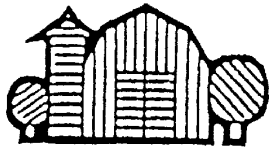
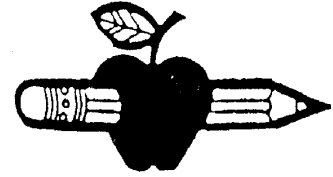


COUNTRY

to



Classroom



Sheep
Sheep
Sheep



Wyoming Ag in the Classroom

Volume 4



Let's Learn About Sheep!

Sheep are raised all over the United States. Texas has the most sheep. Wyoming, California, South Dakota, Montana, Utah, Iowa, Oregon and New Mexico also have many Sheep.

6,350,000 sheep live in the U.S.



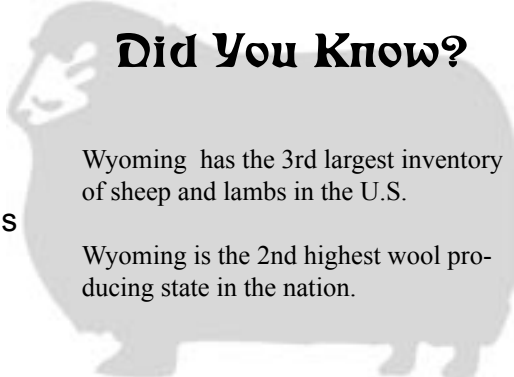
Directions:

Circle the state of Wyoming. Put 3rd by our state. Wyoming has the 3rd largest number of sheep.

What state has the most sheep?

Sheeps Breeds

There are over 35 kinds or breeds of sheep in the United States. There are over 200 different breeds of sheep in the world! All these different breeds of sheep can be divided into two groups - meat breeds and wool breeds. Most of the time the meat breeds are primarily raised for food and wool breeds are primarily raised to produce fiber. Both produce food and fiber.



Did You Know?

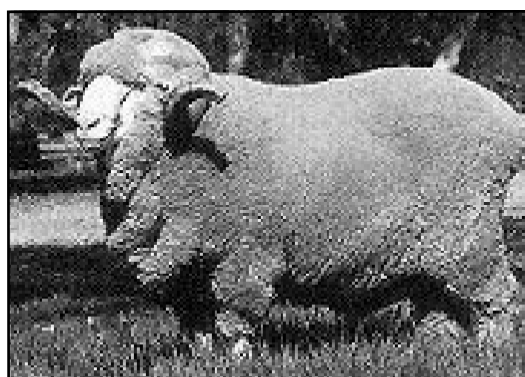
Wyoming has the 3rd largest inventory of sheep and lambs in the U.S.

Wyoming is the 2nd highest wool producing state in the nation.

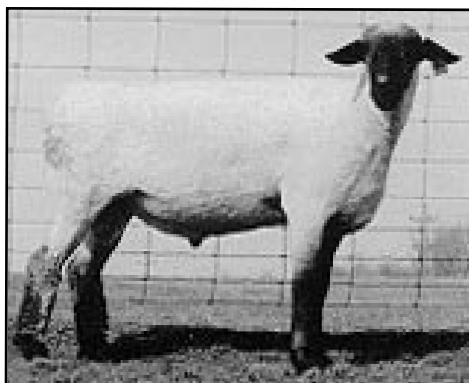
Shown below are four breeds of sheep. Write meat under meat sheep and wool under wool sheep.



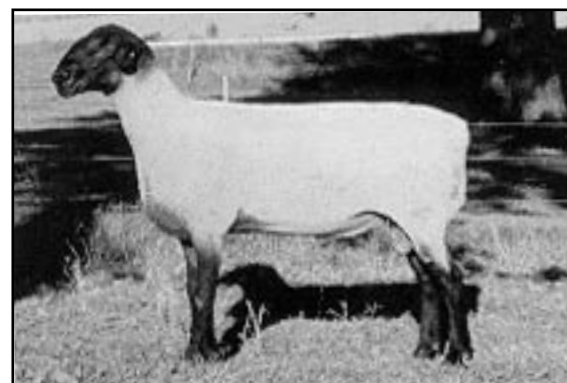
Columbia



Rambouillet



Hampshire



Suffolk



All About Sheep

A female sheep is called a ewe. A male sheep used for breeding is called a ram. A male sheep raised for market is a wether. A baby sheep is called a lamb. Lamb is the name for a sheep less than one year old.

Sheep grow fluffy wool all over their bodies. Wool keeps

them warm and dry. Sheep must have a haircut once a year. This is called shearing.

Sheep have split hooves which can help them climb rocky hills.

Sheep and cattle do not have any top front teeth. Their roof of their mouth is hard so they can bite and eat grass.

Sheep are gentle animals and do not bite.

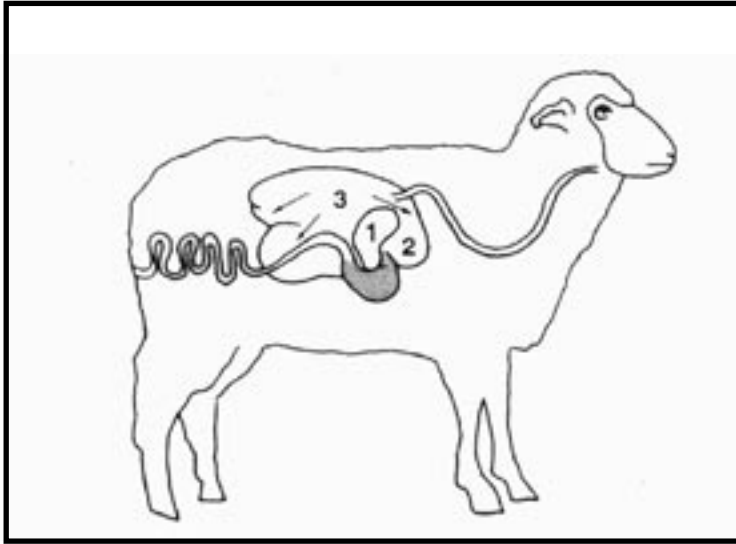
Sheep have tails but their tails are cut off when they are still babies. This is called docking and helps keep the sheep clean and healthy. Docking feels like getting a shot.... it only hurts for a while.

Sheep make a bleating sound. A baby lamb can identify its mother by her bleat.

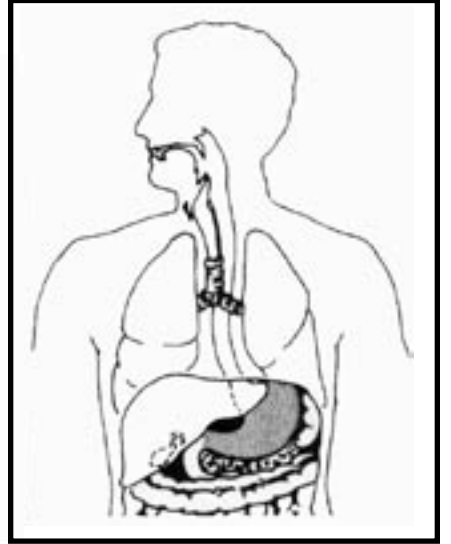
Sheep wear ear tags. Sheep producers put ear tags on their sheep to identify them. Putting an ear tag on feels like getting an ear pierced.

Sheep and cattle are ruminants. Ruminant means they have three extra parts to their stomach. Their special stomach allows them to digest plants and grasses that most other animals cannot.

Sheep and cattle both like to graze. Graze means that they eat grasses and plants. They graze where many crops cannot grow. Sheep even eat weeds



Ruminant Digestive System



Human Digestive System

Sheep have three extra parts to their stomach. Humans have one stomach.

and plants other animals will not. Some ranchers and farmers find that grazing cattle and sheep together is good because they eat different kinds of plants. Grazing is kind of like mowing your lawn, it keeps the plants healthy. It is important not to graze too much of the plants. Ranchers and farmers know they need to take good care of the land because they make their living from the land.

Sheep give us food and fiber. The food is called lamb and the fiber is called wool. Wool fiber is used to make clothes.

Sheep Words

Directions: Write your answers to the questions below.

What is a female sheep called?

What two names are male sheep called?

What is a baby sheep called?

What is a group of sheep called?

Directions: Complete the sentence with a word or words from the story above.

1. Sheep do not have any _____
2. Sheep eat _____
3. Sheep's tails are _____
4. The sound sheep make is: _____
5. Sheep earrings are called _____
6. A sheeps digestive system is called _____

Welcome Baby Lambs



Most lambs are born in the spring. Mother ewes can give birth to one, two or three lambs. Some ewes have had as many as five lambs at once! Lambs can stand soon after they are born. The mother ewe cleans them off. Lambs drink their mother's milk and grow strong. Soon, lambs will eat grasses and hay with their mother until they are five months old. Lambs will be ready to go to market when they are between four and six months old. ideal market weight is between 120 and 135 pounds!

Solve these story problems:

In a flock of five ewes, two of the ewes give birth to one lamb each, two of the ewes give birth to two lambs each, and one ewe gives birth to three lambs. How many lambs are there in the flock?

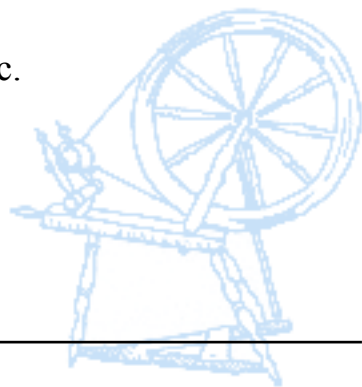
Five ewes were sheared. Each ewe had 8 pounds of wool. How much wool was sheared from the five ewes?

Three lambs are born to a ewe. Each weighs 7 pounds. How much do all three weigh?

Learning About Wool

How Wool Becomes Fabric:

1. **SHEARING:** Spring is usually shearing time for sheep. Sheep have their wool removed in one piece called a fleece.
2. **SCOURING:** The fleece is washed in big tubs to remove dirt, grease and grass.
3. **CARDING:** The clean dry wool is then carded. Carding means to comb the wool to straighten the fibers.
4. **SPINNING:** The wool is spun into yarn. Coarser wool is spun into woolen yarn. Finer wool is spun into worsted yarn.
 - * *Woolen: Woolen yarn is usually used in carpets or thick sweaters.*
 - * *Worsted: Worsted yarn is usually used to make light weight fabrics for suits and dresses.*
5. **KNITTING/WEAVING**
The yarn is knit or woven into fabric.



How well did you read?

What is Carding?

Sheep Give Us Wool

- *Wool is the natural fiber grown from sheep.
- *Wool clothes are cool in the summer and warm in the winter.
- *Wool will not catch on fire. This means wool is flame-resistant.

Different breeds of sheep grow different kinds of wool. Sheep can grow fine wool, medium wool or coarse wool.

- *Fine wool is often used to make suits.



- *Medium wool is often used to make blankets.



- *Coarse wool is often used to make carpets.



What else can be made with wool?

Sheep Shear²ing



Sheep grow a new coat of wool every year. Shearing does not hurt the sheep.



The wool from one sheep is called a fleece.

Sheep grow fluffy wool all over their bodies. Wool keeps them warm and dry. Sheep must have a haircut once a year. This is called Shearing.



Shearing is most often done in the spring. This way the sheep does not wear a wool coat all summer!



The History of Wool

Like civilization, the story of wool begins in Asia during the Stone Age about 10,000 years ago. Primitive man living in the Mesopotamian Plain used sheep for three basic human needs: food, clothing and shelter.

Sheep were one of the first animals to be herded by humans. As humans moved from place to place, sheep were easy to herd and take with them. Herding sheep is the 2nd oldest profession in the world. The nomadic people that cared for the sheep were called shepherds.

Later man learned to spin and weave the wool. Buying and selling to many areas. As early as 4,000 B.C. woolen cloth was being used in the city of Babylon. Babylon means "land of wool."

Today there are over 1 million sheep in the world and more than 200 different breeds. Last year sheep produced 50 million (50,000,000) pounds of wool in the United States.

Today, wool is being used to benefit the environment. It is being used to soak up oil from oil spills. The nice thing about wool sponges is that oil can be cleaned out of the sponge. The oil is recycled and the wool sponge is used over and over again. Wool can clean up 10 to 30 times its weight in oil.

Sheep Products Find Many Uses

From Sheep Hide and Wool

Lanolin (used in lotions to help keep our skin soft and moist)
Clothing
Yarns
Baseballs
Insulation
Tennis balls
Carpet

From the Bones, Horns and Hooves

Syringes
Gelatin Desserts
Piano Keys
Marshmallows
Bandage strips
Adhesive tape
Combs and toothbrushes
Buttons
Ice Cream
Record Albums
Wallpaper and Wallpaper paste
Cellophane wrap and tape
Photographic film

From Sheep Hide and Wool

Lanolin (used in lotions to help keep our skin soft and moist)
Clothing
Yarns
Baseballs
Insulation
Tennis balls
Carpet

From Intestines

Sausage casings
Instrument strings
Surgical sutures
Tennis racquet strings

From Manure

Nitrogen Fertilizer
Phosphorus

From Fats and Fatty Acids

Explosives
Chewing Gum
Paints
Make-up
Dog Food
Margarine
Medicines
Dish Soap
Tires
Chicken Feed
Antifreeze
Crayons
Floor Wax
Candles
Herbicides
Shaving Cream
Shampoo and Conditioner
Lotion

How well did you read?

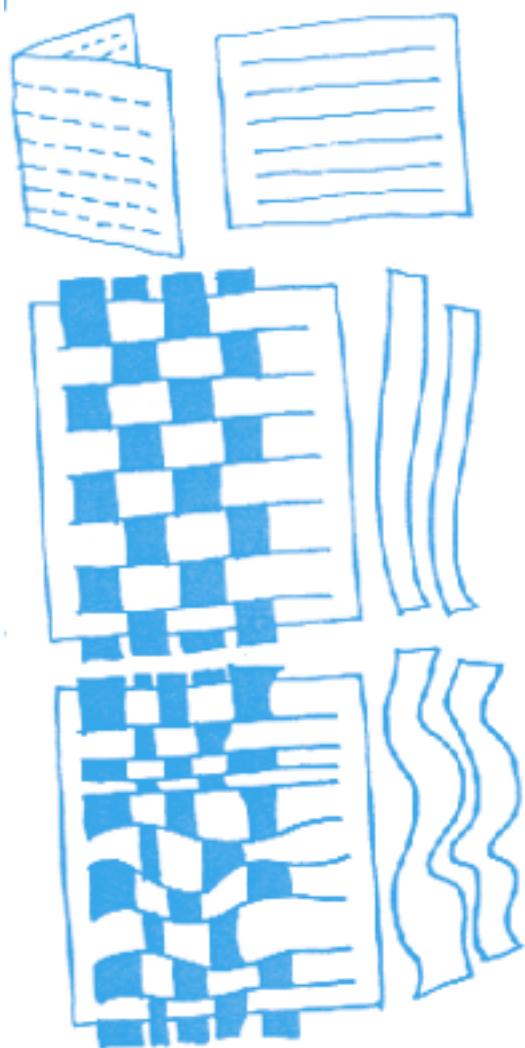
Where did the story of wool begin? _____

Herding sheep is the _____ oldest profession in the world.

The city of Babylon means? _____

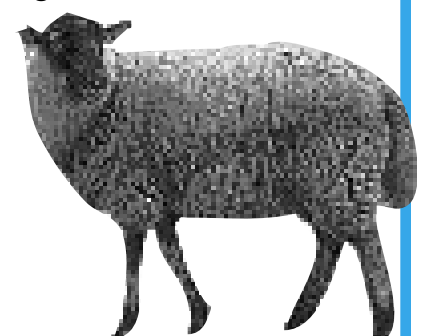
How does wool benefit the environment? _____

Paper Weaving



Paper weaving is a good place to start if you've never tried to weave before.

1. Fold a piece of paper in half and make cuts from the fold out to about 1" from the edge. Open the paper. This will be your "warp".
2. From another piece of paper cut long narrow strips to weave in and out of the warp.
3. To make your weaving more interesting you can vary the width of the spaces between your warp cuts, or make your warp cuts wavy. You can also vary the width and shape of the strips you weave in. Use several different colors of paper.
4. To finish, glue or staple the strips in place along the edges.



Sheep Dogs

There are two kinds of sheep dogs: working dogs and guard dogs. Working dogs are very smart and work with the herder to move the sheep. They run around the sheep quietly to herd them. Most young working dogs first learn how to herd sheep by watching their mothers. A dog trainer will also help them learn. Herders may have two to three working dogs for every 1,000 sheep. Some working dogs are Border Collies and Australian Shepherds.

Guard dogs are used to protect the sheep from wild animals such as coyotes, bears and mountain lions. Guard dogs are not treated like pets. People do not play with guard dogs. Guard dogs like to be with sheep and are very protective of them. Guard dogs stay with the sheep day and night and scare wild animals away. Some guard dogs are the Komondor, Great Pyrenees and Akbash. Other animals like llamas, mules, donkeys, cattle ostriches, and goats are also used to protect sheep. Directions: After reading the story about sheep dogs, fill in the following outline.



1. two kinds of sheep dogs are

a. _____

b. _____

2. working dogs

a. _____

b. _____

c. _____

d. breeds of working dogs are

1) Border Collies

2) _____



3. other animals used to protect sheep are

a. _____ b. _____

Crossword Puzzle

ACROSS:

3. W_____ yarn is usually used to make lightweight fabrics.

5. A male sheep.

8. These nomadic people care for sheep.

13. This nutrient builds muscles and strong bones.

14. C_____ sheep are one of the most common breeds in the U.S.

16. W_____ yarn is usually used in carpets or thick sweaters.

17. This animal works or guards the sheep.

DOWN

1. Sheep give us f_____ and fiber.

2. Sheep are ruminant animals which means their s_____ has three extra parts.

6. This animal has split hooves, no top front teeth and grows wool.

7. Guard dogs protect sheep from coyotes, cougars and b_____.

8. How to turn wool into yarn.

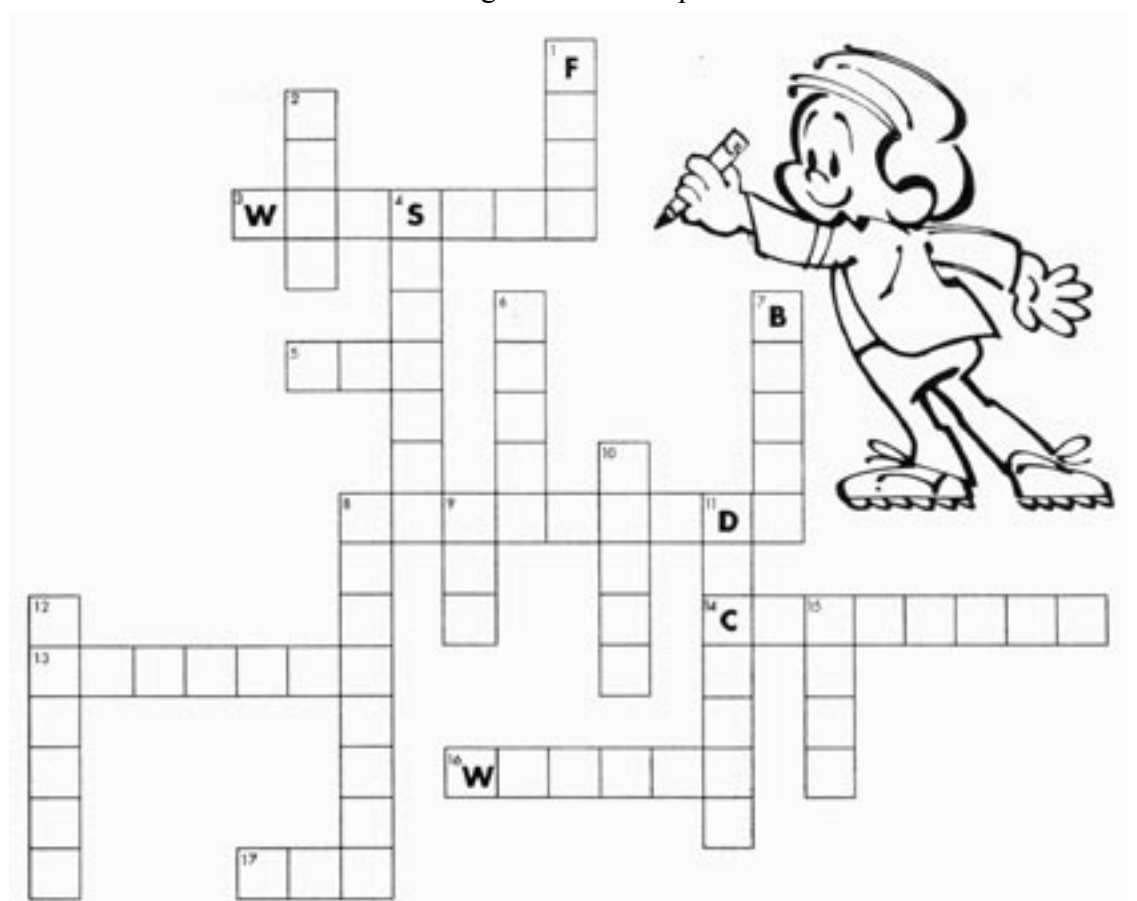
9. A female sheep.

10. This state raises the most sheep in the U.S.

11. D_____ means to cut off the tails of sheep.

12. Most lambs are born during this season.

15. A baby sheep.



The Wild and Woolly West

Early in the beginning of the state sheep played a very important part. As with beef, the sheep traveled through Wyoming over many trails that the pioneer used.

Many early people who came to Wyoming found that sheep would eat grass and sage and even weeds. They could even be found eating on mountain slopes. sheep could go for longer periods without water than cattle.

One of the first men who owned sheep in Wyoming was Francis E. Warren. He later served as both a Territorial Governor and a Wyoming State Governor. In 1883 he started a livestock company.

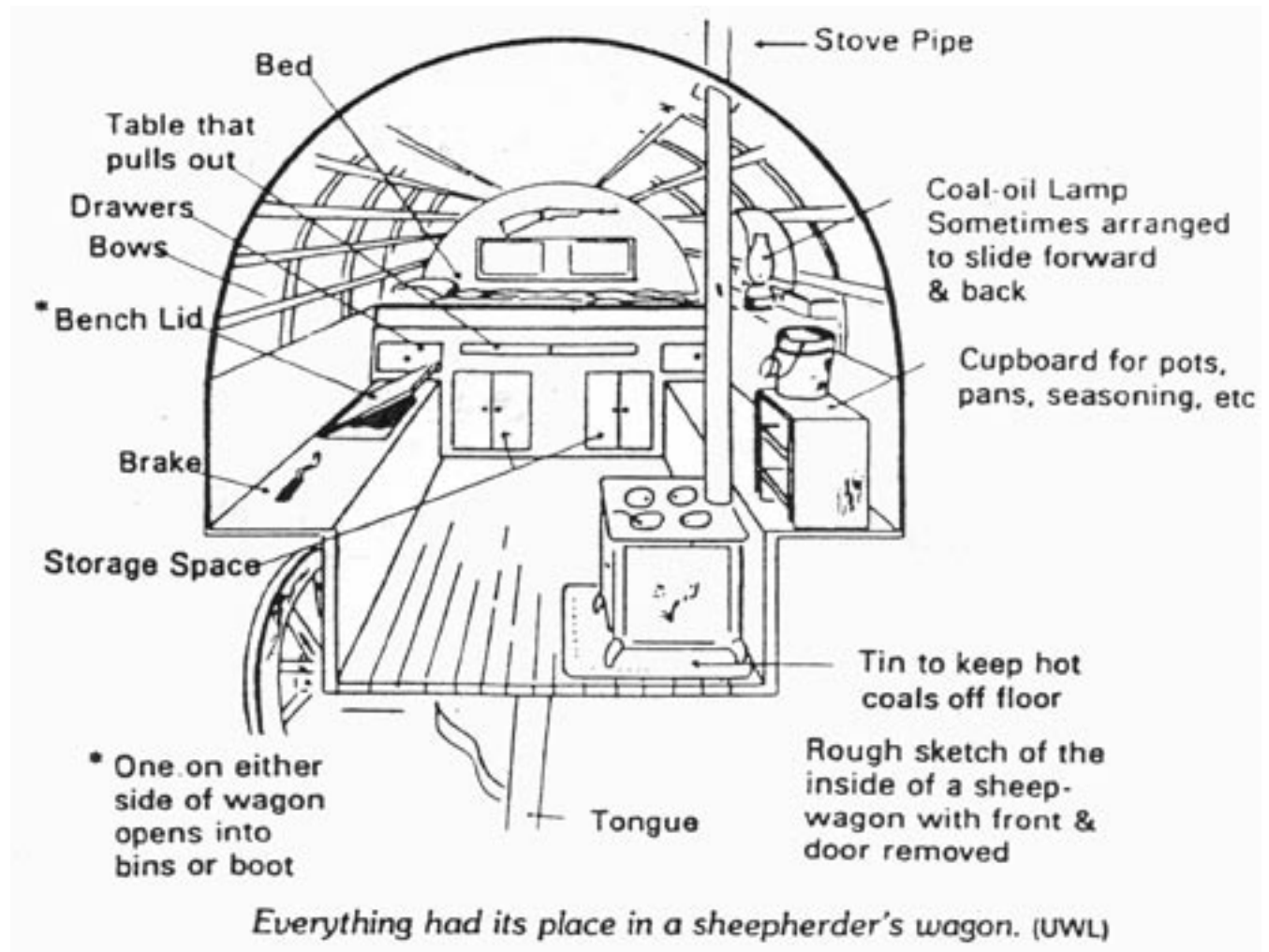
Many early sheepmen were basque and came from France and Spain. Other sheepmen came from Scotland.

The sheepmen who had large flocks of sheep would hire shearers. The shearers took the sheep on the ranges so they could graze. The shearers had a horse, a sheep dog and lived in a sheepwagon. The sheepwagon was invented by a Wyoming man named Joel Hurt. The wagon was very well designed and had everything the shepherd needed.

Sheep ranchers have problems with predators. When the sheep are in big flocks it hard to watch them all. The predator that causes the biggest problem is the coyote. Another problem for ranchers with range flocks is spring blizzards. Large numbers of sheep can be buried under the snow.

The woolgrowers use brands to show ownership like cattlemen. The brand must be "painted" on the wool. This is done by dipping the branding iron in paint. Each time the sheep are sheared they have to be branded.

There came a time when, like the cattlemen, the sheepmen decided to get together and share ideas. They started the Wyoming Wool Growers Association in 1905. It still continues today.



One of the first people to own sheep wagons was.....

- A) Imma Shepard
- B) Francis E. Warren
- C) Joel Hurt
- D) Bea A. Sheep

Joel Hurt was from Wyoming. What did he invent?

- A) Spinning Wheel
- B) Sheepwagon
- C) Telephone
- D) Sheepdog

Can you Solve it?

1 One ewe eats four pounds of hay a day. How many pounds will she eat in 100 days?

2 The ewe is put out on pasture for 150 days. It cost 10 cents a day. How much will it cost to have her on pasture?

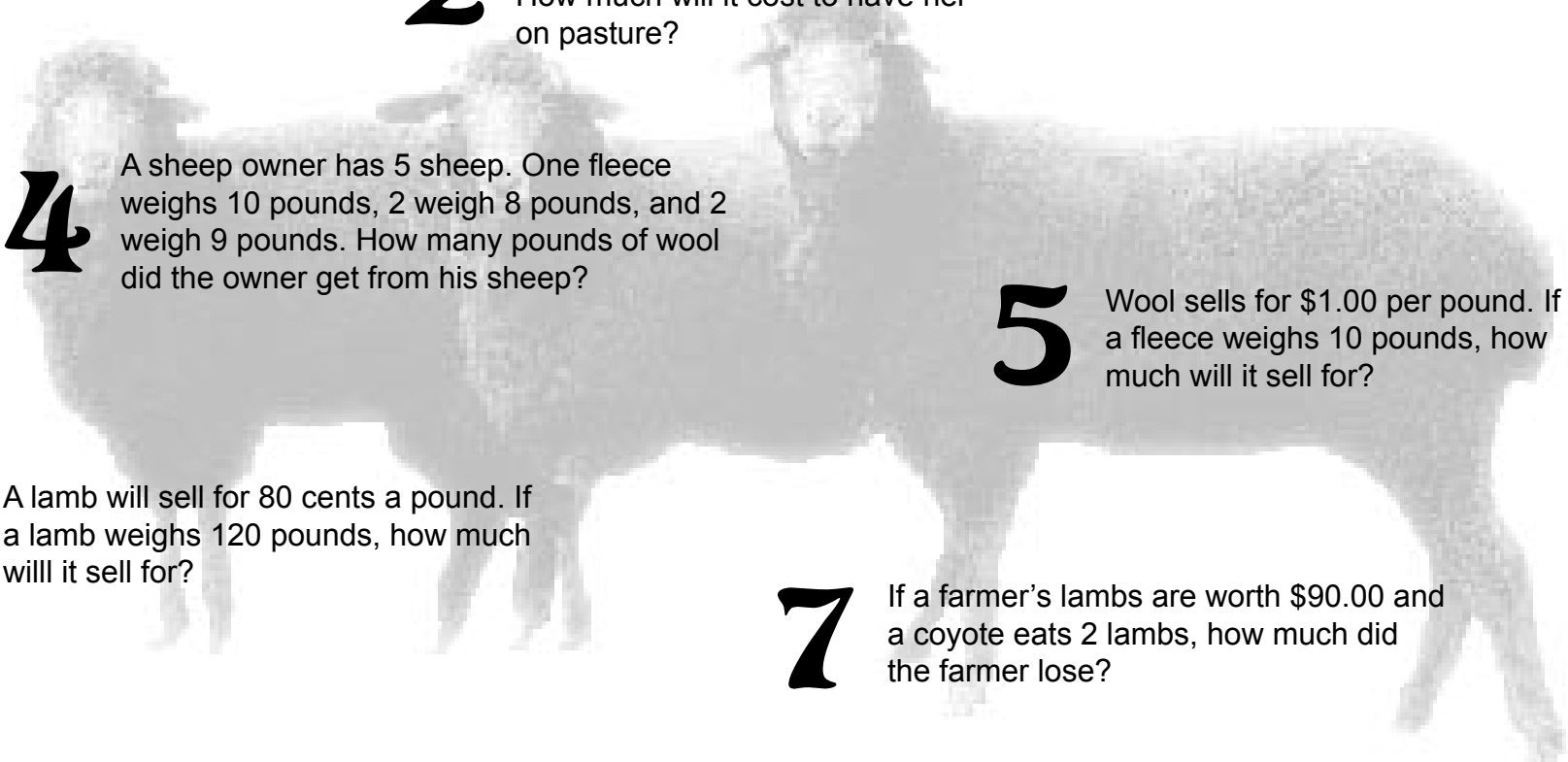
4 A sheep owner has 5 sheep. One fleece weighs 10 pounds, 2 weigh 8 pounds, and 2 weigh 9 pounds. How many pounds of wool did the owner get from his sheep?

6 A lamb will sell for 80 cents a pound. If a lamb weighs 120 pounds, how much will it sell for?

3 The ewe is then put out to eat corn stalks. It costs 10 cents a day to let her eat the corn stalks. She will stay there 60 days. How much will it cost to keep her there?

5 Wool sells for \$1.00 per pound. If a fleece weighs 10 pounds, how much will it sell for?

7 If a farmer's lambs are worth \$90.00 and a coyote eats 2 lambs, how much did the farmer lose?





Wyoming Ag in the Classroom

Volume 4 TEACHER GUIDE

Dear Teachers,

Wyoming Agriculture in the Classroom hopes you enjoy this year's edition of the "Country to Classroom" on Sheep. Wyoming has a long and rich history with the sheep industry, which is a very vibrant part of the whole of Wyoming's making as a great state. The history of the sheep industry is an integral part of teaching Wyoming history. It is Wyoming Agriculture in the Classroom's intent to create an awareness and deep knowledge of the agriculture industry and the importance of agriculture to Wyoming and the nation.

As a way to celebrate agriculture, Wyoming Agriculture in the Classroom will again hold its Annual Bookmark Contest. A flyer will be sent to all teachers the first part of the school year. New changes are being made to the program to make it a more rewarding and educational experience for teachers and students. All entries are due to the WAIC office by February 1, 2006. WAIC's Annual Bookmark Contest is a great way to showcase student learning and a great assessment tool for teachers. The bookmark contest is also a way to introduce students to professional publication and good work practices. If you are interested in more information about our bookmark contest or how to serve on our selection committee, please contact our office.

Sincerely, Sarka J. White, M.Ed.
Education Coordinator WDA/WAIC

If you want to continue your study on agriculture and need more information to enhance your classroom studies, please contact Sarka J. White with Wyoming Agriculture in the Classroom, 2219 Carey Ave., Cheyenne, Wyoming 82002, and (307) 777-6618. Wyoming Agriculture in the Classroom has an extensive resource library and training that is free to all Wyoming teachers. Visit our website at www.wyomingagclassroom.org for information and links to other agriculture literacy sites for educators and families.

Potpourri...Discussion Prompts and Projects

Some additional projects and ideas to extend the use of the "Country to Classroom" magazine.

1. Visit a lambing barn. See how a lamb is born and learn about the care given to new lambs (February - May).
2. Visit a farm or ranch at shearing time. Help to handle wool - get the feel and smell of wool, learn about the different types and uses for wool (February - May).
3. Visit a 4-H or FFA member that has club lambs. Let him/her explain about feeding, caring, etc. of the lambs.
4. Have a hand-spinner come into class. Let the kids handle the wool and try to spin wool on a spinning wheel.
5. Have students design and draw a bulletin board using one or more themes, ie., shearing, grazing, lambing, spinning, weaving or by-products.
6. Pretend that you are a sheep producer and you discover that a coyote has killed 15 of your lambs overnight - brainstorm ways that you might solve your problem. Choose three ideas and list five pros and cons to each choice.
7. Look at these websites for more information on sheep and wool in the U.S.: www.sheepusa.org and www.pendleton-usa.com.
8. Check out these following resources from Wyoming Agriculture In The Classroom. Wool: Farm to Fabric, Naturally; Fiber to Fabric; and Story of Wool.

Wyoming Content and Performance Standards 4th and 8th Grades

Wyoming Content and Performance Standards 4th and 8th Grades

Language Arts: 1. Reading; 2. Writing; 3. Speaking and Listening.

Science: 1. Concepts and Knowledge; 2. Science as Inquiry; 3. History and Nature of Science in Personal and Social Decisions.

Social Studies: 2. Culture/Cultural Diversity; 3. Production, Distribution and Consumption; 4. Time, Continuity and Change; 5. People, Places and Environment

Mathematics: 1. Number and Operation; 4. Algebra; 5. Data Analysis and Probability.

Teacher Activity

A fiber is anything that is long and thin like a piece of thread. There are many different kinds of fibers. Wool is a natural animal fiber. Sheep raised in Wyoming have a fleece of wool which is shorn off each spring. These fibers are then cleaned, carded and spun into yarn. The yarn is then woven or knit into articles of clothing. You may have a sweater or jacket made out of wool. Most wool clothes bought in a store have been made on machines. Here is how you can make wool yarn in your classroom:

Scouring, picking and carding fleece

Materials:

- Container of hot water
- Fine-Toothed comb
- Fleece (grease wool) Source: Contact your local Wool Growers Association or County Extension Service for help.
- Soap Flakes.

Procedure:

1. Scouring: Mix soap flakes and hot water in a container. Add the fleece and wash gently, agitating with your hand. Rinse well with water of the same temperature as wash water. It may take several rinsings. Squeeze (do not wring or twist) the excess water out of the fleece. Fluff the wool and lay out on paper to dry thoroughly.
2. Picking: Remove any burrs, twigs, or other foreign bodies. Form the dry fleece by picking them out by hand.
3. Carding: Comb the wool gently until the wool is fluffed and the fibers are separated.

Spinning Yarn

Materials:

- Pencil or Dowel
- Thread Spool (empty)
- Wool (use wool from the above Scouring, picking and carding)

Procedure:

1. Separate 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 through the spool hole. Insert pencil or dowel into spool hole to hold the end and begin to wrap the yarn around the spool. This may be a two-student activity. One student can turn the spool slowly as another student rolls and twists the wool.
4. When the spool is filled, remove yarn and wind into a ball.

Answer Key

Page 6

crossword puzzle

Across:	Down:	9. Ewe
3. Worst	1. Food	10. Texas
5. Ram	2. Wool	11. Docking
8. Shepherds	4. Stomach	12. Spring
13. Protein	6. Sheep	15. Lamb
14. Columbia	7. Bears	16. Woolen
17 Dog	8. Spinning	

Page 2

Sheep Breeds:

Columbia - Wool
 Rambouillet - Wool
 Hampshire - Meat
 suffolk - Meat

Page 3

Sheep Words

1. Ewe
2. Wether & Ram
3. Lamb
4. Flock

Baby Lambs

1. 9 lambs
2. 40 pounds of wool
3. 21 pounds

Sheep Sentences

1. Front teeth
2. Grass
3. Docking
4. Bleating
5. Ear Tags
6. Ruminant

Page 6

Sheep Dogs

- 1) a. Working
b. Guard
- 2) a. Smart
b. Work with Shepherd
c. Herd the sheep
d. 2 Australian Shepherd
- 3) Ostriches, mules, donkeys, cattle, llamas, or goats

"COUNTRY TO CLASSROOM" is a publication of WYOMING AGRICULTURE IN THE CLASSROOM.

Wyoming Agriculture in the Classroom is a cooperative effort of many Agriculture organizations and individuals around the state. Materials are compiled from Wyoming Department of Agriculture, United States Department of Agriculture, Wyoming Beef Council, Wyoming Ag in the Classroom, Montana Ag in the Classroom, Minnesota Ag in the Classroom, National FFA, Colorado Ag Foundation, Oklahoma Ag in the Classroom, and several other sources.