

# Goats-A-Long Way

- Objectives**
1. The student will learn about the uses of goats, mohair, and other products from goats.
  2. The student will learn about the importance of goats in Texas.

**TEKS:**

Reading: 1.1B,D,E; 1.11A,B; 1.13A; 1.15B,C; 1.21A,B; 2.1B,D,E;  
2.7B; 2.8A-D; 2.10A,B; 2.14B; 3.1B,D,E; 3.8A-C;  
3.9H,I; 3.10A,B; 3.14B; 4.13C,E,F; 4.15A,C; 4.21C  
5.6C; 5.9C; 5.10G; 5.13C,E,G; 5.15A,C

Science: 1.2; 1.4B; 1.6; 1.8; 1.9; 2.2; 2.3; 2.6D; 2.8; 2.9; 4.3;  
4.9; 5.10

Social Studies: 1.5A,B; 1.6C; 2.5A; 2.9A; 2.10C; 2.16B; 4.7A

<b>STAAR:</b>	<b>GRADE</b>	<b>OBJECTIVES</b>
Reading	3,4,5,6	1,2,4
Writing	4	1,4,5,6
Science	5	1,2
Math	3,4,5,6	1

## Assessment Summary:

Objective 1: Students learn about goats and their products.

Objective 2: Students learn about where goats are raised in Texas.

Activities: Grade Appropriate Activities Included in Lesson

Writing: Grades 1-2: Using a list of vocabulary words, students will write a Paragraph about goats.  
Grades 3-6: Using the Internet and other resources, students will choose one type of goat and write an informative essay telling about the different breeds of goats, where they are raised, and the products we get from them.

Project: Students will make posters showing the different breeds of goats, where they are raised, and what they are used for.

## Background

Information: Texas is the leading state in goat production. About one-half is Angora goats and the remaining one-half is meat and dairy goats. Angora goats and their fleece, called mohair, had been the majority of Texas' goat industry until the loss of the 1954 Federal Wool Act and loss of incentives. The Mohair Council Of America reports that Texas produces 90% of the mohair in the U.S. South Africa is the only country that beats the U.S. in world production of mohair. In 1993, with the decline in Angora goat numbers and the introduction of the South African Boer goat, meat production started to increase. Goat meat is the most preferred meat in the world. Meat goat production is increasing. Dairy goat production is a small, but viable piece of goat production in Texas. Goat milk, cheese and other products are produced mostly in the central and eastern parts of the state.

Materials: Fiction and non-fiction books about goats: Recommendations include *Beatrice's Goat* by Page McBrier, *Life on a Goat Farm* by Judy Wolfman, and *Goat's on the Farm* by Mari C. Schuh.)

Paper

Map colors or crayons

Map of Texas showing the counties outlined

Equipment: Computer with Internet capability

# Goats-A-Long Way

## Procedure

### 3. Introduce new vocabulary:

Grades 1-3		Grades 4-6
Angora	Buck	Ruminant
Mohair	Billy	Forage
Doe	Herd	Range
Nanny	Predator	Cashmere
Kid		Browse
Shearing		

2. The teacher will open lesson by reading fiction and/or non-fiction books about goats. Talk about the characters in the story and tell the class they will be learning about goats and the importance of goats to Texas. Using the background information found in the lesson, discuss the different types of goats and their uses. Compare fiber or hair goats, meat goats and dairy goats.
3. Order a natural fiber packet from Natural Fibers Research and Information Center, (512)475-7817. Allow students to feel the mohair samples and discuss some of the things made from mohair. (Packet contains samples of wool, mohair and cotton.)

### Activities

1. Have students complete grade appropriate "Goat Vocabulary" matching exercise or Crossword puzzle.
2. (Grades 1-3) Give each student a map of Texas with the counties labeled. On the board list the top ten counties in mohair production. Have students find and color the ten counties that produce the most mohair. In 2000 the top ten counties were Edwards, Val Verde, Sutton, Uvalde, Gillespie, Kinney, Kimble, Crockett, Terrell, and Mills. Have students work in groups to find the counties. (Grades 3-6) Give each student a map of Texas with the counties labeled. Students should label their map "Top Ten Mohair Producing Counties in Texas". Have them go to the Texas Agriculture Statistics Service website at [www.io.com/tass/cegoat0.htm](http://www.io.com/tass/cegoat0.htm).

Using the table have students determine which ten counties produce the most mohair and have them color them on the Texas map. Have them make a chart showing how much each county produces in order, and the average clip weight (the average pounds of mohair from each animal).

3. Have students complete the activity "What Kind of Goat is It?" using the website [www.tsgra.com](http://www.tsgra.com) for information on the different breeds of goats and each is used for. Have students write a descriptive sentence or paragraph for one or more breeds of each type of goat.

### **Assessment**

(Grades 1-2) Have students write a sentence or paragraph about what they learned about goats. You may want to give them a list of the vocabulary words to use in their writing. (Grades 3-6) Have students choose a type of goat; meat, milk, or fiber, to research and write about. Use the Internet and other resources to find out about the different breeds that are used for the particular purpose, where they originated and other information about them. Have them make a poster showing the information .

### **Extension**

Contact your county extension office to find out if there are any goats raised in your area. If so, ask the producer to bring some goats to your school so that your class can see some real goats. If possible try to get Angora, meat goats, and dairy goats so that the students can see the difference. The producers could leave the animals in the trailers as long as your students could see them. You may want to ask if they could demonstrate the shearing of an angora goat so your students could see this process. Your county extension agent and ag science teacher can be of help.

## Additional Resources About Goats

Mohair Council of America - pamphlets, posters, information and curriculum  
P O Box 5337  
San Angelo, TX 76902  
(800)583-3161  
(915)655-4761 Fax Line  
[www.mohairusa.com](http://www.mohairusa.com)

Texas Sheep and Goat Raisers' Association  
P O Box 2290  
San Angelo, TX 76902  
(915)655-7388  
(915)655-2255 Fax Line  
[www.tsgra.com](http://www.tsgra.com) - They have a lot of links that will even take you to more links.

American Meat Goat Association  
P O Box 333  
Junction, TX 76849  
[www.meatgoats.com](http://www.meatgoats.com)

American Boer Goat Association  
232 W. Beauregard, Ste. 104  
San Angelo, TX 76903  
(915)486-2242  
[www.abga.org](http://www.abga.org)

American Dairy Goat Association  
P O Box 865  
Spindale, NC 28163  
(704)286-3801  
[www.adga.org](http://www.adga.org)

Videos:

[Texas Farm Bureau- Sheep and Goats](#)

Cashmere Producers of America  
6448 Hwy 290E, St. 100-A  
Austin, TX 78723  
(512)452-5205  
[www.capcas.com](http://www.capcas.com)



Boer and Meat Goat Information Center  
[www.boergoats.com](http://www.boergoats.com)

The Goat Farmer Magazine  
[www.goatmagazine.info/goatbiz](http://www.goatmagazine.info/goatbiz)

CyberGoats  
[www.cybergoat.com](http://www.cybergoat.com)

# Learning About Goats

## Introduction

Goats may have been one of the earliest **domesticated** hoofed animals. People have been keeping tame goats since about 6,000 to 7,000 BC. Early explorers kept goats on ships to provide milk and meat on long voyages. Dairy goats were brought to the New World to provide early settlers with milk. The wild ancestors of domestic goats were probably the Bezoar goats, animals that lived on steep hills and mountainsides in Asia Minor. Later, domesticated goats spread to North Africa and southern Europe. The lands they inhabited were either hot and dry, or cold and barren with few plants. From these wild ancestors goats have inherited two major traits. They are very agile and sure-footed, and they will eat almost any kind of plant material.



## Goat Basics

Goats are even-toed, hoofed animals. They are cud-chewing animals with a four compartment stomach. Animals of this kind are called **ruminants**. They have hollow horns that are directed upward, backward, and outward. Male goats have beards. They are extremely agile animals with a very good sense of balance. Domesticated goats frequently engage in jumping and climbing games with their herd-mates.

Goats live in groups called herds. A male goat is referred to as either **buck** or a "billy" goat. A female goat is called a **doe**, or "nanny". Baby goats are referred to as **kids**. Most breeds of goats give birth to a single kid, but twins or even triplets are common in some breeds. A kid can stand on its own within minutes of birth, and can move with the herd within a few days.

Goats are adapted to living in rough, dry, mountainous types of **habitats** where other livestock or crops cannot be grown. **Predators** such as mountain lions, coyotes, bobcats, golden eagles, and even domestic dogs prey on goats, particularly young kids. Often, specially trained guard dogs, and even guard donkeys help protect the goats from predators.

Just about any kind of plant material will serve as forage for goats. They will eat grass as well as broadleaf plants called **forbs**. Another food source are the leaves, twigs, and stems of woody plants commonly called **browse**. Depending upon the climate, goats will eat bitter desert plants and lichens. And while it's not true that goats eat tin cans, they will eat the labels off the tin cans. It is this ability to utilize any kind of plant material for food that makes goats so useful in controlling unwanted vegetation.

## Meat and Dairy Goats

There are many different kinds of goats raised around the world. Primarily goats are raised either for the food they provide, or for their hair. Goats raised as dairy goats include the Alpine, LaMancha, Nubian, Oberhasli, Toggenburg, and Saanen breeds. Goat's milk is very nutritious, easy to digest, and can be used to make many different kinds of cheese.

The main breeds of goats raised for meat production in Texas are the Spanish and the Boer goats. Goat meat is very low in fat and cholesterol. For over 80% of the people in the world, goat meat is the meat most often consumed on a regular basis.



Boer Goat



Nubian Goat

## Fiber Goats

Some goats are raised not for their meat or milk, but for their hair. There are two kinds of goats raised for their hair, the **Angora** goat, and the **Cashmere** goat. While all goats have hair, the hair from these two breeds is particularly soft, warm, luxurious and sought after.

Angora goats are believed to have originated in the Himalayan Mountains of Asia. From the middle ages through modern times these goats have been highly prized for their hair, called **mohair**. This soft, luxurious fiber is woven into fine apparel. The goats have their hair clipped, or sheared, twice a year. Angora goats are raised in Texas, Utah, Arizona, and New Mexico, although most come from Texas. Over 90% of the mohair production in the United States comes from Texas. This accounts for over 50% of the world's mohair production.

Cashmere goats are the other fiber producing type of goat. Most of these goats come from Afghanistan, Iran, Outer Mongolia, India, and China. The fiber from these goats is also very soft, warm, and luxurious.

## Goats and the Environment

Because goats will eat just about any type of vegetation, they are increasingly being used to control unwanted vegetation. Leafy spurge, an exotic species of weed poisonous to many types of animals, is taking over range land in many parts of the western United States. Tall whitetop, also known as perennial pepperweed, is another invasive plant that can be controlled by goats.

In Texas, landowners are using goats to control brush, particularly cedar. Cedar re-growth in fields crowds out native grasses and depletes the groundwater supply. Current research has even determined that certain goats have a genetic preference for cedar. Goats help to control this re-growth and enhance the amount of water percolating into the ground.



By using goats to eat these invasive plants, landowners are helping the environment by removing the plants that are crowding out beneficial species. In addition, they do not have to use herbicides to kill the plants. Herbicides are very expensive, so ranchers are also saving money while helping the environment when they don't have to use them to control noxious brush.

Goats can be pastured with sheep and cattle because each species prefers different plants. While they will eat grass, goats prefer brush, tree leaves and rough browse plants. Cattle and sheep prefer grass. It has even been shown that when properly rotated, goats can actually improve the palatability of plants for many species of wildlife such as deer.

## Products from Goats

We get many other products from goats besides meat, milk, and fiber for clothing. Hides are used as rugs, and the skin is used for fine leather. Gelatin, fertilizers, surgical supplies, medicines, soaps, ceramics, pet foods, horn and bone handles, luggage, and footwear are just a few of the other products we get from the natural, renewable, and Earth-friendly GOAT.



Texas Sheep and Goat Raisers' Association, "Learning About Goats". Used by permission.

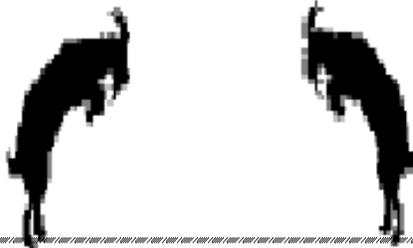
Activity 1

Name \_\_\_\_\_

## Goat Vocabulary (K-2)

Match the definition to the correct word.

- |                                  |                  |
|----------------------------------|------------------|
| 1. _____ a male goat             | A. shearing      |
| 2. _____ comes from Angora goats | B. kid           |
| 3. _____ animal that kills goats | C. predator      |
| 4. _____ female goat             | D. buck or billy |
| 5. _____ the group goats live in | E. doe or nanny  |
| 6. _____ a baby goat             | F. mohair        |
| 7. _____ removing the mohair     | G. herd          |



## Activity 1

Name \_\_\_\_\_

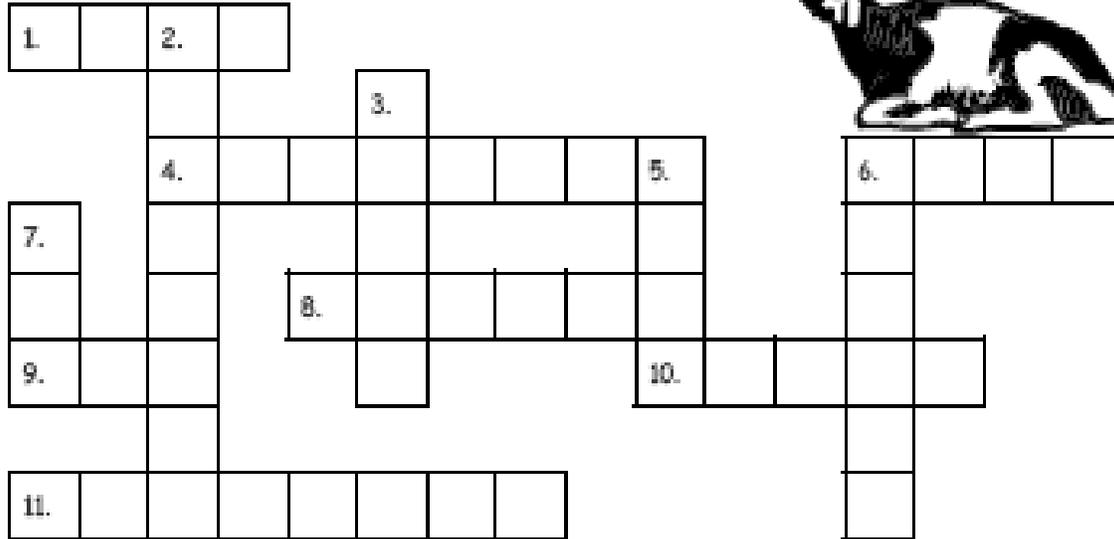
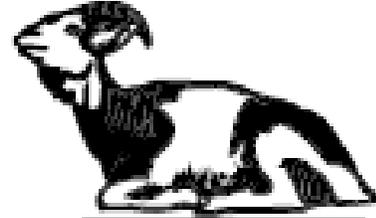
### Goat Vocabulary (3-6)

Match the definition to the correct word.

- |   |             |
|---|-------------|
| 1. _____ a male goat  | a. shearing |
| 2. _____ comes from Angora goats                                | b. kid      |
| 3. _____ where grazing animals roam                             | c. predator |
| 4. _____ a female goat  | d. ruminant |
| 5. _____ the group goats live in                                | e. doe      |
| 6. _____ a baby goat  | f. mohair   |
| 7. _____ removing the mohair                                    | g. herd     |
| 8. _____ kill goats   | h. range    |
| 9. _____ a hoofed, cud-chewing animal<br>that has four stomachs | i. cashmere |
| 10. _____ short, soft, down-like fiber<br>from goats            | j. buck     |
| 11. _____ woody plants like leaves and twigs                    | k. forage   |
| 12. _____ plants animals use for food                           | l. browse   |

# Learning About Goats

## Crossword Puzzle



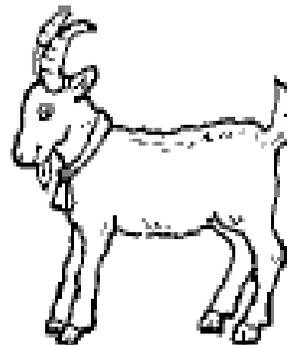
Use the words from the reading to help you find the answers to the puzzle.

Across:

1. Male goat.
4. The process of removing the hair from goats.
6. Food product from goats.
8. Type of goat that gives us very fine fiber used most often in clothing.
9. A female goat.
10. State that produces the most mohair.
11. Animal that hunts and kills other animals for food.

Down:

2. Short, soft, down-like fiber.
3. Another name for a female goat.
5. Animal that gives us meat, milk, and fiber.
6. Hair from an Angora goat.
7. A baby goat.



From the Texas Sheep & Goat Raisers' Association



### Activity 3

## What Kind of Goat Is It?

Goats fall into three categories, depending on whether they are used for meat, milk or fiber.

Listed below are the three main types of goats. Below each type list the breeds of goats that fall into that category. Use the website for the Texas Sheep and Goat Raisers Association which can be found at [www.tsgra.com/livestock.htm](http://www.tsgra.com/livestock.htm).

Write a descriptive paragraph about each breed, including where the breed originated and its primary use in the United States.

Dairy



Fiber



Meat



# ANSWER KEY

## **ACTIVITY 1**

### **Vocabulary-Matching (K-2)**

1. d
2. f
3. c
4. e
5. g
6. b
7. a

### **Vocabulary-Matching (3-6)**

1. j
2. f
3. h
4. e
5. g
6. b
7. a
8. c
9. d
10. i
11. l
12. k

## **ACTIVITY 3**

### **What Kind of Goat Is It?**

#### Dairy

- Alpine
- LaMancha
- Nubian
- Saanen
- Toggenburg
- Oberchalsli

#### Fiber

- Angora
- Cashmere

#### Meat

- Spanish
- Boer