developed for Alabama Agriculture in the Classroom
May 2001
Xris McMillin Blonk

Table of Contents

For the Teacher	
About Sheep--Background Information	1
Vocabulary	2
Classroom Activities	
Word Search	3
Language Arts	
Shape poetry & pattern	4
Easy Poetry for Everyone	5
Handprint Lambs	5
Art	
Clothespin Sheep	6
Paper Bag Puppet	7
Paper Bag Puppet Pattern	8
Poetry & Fingerplays	
Ten Little Lambs	9
Down in the Meadow	10
Wild and Woolly Fun in the Classroom	11
Cleaning and Dying Wool	12
Spinning Wool into Yarn	13
Making a Loom	
Math Ewe Can Do: Problem Solving	14
Science	
Is Wool a Good Insulator?	15
Resources	
Bibliography and Websites	

ABOUT SHEEP



Female sheep are called **ewes** and male sheep are called **rams**. Baby sheep are called **lambs** until they are a year old. Ewes may have one, two or three lambs at a time (usually in the spring). Lambs can stand shortly after being born and grow rapidly. They will weigh between 110-120 pounds by the time they are six months old!

Sheep do not have top front teeth. Instead they have a hard dental pad on the roof of their mouths that helps them eat grass and weeds. Like cows, sheep are **ruminants**. This means that they have stomachs with four sections. This special kind of stomach helps them digest grasses that people and other animals cannot eat.

The wool that sheep grow on their bodies is known as **fleece**, and it keeps them warm and dry. It must be cut each year in a process known as **shearing**. Wool from a single sheep can weigh 8-12 pounds. In addition to clothing made from wool, sheep also give us lotions made from lanolin, medicines, felt, leather, waxes, and hair for artists' brushes as well as seat covers.

There are 35 different breeds of sheep in the United States, and over 900 different breeds found throughout the world. In many countries, people drink milk from sheep.

Sheep can be easily attacked by wolves, coyotes, and bears. Farmers must use dogs to protect their flocks. In some areas, farmers even use donkeys to chase away predators.

Unit Vocabulary

ewe -a female or mother sheep.

fleece -the wool coat worn by sheep.

flock -a group of sheep.

gestation -the period of time a ewe is pregnant (carries her lamb or lambs). A ewe's gestation period is about five months long.

lamb -a young sheep less than one year old.

lambing -the process of giving birth to a young sheep.

lanolin -grease that is on the fleece of sheep. Lanolin is used in make-up and lotions and also to "waterproof" shoes.

mutton -the meat of a sheep that is over one year of age.

ram -a male or father sheep.

ruminant -an animal that has a stomach with four different sections. Sheep can eat hay, grass, and other feeds that other animals and people cannot eat.

shearing -cutting off the fleece of the sheep. This is done once or twice a year.

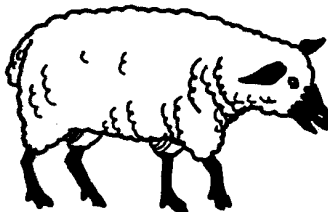
wool -the "hair" of sheep that is cut off and made into cloth for clothes. Wool is very wavy and is made up of many tiny scales.

WORD SEARCH

Find the following words in the puzzle below. Circle the words that you find.

wool	flock	ewe	ram	ruminant
fleece	shear	lamb	bleat	

d a c r a m d e w
n f e u b a f c o
c l a m b d l a o
g o y l e w e x l
y c b n b l e a t
p k t a x a c b l
q o p n s h e a r
v d e t a l m n o



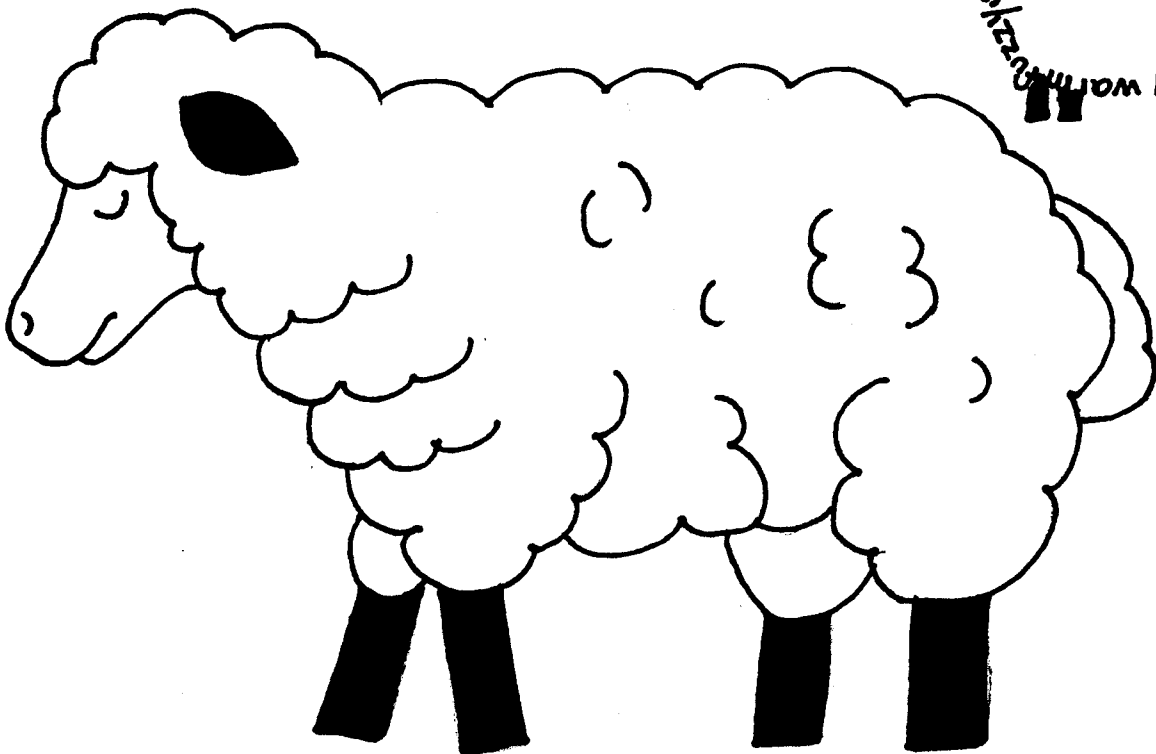
Poetry Shaped for Ewe

Objective: Students will list and use adjectives to create a sheep-shaped poem.

You'll need: Sheep pattern to trace, white paper, pencils, fine-point markers, glue, construction paper.

Procedure:

1. Lightly trace around the sheep pattern on white computer or art paper.
2. Brainstorm a list of adjectives that describe the way sheep look or move.
(For example, woolly, soft, fluffy) List the words on large chart paper.
3. Have students choose their favorite five words.
4. Direct students to copy their five words around the outlined sheep shape.
When all words have been copied, begin again. Work until the entire outline is covered with adjectives.
5. Go over the words with a fine point marker and print the word "sheep" or "lamb" in the center of the shape.
6. Mount on construction paper and display.



Sheep Pattern for Shape Poetry

Easy Poetry for Everyone

Objective: Students will create a five-line descriptive poem.

You'll need: Chart paper, pencils and paper

Procedure:

1. Work with students to create a list of words that could be used to describe lambs. List the words on chart paper.
2. Have students suggest action words (verbs) that remind them of lambs. List the words on chart paper.
3. Following the sample outline below and words from the chart, work with students to create a poem of their own.

Line 1 -noun

lamb

Line 2 -two adjectives

soft, fluffy

Line 3 -three verbs

jumping, running, leaping

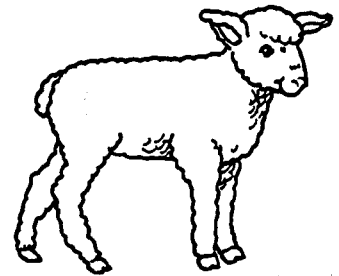
Line 4 -two adjectives

woolly, smooth

Line 5 -noun

lamb

4. Illustrate, share, and display the poetry.



Handprint Lambs

Objective: Students will create handprint animals.

You'll need: White tempera paint

sponge applicator

construction paper

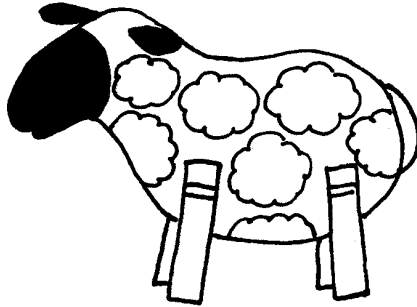
fine-point black marker

Procedure:

1. Spread a thick layer of white tempera paint on one hand.
2. Place the painted hand on a sheet of construction paper and press down.
3. Lift the hand and wash it off.
4. When the handprint has dried, add details like eyes, ears, and texture with a fine point black marker.

Note: The thumb of the print is turned into a neck and head, while the four fingers make perfect legs.

Clothespin Sheep



Objective: Students will create mini-sheep from clothespins.

You'll need: Clothespins (2 per student) black paint, dye, or magic marker
poster board body (see example)
white glue
wiggle eyes
black construction paper for ears
wool or cotton balls

Procedure:

1. Paint or dye 2 clothespins per student.
2. Trace body pattern on white poster board. Cut out.
3. Cover body with white glue and attach wool or cotton balls.
4. Glue on wiggle eyes and black ears.
5. Clip on clothespin legs and let dry.
6. Display your "flock" of sheep and invite other classes to visit.

Funny Facts

Sheep did not always have wool. About 10,000 years ago, when they were still wild, they had very coarse hair. About 4,000 BC, after they were domesticated, their hair gradually changed to wool that could be made into clothing.

Paper Bag Puppets

Objective: Students will create paper bag puppets.

You'll need: Lunch-size paper bags (one per student)
copies of pattern for sheep's face (next page)
wool samples or cotton balls
Scissors
Glue
Pencils
Black crayons

Procedure:

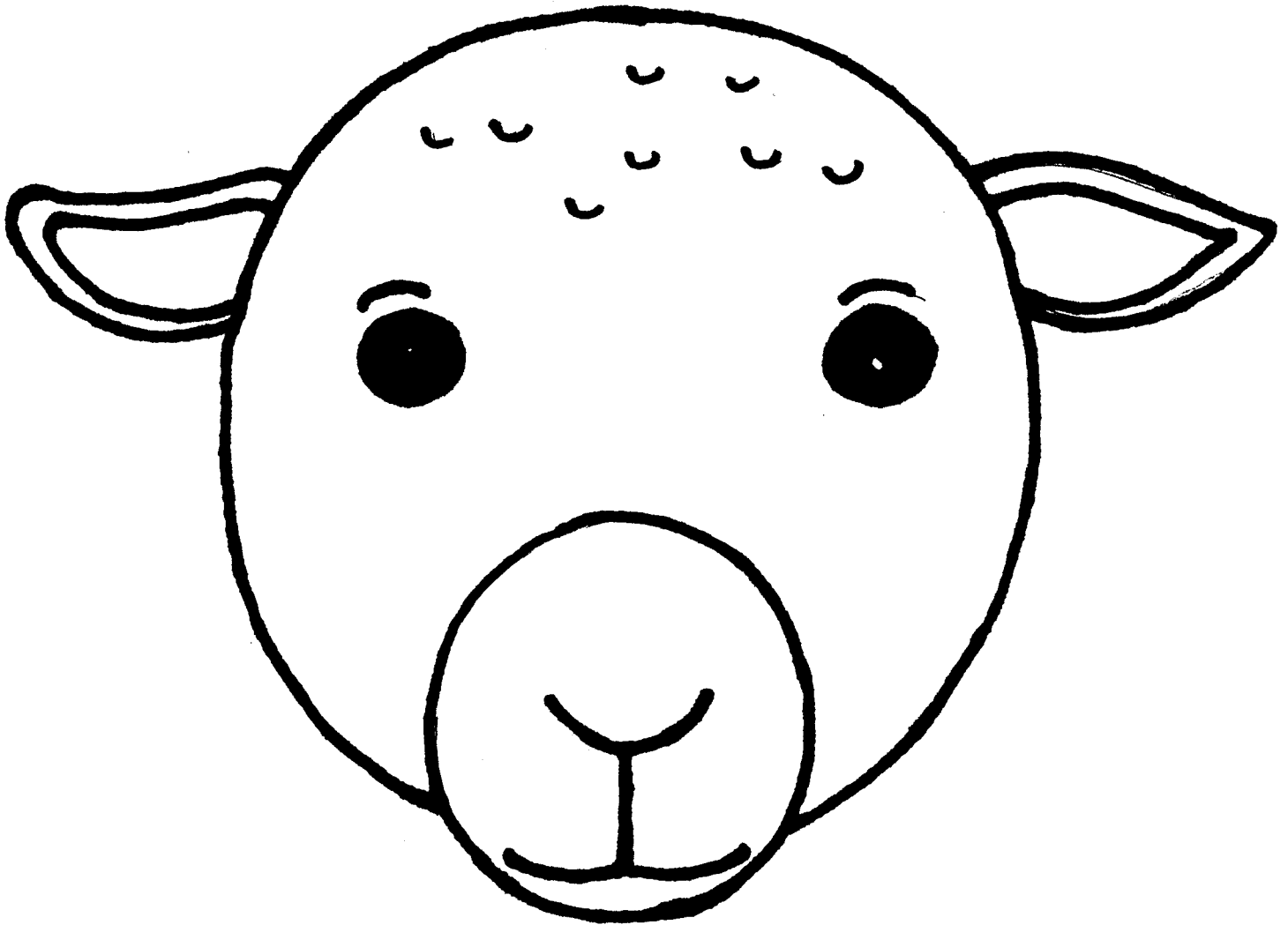
1. Pass out paper bags and have students write their names with pencils along the open edge.
2. Pass out copies of the sheep's face.
3. Have students color the sheep faces black and cut out.
4. Glue sheep face to the bottom of the lunch bag.
5. Use white glue to attach wool sample or cotton balls for fleece.
6. Use completed puppets to perform the accompanying poetry.



Sheep Provide Many of the Products We Use Every Day

lanolin, yam, artists' brushes, tennis balls, felt, carpet, baseballs, paints, makeup, ceramics, medicines, dish soap, tires, candles, shaving creme, marshmallow, buttons, and photographic film, just to name a few.

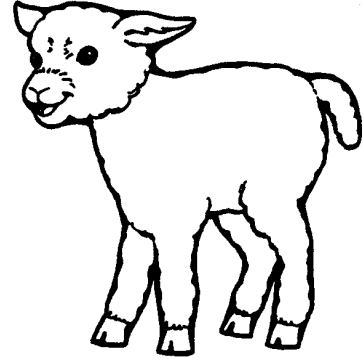
Paper-Bag Puppet Pattern



Directions:

1. Color the lamb's face.
2. Glue wool yarn or cotton balls on head for fleece.
3. Cut out and attach to bottom of lunch-size paper bag.

Ten Little lambs



Ten little lambs in the warm sunshine,
One walks to the barn and then there are nine.

Nine little lambs leaping by the gate,
One runs away home and then there are eight.

Eight little lambs chasing clouds in the heavens,
One jumps the fence and then there are seven.

Seven little lambs up to silly tricks,
One frolics away and then there are six.

Six little lambs looking at a hive,
One's stung on the nose and then there are five.

Five little lambs in a rainy downpour,
One runs to its mother and then there are four.

Four little lambs sharing clover with the bees,
One falls asleep and then there are three.

Three little lambs by the stream so blue,
One leaps across and then there are two.

Two little lambs in the bright, warm sun,
Along comes a butterfly -then there is one.

One little lamb sees he's all alone,
Turns around, and runs for home.

Ten little lambs at home in the shed,
Dreaming lamb dreams on a soft, straw bed.

Xris McMillin Blonk

Down in the Meadow

Down in the meadow where the grass is green
Ten little lambs play by the stream,

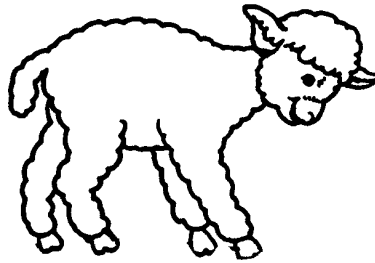
The first one says, "I see a bee."
The second one says, "Let's hide by the tree."

The third one says, "Mary's calling my name."
The fourth one says, "Look at the train."

The fifth one says, "The farmer's at the gate."
The sixth one says, "Hurry, don't be late."

The seventh one says, "Let's go to the shed."
The eighth one says, "It's almost time for bed."

The ninth one says, "The moon's in the sky."
The tenth one fell asleep with a sigh.



Xris McMillin Blonk

Wild and Woolly Fun in the Classroom

Objective: Students will turn raw wool into a finished product.

Step One:

"This is the way we wash the wool"

1. Contact your local extension agent for a source of raw wool or purchase cleaned wool from the address listed on the resource page.
2. Clean the raw wool by following these steps:
 - a. Pick out the larger pieces of debris (sticks, etc.)
 - b. Wash the wool in very warm water (120 degrees) and *Dawn* dish washing soap (this acts as a degreaser to remove the lanolin).
 - c. Rinse in warm water. Repeat.
 - d. Lay outside to dry.
 - e. Use a pet brush to comb the dry wool, straightening the fibers.

Step Two:

"This is the way we dye the wool. .."

Wool is easy and fun to dye in the classroom if you follow this simple "1-1-1-1-1" formula:

1. In a **one**-quart canning jar, add **one** cup of water.
2. Stir in **one** packet of powdered drink mix and **one** tablespoon of vinegar.
3. Dampen about **one** ounce of clean white wool fiber or wool yam and submerge it in the mixture.
4. Set the jar in a sunny location for about four hours or until the color has been absorbed by the wool, and the remaining water is clear or milky.
5. Wash the wool in cool water until the water runs clear.

Step Three:

“This is the way we spin the wool. . .”

You can spin wool successfully in the classroom using either of the following methods:

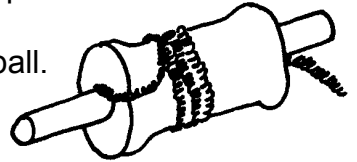
Method 1: Cooperative Spinning

NOTE: This activity is best done in pairs. One student can turn the spool slowly while the second rolls and twists the yarn.

You'll need: Pencil or dowel rod, empty thread spool, clean wool

Procedure:

1. Separate the cleaned, carded wool into strips about 1 inch wide.
2. Roll and twist a strip of wool fiber between your thumb and forefinger until you have a tight piece of yarn about 1/4 inch thick.
3. After forming a few inches of yarn, pass the yarn end of the wool through the spool hole.
4. Insert pencil or dowel into spool hole to hold the end of the spun wool.
5. Begin to wrap the yarn around the spool (see illustration).
6. When the spool is filled, remove the yarn and wind it into a ball.



Method 2: Spinning Made Simple

This method of spinning uses a simple tool that demonstrates the way early people made yarn. The finished product can be used to create a bookmark or friendship bracelet.

You'll need: 6" – 8" piece of coat hanger, clean wool

Procedure:

1. Bend a hook in the end of a 6"-8" piece of coat hanger.
2. Draft out some carded, clean wool about the thickness of a pencil and wrap a few strands around the top of the hook.
3. Begin twisting the hooked wire in one hand (always in the same direction) with one hand while drafting out the wool with the other hand.
4. Continue twisting the wool moving hands farther apart until you have a piece of spun yarn about 12"-18" in length.
5. Fold the piece of spun yarn in half, letting it twist back against itself. This creates a 6"-9" piece of two-ply yarn that will not unravel.
6. Use this piece of yarn to create a friendship bracelet or bookmark.

A Classroom Loom for the Adventurous at Heart

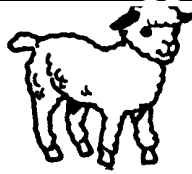
This is a simple and inexpensive loom that can be constructed to help demonstrate the historic art of weaving. While older students will be able to complete the activity with a little assistance, you may want to limit its use to demonstration only with younger children.

You'll need: 6" x 8" rectangle cut from heavy cardboard
ruler
quilter's pins
yarn
pencil

Procedure:

1. Cut a 6 "x 8" rectangle from heavy cardboard or foam board.
2. Measure and mark 1" left and right margins on the 8" width.
3. Carefully measure and mark every $\frac{1}{4}$ " along the top and bottom edges of the remaining board space.
4. Place a quilter's pin at each of the marks.
5. Cut a length of yarn for the warp and tie to the pin at the top left of the board.
6. Run this warp yarn down to the pin at the bottom left, around two pins, then back to the top and around two pins. Follow this pattern until you finish at the pin on the bottom right of the board. Tie off.
7. Take another piece of yarn for the weft. Wrap one end with 2" of masking tape to make it stiff (or use a large, blunt-end needle).
8. Weave the weft yarn over and under the warp yarn, alternating on each successive pass. Change colors to create a stripe.

Math Ewe Can Do



Objective: Students will practice problem-solving skills.
Students will read and solve addition, subtraction, multiplication and division problems.

1. A farmer has 35 ewes, 19 lambs, and 3 rams. How many sheep does she have in all?
2. There are 156 sheep in the pasture. 70 of the sheep are ewes and the rest are lambs. How many lambs are in the field?
3. Mr. Jones has 17 sheep in his barn, 75 sheep in the north pasture, and 156 sheep in the south pasture. How many sheep does he have in all?
4. Mrs. Allison has 245 ewes and lambs. She sells 88. How many does she have left?
5. Jim has 15 ewes. Each ewe has two lambs in April. How many sheep does he have in all?
6. Sarah has 33 ewes, 47 lambs, and 3 rams in each of three pastures. How many sheep does she have in all?
7. Mrs. Smith has 346 sheep. Half of them are ewes. How many ewes does she have? Of the remaining sheep, 165 are lambs and the remainder are rams. How many rams does Mrs. Smith have?
8. James has 155 sheep and five pastures. He puts the same number of sheep in each pasture. How many sheep are in each pasture?

=====

Solutions

- | | | |
|--|------------------------------------|----------------------------------|
| 1. $35 + 19 + 3 = 57$ in all | 2. $156 - 70 = 86$ lambs | 3. $17 + 75 + 156 = 248$ in all |
| 4. $245 - 88 = 157$ left | 5. $15 + (2 \times 15) = 45$ sheep | 6. $3(33 + 47 + 3) = 249$ in all |
| 7. $346 \div 2 = 173$ ewes; $173 - 165 = 8$ rams | | 8. $155 \div 5 = 31$ sheep |

Is Wool a Good Insulator?

Objective: Students will conduct an experiment using the scientific process.

Students will graph and interpret data.

Students will gain an understanding of wool's insulating properties.

You'll need: 2 -one quart glass jars

water

measuring cup

2 thermometers

wool (raw or wool fabric)

timer

paper and pencil



Procedure:

1. Set both glass jars on a table in the classroom. Wrap one with several layers of raw wool or a heavy wool fabric.
2. Fill both jars with hot water.
3. Measure the water temperature of each container and record the data. (At the beginning of the experiment the temperatures should be identical.)
4. Measure the water temperature every five minutes for one hour. Record the data.
5. Create a graph of the data. Use one color to record the temperature of the uninsulated container and another for the container insulated with wool.
6. What conclusions can you draw from the graph. Is wool a good insulator? Why or why not?

NOTE: Try a variation on this experiment using freezer bags and ice cubes.

Place 6-8 ice cubes in each bag. Wrap one bag in layers of wool and leave the other exposed. In which bag will the ice cubes melt first?



Resources

Children's Literature

Baird, Anne. The Christmas Lamb. New York: Morrow Junior Books, 1989.

Carrick, Carol. In the Moonlight, Waiting. New York: Clarion Books, 1990.

de Paola, Tomie. Charlie Needs a Cloak. Englewood Cliffs, New Jersey: Prentice Hall, 1974.

de Paola, Tomie. Haircuts for the Woolsays. New York: Putnam, 1989.

Enderle, Judith Ross. Six Snowy Sheep. New York: St. Martin's Press, 1994.

Hale, Sarah Joseph Buell, Tomie de Paola, illustrator. Mary Had a Little Lamb. New York: Holiday House, 1984.

Inkpen, Mick. If I Had a Sheep. Boston: Little, Brown, 1988.

Keller, Holly. Ten Sleepy Sheep. New York: Greenwillow Books, 1983.

Kiser, Kevin. Sherman the Sheep. New York: MacMillan, 1994.

McPhail, David. The Day the Sheep Showed Up. New York: Scholastic, 1988.

Mendoza, George. Counting Sheep. New York: Grosset & Dunlap, 1982.

Panek, Denis. Ba, Ba Sheep Wouldn't Go to Sleep. New York: Orchard Books, 1988.

Sanders, Scott Russell. Warm as Wool. New York: Bradbury Press, 1992.

Scamehill, Ragnhild. Three Bags Full. New York: Orchard Books, 1993.

Shaw, Nancy. Sheep in a Jeep. Boston: Houghton Mifflin, 1991.

Wallace, Barbara Brooks. Argyle. Nashville: Abingdon Press, 1987.

Ziefert. A New Coat for Anna. New York: Random House, 1988.

Kits and Videos

Ag Experience

MBP 141

3144 N. "G" Street, #125

Merced, CA 95340

phone number: (209) 384-9272

FAX: (209) 384-1378

e-mail: agexper@cyberlynk.com

www.galaxymall.com/education/teaching

Sheep Booklet @ \$5 each. Booklet masters and samples to paste in book, puppet pattern, sheep facts, activities (K-3).

Sheep Video @ \$5 each. "Wool lesson & How to Spin Wool With a Drop Spindle" and "Sheep on the Farm" (K-6). Running time -22 minutes.

Spinning Kit @ \$12 each. Combed, carded wool for spinning, 2 doweling drop spindles, lesson plan, activities, and labeled wool samples.

Wool Replacement Kit @ \$6 each. Combed, carded wool for spinning equal to amount in Spinning Kit.

Internet Sites

<http://www.fibronet.com.tw/wool/woolfiber.html> (about wool)

http://www.dpie.gov.au/agfor/wool_vl/whome.html (wool virtual library)

<http://www.simmons.edu/~lieb/textiles.htm> (early American textile history)