From Moo to Meat and More!

Objectives	1. The student will learn that we get meat from beef breeds of cattle.
	2. The student will learn how beef cattle are raised.
	3. The student will learn some of the by-products from beef cattle.

Grade Level	1-3	4-6

TEKS:

1-3	4-6
R- 1.1B,D,E;1.11A,B;1.17G;1.21B	R- 4.10K;4.13C
R- 2.1B,D,E;2.7B;2.8A,B;2.10B; 2.12D,G;2.15C;2.17B,D	R- 5.9A,E;5.10K;5.13D,E;5.16B; 5.21C
R- 3.1B,D,E;3.7B;3.8A;3.17C	R- 6.9A,E;6.10K;6.13D,E;6.16B; 6.20C,D
S- 1.5A;1.6A,B;1.9A,B	
S- 2.5A;2.9A,B;3.9A	S- 4.8A
SS- 1.9A,B	S- 5.9A
SS- 2.8A,C;2.10A,C;2.17C,D,E	SS- 4.9B;4.13A,B;4.14B;4.22C,F
SS- 3.6A,3.16C,D,F	SS- 5.9B;5.13B;5.25C
H- 1.7C;2.4A,D;3.3A	SS- 6.21A,C

TAKS:

	GRADE	OBJECTIVES
Reading	3, 4, 5, 6	1,4
Writing	4	1, 4, 5, 6
Science	5	1, 2
Math	1, 2, 3	2

Assessment Summary:

Objective 1: Complete a TAKS formatted multiple choice quiz on beef cattle.

Objective 2: Complete grade appropriate writing assignments.

Objective 3: Complete a poster showing products we get from beef cattle.

Writing: 1. Have students write a story about ranchers and what they do.

2. Using the Internet and other research sources, have students write descriptive/comparative essays about two or more breeds of beef cattle of their choice.

3. Have students research the history of cattle brands and write an informative essay about their findings.

Project: Students will complete a poster showing the many different breeds of beef cattle and their characteristics. The posters should include a collage of magazine pictures of products we get from beef cattle.

Background Information: Included in Lesson

From Moo to Meat and More!

Procedure

1. Introduce new vocabulary:

Grades 1-3		Grades 4-6
Longhorn	Pasture	Over graze
Breeds	Round up	Feedlot
Purebred	Brand	Roughage
Crossbred	Graze	Composite Breeds
Acre	Heifer	
Ear Tag		

Activities

2. Have students complete the activity "The Beef Cattle Ranch" by reading the grade appropriate information and completing the multiple-choice questions. The teacher may need to read the information aloud for younger students.

3. Using magazines and newspapers, have students make a poster of beef products. For younger students, gather pictures of beef products and make a memory game by making a word card to match each picture.

4. Have students complete "From Moo to Meat and More" word search. Also have students pick ten words from the list and use each word in a sentence.

5. For younger students, discuss the lunch menu each day and have them identify which menu items are beef products. For older students, copy the week's lunch menu and have them highlight the menu items that are beef products.

6. Complete "From Moo to Meat and More" activity.

7. Have students do research about some aspect of the beef cattle industry. This could include famous trail drives, early Texas ranches, cowboys, branding, or famous ranches in Texas. Have them write an informative paper on their findings.

8. Read about cattle brands. Complete "Read the Brand" activity.

9. Have students design their own brand using a potato.

10. For younger students, create a memory game using brands.

Additional Resources

www.tsha.utexas.edu/handbook/online/articles/view/CC/auc1.html

Chicago Historical Society

http://www.chicagohs.org/AOTM/oct99/oct99resrc.html

http://www.cowboyshowcase.com/brands.htm

From Moo to Meat and More!

Introduction

What animal supplies us with a nice, cold beverage to drink, a big, juicy hamburger to eat, along with baseball gloves, footballs, shoes and other types of clothing, and believe it or not, even JELLO? How about ……. a COW!

Longhorn Cow

Texas has more cows than any other state. In fact, when people from other states think about Texas, chances are, the first things that come to mind are cows and cowboys. Many early Texas ranchers got their start after the Civil War by rounding up wild **longhorn cattle** in south Texas. Cowboys would drive them north to Kansas and Missouri where they were loaded on trains and shipped back east to feed people in places like Philadelphia, Boston, New York, and Washington DC. The famous cattle drives of the old west ended in the late 1800s when the open prairie was fenced with **barbed wire** and railroads came to Texas.

Texas is the number one state in the United States in the number of cattle raised. Most of the cows raised in Texas are **beef cattle**. Beef cattle are used for meat, provide leather for clothing and supply **by-products** that go into many of the everyday things we use such as soap, candles, crayons, paint, and more.

Breeds of Beef Cattle

There are many **breeds** of beef cattle raised by ranchers. Some **purebred** beef breeds include Hereford, Angus, Simmental, Shorthorn, Brahman and Limousin. Most of the purebred beef breeds originated in Europe or the British Isles. Brahman cattle came to America from India.

Brahman Cow

Some cattle are mixtures of different beef breeds. Some of these mixed breeds have been registered as new breeds, such as the Santa Gertrudis. This breed was developed on the King Ranch in Texas and is a cross between Shorthorn and Brahman cattle. These are called **composite breeds**. Other composite breeds include Brangus,

made up of Brahman and Angus, and Beefmaster, which is a cross between Brahman, Hereford and Shorthorn. Many ranchers' herds consist of cows that are not recognized as a particular breed. They are a mixture called **crossbreeds**. Most ranchers put a purebred or composite bull with these crossbred cows hoping the calves exhibit the desirable characteristics of the parents.

Santa Gertrudis Bull

The Cattle Rancher

The cattle rancher raises cattle to be sold for meat. Since beef cattle eat mostly grass, many **acres** of grassland or **pasture** are needed to feed his herd. (An acre is about the size of a football field.) Usually, cattle graze land that is not suitable for growing crops. This may be because it is too steep, rocky, or there is not enough rainfall to plant crops. Many cattle ranches in Texas contain several thousand acres. The King Ranch in South Texas has over 800,000 acres. The rancher and his family often do most of the work required on the ranch. However, the larger cattle ranches have full time employees who help take care of the ranching chores.

The rancher has many jobs to do. During the summer he must buy or grow hay and grain to feed his cattle during the winter.   Hay may be stored in large round bales weighing 1500 pounds each. He will move these bales to the pastures as needed. The rancher must mend broken fences and repair machines that are used on the ranch. He must make sure there is enough water for his herd. Salt and mineral blocks must be put out in the pastures. Cattle lick these blocks in order to get the necessary salt and minerals in their diet.

In the winter and early spring, calves are born to the mother cows. The rancher must watch for any illnesses and treat any sick calves with the correct medication. Later in the spring the rancher rounds up his herd. He must often hire extra workers to help with the **round up**. He vaccinates the calves to keep them from getting diseases. In order to identify each of his animals, the rancher either**brands** (burns a special symbol in the hide) or tags the cattle. Tagging requires a numbered label, or **ear tag**, to be clamped through the animal's ear, like an earring. The rancher will now have identified the cattle he owns. He may enter this information into his computer for quick reference. He will know at the touch of a computer key how long each calf has been on the open range, if it is a **bull** (a male) or **heifer** (female), who its mother is, and when it needs to be sold.

The herd is returned to the pasture in order to graze (eat grass). For the rest of the spring and summer the calves roam the pastures, eating and gaining weight. The rancher may move his herd from one pasture to another in order not to over graze the land. This gives the grass time to rest and regrow. Helicopters are sometimes used on large ranches to locate cattle and check water supplies. The rancher might use his cellular phone to keep in contact with his ranch hands.

By the fall the calves weigh between 500 and 600 pounds and it is time for another round up. The rancher again may need to hire extra workers to help him. This time the rancher will round up the calves that he wants to sell. The calves are loaded into a trailer and taken to a livestock auction where cattle buyers bid on them. The cattle buyers load all the calves they have bought on a truck and send them to a feedlot. At the feedlot they are kept in large pens with other calves and eat a mixture of grains, protein supplements, vitamins, minerals, and roughage like peanut hulls or cottonseed hulls. When the calves reach market weight, usually about 1000 pounds, they are slaughtered and processed into steaks, roasts, hamburger, and other beef products we enjoy.

The rancher sometimes keeps a few of the best female calves, called heifers. When the heifers are about two years old they have a calf and are added to the herd to replace older cows. The rancher works long hours managing his ranch and must be skilled in the many jobs it takes to run an efficient cattle producing business.
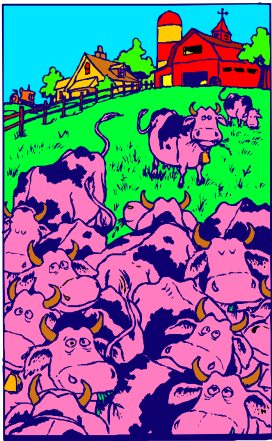

Cattle Round Up on the Pitchfork Ranch

The Beef Cattle Ranch

A rancher raises beef cattle.   These cattle become the meat sold in stores.
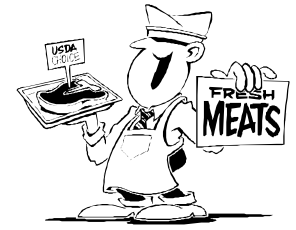
The first home for the calves is usually a pasture on the ranch. The calves live with their mothers in a group called a herd.

The rancher rides a horse among the animals to move them from one pasture to another.

The cattle must have plenty of grass to eat and water to drink. To their diet of grass, the rancher adds a special feed and vitamins.
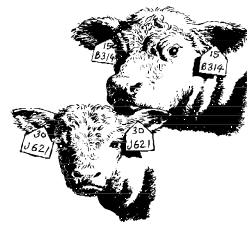
In the spring the calves are roped and brought in for special care. They are given shots to keep them healthy. Their horns are removed. They are branded. The branding irons are heated red hot and the symbol of the ranch is put on the cattle.

The beef rancher uses barbed wire on the fences around the ranch. The cattle know to stay away from the barbed wire.
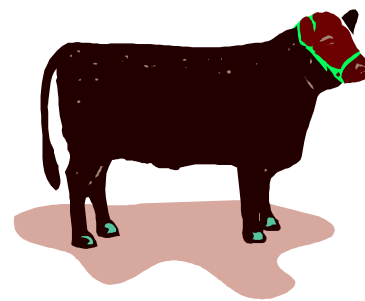
The Beef Cattle Ranch

1. A rancher raises _____ .

    O milk cows   O beef cattle

2. Beef cattle are raised for _____.

    O milk   O meat

3. In this story, the word "herd" means_____.

    O a group of animals   O a group of ranchers

4. Branding is used to help the rancher

    know _____.

        O how much the animals have eaten.

        O which animals belong to him.

5. What is barbed wire used for?

        O to keep the cattle inside the fence

        O to brand the cattle

6. Cattle eat _____.

        O insects and small animals

        O grass and special feed

The Beef Cattle Ranch

A rancher raises beef cattle. These cattle become the meat sold in stores.

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The beef rancher uses barbed wire on the fences around the ranch. The cattle know to stay away from the barbed wire.

In the spring the calves are roped and brought in for special care. They are given shots to keep them healthy. Their horns are removed. They are branded. The branding irons are heated red hot and the symbol of the ranch is put on the cattle.

Sometimes instead of branding them, the rancher will tag the cattle. A numbered tag called an ear tag is put through the animal's ear, like an earring.

For the rest of the spring and summer, the calves roam the pastures, eating and gaining weight. By the fall the calves weigh about 500 pounds, and it is time to round up the cattle and sell them.

Long ago, the calves would be taken to market with a trail drive. Today, ranchers take them by truck to sell them to a feedlot. At the feedlot, the calves will keep gaining weight. When they are about 1000 pounds, they will be butchered.
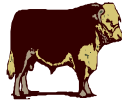
Beef cattle are used not only for meat, but they also provide leather for clothing and supply by-products that go into many of the everyday things we use such as soap, candles, crayons, paint, and more. Beef products include steak, roast, hamburger, ribs,

and steak fingers.

The Beef Cattle Ranch

1. A rancher raises _____ .

    O milk cows   O beef cattle

2. Beef cattle are raised for _____.

    O milk   O meat

3. In this story, the word "herd" means_____.

    O a group of animals

    O a group of ranchers

4. Branding and tagging are used to help the rancher
    know _____.

    O how much the animals have eaten.

    O which animals belong to him.

5. What is barbed wire used for?

    O to keep the cattle inside the fence

    O to brand the cattle

6. Cattle eat _____.

    O insects and small animals

    O grass and special feed

7. Which is __not__ a product of beef cattle?

    O steak   O bacon   O hamburger

8. Which paragraph below shows the correct order?

    O Calves are branded or tagged. Calves weigh about 1000 pounds.
       Calves are sold to the feedlot. Calves are butchered.

    O Calves weigh about 1000 pounds. Calves are
       branded or tagged. Calves are sold to the feedlot.
       Calves are butchered.

    O Calves are branded and tagged. Calves are sold to
       the feedlot. Calves weigh about 1000 pounds. Calves
       are butchered.

9. Which of the following is a product made from beef cattle?

    O candles   O blue jeans   O pork chops

10. Where does the rancher put the tag on his cattle?

    O on its leg   O on its ear   O on its tail

Activity 4

From Moo to Meat and More

Find the hidden words:

```
G Q A X V F S P D H P O H A U W E I U T T D Y B Q
B O F K S E I D N P U F E E O M X O X D B H N I V
I R D S L T P B R M O O E Z F N W M H Y Q D D U K
B X M D O Y E J C E S R O H S Q E K X A K R N Q Q
K I N U W V B A U O W W Y X U N A M P L I Q A G L
R A Y U A V C U K V D A I J N G U R W M H I R P M
C R E I T T X P W A W U E Q K E A O F Z X Z B X Z
T A O A W N R V G H A K P I C N W M J D J I Y F Y
E W K W J V C A E S G T R U C H C Y D Q I L M I G
S P I M R E Q T I N V K J H C F A N W O Z F H J Y
Q H N A R O Y H M L O A E N D E G R L W T F L H X
P H G T A F D Q I E D R A X O E A G C R F S S E T
E R U T S A P A L E X R T C Q B D P U U D I L P I
N Y B B C Z O T W U S L I O A I H C X C W O R E A
J B E W N I T C X F G Q R V L L K W O R S M E A T
E H H P B A R B E D W I R E E D V X X E R S H X X
N P J M C K H K N E V Q U Q P B E E R H Z V A O S
O M O F C R A Y O N S E Y G M X F E S T P E M R Y
X O E R I M M R E V G A U V E I F H F A I Z B P G
W E T O A M O Z E W Z R F D H E U R L E N C U X J
B R C O Q Y R H S W U T N Q N T I M K L T U R D O
F O R S M I O W W B W A R C K U C E P D H Y G M O
I A F O P P S O O D C G E D R E H W N X E Q E G M
C S A W U Y K F G I L S Z Y P Q P M Y X X N R D T
P T B Y C E R O H A D L D Y D G N S N H H O R N S
```

BARBED WIRE	FENCES	RANCH
BEEF	GRASS	RANCHER
BEEF CATTLE	HAMBURGER	ROAM
BRAND	HERD	ROAST
CALVES	HORNS	ROPE
CANDLES	HORSE	STEAK
CRAYONS	LEATHER	TRAIL DRIVE
EAR TAG	MEAT	TRUCK
FEEDLOT	PASTURE	

Activity 6

FROM MOO TO MEAT AND MORE!

Texas is the number one state in the United States in the number of cattle raised. Most of the cows raised in Texas are beef cattle. Beef cattle are used for meat, provide leather for clothing, and supply by-products that go into many of the everyday things we use such as soap, candles, crayons, paint, and more. Beef products include steak, roast, hamburger, ribs, and steak fingers.

1.   Which state is number one in cattle raising? _____

2.   What are beef cattle used for besides meat?

_____

3.   Name three beef products people eat.

_____   _____   _____

4.   Which sentence tells the main idea of this paragraph?

O Many products are made out of beef cattle.

O Texas is number one in beef cattle.

How to Read Brands

The cattle rancher uses a branding iron to mark his cattle. The brand is a symbol that represents the name of the ranch. A branding iron in the shape of the symbol is made from iron. The branding iron is a long iron rod with the symbol attached to the end. The branding iron is heated until it is very hot. Each cow on the ranch is marked with the brand.

In branding terminology, a leaning letter or character is "tumbling." In the horizontal position it is "lazy." Short curved strokes or wings added at the top make a "Flying T." The addition of short bars at the bottom of a symbol makes it "walking." Changing angular lines into curves makes a brand "running." Half-circles, quarter-circles, and triangles were frequently used in late nineteenth-century brands. An open triangle was a "rafter." If a letter rested in a quarter-circle it was "rocking." There were "bars," "stripes," "rails," and "slashes" that differed only in length and angle. When a straight line connected characters, a "chain" was made. A picture of a fish marked the cattle owned by Mrs. Fish of Houston. A. Coffin of Port Lavaca used a representation of a coffin with a large A on it. Bud Christmas of Seminole had his XMAS brand, and S. A. Hightower of Breckenridge placed "HI" beside a mushroom-like object.

R, or Block R	Running R	Walking R	Crazy R	Tumbling R	Lazy R

Bar R	R Bar	Circle R	Box R	Diamond R	Rocking R
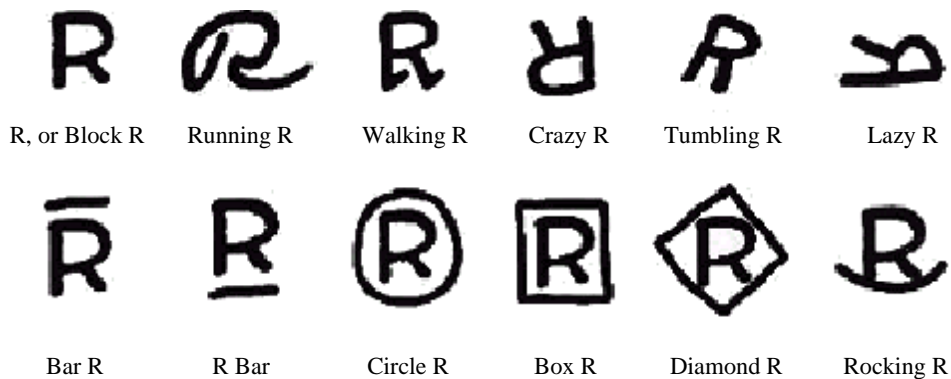
"CATTLE BRANDS." The Handbook of Texas Online.
http://www.tsha.utexas.edu/handbook/online/articles/view/CC/auc1.html

Chicago Historical Society
http://www.chicagohs.org/AOTM/oct99/oct99resrc.html

http://www.cowboyshowcase.com/brands.htm

Activity 8

Read the Brand

Read the information on the Cowboy Showcase website about how to read brands.
  http://www.cowboyshowcase.com/brands.htm#reading brands
Use your knowledge to read the names of the brands below. Write your answer
   in the blank.
Example: The first one is the *S Bar*.

1.   S   S Bar

2.   _____

3.   _____

4.   _____

5.   _____

6.   _____

7.   _____

8.   _____

9.   _____

Activity 9

Make Your Own Brand From a Potato!

Material:
 You will need: 1/2 potato sliced lengthwise, an ink stamp pad, pencil, thin tracing
                        paper, spoon, paper towel

Procedure:

1. Design your own brand on the tissue paper. The brand should mean something
    to you.

    For example: J = Big J Brand

2. Shade in the brand making it as dark as possible.

3. Turn the potato face down on the cut surface of the potato.

4. The brand will appear backward.

5. Use a pencil to rub over the reversed image. Remove the paper and the image
    will be transferred to the potato.

6. Use the spoon to carefully dig away the bits of potato from around the drawing
    of your brand. This should leave the brand higher than the rest of the potato.

7. Dry the potato brand by pressing it against a paper towel.

8. Ink the brand. Place the potato on the ink pad and gently move it so that the
    brand is covered with ink.

9. Press the brand on a clean piece of paper. Remove it. Voila! You have your own
    branding potato.

Famous Cattle Brands

Make several copies of the brand cards and laminate them. Use as a memory game.

Running W King Ranch	HK Brand King Ranch	Flying X	Lazy S
V Bar	Bar S Sawyer Cattle Co.	TRJ Brand	H Crook Hawkins Ranch
Hundred and One Ranch	7F Ranch	T Anchor	Turkey Track

From Moo to Meat and More Quiz

1. Beef cattle are raised for _____.

      O   milk   O meat

2. _____ is used to help the rancher

   know which animals belong to him.

      O Barbed wire   O Branding

3. Which is a product of beef cattle?

    O   steak   O bacon   O pork chops

4. _____ is used to keep the cattle inside the fence.

      O Branding   O Barbed wire

5. Cattle eat _____.

     O   insects and small animals

     O grass and special feed

From Moo to Meat and More Quiz

1. Beef cattle are raised for _____.

    O milk   O meat

2. _____ is used to help the rancher

know which animals belong to him.

    O Barbed wire   O Branding

3. Which is a product of beef cattle?

    O candles   O bacon   O pork chops

4. _____ is used to keep the cattle inside the fence.

    O Branding   O Barbed wire

5. Cattle eat _____.

    O insects and small animals

    O grass and special feed

6. A _____ is a group of animals.

        O   herd   O   tag

7.-9. Name three products that are made from beef cattle.

_____   _____   _____

10.   Number these steps in the correct order. 1-5

_____Calves are branded or tagged.

_____Calves are born.

_____Calves weigh about 1000 pounds.

_____Calves are butchered.

_____Calves are sold to the feedlot.

ANSWER KEY

ACTIVITY 2
The Beef Cattle Ranch (1-3)

1. beef cattle
2. meat
3. a group of animals
4. which animals belong to him
5. To keep the cattle inside the fence
6. grass and special feed

The Beef Cattle Ranch (4-6)

1. beef cattle
2. meat
3. a group of animals
4. which animals belong to him
5. To keep the cattle inside the fence
6. grass and special feed
7. bacon
8. 3rd choice
9. candles
10. on its ear

ACTIVITY 6
From Moo to Meat and More

1. Texas
2. soap, candles, crayons, paint, and more
3. will vary
4. Many products are made out of beef cattle.

ACTIVITY 8
Read the Brand

1. S Bar
2. Hundred and One
3. Running W
4. Lazy S
5. Half Circle 10
6. Rising Sun
7. Slash C
8. Flying X
9. Circle S

ASSESSMENT
From Moo to Meat and More Quiz (1-3)

1. Meat
2. Branding
3. steak
4. Barbed wire
5. grass and special feed

From Moo to Meat and More Quiz (4-6)

1. Meat
2. Branding
3. candles
4. Barbed wire
5. grass and special feed
6. herd
7.-9. will vary
10. 2,1,4,5,3