ACTIVITY 7
Cattle Characteristics

RANCH LIFE SERIES | BOOK 1 | RANCHING & LIVESTOCK:
Chapter 6

Content Area
Science

Topic
Structure and Function, Adaptations

Objective
Students will observe unique traits for cattle breeds and apply inherited traits to the cattle business.

Texas Essential Knowledge and Skills (TEKS):
K.10A, 1.10A, 2.10A, 3.10A, 4.10AB, 5.10B
Cattle Characteristics

CONTENT AREA: Science

TOPIC: Structure & Function, Adaptations

GAME MATERIALS:

• SECURITY BRIEFING (page A7-2): 1 per student or student group
• CATTLE BREED QUICK REFERENCE CARDS (pages A7-3 to A7-8): 1 set per student group
  * Note: Only the front side of the reference card will be used in Activity 7.
  You will only need to copy the back side of the reference cards IF your students will also be completing Activity 8.
• Large blank paper to make a poster
• Markers, crayons, colored pencils, pencil or pen
• THE BOTTOM LINE (page A7-10): 1 per student or student group

READING STRATEGY:
Students will read Chapter 6 (pages 29-43) before completing the activity below.

GAME INSTRUCTIONS:

• Divide students into groups and give each a complete set of the CATTLE BREED QUICK REFERENCE CARDS.
• Each group will assume the role of "rancher."
• Referencing the CATTLE BREED QUICK REFERENCE CARDS, each group will need to determine which of their breeds has the characteristics they believe will sell best at auction. Students will do this by comparing and contrasting characteristics between different breeds. They will also need to consider the inherited traits that will be passed on to young calves when the newly acquired cattle reproduce with existing cattle on the ranch.
• After a breed has been chosen, each group will make an easy-to-read poster advertising the benefits, adaptations, and inherited traits of their chosen cattle breed.
• Students will use their poster as a visual aide as they attempt to "sell" their cattle breed to the class during their group's presentation to the class.

STUDENT SKILLS ASSESSMENT:

• Have students (or student groups) complete THE BOTTOM LINE worksheet at the end of the game.
Cattle Characteristics

SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

Running a ranch is big business. There is a lot of information that Loper has to know about his cattle. There are many different breeds of cattle and each breed has adaptations that make it suitable for living in certain climates.

Our ranch is located in the Panhandle which is in the Great Plains of Texas. Our climate is hot and dry. The cattle that roamed this area long before our ranch was established was the Texas Longhorn. They are perfectly suited for our area. We still have some Longhorns on the ranch, but I don’t mess around with those guys!

ACTIVITY INSTRUCTIONS:

You are a rancher and need to choose the breed of cattle you want to sell at auction! (Auction is the market where ranchers bring cattle to sell to and buy from other ranchers.)

• Look at your CATTLE BREED QUICK REFERENCE CARDS and identify characteristics each breed has in common. Then identify the characteristics that are different.
• Decide as a group what breed of cattle you would like to sell, taking into consideration the characteristics you think would be most appealing to other ranchers. Don’t forget to consider the inherited traits that will be passed on to young calves when the new cattle reproduce with the rancher’s own cattle!
• As a group, make an informative and easy-to-read poster to help advertise the benefits, adaptations and inherited traits of your chosen cattle breed.
• Use your group’s poster as a visual aide when it is your turn to sell your cattle to your class, ur, I mean... sell your cattle at auction!

WRAP UP:

Fill out THE BOTTOM LINE worksheet after you have completed the activity.
**ANGUS**

**BENEFITS**
- High-quality meat
- Relatively hardy
- Calm
- Calves easily

**ADAPTATIONS**
- Coloring prevents sunburns and cancer

**ORIGIN**
- Scotland

**SIZE**
- Bull: 1800-2400 lbs.
- Cow: 1200-1600 lbs.

**COLOR(S)**
- Black

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**RED ANGUS**

**BENEFITS**
- Long life span
- Quiet, easy going
- Good maternal instincts
- Easy calving
- High-quality, marbled meat

**ADAPTATIONS**
- Hardy to a variety of weather conditions

**ORIGIN**
- England
- Scotland

**SIZE**
- Bull: 1800-2300 lbs.
- Cow: 1100-1500 lbs.

**COLOR(S)**
- Red

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**BEEFMASTER**

**BENEFITS**
- High fertility, good maternal instincts
- Intelligent, gentle
- Most hardy breed
- Excellent growth

**ADAPTATIONS**
- Heat, drought and insect tolerant

**ORIGIN**
- U.S.A. (Texas)

**SIZE**
- Bull: 1900-2400 lbs.
- Cow: 1050-1250 lbs.

**COLOR(S)**
- No color restriction
- Mainly red and dun colors

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**BONSMARA**

**BENEFITS**
- High-quality meat
- Large size
- High fertility
- Calm, easy to handle

**ADAPTATIONS**
- Sub-tropic climate

**ORIGIN**
- South Africa

**SIZE**
- Cow: 1100 lbs.

**COLOR(S)**
- Red
<table>
<thead>
<tr>
<th>CATTLE BREED</th>
<th>BULL</th>
<th>COW</th>
<th>WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RED ANGUS</strong></td>
<td>$200</td>
<td>$160</td>
<td>Be sure to consider the following first!</td>
</tr>
<tr>
<td><strong>ANGUS</strong></td>
<td>$225</td>
<td>$190</td>
<td>Be sure to consider the following first!</td>
</tr>
<tr>
<td><strong>BONSMARA</strong></td>
<td>$250</td>
<td>$200</td>
<td>Be sure to consider the following first!</td>
</tr>
<tr>
<td><strong>BEEFMASTER</strong></td>
<td>$295</td>
<td>$240</td>
<td>Be sure to consider the following first!</td>
</tr>
</tbody>
</table>

1. **GEOGRAPHIC LOCATION OF YOUR RANCH**
   - Does your region have grass as a food source for your cattle? What type of terrain is found in your region? What is your climate?

2. **COST FOR FEED PER BULL/COW**
   - The more cattle you buy, the more feed you will also need to purchase. Feed costs $100 - $200 per month depending on the amount of cattle you buy, how much they eat, and how much grass you grow on your ranch. (Be sure to note the feed cost for each breed of cattle you are considering.)

3. **AMOUNT OF ACREAGE YOU OWN**
   - Each bull or cow will need 25 acres of grass.
**BRAFORD**

**BENEFITS**
- Good beef yields
- Superior maternal ability
- Best in warm climates

**ADAPTATIONS**
- A chemical in their blood makes them heat and insect repellent

**ORIGIN**
- U.S.A. (Louisiana)
- Australia

**SIZE**
- Cow: 1150-1250 lbs.

**COLOR(S)**
- Red with white head, feet and underbelly

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**BRANGUS**

**BENEFITS**
- Heat/high humidity resistant
- Hardy in cold climates
- Good maternal instincts
- Resistant to ticks/bloat
- Rapid weight gain

**ADAPTATIONS**
- Hump provides fat energy
- Produce more hair in cooler conditions
- Adapts to most climates

**ORIGIN**
- U.S.A.

**SIZE**
- Cow: 1200 lbs.

**COLOR(S)**
- Solid black with small amounts of white on the under belly

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**BRAHMANS**

**BENEFITS**
- Thrives in warm tropical conditions
- Intelligent, shy, sensitive
- Quick growth

**ADAPTATIONS**
- Skin oil repels insects
- Glossy hair reflects sunlight
- Loose skin allows for fast cooling
- Hump provides fat energy

**ORIGIN**
- India

**SIZE**
- Bull: 1600-2200 lbs.
- Cow: 1000-1400 lbs.

**COLOR(S)**
- Light gray, red and black

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**CHAROLAIS**

**BENEFITS**
- High quality beef
- Grow fast & large in size
- Ease of handling/calving

**ADAPTATIONS**
- Maintains longer, thicker hair in winter/sleeker, shorter in summer
- Sturdy hooves
- Large, hardy calves
- Prone to sunburn (light coat)

**ORIGIN**
- France

**SIZE**
- Cow: 1250-1600 lbs.

**COLOR(S)**
- Cream/white
<table>
<thead>
<tr>
<th>CATTLE BREED</th>
<th>BULL</th>
<th>COW</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRAHMANS</td>
<td>$250</td>
<td>$200</td>
</tr>
<tr>
<td>BRAFORD</td>
<td>$275</td>
<td>$225</td>
</tr>
<tr>
<td>CHAROLAIS</td>
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**WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?**

Be sure to consider the following first!

1. **GEOGRAPHIC LOCATION OF YOUR RANCH**
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3. **AMOUNT OF ACREAGE YOU OWN**
   Each bull or cow will need 25 acres of grass.

**DOWNLOADABLE PDF AT RANCHLIFELEARNING.COM**
**BENEFITS**
- Beef sells for high price
- Calves bring high sales price
- Lower winter costs
- Long life span

**ADAPTATIONS**
- Hardy breed
- Withstands tougher climates and weather

**ORIGIN**
- England

**SIZE**
- Bull: 1800-2400 lbs.
- Cow: 1200-1500 lbs.

**COLOR(S)**
- Red to yellow with white face

**HEREFORD**

**BENEFITS**
- Heat tolerant
- Hardy breed
- Used most in ag work
- Disease/parasite resistant

**ADAPTATIONS**
- Skin oil repels insects
- Glossy hair reflects sunlight
- Loose skin allows for fast cooling
- Hump provides fat energy

**ORIGIN**
- Southwest Asia

**SIZE**
- Bull: 440 lbs.
- Cow: 331 lbs.

**COLOR(S)**
- Red

**SHORTHORN**

**BENEFITS**
- Beef sells for high price
- Calves bring high sales price
- Lower winter costs
- Long life span

**ADAPTATIONS**
- Hardy breed
- Withstands tougher climates and weather

**ORIGIN**
- England

**SIZE**
- Bull: 1800-2400 lbs.
- Cow: 1200-1500 lbs.

**COLOR(S)**
- Red, white, roan

**LONGHORN**

**BENEFITS**
- High fertility
- Hardy breed
- Disease/parasite resistant
- Long life span
- Lean meat

**ADAPTATIONS**
- Resistant to drought
- Gain weight rapidly in good conditions

**ORIGIN**
- U.S.A. (Texas)

**SIZE**
- Bull: 1500 lbs.
- Cow: 1000 lbs.

**COLOR(S)**
- Red, black, yellow, brown, cream, spotted

**ZEBU**

**BENEFITS**
- Beef sells for high price
- Calves bring high sales price
- Lower winter costs
- Long life span

**ADAPTATIONS**
- Hardy breed
- Withstands tougher climates and weather

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**ORIGIN**
- U.S.A. (Texas)

**SIZE**
- Bull: 1500 lbs.
- Cow: 1000 lbs.

**COLOR(S)**
- Red, black, yellow, brown, cream, spotted

**SHORTHORN**

**BENEFITS**
- Mild disposition
- Long life span
- Superior marbling in meat

**ADAPTATIONS**
- Female traits of early maturity, fertility, docility, ease of calving
- Increased tenderness in meat

**ORIGIN**
- England

**SIZE**
- Bull: 2200-2800 lbs.
- Cow: 1300-1700 lbs.

**COLOR(S)**
- Red, white, roan

**LONGHORN**

**BENEFITS**
- Heat tolerant
- Hardy breed
- Used most in ag work
- Disease/parasite resistant

**ADAPTATIONS**
- Skin oil repels insects
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DOWNLOADABLE PDF AT RANCHLIFELEARNING.COM
AUCTION
Sale every tues.
THE BOTTOM LINE

Cattle come in many sizes, shapes, and colors. Each cattle breed has different **benefits** and **limitations** that make it ideal for certain **climates** and ranches.

*Answer the questions below:

1. Which physical characteristics do the cattle have in common? (shape, hooves, coloring, etc...)

2. What did the cattle from tropical warm locations have in common?

3. Why do ranchers pay such close attention to the different inherited traits such as: structures, weight, and color?

4. What behaviors would a rancher prefer in his/her cattle herd? Explain your answer.

5. If you had to choose your favorite breed of cattle what would it be and why?