

Beef Cattle Lesson Plans

For use in the education of school-age children in the beef cattle industry

Designed by Kitty Halloran and Cheyenne Love

for

Fort Hope



Lesson Plan for Day 1

Topic: Basic Cattle Terminology

Corresponding Worksheet: "Cattle Terminology"

Lesson Length: 30 Minutes or Less

Lesson Location: Classroom, Indoors

Lesson Overview:

1. Opening question of "Who knows what a cow is?"
 - Hopefully, most of the students will know what a cow is, and be willing to say that they do
2. After they answer, ask something along the lines of "Who knows what a (bull, steer, or heifer) is?"
 - Fewer students will probably know what these terms mean
3. Go into describing the days topic: Cattle Terminology
 - NOTE: Let the students know that "cattle" means a group of cows, bulls, steers, heifers, etc.
4. Go through each term on the corresponding worksheet with the students and make sure everyone understands these commonly used terms
5. Allow the students to work on the crossword puzzle and vocabulary matching game on the corresponding worksheet alone or in small groups
6. Go over the answers to the crossword puzzle and matching game with the students

Crossword Answer Key:

1 Down- Heifer

2 Across- Steer

3 Down- Bull

4 Across- Chute/Chute System

5 Down- Cow

5 Across- Calf

Matching Game Answer Key (From Top Photo Down):

- Calf

- Chute/Chute System

- Cow

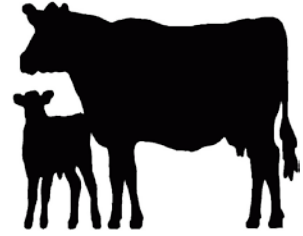
- Bull

- Heifer

- Steer



Cattle Terminology



Bull- Adult male used for breeding

Cow- Adult female that has had babies

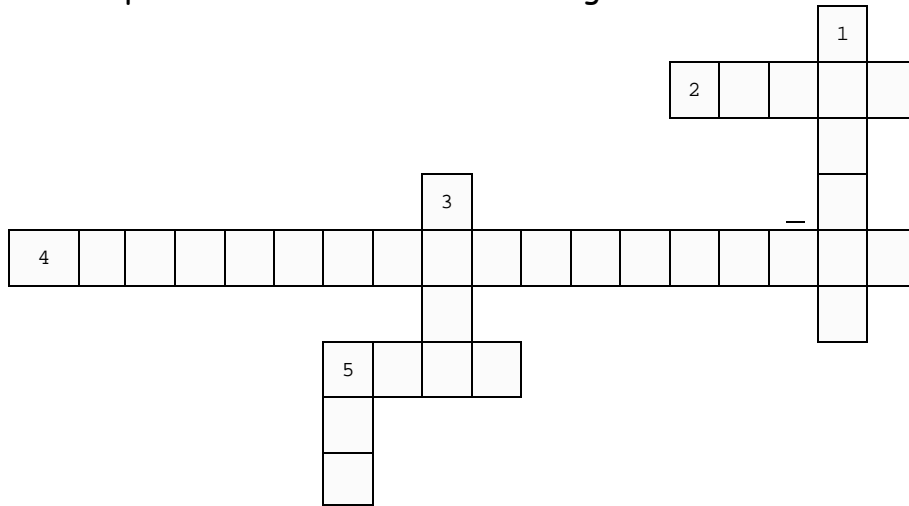
Steer- Male that cannot be used for breeding

Heifer- Young female that has not had babies yet

Calf- A male or female baby

Chute/Chute System- Holds cattle for many things

Complete the crossword below using the above terms!



• **Down**

- 1. Young female that has not had babies yet
- 3. Adult male used for breeding
- 5. Adult female that has had babies

• **Across**

- 2. Male that cannot be used for breeding
- 4. Holds cattle for many things
- 5. A male or female baby

Terminology Matching Game

Draw a line to match the term to the picture!

Cow (Hint: Who is with a baby?)

Bull (Hint: Who looks the toughest?)

Chute/Chute System (Hint: Which photo shows cattle being held?)

Steer (Hint: He is the same color as the bull, but doesn't look as tough!)

Heifer (Hint: She is the same color as the cow, but she doesn't have a baby with her!)

Calf (Hint: Which photo shows a baby?)



Lesson Plan for Day 2

Topic: See what the cow sees

Corresponding Worksheet: None

Lesson Length: 30 Minutes or Less

Lesson Location: Outdoors

Lesson Overview:

1. The goal of this lesson will be to show the students the path the cattle take when going through the pens and chute system
2. The students should start in the pasture, then be led by the teacher(s) through the holding pens, s-chute and actual chute (it would be safer to go around the actual s-chute and chute, instead of through them), the larger arena, and back out into the pasture
 - At each section, the teacher can give a little information about what the students are seeing
 - EXAMPLES: “The pasture is where the cattle eat,” “the chute is what holds the cattle while they are getting shots and brands,” etc.
 - Answer any questions the students might have along the way
3. After walking through the entire system, make sure the students understand why cattle are brought through this type of system as opposed to just being worked with in an open pasture
 - This is the safest, easiest, and overall best system for the cattle and humans involved

Note on Safety:

- For safety purposes, make sure there are absolutely no cattle in the entire system when leading the students through it

Lesson Plan for Day 3

Topic: Cattle Byproducts

Corresponding Worksheet: “Byproducts- Fun Facts”

Lesson Length: 30 Minutes or Less

Lesson Location: Classroom, Indoors

Lesson Overview:

1. Discuss with the students what cattle byproducts are, where on the cow they come from, and go over some examples of popular items that many of the students probably don't know come from a cow (such as crayons, ice cream, and glue)
 - NOTE: The cattle byproducts chart on the corresponding worksheet will be helpful for this discussion with the students
2. Let the students fill out the byproducts fill-in activity by memory first before referring to the cattle byproducts chart for help
 - NOTE: The students may work on this fill-in activity individually or in small groups
 - NOTE: Teachers should walk around and answer any questions the students may have about the fill-in or help the students if they need assistance
3. As a final activity for the day, let the students get up and locate some cattle byproducts that are in the classroom

Byproducts Fill-in Worksheet Answers:

- Refer to the cattle byproducts chart for the answers to the byproducts fill-in activity; there are many correct answers for the fill-in!

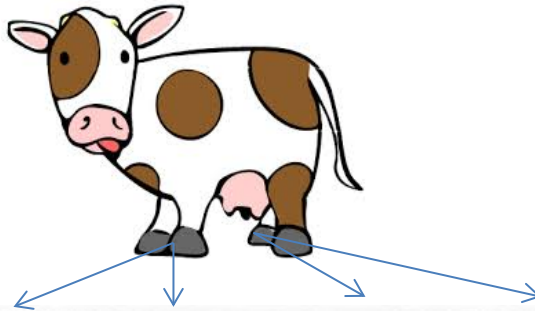
Byproducts- Fun Facts

What are byproducts?

They are things made from parts of the cow (besides your hamburger!)

There are hundreds of uses for Cattle byproducts, which we use every day.

Nearly the entire cow is used, but only about half of the cow is used for beef.... So what is the rest of the cow used for?



Cattle By-Products			
<u>Hide & Hair</u>	<u>Fats & Fatty Acids</u>	<u>Horns, Bones, Hooves & Blood</u>	<u>Organs & Glands</u>
Leather Case	Asphalt	China Dishes	Racket Strings
Leather Belt	Candles	Dog Food	Allergy Medicine
Soccer Ball	Crayons	Printing Press	Vaccines
Baseball	Toothpaste	Comb	Prescription Meds
Baseball Mitt	Lipstick	Fertilizer	Vitamins
Paint Brush	Deodorant	Dog Bones	
Glue	Shampoo	Fire Exting. Foam	
Wallpaper	Bar Soap	Gelatin	
Building Insulation	Laundry Soap	Ice Cream	
Emery Boards	Floor Wax	Camera Film	
Sandpaper	Rubber Boots	Jello	
Plywood & Drywall	Running Shoes	Gummy Candy	
Paper Boxes	Tires	Jelly Beans	
Linoleum	Brake Fluid	Marshmallows	
	Car Polish & Wax	Chewing Gum	



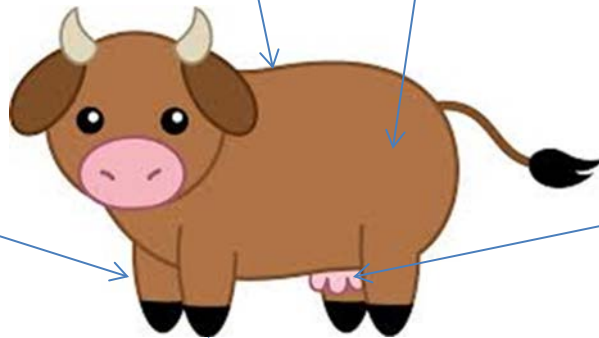
Look at all the things you can make from one cow!

Byproducts Fill in the Blanks!

Hide and skin

Fat

Hair



Organs and glands

Horns and hooves

Lesson Plan for Day 4

Topic: Safe Cattle Handling

Corresponding Worksheet: "Safe Cattle Handling"

Lesson Length: 30 Minutes or More

Lesson Location: Outdoors

Lesson Overview:

1. Separate the students into two groups; one group will get a lecture about proper cattle handling and complete the game on the back of the corresponding worksheet, while the other group will be given hands-on experience putting on a halter, leading a cow, etc.
 - NOTE: The hands-on group should learn how to put on a halter, lead the cow a few steps, and understand where to stand when leading (the left side of the cow is where the student should stand and walk), and how to take off the halter... Of course, adult supervision is necessary
 - NOTE: The lecture group will be given the "Safe Cattle Handling" worksheet... the teacher will go over the worksheet with the students, and make sure they understand the material. Demonstrations using students to emphasize the "zigzag" movement technique and blind zones would be helpful for student understanding. The game on the back of the worksheet can be done after lecture is over and the students understand the material
2. Groups will switch after both are done with their respective activities (lecture or hands-on)

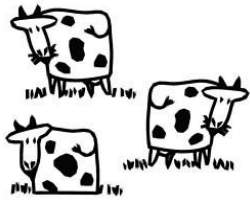
Cattle Handling Game Answer Key:

Upper Left Box- Cowboy should move in a zigzag pattern towards the cattle

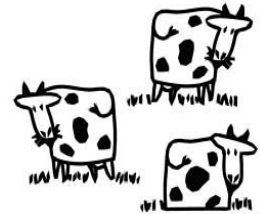
Upper Right Box- Cowboy should move straight up, towards the upper right hand corner of the box, and then move in a zigzag pattern towards the cattle

Lower Left Box- Cowboy should move in a zigzag pattern towards the cattle

Lower Right Box- Cowboy should move towards the lower left corner of the box, then in a zigzag pattern towards the cattle



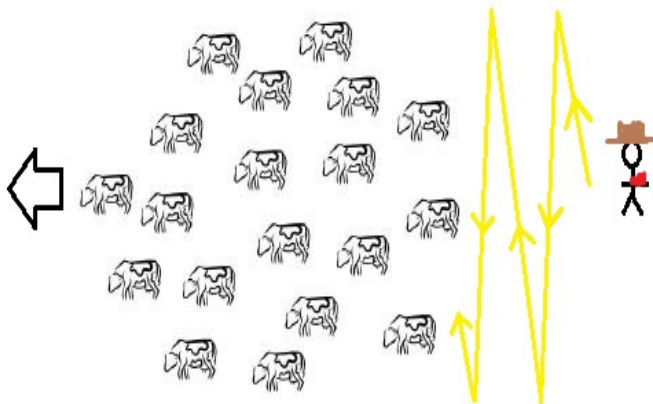
Safe Cattle Handling



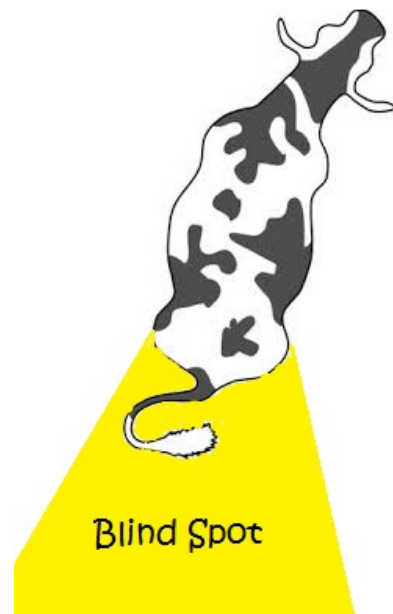
It is very important to know how to safely approach, lead, and herd cattle!

Did you know?

- ❖ Cattle like to stay together; they hate being separated from their friends!
- ❖ It is best to move cattle in large groups! The best way is seen in Picture 1. Moving in a zigzag pattern behind the herd is the easiest and safest way to move them!
- ❖ Do not stand right behind cattle! They have a blind spot, which makes it so they cannot see directly behind them, just like us! (see Picture 2).
- ❖ When leading a single animal with a halter, always stand to the left of the animal's head!



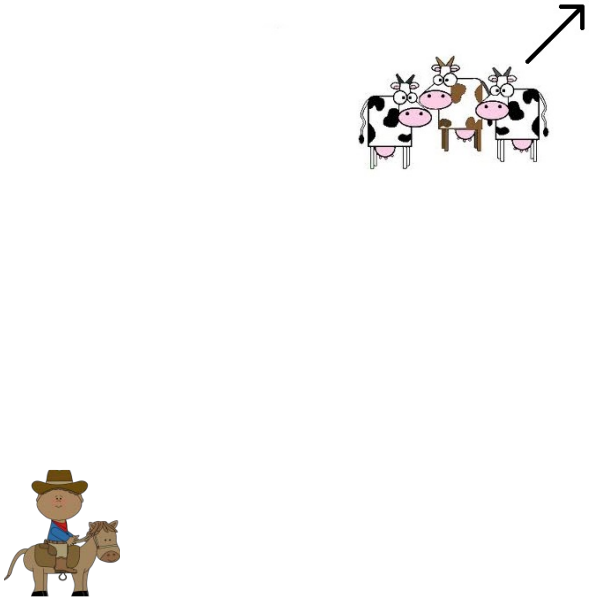
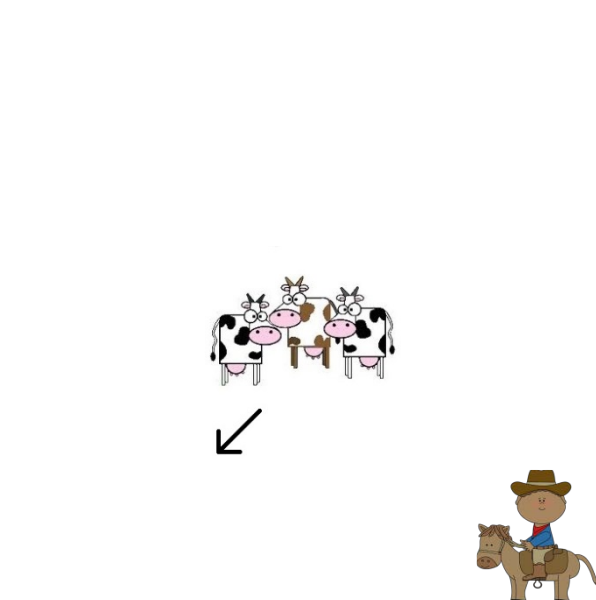
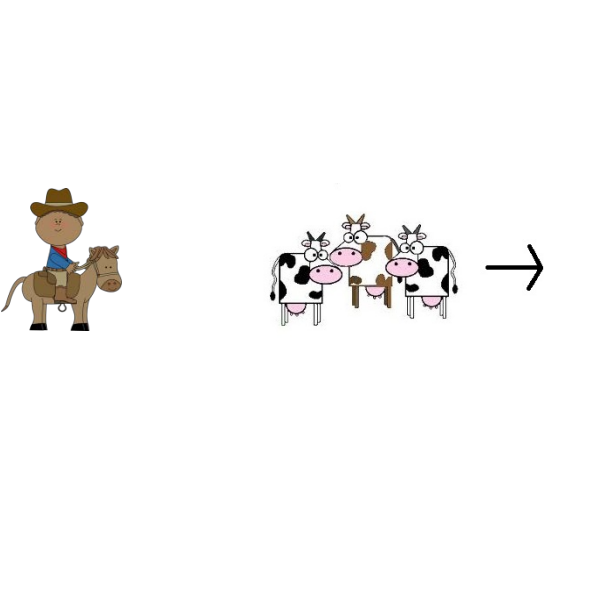
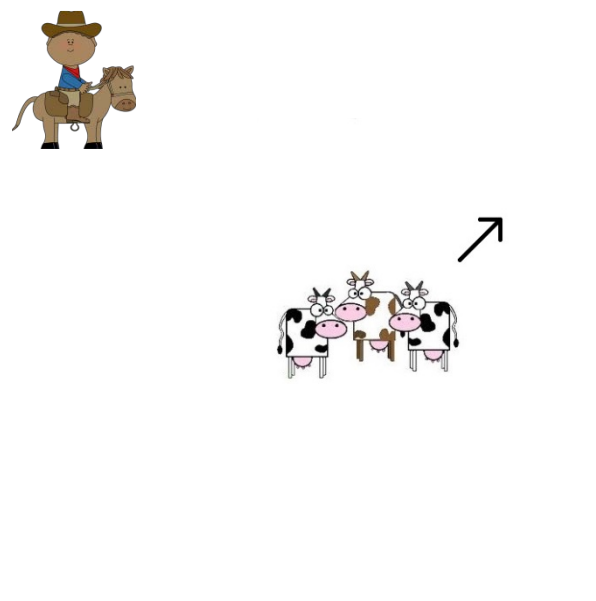
Picture 1



Picture 2

Cattle Handling Game

Draw arrows or lines to show how the cowboy should move to get the Cattle herd to go in the direction of the arrow!

Lesson Plan for Day 5

Topic: Cattle Identification

Corresponding Worksheets: “Cattle Identification” and “Build a Brand”

Lesson Length: 30 Minutes

Lesson Location: Classroom, Indoors

Lesson Overview:

1. Opening question of, “How do we tell cattle apart?”
 - Most of the students might answer by cattle color, gender, or age. The teacher should explain that there are other much easier ways for farmers and ranchers to tell cattle apart
 - These simpler ways of ID are brands, ear tags, and (less commonly) tattoos
2. Go through the “Cattle Identification” worksheet with the students and make sure everyone understands the difference between brands, ear tags, and tattoos
 - Emphasize the proper location for brands, ear tags, tattoos
3. Let the students look at the “Reading a Brand” information on the corresponding worksheet and complete the “Name the Brand” activity
4. The students may then create their own brand and place it in the proper location on the cow drawing on the provided “Build a Brand” worksheet

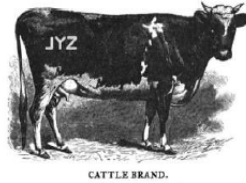
Name the Brand Answer Key:

- 1) Walking H
- 2) Running K
- 3) Circle E
- 4) Half Diamond T
- 5) Box S

Cattle Identification

- What are brands?
 - They are a way for ranchers to identify their cattle using special markings
 - Ranchers create their own unique brand to tell the difference between their cattle and cattle from a different ranch.

- Examples:



- What are the different types of brands?
 - There are a bunch of different ways a rancher can design a brand
 - The symbols can include a number, letter, or common shape
 - One thing to remember is to keep the design simple! Simple designs are easier to read and less painful for the cattle

- Examples:



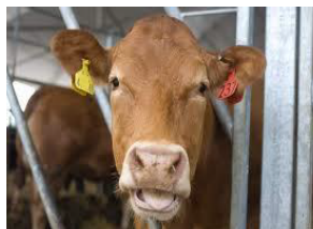
- Where do you put a brand?
 - Brands can be put either on the hindquarters or the shoulder of the cow
 - Brands can also be put on either the right or the left side of the cow

- Examples:



- There are other ways to identify the cow too!
 - Ear tags are a very common means of identification
 - Tattoos, while less common, are also another option

- Examples:



Reading a Brand

Rules:

1. Left to Right

2. Top to Bottom

3. Outside to Inside

R "R"


 Quarter Circle R

 Circle R

 Tumbling R

 Half Diamond R


 Diamond R


 Lazy R

 Rafter R

 Box R

 Reverse R

 Bar R

 Walking R

 Flying R

 Running R

Name the Brand?

1.  _____

2.  _____

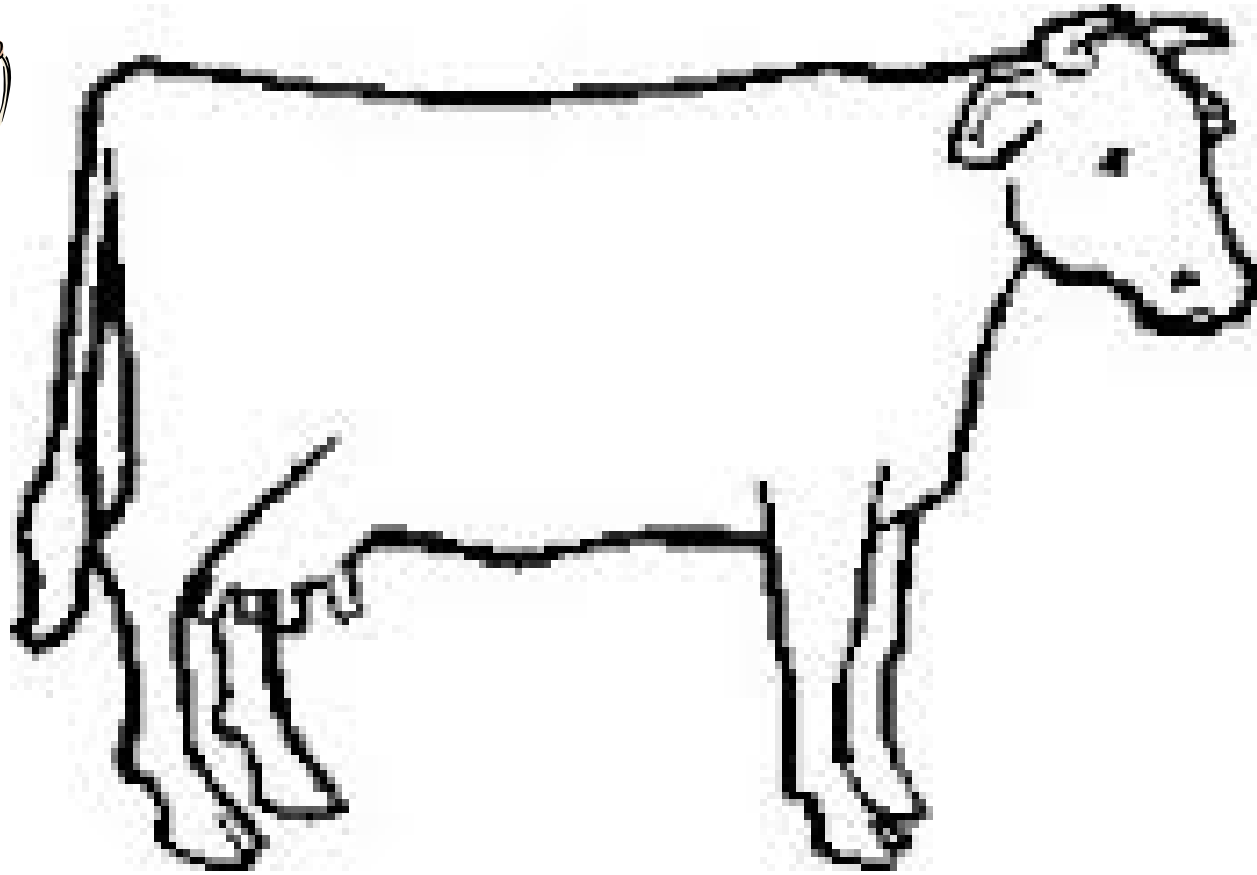
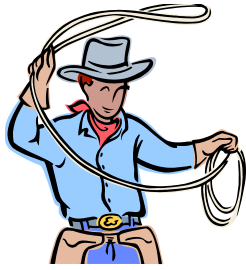
3.  _____

4.  _____

5.  _____



BUILD YOUR OWN BRAND! USE THE TECHNIQUES WE LEARNED
IN CLASS. BE CREATIVE, AND HAVE FUN! HERE'S A HINT IF YOU
ARE STUCK: LOTS OF RANCHERS USE THEIR INITIALS TO MAKE
THEIR BRANDS.



Put your brand on the cow! Also put an ear tag or tattoo in it's appropriate place.

Lesson Plan for Day 6

Topic: Segments of the Beef Cattle Industry

Corresponding Worksheet: “Segments of the Industry” Booklet

Lesson Length: 30 Minutes

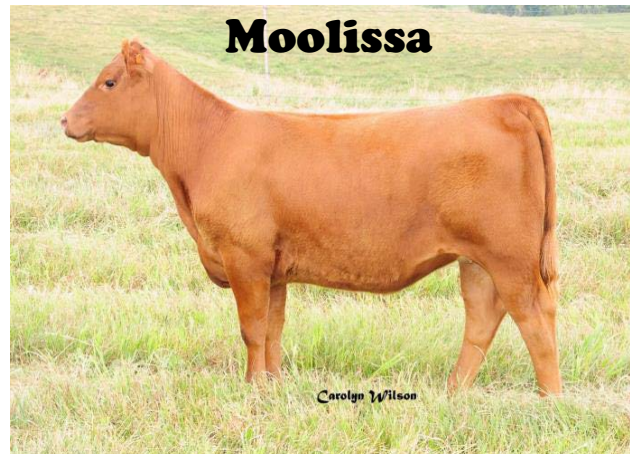
Lesson Location: Classroom, Indoors

Lesson Overview:

1. Open by telling the students that there are different places cattle have to visit before they become the food that we enjoy
 - This is called the “Six Segments of the Industry” and they are...
 - Producer
 - Stocker/Backgrounder
 - Feedlot
 - Packer
 - Retailer/Food Service (These are separate segments, but for the sake of simplicity, we are going to combine them! So with these combined, there are “five segments of the industry!”)
2. Read the “Segments of the Industry” booklet with the students. When you reach a drawing activity, give the students about 5 minutes to draw what is told in the booklet
3. After the booklet reading and drawing is over, let the students show off their artwork to other students and the teacher(s)

Segments of the Industry

In this booklet we will go through each part of the industry! We will follow the stories of Steve the steer and Moolissa the heifer in their journey from pasture to you.



1. Producer

The producers own what is known as a cow-calf operation. In this type of operation, the manager will breed their herd of females and calve out baby cattle. This is where Steve and Moolissa are born! The producer will raise the calves until they are ready for the next segment of the industry. There are two types of producers: Commercial producers and seedstock producers.

The commercial producers provide the cattle that we primarily use for beef. These cattle are not registered, and will end up as meat for consumers. This is what Steve is going to be. Draw in the space below a picture of a cow and her calf at a commercial producer ranch.

Seedstock producers provide registered cattle that have superb genetics. These cattle are the best of the best: they look great and they have a gentle temperament. Kids in FFA and 4-H for shows buy most of these cattle. Some of the cattle are given to the commercial producers so they have some good cattle too! This is what Moolissa will do. In the space below, draw cattle in a seedstock producer operation.

2. Stocker/ Backgrounder

After Steve and Moolissa say goodbye from their mothers, they are taken from the producer to the stocker/backgrounder. Here, the young cattle are put out on pasture to eat grass for a few months to grow big and strong before they head to the next segment of the industry. Once Moolissa gains weight, she will be bought back by a producer so she can be used as a breeding cow for the next generation of calves! Draw a picture of some cattle on pasture!

3. Feedlot

At the feedlot, Steve will hang out in a large pen with a lot of other cattle for a few weeks. Here they are fed a high energy feed to put on fat before going to the next segment. This is what you usually see on the freeway on long road trips (although you usually smell it before you even see it!). Sometimes, if the cattle are big enough, they skip the stocker/backgrounder step entirely and come to the feedlot right after they are taken away from their mothers. Draw a picture of cattle in a feedlot!

4. Packer

Once Steve is big enough, he is taken from the feedlot to a packing facility. At the packer, cattle are made into beef that we eat. Draw a picture of a cow on the top of the arrow, and draw some of your favorite beef products under it!



5. Retailer/ Food Service

The retailer and food service industries will purchase beef from the packer and sell it to various customers. This includes you! Draw a picture of a customer buying beef product from a retailer or food service, which can include the grocery store, a fast food restaurant, or even the school cafeteria!

Lesson Plan for Day 7

Topic: Review Day and Graduation

Corresponding Worksheet: “Beef Buckaroo” Certificate

Lesson Length: 30 Minutes

Lesson Location: Classroom, Indoors

Lesson Overview:

1. Separate the students into 2 or more groups for the review game; let each group pick and choose their review questions from the jeopardy game (link to the game is below)
 - NOTE: The rules to this review game are just like jeopardy, but for fairness sake, alternate groups and students every question to make sure everyone gets a chance to answer questions
 - NOTE: If Internet access is an issue in the classroom, the questions could be written on pieces of paper and hung on the wall
 - NOTE: The students may have their notes out during the game for assistance!
2. After the review game is completed, students will be given their “Beef Buckaroo” Certificate, which certifies that they have finished beginner beef training
 - NOTE: The student names will have to be filled in on the individual certificates manually

Link to the Jeopardy Review Game:

<http://www.superteachertools.net/jeopardyx/jeopardy-review-game.php?gamefile=1402341779>

- NOTE: If the game needs to be edited or changed for any reason, the password required for editing is “daisy” (all lower caps)

A decorative border surrounds the text, featuring a light gray swirling ribbon that forms a rectangular frame. Scattered throughout this frame are numerous stars of varying sizes and styles, including solid black stars, white stars with black outlines, and small five-pointed stars. The overall aesthetic is celebratory and Western-themed.

CERTIFIED BEEF BUCKAROO

this certificate is awarded to:

in recognition of
Successfully completing beginner beef cattle training!

Lesson Plan for Day 1

Topic: Cattle Vocabulary

Corresponding Worksheet: "Cattle Vocabulary"

Lesson Length: 30 Minutes or Less

Lesson Location: Classroom, Indoors

Lesson Overview:

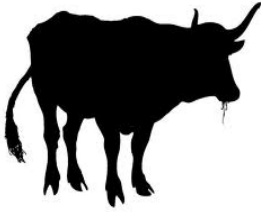
1. Discuss the topic of today's lesson: Cattle Vocabulary
 - NOTE: Let students know that the terms discussed today are used every day in the beef cattle industry
2. Go through each term on the corresponding worksheet with the students and make sure everyone understands these commonly used terms
3. Allow the students to work on the word scramble and vocabulary matching game on the corresponding worksheet alone or in small groups
4. Go over the answers to the word scramble and matching game with the students

Word Scramble Answer Key:

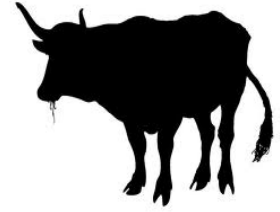
1. Cull cattle
2. Parturition
3. Maternal traits
4. Ruminant
5. Paternal traits
6. Weaning
7. Castration
8. Estrus

Matching Game Answer Key (From the Top Definition Down):

- Weaning
- Parturition
- Cull cattle
- Maternal traits
- Paternal traits
- Estrus
- Castration
- Ruminant



Cattle Vocabulary



Castration- The act of removing a bull's testicles

Cull cattle- Cattle that you do not want anymore and need to sell

Estrus- The time in the reproductive cycle when the female cow is in heat

Maternal traits- Traits that influence female characteristics, such as milk yield

Parturition- The act of giving birth

Paternal Traits- Traits that influence male characteristics, such as muscle growth

Ruminant- A type of animal that has a compartmentalized stomach; this type of animal will regurgitate their food, chew the cud, and swallow it down to aid in digestion

Weaning- Taking older calves away from their mothers so they can start eating grass and growing on their own

Unscramble the terms below!

1. cllu tletca

2. itntrporuia

3. emntrlaa aristt

4. inrutmna

5. rpheltaa traist

6. agniwne

7. nsratIcaot

8. rstseu

Matching Vocabulary

Draw an arrow from the term to the definition!

Castration

Taking older calves away from their mothers so they can start eating grass and growing on their own

Estrus

The act of giving birth

Parturition

Cattle that you do not want anymore and need to sell

Weaning

Traits that influence female characteristics, such as milk yield

Ruminant

Traits that influence male characteristics, such as muscle growth

Maternal traits

The time in the reproductive cycle when the female cow is in heat

Paternal traits

The act of removing a bull's testicles

Cull cattle

A type of animal that has a compartmentalized stomach. This type of animal will regurgitate their food, chew the cud, and swallow it down to aid in digestion.

Lesson Plan for Day 2

Topic: Cattle Anatomy

Corresponding Worksheet: “Parts of the Beef Cow”

Lesson Length: 30 Minutes

Lesson Location: Outdoors

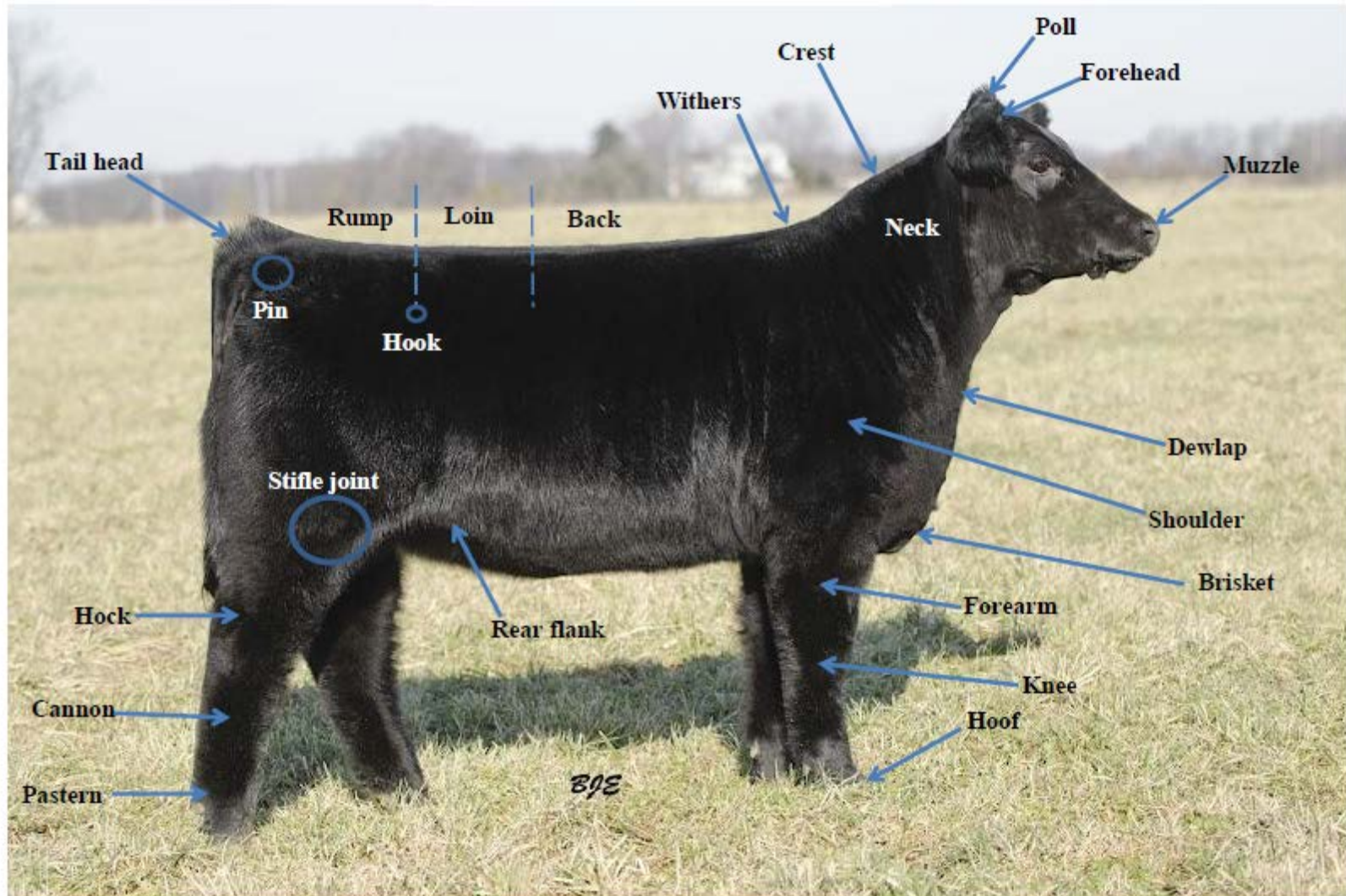
Lesson Overview:

1. Students should be divided into 2 groups; one group will go with one teacher to judge cattle conformation, and the other group will go with another teacher to identify “parts” of the beef cattle’s anatomy
 - The group judging conformation will be given the chance to look at a cow (preferably a group of cattle, however one can work if that is all that is available). The teacher will go over the “Anatomy and Conformation” information on the corresponding worksheet. The group will then use this information on the corresponding worksheet to help them judge the cow (or cattle’s) conformation.
 - The other group will work with one cow, in order to be able to identify important anatomical points on the cow’s body. The teacher will encourage the use of the “Parts of the Beef Cow” informative photograph, in order to help students be able to identify these “parts” on a live animal as well as on paper.
2. After about 15 minutes, the groups should switch activities

Helpful Notes:

- The “poll” is located directly between the cow’s ears
- “Pins” and “hooks” may be harder to see on heavier cows, but can still be identified by touch
- The heifer on the “Parts of the Beef Cow” photograph has very good conformation, this can be used as guide when judging conformation as well
- The cow being used for the anatomical points activity should be very calm and friendly, since the students may want to feel the points on the cow’s body

Parts of the Beef Cow



Anatomy and Conformation

Conformation: the structure of cattle- how their bodies are put together

All cattle are built very much the same, but often there are many variations that leads to "good" conformation and "bad" conformation.

Where are the major areas to look at when judging conformation?

- Head
- Neck
- Topline (down their back)
- Legs

What is *good* conformation?

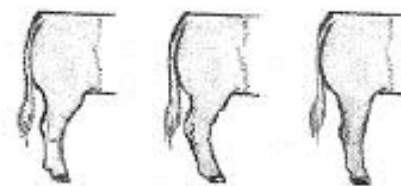
- Head
 - Matches the body: not too large, not too small
 - Fits the gender: females should have a feminine shape, males should look more manly
- Neck
 - Flows smoothly into shoulders
 - Long
- Topline
 - Long
 - Flat
- Legs
 - Long
 - Correct angles



Correct

Buck Kneed

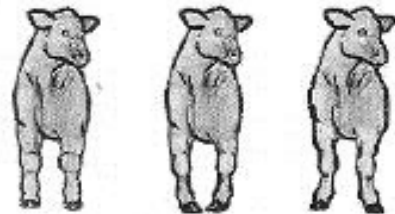
Calf Kneed



Correct

Sickle Hocked

Postlegged



Correct

Bowlegged
or Pigeon Toed

Knock Kneed
or Splay Footed



Correct

Bowlegged
or Pigeon Toed

Cow Hocked or
Splay Footed

Lesson Plan for Day 3

Topic: Cattle Breeds

Corresponding Worksheets: “Breeds of Cattle” and “Color and Label the Breeds”

Lesson Length: 30 Minutes or Less

Lesson Location: Indoors or Outdoors

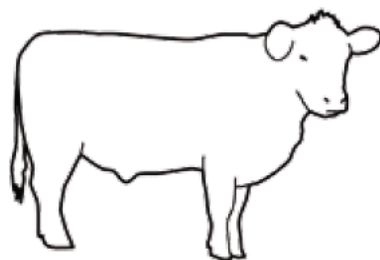
- Lesson can be taught indoors or outdoors: outdoors would be helpful if there were multiple breeds of cattle available for the students to look at, if not, indoors is fine as well

Lesson Overview:

1. Discuss the “Breeds of Cattle” information sheet with the students, and make sure everyone understands the difference between popular cattle breeds
 - The species of cattle refers to bos Taurus, bos Taurus/indicus (a crossbred cattle would fall under this category), and bos indicus
 - Breeds refer to British, European continental, F1 (crossbred cattle), and Zebu. Breeds also refer to Angus, Hereford, Brahman, etc.
2. The teacher may choose to take a fun poll after the lecture, and see what cattle breed on the corresponding worksheet is the most popular amongst the students
3. The students may complete the “Color and Label the Breeds” game either individually or in small groups
4. Go over the answers to the game after the students are done

Color and Label the Breeds Answer Key:

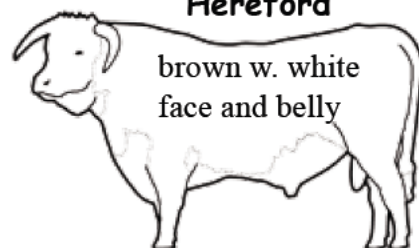
Either of the two left-hand animals could be Black Angus or Charolais, but the Angus must be colored black and the Charolais colored or left white.



Black Angus/Charolais

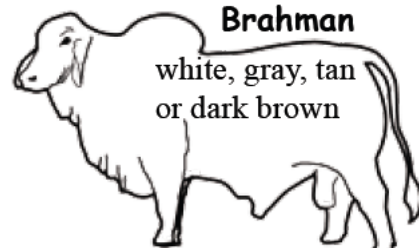


Hereford



brown w. white
face and belly

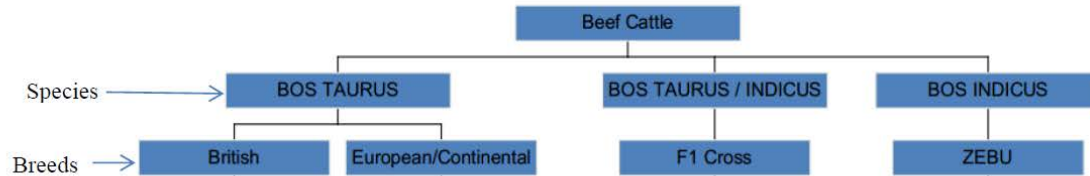
Brahman



white, gray, tan
or dark brown

Breeds of Cattle

Cattle Classification



The Zebu Breed:

Brahman:

- ~ Native to Africa and Southeast Asia
- ~ Heat tolerant
- ~ Parasite resistant
- ~ Hump on the withers
- ~ Large, droopy ears
- ~ Colors range from white to gray
- ~ Poor meat quality



British Breeds:

- ~ Superb maternal traits
 - ~ fertility
 - ~ longevity
 - ~ high milk production
- ~ Early puberty
- ~ Less muscle mass

Angus:

- ~ Black
- ~ Most popular breed in the US



Hereford:

- ~ Red with white points
- ~ Horned or polled
- ~ Low maintenance



~
Shorthorn:

- ~ Red to white in color
- ~ Can also be a “roan” color



European/ Continental Breeds:

- ~ Superb paternal traits
 - ~ fast growth rate
 - ~ large muscle mass
 - ~ large body size

Simmental:

- ~ Most popular continental breed in US
- ~ Light red to dark red with white points
- ~ Mostly black now in the US



Limousin:

- ~ Excellent growth and muscle mass
- ~ Golden red to red brown in color



Charolais

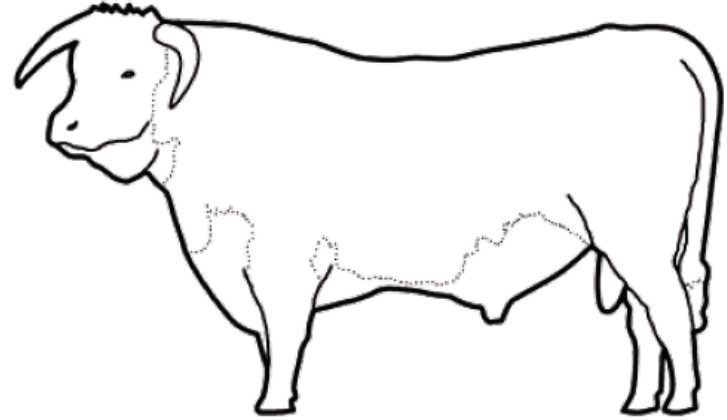
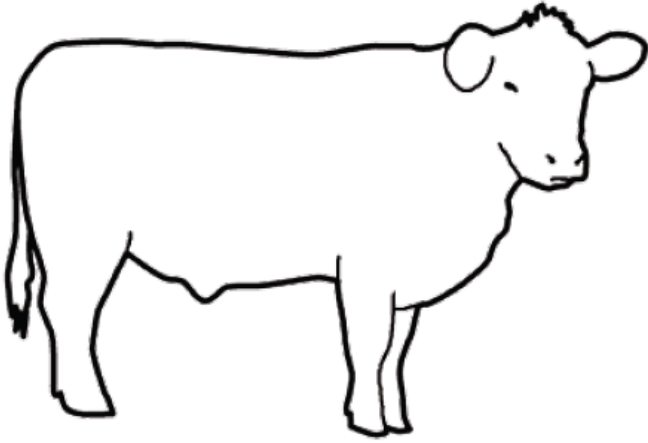
- ~ White to cream colored
- ~ Known for growth and muscle



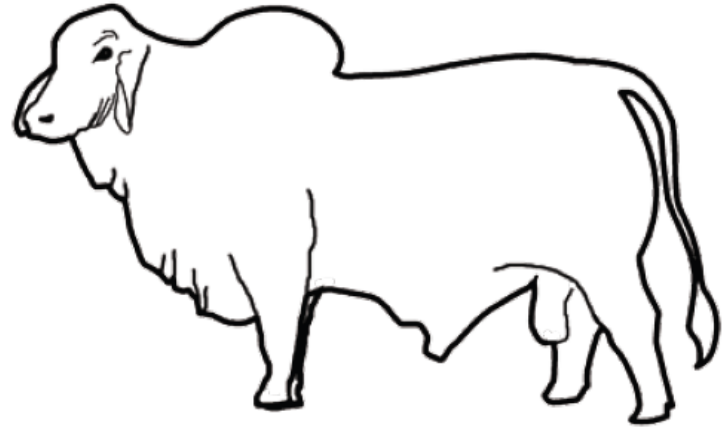
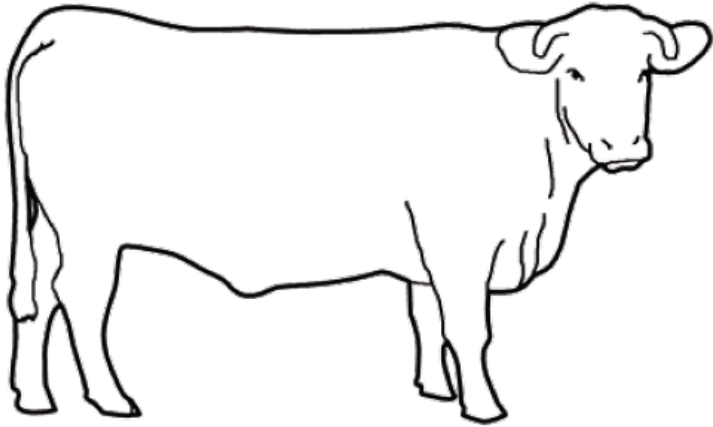
What's your favorite breed?



Color and Label the Breeds



Hereford Black Angus Charolais Brahman



Lesson Plan for Day 4

Topic: BCS and Culling

Corresponding Worksheet: “BCS and Culling”

Lesson Length: 30 Minutes or Less

Lesson Location: Outdoors

Lesson Overview:

1. Discuss the “BCS and Culling” worksheet with the students, and make sure they understand fully understand how to judge BCS and the things that can affect a cow’s BCS score
2. Make sure the students understand the “Fun Fact” on the corresponding worksheet
 - NOTE: We want cows fatter at calving because they need to be able to produce milk to support the calf... an emaciated cow or an obese cow will not be able to produce the milk the calf needs
3. Make sure students understand why some producers choose to “cull” some of their cattle
4. Let the students look at the cattle on pasture at the ranch and give them their own BCS scores
 - After they’ve had their guesses, share the actual BCS scores of the cattle in the herd

Helpful Notes:

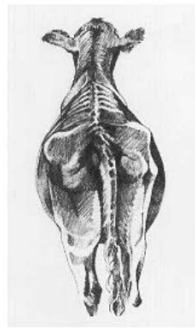
- The cattle herd should be close enough to where the lesson is being taught so the students have the opportunity to score them
 - The herd can be put in the arena the night before or morning of the lesson if necessary
- It is important to determine the BCS scores of the cattle herd BEFORE the lesson begins, so the students can find out the real scores after they have attempted giving the cattle a score

BCS and Culling

Body condition score (BCS)

- Based on degree of fatness
- Numeric scale
 - 1: emaciated (incredibly thin)
 - 5: ideal BCS (not too fat, not too thin)
 - 9: obese (severely overweight)

BCS = 3



BCS = 5



BCS = 7



Why BCS can vary among cattle:

- Age- BCS will decrease as the animal ages
- Nutrition- cattle eating too much food will have a high BCS, cattle that don't eat enough food will have a low BCS
- Activity- cattle that have a large pasture to wander in will have a lower BCS than cattle in a feedlot pen with little room to move
- Hormonal changes- BCS of cows will fluctuate depending on their reproductive cycle

Fun fact: Cows should be a BCS 5 for breeding because that is the ideal condition for conception. At calving, a cow should be a BCS 6. This is because we want her to be a little fatter in order to support her nutritional needs as well as the calf's nutritional needs.

If BCS is an issue, the producer might want to consider "culling" some of their cattle

Other reasons why a producer might want to cull their cattle:

- Conformational issues
- Reproductive issues
- Disease

Lesson Plan for Day 5

Topic: Cattle Selection

Corresponding Worksheet: "Selection"

Lesson Length: 30 Minutes or Less

Lesson Location: Classroom, Indoors

Lesson Overview:

1. The goal of this lesson is to make sure students understand the things to look for when picking out replacement cattle
 - NOTE: While this lesson incorporates conformation (which was mentioned during the "Cattle Anatomy" lesson, it also includes two new things to look for in cattle-temperament (behavior) and herd size regulation
2. Go over the "Selection" worksheet with the students, and make sure they understand the difference between conformation and temperament, and make sure they understand the importance of keeping the herd the same size every year
3. Let the students check-off the things they would want in their cattle herd on the corresponding worksheet
 - NOTE: While there are technically no "right" or "wrong" answers to this activity (some people might find charging cattle exciting), students should know to check-off the most positive traits for their cattle herd

Check-Off Activity Best Answers:

- ✓ Calm
- ✓ Straight legs
- ✓ Smooth topline
- ✓ Halter broke

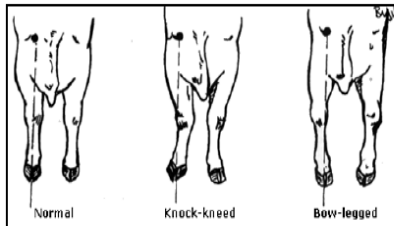
Selection

It's important to be mindful of what kinds of cattle you select for your next generation of breeding stock. Here are a few points to consider when selecting cattle to buy for your operation:

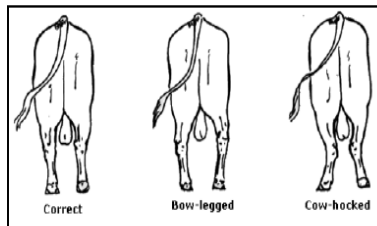
- Conformation
- Temperament
- How many you need to replace your cattle that you sold

Conformation: Look at different body parts of the cattle, because some are built differently. While judging conformation, it's important to look over the entire body, but for now, let's look at the significant parts of the body.

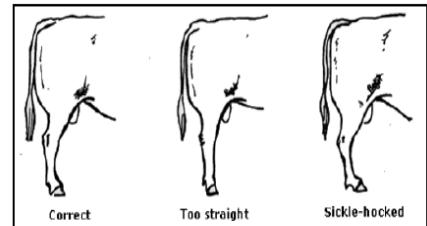
Legs (front view)



Legs (rear view)



Legs (side view)



Look at these two pictures, what do you notice about the topline of the cattle?



Producers like to see a long, smooth, flat topline. The picture on the right has correct conformation, while the picture on the left is not ideal.

Temperament: What kind of cattle would you rather have?



Cattle producers would much rather have cattle that are easy to handle. Sometimes, depending on the type of operation, it's not even necessary for cattle to be halter-broke, just as long as they are safe to be around. It's pretty bad if you are trying to sell your cattle and they keep charging people! Watch out for if your cattle are pawing the ground and lowering their head at you, this is an indication that they may charge!

Replacements:

Producers want to keep their herd at about the same size each year. But, when they sell their good cattle to stockers, or if they cull the bad cattle, they end up with less than what they started with! This is why a producer needs to buy new cattle to replace what they already sold.

Check off the traits that you would like to look for in selecting cattle!

- | | |
|--|---|
| <input type="checkbox"/> Kicking | <input type="checkbox"/> Knock kneed |
| <input type="checkbox"/> Calm | <input type="checkbox"/> Smooth topline |
| <input type="checkbox"/> Bow legged | <input type="checkbox"/> Halter broke |
| <input type="checkbox"/> Pawing the ground | <input type="checkbox"/> Charging |
| <input type="checkbox"/> Straight legs | <input type="checkbox"/> Sickle hocked |

Lesson Plan for Day 6

Topic: Cattle Digestion

Corresponding Worksheet: "Cattle Digestion"

Lesson Length: 30 Minutes or Less

Lesson Location: Classroom, Indoors

Lesson Overview:

1. The goal of today's lesson is to teach the students about the differences between a human's digestive system and a cow's digestive system
 - NOTE: Due to the extreme complexities behind the cattle digestive system, this lesson will be incredibly basic, and focus more on the physical differences between the human and cow stomach; as opposed to the chemical differences, (students can learn all about that when they get to college!)
2. Go over the information on the beginning of the "Cattle Digestion" worksheet with the students, and make sure the students understand the basic facts of cattle digestion
 - NOTE: This would be a good opportunity to ask if students have heard the term "chewing the cud." Tell them that "chewing the cud" is when cows re-chew food that they have eaten before. It helps them further digest food!
3. Let the students draw the 4 stomachs on the cattle outline by themselves, then let them work on the "Human vs. Cow Digestion Activity" on the back of the corresponding worksheet alone or in small groups
4. Go over the answers to the "Human vs. Cow Digestion Activity" once all the students are done

Human vs. Cow Digestion Activity Answer Key:

1. The cow's stomach has 4 compartments; it is much larger than the man's stomach; it curves more; etc.
2. 1
3. 4
4. Food goes into the man's stomach and then moves onto the intestines. Food in the cow's stomach is stored and then chewed again later... this is called "chewing the cud."

Cattle Digestion

How do cattle turn grass into tasty beef that we later enjoy?

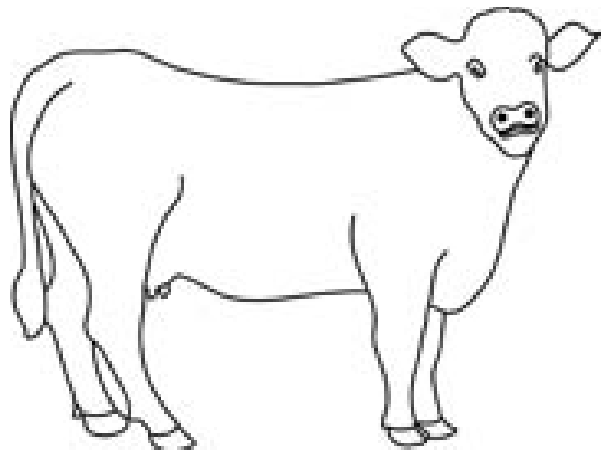
In humans, food goes into our mouths, down our throats, and into our stomachs. Cattle are different in one main way- we have 1 stomach and they have 4*!

Did you know?

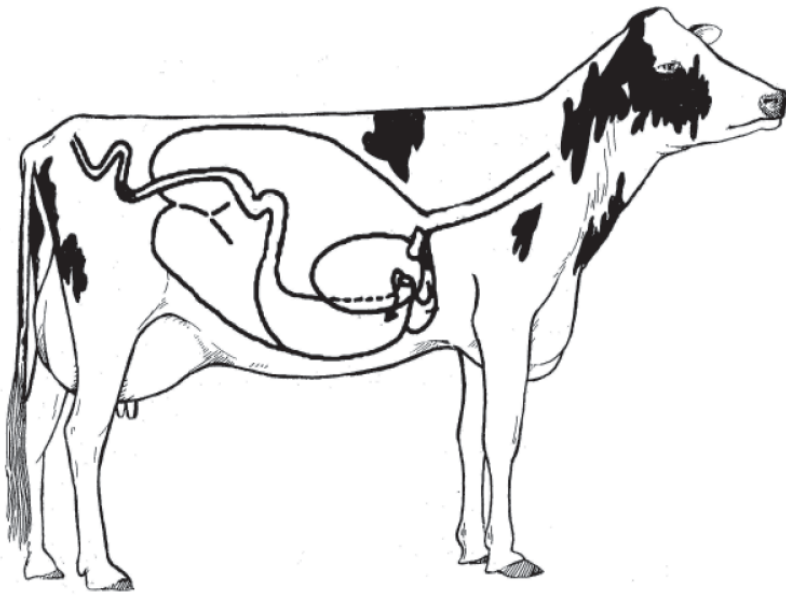
- **This unique digestive system of cattle makes them “ruminants”**
- **Because cattle have 4 stomachs*, they can digest things humans cannot! (It would not be nice for us to try to eat grass or hay!)**
- **In one of the cow’s stomachs, there are “little animals” called microorganisms, that help a cow get all the nutrients it can from its food**

Draw the following path on the cow outline...

Mouth/Throat/Stomach 1 with microorganisms/Stomach 2/Stomach 3/Stomach 4



***Technically, cows have only 1 large stomach with 4 “compartments!”**

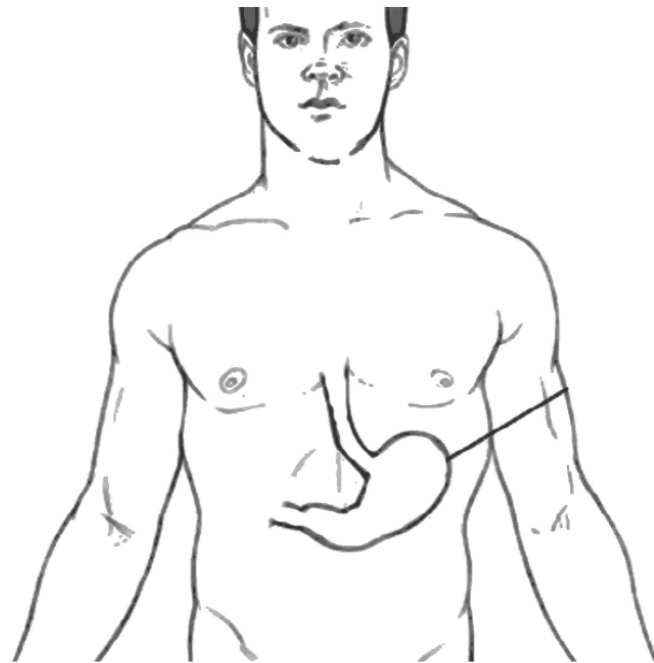


1. What differences can you see between the man's stomach and the cow's?

2. How many compartments does the man's stomach have? _____

3. How many compartments does the cow's stomach have? _____

4. How do the man's stomach and the cow's work differently?



Lesson Plan for Day 7

Topic: Review Day and Graduation

Corresponding Worksheet: “Moo Master” Certificate

Lesson Length: 30 Minutes

Lesson Location: Classroom, Indoors

Lesson Overview:

1. Separate the students into 2 or more groups for the review game; let each group pick and choose their review questions from the jeopardy game (link to the game is below)
 - NOTE: The rules to this review game are just like jeopardy, but for fairness sake, alternate groups and students every question to make sure everyone gets a chance to answer questions
 - NOTE: If Internet access is an issue in the classroom, the questions could be written on pieces of paper and hung on the wall
 - NOTE: The students may have their notes out during the game for assistance!
2. After the review game is completed, students will be given their “Moo Master” Certificate, which certifies that they have finished intermediate beef training
 - NOTE: The student names will have to be filled in on the individual certificates manually

Link to the Jeopardy Review Game:

<https://www.superteachertools.net/jeopardyx/jeopardy-review-game.php?gamefile=1402624038>

- NOTE: If the game needs to be edited or changed for any reason, the password required for editing is “daisy” (all lower caps)

A decorative border surrounds the text, featuring a light gray swirling ribbon that weaves through the page. Scattered throughout this ribbon are various stars: some are solid black, some are white with black outlines, and some are small and faint. The stars vary in size and are positioned at different angles, creating a festive and celebratory feel.

CERTIFIED MOO MASTER

this certificate is awarded to:

in recognition of
Successfully completing intermediate beef cattle training!

Lesson Plan for Day 1

Topic: Meat Science

Corresponding Worksheet: “Meat Science-Part 1”

Lesson Length: 30 Minutes

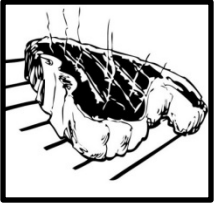
Lesson Location: Classroom, Indoors

Lesson Overview:

1. Opening question of “Who knows what ‘meat’ actually is?”
 - Most students might say meat is muscle, but after the students answer, provide the actual definition, which states that meat is all animal tissues suitable for food! This definition can even include things like liver or tongue
2. This lesson will focus on “beef” which is the term for meat from cattle
 - Meat is made up mainly of water, but also has nutrients, proteins, amino acids, minerals, carbohydrates (carbs), and fat
 - All of these things are needed for good health
3. Discuss “Interesting Fact 1,” which can be seen on the corresponding worksheet
 - Explain to students that bright, cherry red is usually the color of meat we see at the deli counter or meat department (this color is caused by the meat being exposed to more oxygen). This is because grocers know this color is the most pleasing to customers. However, this color has a trade-off, it is a more appealing color to the eye, but it spoils faster
 - Meat that is browner (such as vacuum-packaged beef) is not necessarily bad; it most likely means it is just not being exposed to as much oxygen
 - One way to detect spoilage in beef is of course by checking the expiration date, but a customer can also smell to see if the beef omits a rotten odor (if it does, it’s best to buy something else!)
4. Let the students work on the activity about meat cuts on the corresponding worksheet, go over answers (provided below) once everyone is done
5. Have the students discuss their thoughts about “Interesting Fact 2” in small groups. Once everyone has come up with their answers, have a larger mini-discussion
 - Explain that lean beef has skyrocketed into fame recently since people are becoming increasingly concerned with health and eating less fatty food items

Meat Cuts Activity Answer Key:

- Hamburgers: Chuck, Round, and Sirloin (any of the 3 cuts)
- Meatballs: The same cuts as the hamburger, but some people like to mix pork into their meatballs as well!
- BBQ Ribs: Rib
- Steak: Short Loin, Rib, Chuck, Round, Rib, Sirloin (any of the 3 cuts), Plate, Tenderloin
- Beef Stew: Any cut of meat can be used for beef stew! The different cuts are of course different quality, so that will be the only difference!



Meat Science-Part 1



What is meat?

Commonly, meat is referred to as animal tissues that are suitable for use as food. Usually what we think of when we think of meat is the muscles from an animal.

Did you know...

- **Beef is the term for meat from cattle**
- **Pork is the term for meat from pigs (swine)**
- **Poultry is the term for meat from chickens or turkeys (However, we most commonly hear people say they feel like chicken, or can't wait for the turkey at Thanksgiving dinner!)**

For this class, we will focus on beef!

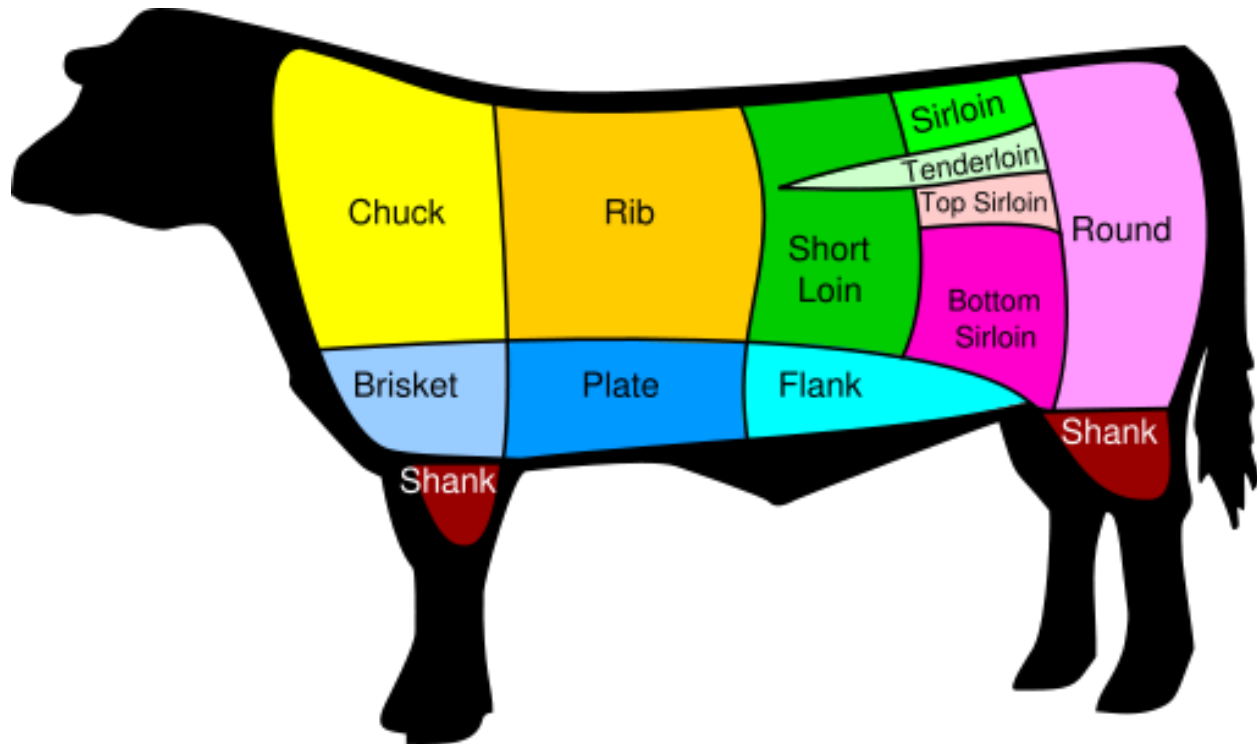
Beef Composition

Beef is made up mainly of water, but it also contains proteins, amino acids, minerals, vitamins, carbohydrates and fat... important things we need for good health!

Interesting Fact 1: When you see beef in the grocery store, it is always a bright cherry red. However, beef can also be a brown shade. Color signals how much oxygen is in the beef!

(Brown= Less Oxygen, Red=More Oxygen)

Here are the most popular cuts of beef...



Can you guess which cuts go towards our favorite foods?

What cuts do you think these foods come from?

- **Hamburgers:** _____
- **Meatballs:** _____
- **BBQ Ribs:** _____
- **Steak:** _____
- **Beef Stew:** _____

Interesting Fact 2: In the past, fatty beef was considered very high quality and desired. Now, people are demanding lean beef with little to no fat! Why do you think this is?

Lesson Plan for Day 2

Topic: Meat Science (Continued)

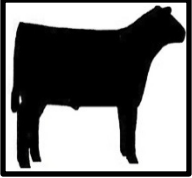
Corresponding Worksheets: “Meat Science- Part 2” and “Quality Grade Chart”

Lesson Length: 30 Minutes or Less

Lesson Location: Classroom, Indoors

Lesson Overview:

1. Discuss cattle slaughter with the students
 - Helpful Definitions:
 - “Knock box”- A steel “box” that holds cattle before being stunned; it is like a chute system, but has solid walls
 - Captive bolt gun- A mechanized “gun” that shoots a steel rod into the cattle’s skull and retracts back (no projectile bullet)
 - “Bust a gut”- When the meat plant worker accidentally pierces the viscera with a knife, and the stomach or intestinal contents are released (very unsanitary!)
2. Go over “Interesting Fact 1” on the corresponding worksheet; make sure students understand what “Dark Cutters” are and how they are caused
 - NOTE: While Dark Cutters are considered undesirable because of their looks, they can still be eaten (it just won’t taste as good as normal beef)
3. Discuss the things that go into judging the overall quality of meat
 - NOTE: Quality grades are given qualitative (word) scores, while yield grades are given numerical (number) scores
4. Explain the “Quality Grade Chart”
 - The students should know that prime, choice, and select are the most popular quality grades of meat for consumers



Meat Science- Part 2



How do we go from a live animal to a hamburger?

Cattle are made into food through a process called slaughter. While some people think this word sounds scary or cruel, it is actually the most humane and nice way for cattle to be turned into food that we later enjoy.

A basic overview of slaughter...

- 1. Cattle arrive at the slaughter plant**
- 2. After a night in the holding pens, the cattle are calmly led in a single-file line into the “knock box”**
- 3. Cattle are stunned unconscious with a captive bolt gun**
- 4. Stunned cattle are hung up by a leg and bled... now the cattle are considered “carcasses”**
- 5. The hide is removed either by hand or by a hide pulling machine**
- 6. The head and limbs are removed**
- 7. The viscera (internal organs) are taken out... The worker is careful not to “bust a gut”**
- 8. A postmortem (after death) inspection is performed by a USDA inspector**
- 9. The carcass is split with a saw and rinsed with water or an organic acid**
- 10. The carcass is refrigerated for future food use**

Interesting Fact 1: While most meat emerges from slaughter normal and ready for food prep, there is a condition called “Dark Cutters” which produces undesirable beef. Beef with this condition (caused by stress before slaughter) is dark in color, has a high pH, and holds a lot of water!

How is the overall quality of meat judged?

Meat is judged based on a quality grade and a yield grade.

- **Quality Grades are based on the amount of marbling (fat in the meat) and the age of the animal. Marbling ranges from *abundant* (the most fat) to *practically devoid* (the least amount of fat). Age ranges from A (9-30 months old) to E (greater than 8 years old)... See the chart on the next page!**
- **Yield Grades are based on how much edible meat the carcass will produce. It ranges from 1 (a lot of meat is produced) to 5 (barely any meat is produced)**

Quality Grade Chart

Combining Marbling with Carcass Maturity to Determine Quality Grade						
		Carcass Maturity				
Marbling Score		A	B	C	D	E
Abundant						
Moderately Abundant	Prime					
Slightly Abundant				Commercial		
Moderate						
Modest	Choice					
Small					Utility	
Slight	Select					
Traces						
Practically Devoid	Standard				Cutter	Canner

Lesson Plan for Day 3

Topic: Vaccinations

- Chute System Operation may also be a topic for this day, but that is up to availability of resources (amount of cattle, teachers, etc.) and desire of instructors

Corresponding Worksheet: “Vaccinations”

Lesson Length: 30 Minutes

Lesson Location: Outdoors

Lesson Overview:

- If chute system operation is included...
 1. Students should be divided into 2 groups; one group will be taught how to work the chute system (how to move cattle up to it, how to catch cattle in the chute, etc.) while the other group goes over the “Vaccinations” worksheet with a teacher and will be given the opportunity to practice vaccinating cattle (with an empty syringe- no needle!) on a very calm cow’s neck
 - The chute system group will be shown the mechanics behind the chute, how it is used/operated, and how to be safe around it (no walking in front of the chute without telling the operator first, etc.)
 - The vaccination group will go over the corresponding worksheet with the teacher, then be given the opportunity to practice proper vaccination techniques with an empty syringe (no needles) and a calm cow
- If chute system operation is not included...
 1. Students should be divided into 2 groups; both groups will be practicing vaccination techniques following the activities seen above, however, there will be 2 cows (one for each group)

Helpful Notes:

- The cow(s) used for proper vaccination techniques should be very calm, friendly, and used to vaccinations/being touched on the neck
- High adult supervision is necessary for chute system operation even if cattle are not involved (and the chute is empty)
 - Basic chute operation can be taught without cattle being involved
 - Since the chute is a large piece of machinery, adult supervision of all students around the system is absolutely necessary



Vaccinations



There are 3 “basic protection” vaccines recommended for all cattle...

- 1. Clostridial**
- 2. Respiratory**
- 3. Deworm**

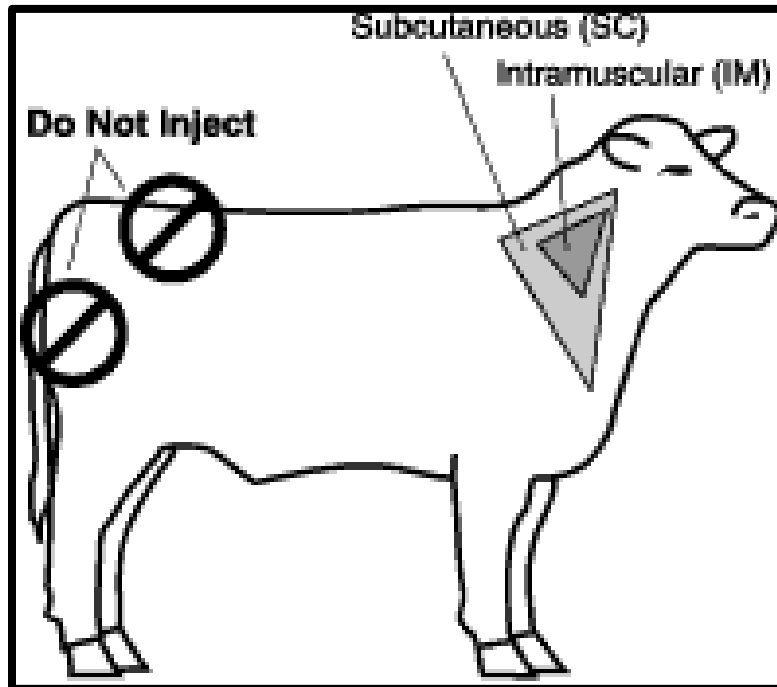
Vaccines must be handled properly!

- Follow the label (this one is the most important!)**
- Check expiration date**
- Refrigerate after mixing the vaccine**
- Double check how long the vaccine will be effective after mixing and refrigeration**

The 2 types of vaccines are “intramuscular” or “IM” (the vaccine goes into the animals’ muscle) and “subcutaneous” or “SubQ” (the vaccine goes directly under the skin)

The proper location to vaccinate?

The neck!



Why is the neck the proper place to vaccinate cattle?

(Hint: How might the “Do Not Inject” locations affect meat quality?)

Some other vaccination tips...

- **It is important to “tent” the skin before a SubQ vaccine**
- **An IM needle is 1-1.5 inches long, whereas a SubQ needle is .75-1 inch long**
- **The needle should be inserted at a 90-degree angle to the neck for IM and a 45-degree angle to the neck for SubQ**

Lesson Plan for Day 4

Topic: Reproduction and Breeding

Corresponding Worksheet: “Reproduction & Breeding”

Lesson Length: 30 Minutes or Less

Lesson Location: Classroom, Indoors

Lesson Overview:

1. Go over the 2 ways possible to breed cattle- natural service and artificial insemination (AI) with the students
 - NOTE: Tell the students that some farmers combine these 2 breeding methods; they AI their cattle, then put them in a pasture with a bull. If the AI technicians missed a cow, the bull will take care of it!
2. Make sure the students understand how the farmer decides it’s time to inseminate their cattle
 - NOTE: Estrus is briefly mentioned here, but it will be talked about it more detail further on in the worksheet
3. Let the students work in small groups to brainstorm some ideas about the advantages and disadvantages of AI (there is a space on the corresponding worksheet that students can write their ideas in); after they have had some time to think of reasons, go over the reasons below with them
4. Discuss “estrous” and “estrus” and make sure the students understand the difference between the two terms
5. Talk about the ways estrus is detected
 - NOTE: All of the ways listed on the corresponding worksheet are effective, but the prices of each method vary! Chalk is cheap, as opposed to the electronic device, which is very expensive!

Advantages of AI Answer Key:

- Genetic improvement
- Availability of sires (bulls)
- Danger of bull removed
- Disease reduction
- Increased flexibility for breeding
- Better cost

Disadvantages of AI Answer Key:

- Estrus detection can be tricky
- Trained AI technician is needed
- Could cause genetic defects if not properly recorded/researched
- Technology and equipment to store semen can get expensive

Reproduction & Breeding



Did you know?

Reproduction is the most important factor in cattle profitability! There are 2 ways to breed cattle, natural service and artificial insemination (AI).

Natural Service

- Bull actually breeds the female
 - Standing heat (estrus)
 - Multiple times
 - Young Bull: 25-30 cows
 - Old Bull: 30-40 cows

Artificial Insemination

- 5 Step System
 - Collect semen from bull
 - Freeze semen
 - Ship to anywhere
 - Thaw semen
 - Inseminate cow

How does the farmer know when to inseminate?

The farmer will check for signs of “standing heat” (estrus) twice a day. Insemination will be done 12 hours after estrus is observed and continue to be done on the AM/PM rule until estrus is over. Hopefully, pregnancy will result after all that work!

AJ is the most preferred method of breeding!

List some possible advantages of AJ

What are some possible disadvantages of AJ?

Up to now, we have only mentioned the term “estrus,” but there is another term in regards to cattle reproduction called “estrous”...

So what is the difference?

- “Estrous” refers to the entire cycle of reproductive events (including estrus)
- “Estrus” refers to a specific time during the estrous cycle, where the female is in standing heat (i.e.- ready to be bred)

What are some ways estrus is detected?

Chalk, paint, or fabric patches on the tail head, chin-ball markers, or electronic devices!

Lesson Plan for Day 5

Topic: Calving

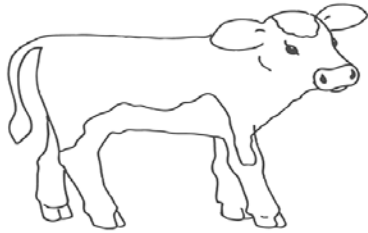
Corresponding Worksheet: “Calving”

Lesson Length: 30 Minutes or Less

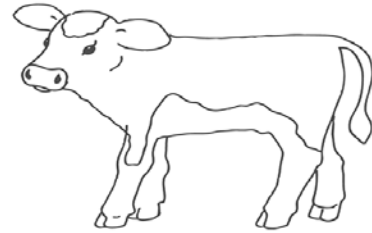
Lesson Location: Classroom, Indoors

Lesson Overview:

1. Begin discussing the proper facility for calving (a cow or heifer giving birth)
 - NOTE: The barn MUST be dry and lined with hay for the comfort of the mother and calf; if the mother is in a pasture, plenty of shelter (a barn, a covered area) should be available and follow the dry and hay lined guidelines
2. Go over the 3 stages of calving, which can be seen on the corresponding worksheet
 - Make sure the students know the differences between the steps (what each step entails, length of the steps, etc.) before moving on
3. Discuss colostrum, and why it is important for the calf to receive it as soon as possible after birth
4. Explain what dystocia is, and the different ways a calf can be born (see photo on the corresponding worksheet)
 - NOTE: Normal birthing position will look like the calf is diving out of the birth canal
 - NOTE: The photo shows many ways a calf can be improperly delivered
 - The breech position is the MOST dangerous form of dystocia, because the calf can suffocate due to a lack of oxygen supply (since the placenta, which in pregnancy gives the calf it’s oxygen, has already been broken)
 - To correct dystocia, the farmer or ranch hand can gently push the calf back into the uterus, and turn it around into the correct position (even though this sometimes does not work!)
5. Discuss how “pulling” a calf can be used to help a mother who has been in labor for too long
 - NOTE: The person helping pull a calf MUST pull in time with the cow’s contractions



Calving



Many important elements go in to making sure calves are delivered safely!

Before the calf is born, a proper birthing facility should be set-up! It should be dry, have plenty of shelter, and be lined with hay for the comfort of the cow and calf!

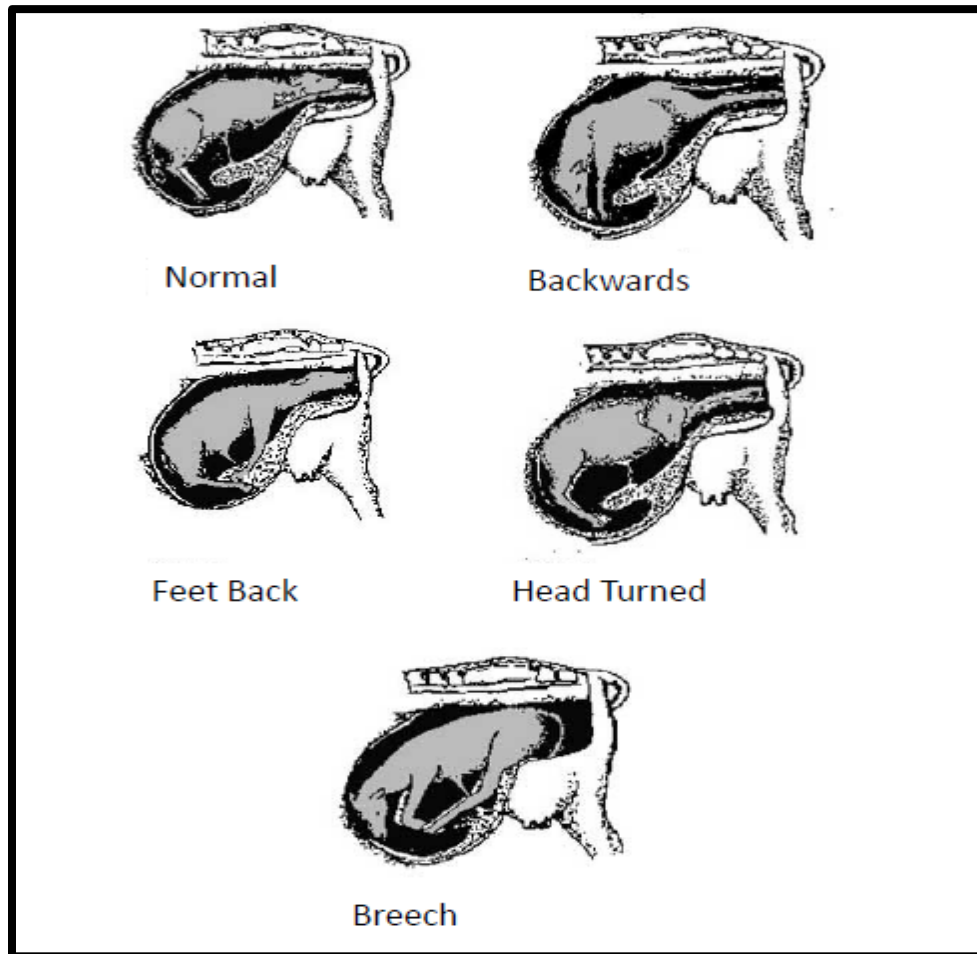
There are 3 stages of calving...

- 1. Preparatory: 4-24 hours before birth; calf rotates into correct position (head and feet pointing towards birth canal); contractions begin!**
- 2. Delivery: Calf enters birth canal; cow lies down; frequent contractions; calf's foreleg and nose become visible; calf is fully birthed; nose and mouth should be cleared; calf should begin breathing immediately; delivery usually takes 30 minutes-1 hour!**
- 3. Cleaning: 8-12 hours; placenta is expelled from the cow; calf should be standing and nursing regularly!**

Do you know why it is so important for a calf to nurse soon after birth?

The first milk produced from the cow is called colostrum. It is a thick, creamy liquid, which contains antibodies essential for the calf's health. The calf **MUST receive colostrum within 24 hours of birth, since they do not have any immune system at first!**

Unfortunately, calving doesn't always go as planned!
Dystocia is the term for calving difficulties. The calf should be born with the nose and feet first (as if they are diving!); however, there are other ways calves can be born. See the picture below!



If the cow is having difficulties during calving, the farmer or barn worker can “pull” the calf. This involves the (trained) person present attaching rope or chains to the calf’s legs, and pulling in time with the cow’s contractions. This is a welcome practice for a cow that has been in labor for too long!

Lesson Plan for Day 6

Topic: Crossbreeding

Corresponding Worksheet: “Crossbreeding”

Lesson Length: 30 Minutes or Less

Lesson Location: Classroom, Indoors

Lesson Overview:

1. Explain the definition of “crossbreeding” to the students, and discuss the 2 things good crossbreeding systems will take advantage of; the corresponding worksheet gives a basic explanation of these 2 things
2. Go over and explain the reasons why crossbreeding is good and why it is bad
 - NOTE: “Calf crops” refers to the calves produced by a farmer/rancher. Variations in calf crops are bad, because feedlots buying calves want them to all be similar so they grow at the same rate
3. Let the students complete the composite cattle activity on the corresponding worksheet (This should only take a few minutes)
 - If students are struggling, let them work together before providing the answers
4. Finish the lesson by explaining that crossbreeding is important for improving the entire cattle population, since it improves genetics and overall health (by choosing the best, healthiest animals)
5. Go over the answers to the composite cattle activity

Composite Cattle Activity Answer Key:

- Brangus- Brahman X Angus
- Brahford- Brahman X Hereford
- Simbrah- Simmental X Brahman

Crossbreeding

Crossbreeding means combining the best traits of the parents, in order to get “genetically superior” (a fancy way of saying “much better”) offspring!

Good crossbreeding systems will take advantage of 2 things...

1. Breed complimentary (How well the 2 breeds work together)

2. Heterosis (The ability of the offspring to outperform the parents)

Why crossbreeding is good!

- **Maintain a high level of heterosis**
- **Utilize and identify best cattle breeds**
- **Simple and manageable**

Why crossbreeding is bad!

- **A large number of cows and breeding pastures are needed**
- **Lots of labor/management required**
- **Takes some time to get the “right mix” of breeds**
 - **This can cause variations in “calf crops,” which means calves will be different!**

Did you know? Crossbred cattle are referred to as “composite” breeds!

Can you guess what 2 “pure” breeds make up these composite cattle?

- **Brangus**

_____ X _____

- **Brahford**

_____ X _____

- **Simbrah**

_____ X _____

While crossbreeding can give us things like new color combinations, it is very important for improving beef cattle genetics and the health of the cattle population!

Lesson Plan for Day 7

Topic: Review Day and Graduation

Corresponding Worksheet: “Cattle Commander” Certificate

Lesson Length: 30 Minutes

Lesson Location: Classroom, Indoors

Lesson Overview:

3. Separate the students into 2 or more groups for the review game; let each group pick and choose their review questions from the jeopardy game (link to the game is below)
 - NOTE: The rules to this review game are just like jeopardy, but for fairness sake, alternate groups and students every question to make sure everyone gets a chance to answer questions
 - NOTE: If Internet access is an issue in the classroom, the questions could be written on pieces of paper and hung on the wall
 - NOTE: The students may have their notes out during the game for assistance!
4. After the review game is completed, students will be given their “Cattle Commander” Certificate, which certifies that they have finished intermediate beef training
 - NOTE: The student names will have to be filled in on the individual certificates manually

Link to the Jeopardy Review Game:

<https://www.superteachertools.net/jeopardyx/jeopardy-review-game.php?gamefile=1402625757>

- NOTE: If the game needs to be edited or changed for any reason, the password required for editing is “daisy” (all lower caps)

A decorative border surrounds the text, featuring a light gray swirling ribbon that forms a frame. Scattered throughout this frame are various sizes of stars, some with black outlines and some with white outlines, creating a celebratory and elegant look.

CERTIFIED CATTLE COMMANDER

this certificate is awarded to:

in recognition of
Successfully completing advanced beef cattle training!

