



## **RANCH LIFE SERIES WITH HANK THE COWDOG**

**BY JOHN R. ERICKSON**



# **- BOOK 2 -** **COWBOYS AND HORSES** *Activity Guide*

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*Howdy, educators! Welcome to the Activity Guide for **BOOK 2: COWBOYS AND HORSES** of the **RANCH LIFE SERIES WITH HANK THE COWDOG** by John R. Erickson.*

The following pages contain science and social studies activities designed to coordinate with chapters in the book. These 9 activities can be treated as stand-alone supplement/enrichment activities for your classroom curriculum OR can be taught sequentially as a total Ranch Life unit. Activities can be completed by individual students or within student groups with no minimum/maximum number of students required.

Instructions on how to use this Activity Guide can be found on the following page.

**BONUS MATERIALS** can be found at [ranchlifelearning.com](http://ranchlifelearning.com) and includes downloadable PDFs of resources provided as master copies in this book. *(Please note: All PDF resources must print at 100% not fit to page.)*

## — To Use This Guide —

### **BOOK 2: COWBOYS AND HORSES**



1. Each lesson is separated by an **ACTIVITY DIVIDER**, a tabbed, quick-reference that includes:
  - Activity Number & Title
  - Ranch Life Book Number/Chapter Reference for Activity
  - Content Area
  - Topic(s)
  - Objective(s)
  - Texas Essential Knowledge and Skills (or TEKS)
2. An **EDUCATOR GUIDE** that includes for each activity:
  - A Materials List
  - Instructions for Educator
  - Reading Strategy
3. A **SECURITY BRIEFING** - student instruction sheet presented as “Words of Wisdom” from Hank the Cowdog. This sheet includes an overview of the activity, including any key words/phrases and additional instructions. It can be used as a station card for students working in groups.
4. **RESOURCES** - master copies for activity preparations (*referenced in ALL CAPS within activity instructions*), also available for PDF download at [ranchlifelearning.com](http://ranchlifelearning.com).
5. **THE BOTTOM LINE** - student worksheet to be completed at the end of the activity (*either individually or in small groups*).

### *Want more?*

Visit [ranchlifelearning.com](http://ranchlifelearning.com) for additional Ranch Life Series with Hank the Cowdog educational resources, including instructional videos and sample projects.

### *About the Activity Guide Authors*

Educators Michelle Sedberry and Jenny Gaona are the creative minds behind this guidebook. Michelle Sedberry is a science specialist and Jenny Gaona is a social studies specialist. Jenny and Michelle have a combined 40 years of experience in the classroom and designing curriculums and classroom activities for their content areas of expertise. The cross-curricular chemistry between these two master educators makes this guidebook a one-of-a-kind resource for educators.

Julie Hodges, Helen DeVitt Jones Endowed Director of Education at the National Ranching Heritage Center, served as editor.



**SPECIAL THANKS TO THE HOUSTON LIVESTOCK SHOW AND RODEO**



# ACTIVITY 1

## *History of Traildriving*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapter 2

**Content Area:**

Social Studies

**Topic:**

Traildriving History of the American Cowboy

**Objective:**

Students will study cause and effect as they place events on a timeline in sequential order.

**Texas Essential Knowledge and Skills (TEKS):**

K.3A, K.3B, 1.3A, 1.3B, 2.2A, 2.2B, 2.2C, 3.3A, 3.3B, 4.4B, 5.8B, 5.13B





## History of Traildriving

**CONTENT AREA:** Social Studies

**TOPIC:** Timeline of the History of the American Cowboy

### GAME MATERIALS:

- SECURITY BRIEFING (page A1-2): 1 per student table group
- HISTORY OF TRAILDRIVING - TIMELINE (page A1-4): 1 per student table group
- HISTORY OF TRAILDRIVING - EVENT CARDS (page A1-3): 1 per student table group
- THE BOTTOM LINE (page A1-5): 1 per student or student table group

### READING STRATEGY:

- Teacher will read pages 3-4 aloud to students.
- As the teacher is reading, students working in table groups will place the HISTORY OF TRAILDRIVING - EVENT CARDS in sequential order on the HISTORY OF TRAILDRIVING - TIMELINE.
- Teacher will need to allow students to review the event cards before reading aloud.

### GAME INSTRUCTIONS:

1. Each student or student group needs one HISTORY OF TRAILDRIVING - TIMELINE and a set of HISTORY OF TRAILDRIVING - EVENT CARDS.
2. Have the students familiarize themselves with the EVENT CARDS before beginning the activity.
3. Read Chapter 2 aloud to your students.
4. Students will place the EVENT CARDS on the TIMELINE in sequential order as the chapter is read.

### STUDENT SKILLS ASSESSMENT:

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



# History of Traildriving



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

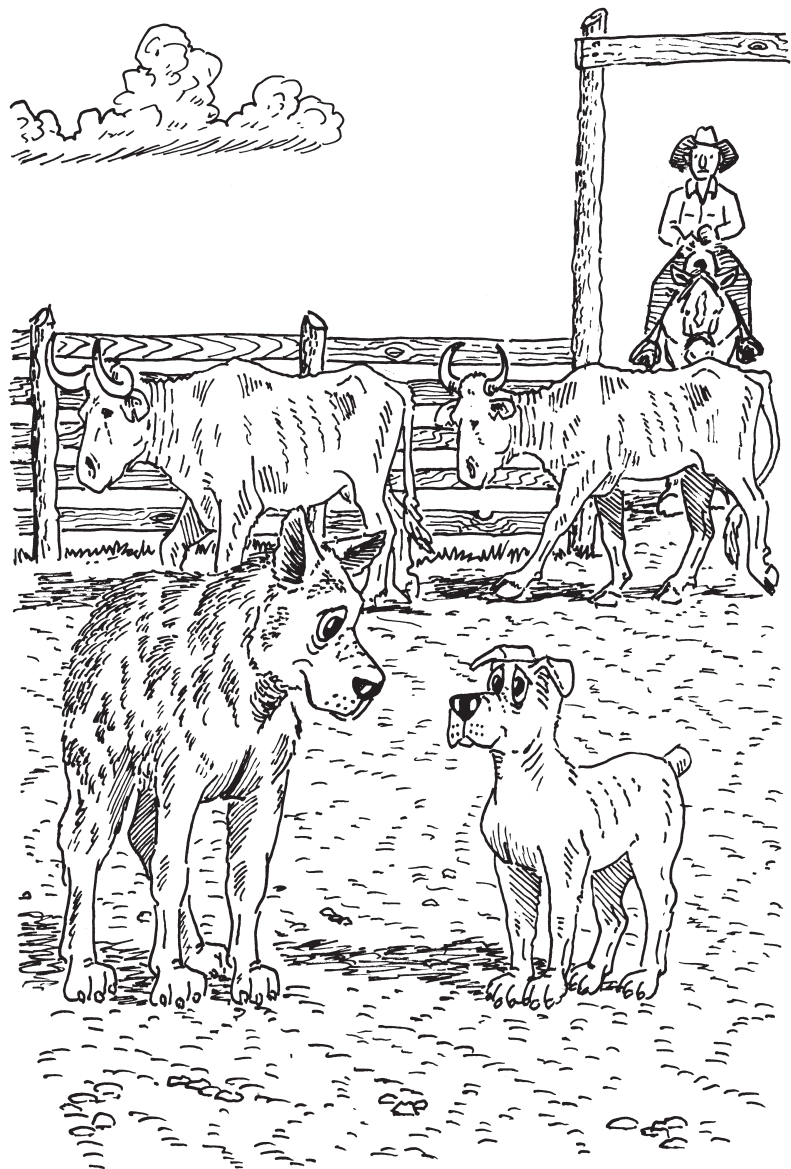
*It's me again, Hank the Cowdog, or if you prefer, Hank El Perro Vaquero. I've been running security on this ranch my entire life, but ranching started way before I got here. Lots of cowboys, ranchers, cattle, and horses have run through these parts. I am going to give you a brief history of how our ranch got here. As Head of Security, it is important to know your roots and where you came from. Knowing how ranchers were successful in the **past** will help us make the right decisions in the **future**. I have a lot of historical events that I need your help in putting in chronological order. I am the Head of Security and can't be in charge of knowing what happened **first**, **second**, or **last**. Help me and Drover put these events back in order so we can learn how we got here in the first place.*

### ACTIVITY INSTRUCTIONS:

1. Each student or student group needs one *HISTORY OF TRAILDRIVING - TIMELINE* and a set of *HISTORY OF TRAILDRIVING - EVENT CARDS*.
2. Read over your *EVENT CARDS* to familiarize yourself with the events.
3. As your teacher reads the chapter aloud to you, place the *EVENT CARDS* on the *TIMELINE* in sequential order.

### WRAP UP:

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



**Civil War**

**Wild cattle were driven north to railroad towns in Kansas and Nebraska.**

**Wild cattle were gathered outside of brush country in South Texas.**

**Cattle were loaded into railroad cars and transported back east.**

**Cattle were taken back east to feed people living in the cities.**

**The Traildriving Period starts around 1865.**

**The Traildriving Period ends around 1880.**

**Thousands of young men (and some girls who were disguised as boys) were drawn into the livestock business.**

**The word "cowboy" appears.**

**Before 1870, people who handled livestock were known as "herders" or "drovers."**

# Traildriving Period (1865-1880)

1



2



3



4



5

6



7



8



9



10





# History of Traildriving



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## THE BOTTOM LINE

Each traildriving event on your timeline has a cause and an effect. Choose three events and write the cause and effect of each event.

	EVENT	CAUSE	EFFECT
1.			
2.			
3.			

Which event in traildriving history do you think was the MOST important as it relates to the history of the American cowboy? Explain.



## ACTIVITY 2

### *Traditions*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapter 2

**Content Area:**

Social Studies

**Topic:**

Identifying and Comparing Traditions

**Objective:**

Students will define the word “tradition” and identify traditions from the reading and their own lives.

**Texas Essential Knowledge and Skills (TEKS):**

K.12A, K.12B, 1.15A, 3.13B, 4.19A, 5.22A, 5.22B







## Traditions

**CONTENT AREA:** Social Studies

**TOPIC:** Identifying and Comparing Traditions

**ACTIVITY MATERIALS:**

- SECURITY BRIEFING (page A2-2): Copy/Print PDF, 1 per student or student group
- TRADITIONS - BOOKMARK (page A2-3) 1 per student
- THE BOTTOM LINE (page A2-4): Copy/Print PDF, 1 per student or student group

**READING STRATEGY:**

- Students will read Chapter 2, pages 5-6.
- As students read through the book, they will write the letter "T" next to any cowboy traditions they identify in their reading.

**ACTIVITY INSTRUCTIONS:**

1. Each student will need one TRADITIONS - BOOKMARK.
2. Teacher will lead a discussion defining the word "tradition," and students will copy the definition down on their bookmark. Students will then write down any family traditions they have on their bookmark.
3. Teacher will read aloud from Chapter 2B or have students read together in their groups.
4. As the teacher or student(s) read, students will write a capital "T" next to any traditions they can identify in their text.

**STUDENT SKILLS ASSESSMENT:**

Have students (or student groups) complete THE BOTTOM LINE worksheet at the end of the activity.



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

*Listen up, I wasn't the first security guard to roam around these parts. Lots of ranchers, cowboys, and pesky coyotes were here before me. These ranchers established **traditions** that we still follow today. These traditions have helped us make good decisions for our ranch. These decisions help accomplish the most important thing on the ranch—putting food in the bowl of the Head of Security (that's me!). A long time ago, the smartest rancher to ever live created the best ranching tradition. This tradition was to have a cowdog run ranching security, and the rest is history!*

### ACTIVITY INSTRUCTIONS:

1. Each student will need one TRADITIONS - BOOKMARK.
2. Your teacher will lead a discussion defining the word "tradition." Write the definition down on your BOOKMARK. Add to your BOOKMARK any family traditions you enjoy.
3. Your teacher will read aloud from Chapter 2B or you will read together in your groups.
4. Write a capital "T" next to any traditions you find in the text.

### WRAP UP:

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



<b>TRADITION</b>	 <p>Some of my family traditions are:</p>	<b>TRADITION</b>	 <p>Some of my family traditions are:</p>	<b>TRADITION</b>	 <p>Some of my family traditions are:</p>	<b>TRADITION</b>	 <p>Some of my family traditions are:</p>	<b>TRADITION</b>	 <p>Some of my family traditions are:</p>
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NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

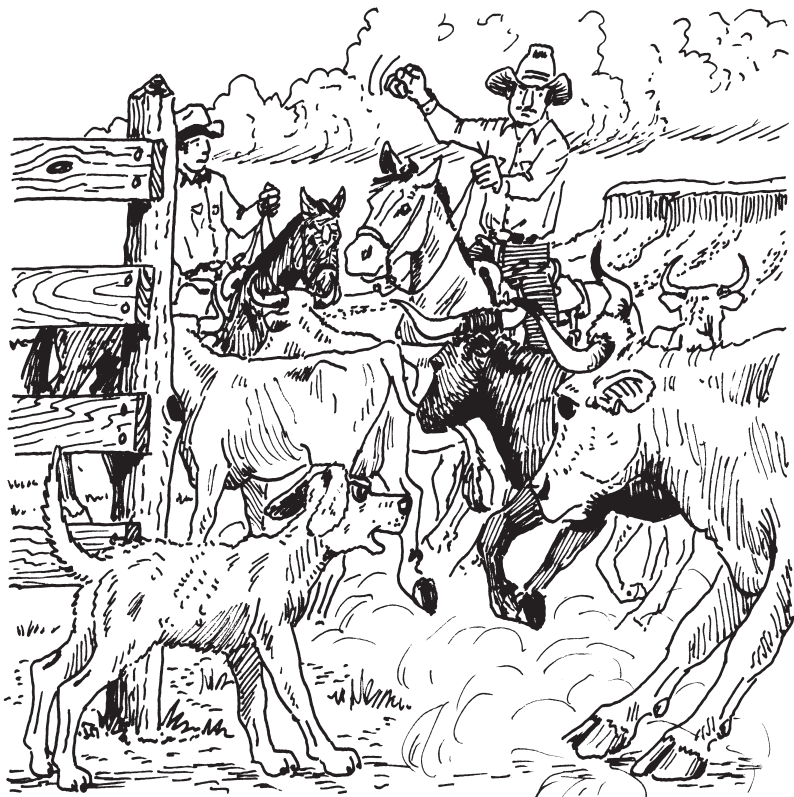
## THE BOTTOM LINE

Answer the following questions about *traditions*.

*Answer the questions below:*

1. What is a tradition?
2. What traditions do you have with your family?
3. Name one tradition from the book (pages 5-6).

4. Explain why you think ranching tradition is important.





## ACTIVITY 3

### *Work Horse vs. Pleasure Horse*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapter 3B and 5

**Content Area:**

Science

**Topic:**

Inherited Traits & Learned Behaviors

**Objective:**

Students will explore the life cycle and learned behaviors of a horse.

**Texas Essential Knowledge and Skills (TEKS):**

4.13B, 5.13B





## Work Horse vs. Pleasure Horse

**CONTENT AREA:** Science

**TOPIC:** Inherited Traits and Learned Behaviors

### ACTIVITY MATERIALS:

- SECURITY BRIEFING (page A3-2): 1 per student or student group
- WORK VS. PLEASURE HORSE - VENN DIAGRAM (page A3-3): 1 per student table group
- WORK VS. PLEASURE HORSE - INHERITED/LEARNED CARDS (page A3-4): 1 per student table group
- THE BOTTOM LINE (page A3-5): Copy/Print PDF, 1 per student or student group

### READING STRATEGY:

Search for information about animal behavior while reading Chapters 3B and 5. Students will journal information about horse behavior found in the reading on their WORK VS. PLEASURE HORSE - VENN DIAGRAM.

### ACTIVITY INSTRUCTIONS:

1. Students will read Chapters 3B and 5 as a group to learn about all the jobs work horses and pleasure horses do.
2. As students read, have them place WORK VS. PLEASURE HORSE - INHERITED/LEARNED CARDS where they belong on the WORK VS. PLEASURE HORSE - VENN DIAGRAM.
3. Once the students have placed all the INHERITED/LEARNED CARDS, have them analyze each job to decide if the work is a *learned behavior* of the horse or an *inherited trait*.

### STUDENT SKILLS ASSESSMENT:

Have students (or student groups) complete THE BOTTOM LINE worksheet at the end of the activity.



# Work Horse vs. Pleasure Horse



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

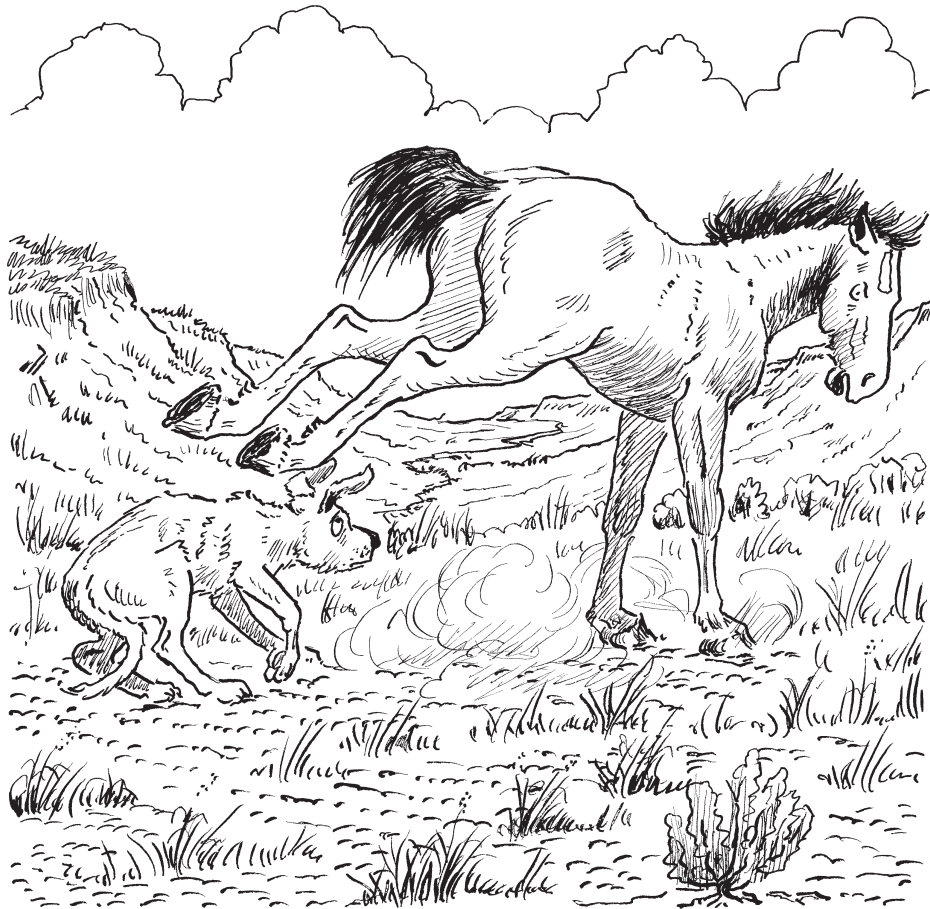
On a ranch, animals have important jobs. My job, Head of Ranch Security, is the most important job, but I also help Loper and Slim herd cattle and sometimes find lost animals. I have heard stories of people who keep dogs as pets and those dogs don't work at all! Sounds pretty boring to me. On the ranch, we also have work horses. There is a lot of difference between a work horse and a pleasure horse. Cowboys pick a horse according to the traits the horse has **inherited**.

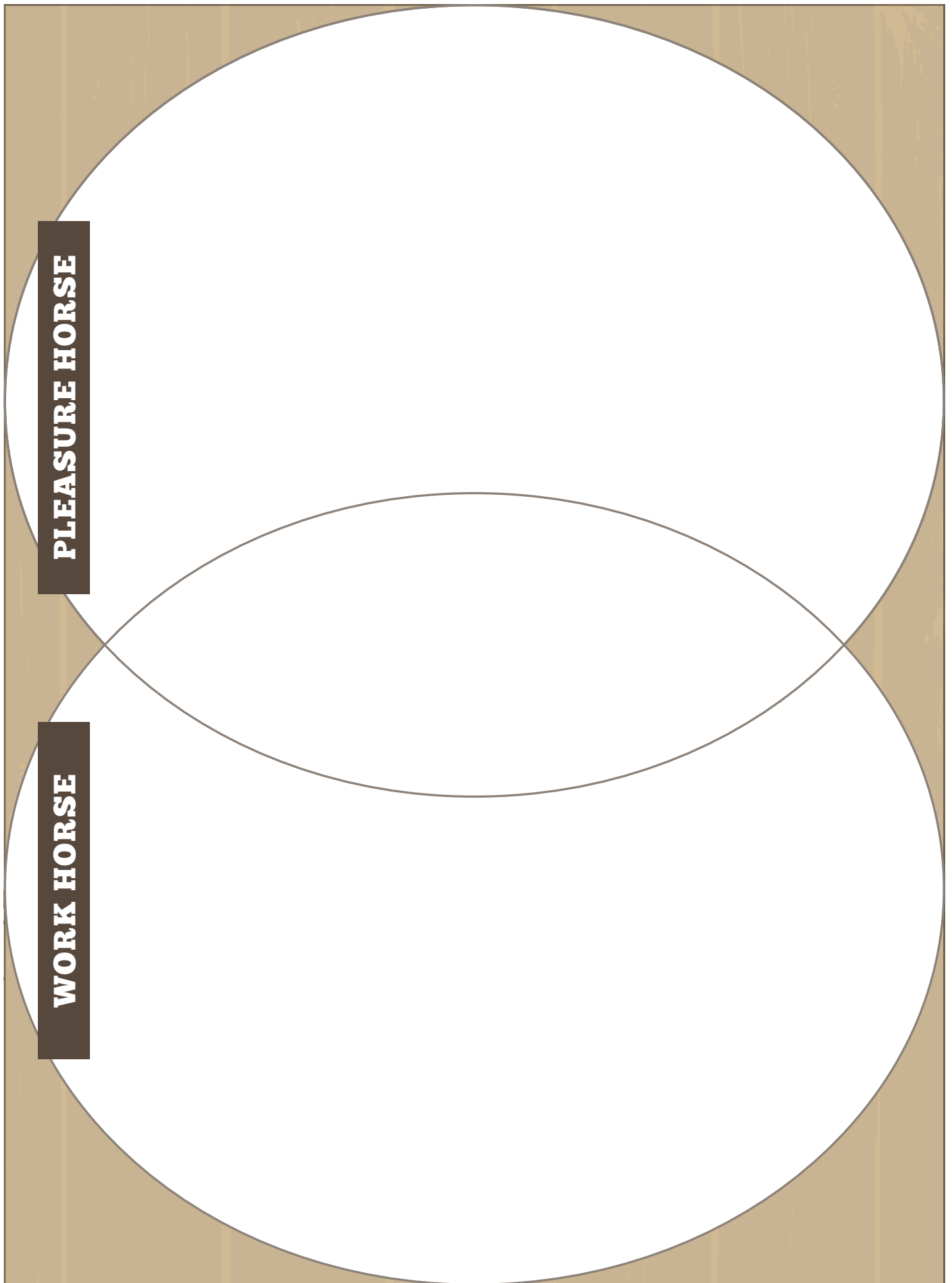
### ACTIVITY INSTRUCTIONS:

1. Read Chapters 3B and 5 as a group to learn about all the jobs horses on a ranch do. As you read, determine whether the job you're reading about is something a work horse or a pleasure horse would do.
2. Place each **INHERITED/LEARNED CARD** where it belongs on the **WORK HORSE VS. PLEASURE HORSE - VENN DIAGRAM**.
3. Once you have placed all your cards, analyze each job to determine if that horse's work is a **learned behavior** or **inherited trait**.

### WRAP UP:

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

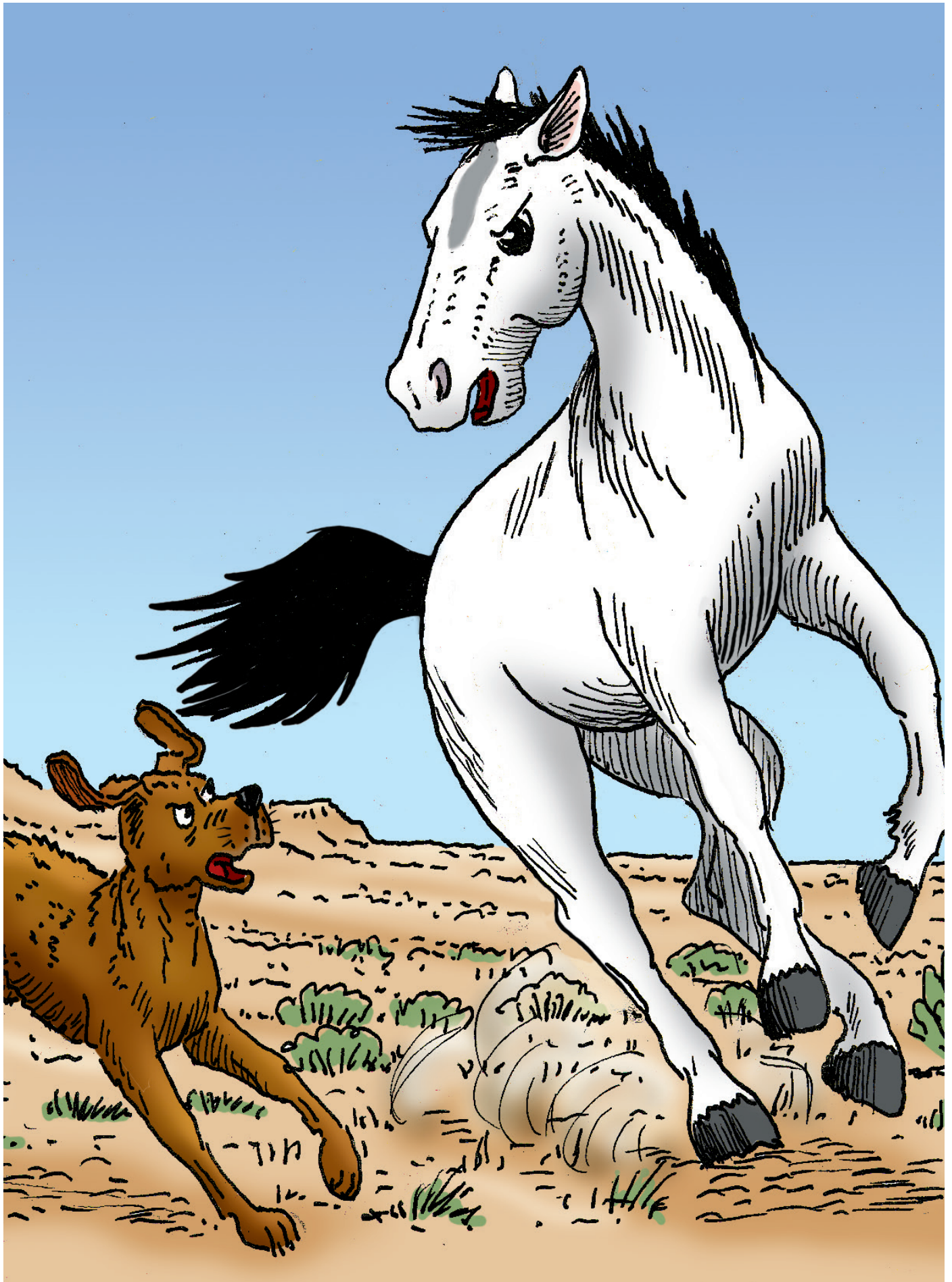




<b>CUTTING HORSE COMPETITIONS</b>	<b>CARRY SOLDIERS INTO BATTLE</b>	<b>FRIEND TO A COWBOY</b>	<b>NAVIGATES BACK COUNTRY</b>
<b>PULLS WAGON</b>	<b>HERDS CATTLE</b>	<b>HAULS FREIGHT</b>	<b>TRAIL RIDES</b>
<b>PACK ANIMAL</b>	<b>TEAM ROPING</b>	<b>BARREL RACING</b>	<b>ENDURANCE</b>
<b>TRANSPORTATION</b>	<b>STRONG</b>	<b>PULLS PLOW</b>	<b>RACES AT KENTUCKY DERBY</b>

<b>CUTTING HORSE COMPETITIONS</b>	<b>CARRY SOLDIERS INTO BATTLE</b>	<b>FRIEND TO A COWBOY</b>	<b>NAVIGATES BACK COUNTRY</b>
<b>PULLS WAGON</b>	<b>HERDS CATTLE</b>	<b>HAULS FREIGHT</b>	<b>TRAIL RIDES</b>
<b>PACK ANIMAL</b>	<b>TEAM ROPING</b>	<b>BARREL RACING</b>	<b>ENDURANCE</b>
<b>TRANSPORTATION</b>	<b>STRONG</b>	<b>PULLS PLOW</b>	<b>RACES AT KENTUCKY DERBY</b>

<b>CUTTING HORSE COMPETITIONS</b>	<b>CARRY SOLDIERS INTO BATTLE</b>	<b>FRIEND TO A COWBOY</b>	<b>NAVIGATES BACK COUNTRY</b>
<b>PULLS WAGON</b>	<b>HERDS CATTLE</b>	<b>HAULS FREIGHT</b>	<b>TRAIL RIDES</b>
<b>PACK ANIMAL</b>	<b>TEAM ROPING</b>	<b>BARREL RACING</b>	<b>ENDURANCE</b>
<b>TRANSPORTATION</b>	<b>STRONG</b>	<b>PULLS PLOW</b>	<b>RACES AT KENTUCKY DERBY</b>





# Work Horse vs. Pleasure Horse

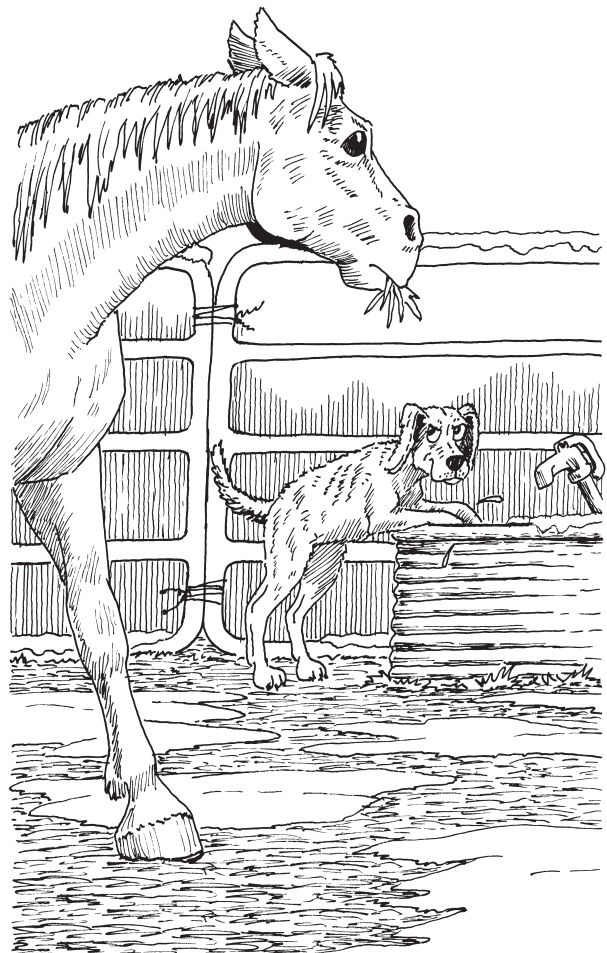


NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## THE BOTTOM LINE

*Answer the questions below:*

1. How are work horses and pleasure horses alike? (explain)
2. What did you notice when comparing the work horses and the pleasure horses?
3. If you were going to persuade someone to get a certain type of horse, what traits would you select to highlight to the buyer?
4. What would happen if a rancher bred a work horse and a pleasure horse together?
5. If you were a cowboy on a ranch, what traits would you value most in your work horse and why?





# ACTIVITY 4

## *Training Colts*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapter 4B

**Content Area**

Science

**Topic**

Life Cycles, Inherited Traits and Learned Behaviors

**Objective**

Students will explore the life cycle and behaviors of horses.

**Texas Essential Knowledge and Skills (TEKS):**

3.13B, 4.13B, 5.13AB







## Training Colts

**CONTENT AREA:** Science

**TOPICS:** Life Cycles, Inherited Traits, and Learned Behaviors

### GAME MATERIALS:

- SECURITY BRIEFING (page A4-2): 1 per student or student group
- TRAINING COLTS - HORSE LIFE CYCLE REFERENCE (page A4-3): 1 per student or student group
- TRAINING COLTS - SORTING MAT (page A4-4): 1 per student or student group
- TRAINING COLTS - SORTING/PLAYING CARDS & CARD BACK (pages A4-5 to A4-8): 1 per student or student group
- TRAINING COLTS - SORTING/PLAYING CARDS TEACHER KEYS (pages A4-9 to A4-11)
- TRAINING COLTS - GAME BOARD (included): 1 per student or student group
- Found objects for game pieces (e.g., different colored math manipulative cubes)
- THE BOTTOM LINE (page A4-12): 1 per student or student group

### READING STRATEGY:

N/A

### GAME INSTRUCTIONS:

1. Give each student or student group a TRAINING COLTS - HORSE LIFE CYCLE REFERENCE. Students will read over it and refer back to it as they complete the activity.
2. Have students read Chapter 4B. As they read, they will organize the TRAINING COLTS - SORTING/PLAYING CARDS into three categories (foal, mare, and stallion) on the TRAINING COLTS - SORTING MAT. Consult teacher keys for answers.
3. Once students are familiar with the stages of the horse life cycle and behaviors, they can place their game pieces on "START" and take turns drawing cards to play the TRAINING COLTS BOARD GAME.
4. To play the game, students will use the SORTING/PLAYING CARDS. Place SORTING/PLAYING CARDS face down on the TRAINING COLTS - GAME BOARD "Draw Pile" box. As students take turns drawing a card, they will advance their game piece to life cycle that corresponds to the characteristic listed on the card. For example, if they draw a card that says "A Female Animal," they will advance to the next open "mare" position on the game board. If a student draws a card that contains a characteristic that corresponds to more than one stage of the life cycle, they may choose which space they would like to advance to.
5. The first player to reach the FINISH space wins.

### STUDENT SKILLS ASSESSMENT:

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

# Training Colts



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

As the head of ranch security, I must pay close attention to the animals on the ranch and keep them safe from **predators**. Horses are more likely to be attacked when they are young. A mare must protect her colt from danger, but I also do my part paying close attention to the **life cycle** of the horse. When a mare gives birth to a colt, my job becomes very important. I have a lot to remember and I need your help to sort out all the **characteristics** of a horse life cycle and the **behaviors** during each of the stages.

### GAME INSTRUCTIONS:

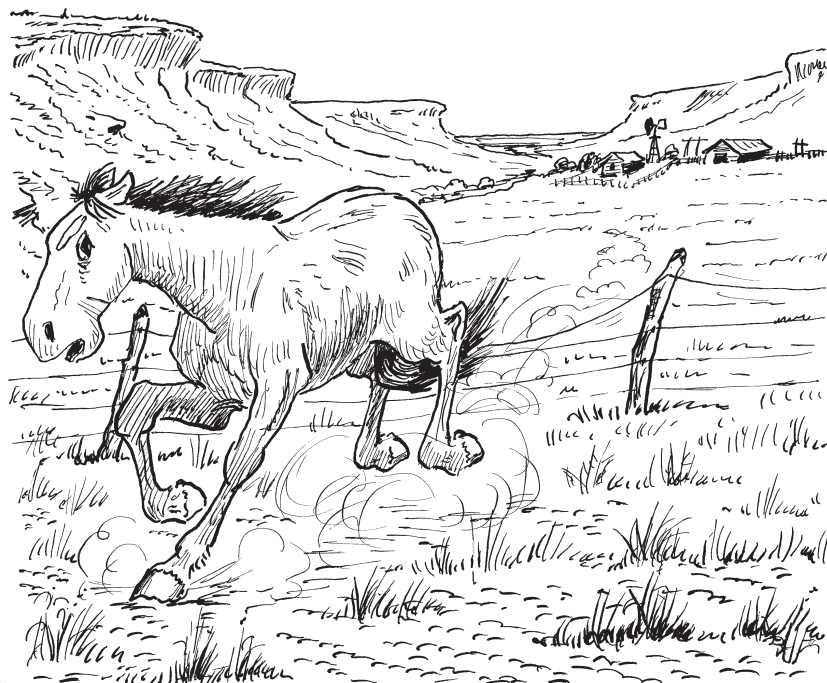
1. Look at the TRAINING COLTS - HORSE LIFE CYCLE REFERENCE. Discuss information with your group.
2. Read Chapter 4B. As you read, organize the TRAINING COLTS - SORTING/PLAYING CARDS into three categories—foal, mare, and stallion—on the TRAINING COLTS - SORTING MAT. (Some cards may fall in multiple columns.)
3. Place game pieces on "START" and the SORTING CARDS face down on the "Draw Pile" spot on the TRAINING COLTS - GAME BOARD. Players will take turns drawing 1 card. Read each card and advance to the answer on the GAME BOARD. For example, if you draw a SORTING/PLAYING CARD that says, "A Female Animal," advance to the next open "mare" position on the GAME BOARD.

If you draw a SORTING CARD that contains a characteristic that corresponds to more than one stage of the life cycle, you may choose which space you would like to advance to.

4. The first player to reach the FINISH space wins.

### WRAP UP:

Fill out THE BOTTOM LINE worksheet after you have completed the game.



# Life Cycle of a Horse



## STAGE 1 Mating

A mare mates with a stallion at 3 years.



## STAGE 2 Gestation

A foal grows inside its mother for about 1 year.



## STAGE 3 Foal

*Male Foal: Colt  
Female Foal: Filly*

The foal drinks its mother's milk for 6 months to 1 year.



## STAGE 4 Adult

*Male Adult: Stallion  
Female Adult: Mare*

A horse lives 25 to 30 years.

# Life Cycle of a Horse



## STAGE 1 Mating

A mare mates with a stallion at 3 years.



## STAGE 2 Gestation

A foal grows inside its mother for about 1 year.



## STAGE 3 Foal

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The foal drinks its mother's milk for 6 months to 1 year.


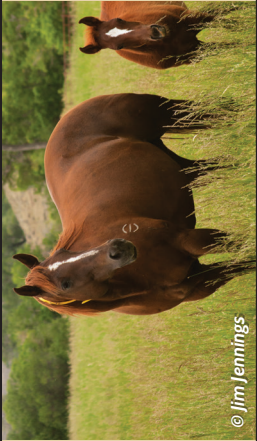



## STAGE 4 Adult

*Male Adult: Stallion  
Female Adult: Mare*

A horse lives 25 to 30 years.



STALLION		
MARE		
FOAL		

<b>A male horse</b>	<b>Carries out work on the ranch</b>	<b>Weaned from mother at 6 months</b>
<b>Learns to wear a saddle</b>	<b>May be aggressive toward stallions during mating season</b>	<b>HALTER BROKE Wears a halter and learns to be led</b>
<b>A female horse</b>	<b>Trains for 3 to 4 years</b>	<b>Reproduces</b>
<b>Must undergo a long period of training aimed at building trust in humans</b>	<b>May be very aggressive toward other horses when protecting a foal</b>	<b>First reaction to danger is to flee</b>





<p><b>If threatened by a predator, will stand its ground to protect a colt</b></p>	<p><b>Can be aggressive toward herd and handlers if not trained</b></p>	<p><b>Fights against pressure of a halter and rope</b></p>
<p><b>Less than 1 year old</b></p>	<p><b>Breeds with a mare</b></p>	<p><b>Use ears and tail as main communication</b></p>
<p><b>Provides milk for foals</b></p>	<p><b>Learns to respond to commands</b></p>	<p><b>Herd animal</b></p>
<p><b>Can live 25 to 30 years</b></p>	<p><b>Is taught to allow a person to ride on its back</b></p>	<p><b>Wears a saddle</b></p>



<b>What a colt (male) and a filly (female) both are</b>	<b>Requires food and water every day</b>	<b>Can carry a rider to any spot on the ranch</b>
<b>Social animal</b>	<b>Carry its young for about 1 year</b>	<b>Nurses its young for 6 months</b>
<b>Breeds with a stallion</b>	<b>Defends the herd from predators</b>	<b>Has very little understanding of the work it will be expected to do</b>
<b>Can walk and run after just a few hours of being born</b>	<b>Can be frightened by a saddle being put on its back</b>	<b>Eyes are set on the side of its head</b>



<p><b>A male horse</b></p> <p>STALLION</p>	<p><b>Carries out work on the ranch</b></p> <p>FOAL, MARE, STALLION</p>	<p><b>Weaned from mother at 6 months</b></p> <p>FOAL</p>
<p><b>Learns to wear a saddle</b></p> <p>FOAL</p>	<p><b>May be aggressive toward stallions during mating season</b></p> <p>STALLION</p>	<p><b>HALTER BROKE</b></p> <p><b>Wears a halter and learns to be led</b></p> <p>FOAL</p>
<p><b>A female horse</b></p> <p>MARE</p>	<p><b>Trains for 3 to 4 years</b></p> <p>FOAL</p>	<p><b>Reproduces</b></p> <p>MARE, STALLION</p>
<p><b>Must undergo a long period of training aimed at building trust in humans</b></p> <p>FOAL</p>	<p><b>May be very aggressive toward other horses when protecting a foal</b></p> <p>MARE</p>	<p><b>First reaction to danger is to flee</b></p> <p>FOAL, MARE, STALLION</p>



<p><b>If threatened by a predator, will stand its ground to protect a colt</b></p> <p>MARE</p>	<p><b>Can be aggressive toward herd and handlers if not trained</b></p> <p>STALLION</p>	<p><b>Fights against pressure of a halter and rope</b></p> <p>FOAL</p>
<p><b>Less than 1 year old</b></p> <p>FOAL</p>	<p><b>Breeds with a mare</b></p> <p>STALLION</p>	<p><b>Use ears and tail as main communication</b></p> <p>FOAL, MARE, STALLION</p>
<p><b>Provides milk for foals</b></p> <p>MARE</p>	<p><b>Learns to respond to commands</b></p> <p>FOAL</p>	<p><b>Herd animal</b></p> <p>FOAL, MARE, STALLION</p>
<p><b>Can live 25 to 30 years</b></p> <p>FOAL, MARE, STALLION</p>	<p><b>Is taught to allow a person to ride on its back</b></p> <p>FOAL</p>	<p><b>Wears a saddle</b></p> <p>FOAL, MARE, STALLION</p>

<b>What a colt (male) and a filly (female) both are</b>  <i>FOAL</i>	<b>Requires food and water every day</b>  <i>FOAL, MARE, STALLION</i>	<b>Can carry a rider to any spot on the ranch</b>  <i>MARE, STALLION</i>
<b>Social animal</b>  <i>FOAL, MARE, STALLION</i>	<b>Carry its young for about 1 year</b>  <i>MARE</i>	<b>Nurses its young for 6 months</b>  <i>MARE</i>
<b>Breeds with a stallion</b>  <i>MARE</i>	<b>Defends the herd from predators</b>  <i>STALLION</i>	<b>Has very little understanding of the work it will be expected to do</b>  <i>FOAL</i>
<b>Can walk and run after just a few hours of being born</b>  <i>FOAL</i>	<b>Can be frightened by a saddle being put on its back</b>  <i>FOAL</i>	<b>Eyes are set on the side of its head</b>  <i>FOAL, MARE, STALLION</i>



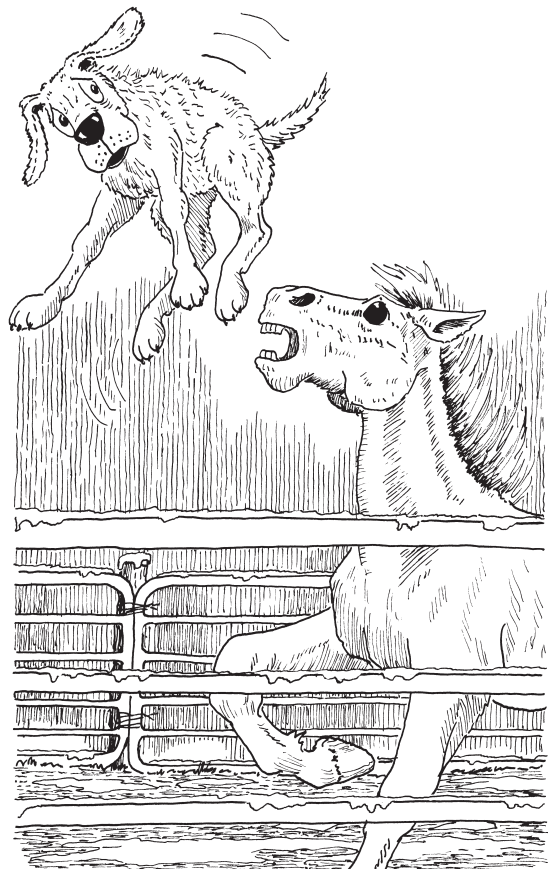
NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## THE BOTTOM LINE

When playing the TRAINING COLTS BOARD GAME you noticed characteristics that were the same and different between foals, mares and stallions.

*Answer the questions below:*

1. What characteristics did you notice to be different between foals, mares and stallions?
2. Write down a life cycle of another animal that you know.
3. What is the same between your animal and a horse life cycle?
4. What is different between your animal and a horse life cycle?
5. Would Hank need to spend more time protecting a foal, mare or stallion on his ranch?  
Explain your answer.





# ACTIVITY 5

## *Horse Traits Mix Up*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapter 4C

**Content Area**

Science

**Topic**

Inherited Traits of Horses

**Objective**

Students will explore and describe inherited traits and learned behaviors of horses.

**Texas Essential Knowledge and Skills (TEKS):**

4.13B, 5.13B





## Horse Traits Mix Up

**CONTENT AREA:** Science

**TOPIC:** Inherited Traits of Horses

### GAME MATERIALS:

- SECURITY BRIEFING (page A5-2): 1 per student or student group
- Brass fastener
- Jumbo paperclip
- POSTER (8.5" X 11" sheet of paper): 1 per student
- HORSE TRAITS MIX UP - DATA SHEET (page A5-3): 1 per student
- HORSE TRAITS MIX UP - SPINNER (page A5-4): 1 per student
- THE BOTTOM LINE (page A5-5): 1 per student or student group

### READING STRATEGY:

N/A

### GAME INSTRUCTIONS:

1. Have students read Chapter 5C.
2. Students will become horses for this activity. They will spin the HORSE TRAITS MIX UP - SPINNER and record the traits they have inherited as a horse on the HORSE TRAITS MIX UP - DATA SHEET.
3. Using the data students collect on the DATA SHEET, students will create a POSTER to advertise themselves (as a horse) to Loper and Slim.
4. Students will present their POSTERS and decide which horses Slim and Loper would like to purchase. Number students off 1 to 40. Even numbers will be the horses and odd numbers will be cowboys. Each horse will have 30 seconds to advertise themselves using their poster. The cowboys will select the horse they would like to purchase. Then have groups switch roles and repeat.

### STUDENT SKILLS ASSESSMENT:

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



# Horse Traits Mix Up



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

It's me again, Hank the Cowdog. As you know, I am the Head of Security here on the ranch and I am the most important because I keep everyone safe. The second most important animal on the ranch is the horse! Cowboys use their horses for many tasks, including moving things around the ranch, herding cattle, and hauling loads. The horse's **attributes** are very important. A cowboy must think about the tasks they need the horse to perform to determine which **characteristics** would be the most useful. Loper needs your help selecting another horse for the ranch.

### ACTIVITY INSTRUCTIONS:

1. Read Chapter 5C.
2. For this activity, you are going to become a horse! Spin the HORSE TRAITS MIX UP - SPINNER to see what traits you are going to inherit. Record your traits on the HORSE TRAITS MIX UP - DATA SHEET. Be sure to fill out each section of the data sheet using the descriptions and scores from the spinner and your book to list advantages, disadvantages and cowboy notes. Total your score at the bottom.
3. Using the data you collected on the HORSE TRAITS MIX UP - DATA SHEET and the 8.5" x 11" sheet of paper provided to you, create a POSTER to advertise yourself (as a horse) to Loper and Slim. You will have 30 seconds to give your advertising presentation.

*Note: A high score on your data sheet, means you have a lot of desirable traits! A low score means that your traits are less desirable. Keep this in mind as you decide what to use as selling points on your poster. For example, if you have a low overall score, play up your best traits!*

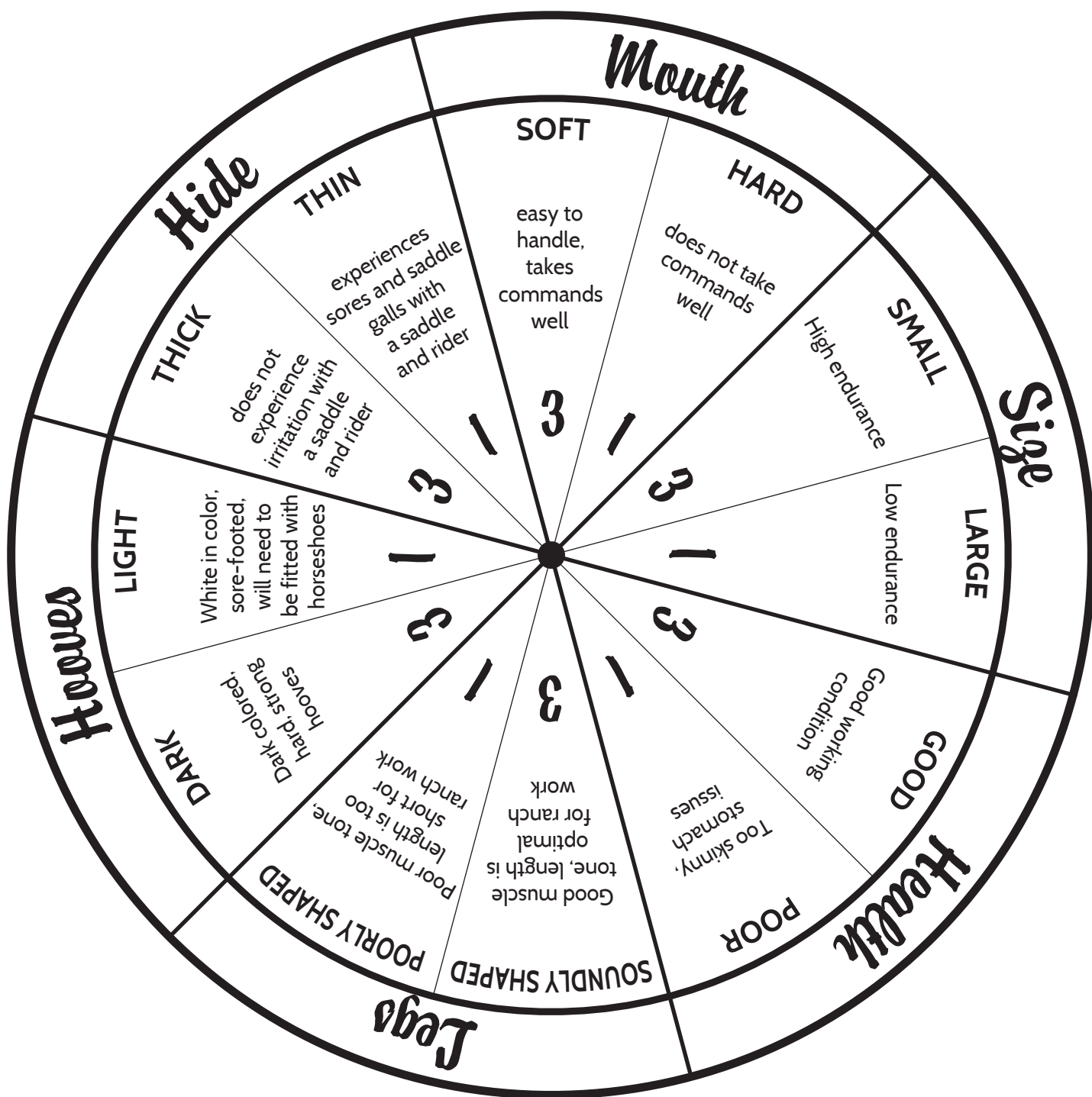
### WRAP UP:

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



Horse Traits Mix Up - Data Sheet

BODY PART	BODY PART TRAIT(S) DESCRIPTION	SCORE	ADVANTAGE(S)	DISADVANTAGE(S)	COWBOY'S NOTES
Mouth					
Size					
Health					
Legs					
Hooves					
Hide					
TOTAL SCORE					







# Horse Traits Mix Up



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## THE BOTTOM LINE

Each horse that went to market had different advantages and disadvantages. Cowboys and ranchers must think carefully about what they want to accomplish with the horses they purchase for use on the ranch.

Reflect on what your horse had to offer at market. Using the chart below, explain why your horse's traits could have been an advantage or disadvantage to a rancher.

	TRAIT(S)	ADVANTAGE(S)	DISADVANTAGE(S)
Mouth			
Size			
Health			
Legs			
Hooves			
Hide			





## ACTIVITY 6

### *Most Valuable Asset*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapters 3A and 4D

**Content Area**

Social Studies

**Topic**

Who or what is the most valuable asset on a ranch?

**Objective**

Students will analyze the roles of various animals/people on a ranch and will assign values to those roles.

**Texas Essential Knowledge and Skills (TEKS):**

K.7A, 1.10A, 1.10B, 2.9B, 4.12A, 5.13A





## Most Valuable Asset

**CONTENT AREA:** Social Studies

**TOPIC:** Who or What is the Most Valuable Asset on a Ranch?

### ACTIVITY MATERIALS:

- SECURITY BRIEFING (page A6-2): 1 per student or student group
- MOST VALUABLE ASSET - ASSESSMENTS 1-4 (pages A6-3 to A6-4): 1 per student
- MOST VALUABLE ASSET - VALUE METER (page A6-5): 1 per student
- THE BOTTOM LINE (page A6-6): 1 per student or student group

### READING STRATEGY:

Give students time to skim the book focusing on their animal/person. Students will be searching for information related to their animal/person that identifies its/their value to a ranch in four different categories:

- Economic
- Companionship
- Work Ethic
- Trustworthiness

### ACTIVITY INSTRUCTIONS:

1. Each student is assigned a ranch role (rancher, cowboy, horse, or cattle) and receives the MOST VALUABLE ASSET - ASSESSMENT for that role. Students will gather together in groups with other students assigned the same role. Each group will meet in one of the four corners of the classroom to discuss their importance to the ranch and will complete their ASSESSMENT.
2. Using their assessment, each group must be prepared to answer the question, *"What makes YOU the MVA (Most Valuable Asset) of your ranch?"*
3. Groups will then be mixed up to include one of each role in a group (1 rancher, 1 cowboy, 1 horse and 1 cow). Using the ASSESSMENT, each student will defend his or her position as "MVA" on the ranch in the four categories of ranch value (*economic, companionship, work ethic and trustworthiness*).
4. Once all students in the group have spoken, all members of the group will then fill out a MOST VALUABLE ASSET - VALUE METER to decide for themselves where each role falls on the meter.

### STUDENT SKILLS ASSESSMENT:

Have students (or student groups) complete The Bottom Line worksheet at the end of the activity.

# Most Valuable Asset



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

We all know that there are a lot of people and animals who contribute to a successful ranch. Each figure adds value to our ranch. Now, we all know that the Head of Security (that's me) is the most valuable to this ranch running on all four paws. But when it comes to the other roles played on the ranch—the rancher, cowboys, horses, and cattle—who do you think has the most value?

### ACTIVITY INSTRUCTIONS:

1. Each student will be assigned a ranch role (rancher, cowboy, horse, or cattle) and will receive the **MOST VALUABLE ASSET - ASSESSMENT** for that role. Gather together in groups with other students assigned the same role. (Each group can meet in one of the four corners of the classroom.) Discuss with your group your importance to the ranch. Complete your **ASSESSMENT**.
2. Using your **ASSESSMENT**, prepare to answer the question, "**What makes YOU the MVA (Most Valuable Asset) of your ranch?**"
3. Groups will then be mixed up to include one of each role in a group (1 rancher, 1 cowboy, 1 horse and 1 cow). Using your **ASSESSMENT**, defend your position as "MVA" on the ranch to your group in the four categories of ranch value (economic, companionship, work ethic and trustworthiness).
4. Once all students in the group have spoken, each student fills out a **MOST VALUABLE ASSET - VALUE METER** to decide for themselves where each ranch role falls on the meter. (You may not think it's you, after all!)

### WRAP UP:

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





## RANCH VALUE ASSESSMENT FORM

# CATTLE



*Describe the following values of the above asset:*

ECONOMIC

COMPANIONSHIP

WORK ETHIC

TRUSTWORTHINESS

## RANCH VALUE ASSESSMENT FORM

# HORSE



*Describe the following values of the above asset:*

ECONOMIC

COMPANIONSHIP

WORK ETHIC

TRUSTWORTHINESS



## RANCH VALUE ASSESSMENT FORM

# COWBOY



*Describe the following values of the above asset:*

ECONOMIC

COMPANIONSHIP

WORK ETHIC

TRUSTWORTHINESS

## RANCH VALUE ASSESSMENT FORM

# RANCHER



*Describe the following values of the above asset:*

ECONOMIC

COMPANIONSHIP

WORK ETHIC

TRUSTWORTHINESS



## RANCH ASSET VALUE METER

RATE EACH VALUE

### CATTLE



1 2 3  
ECONOMIC

1 2 3  
COMPANIONSHIP

1 2 3  
WORK ETHIC

1 2 3  
TRUSTWORTHINESS

### HORSE



1 2 3  
ECONOMIC

1 2 3  
COMPANIONSHIP

1 2 3  
WORK ETHIC

1 2 3  
TRUSTWORTHINESS

### COWBOY



1 2 3  
ECONOMIC

1 2 3  
COMPANIONSHIP

1 2 3  
WORK ETHIC

1 2 3  
TRUSTWORTHINESS

### RANCHER



1 2 3  
ECONOMIC

1 2 3  
COMPANIONSHIP

1 2 3  
WORK ETHIC

1 2 3  
TRUSTWORTHINESS

## RANCH ASSET VALUE METER

RATE EACH VALUE

### CATTLE



1 2 3  
ECONOMIC

1 2 3  
COMPANIONSHIP

1 2 3  
WORK ETHIC

1 2 3  
TRUSTWORTHINESS

### HORSE



1 2 3  
ECONOMIC

1 2 3  
COMPANIONSHIP

1 2 3  
WORK ETHIC

1 2 3  
TRUSTWORTHINESS

### COWBOY



1 2 3  
ECONOMIC

1 2 3  
COMPANIONSHIP

1 2 3  
WORK ETHIC

1 2 3  
TRUSTWORTHINESS

### RANCHER



1 2 3  
ECONOMIC

1 2 3  
COMPANIONSHIP

1 2 3  
WORK ETHIC

1 2 3  
TRUSTWORTHINESS



# Most Valuable Asset



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## THE BOTTOM LINE

Everyone on a ranch has value. Out of the many people and animals involved on the ranch, who do you think has the most value?

*Answer the questions below:*

1. Why are cattle important to the success of a ranch?
2. Why is a horse important to the success of a ranch?
3. Why is a cowboy important to the success of a ranch?
4. Why is a rancher important to the success of a ranch?
5. In your opinion, what or who is the most important to the success of a ranch: cattle, the horse, a cowboy or a rancher? Explain your answer.





# ACTIVITY 7

## *A Day in the Life of a Cowboy*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapter 6 and 7

**Content Area**

Social Studies

**Topic**

The Impact of a Cowboy's Work

**Objective**

Students will be able to categorize challenges and accomplishments of a cowboy.

**Texas Essential Knowledge and Skills (TEKS):**

K.7A, K.7B, 1.10A, 1.10B, 4.12A, 4.12B, 5.13A





## A Day in the Life of a Cowboy

**CONTENT AREA:** Social Studies

**TOPIC:** The Impact of a Cowboy's Work

### GAME MATERIALS:

- SECURITY BRIEFING (page A7-2): 1 per student or student group
- A DAY IN THE LIFE OF A COWBOY GAME - GAME BOARD (included): 1 per student group
- A DAY IN THE LIFE OF A COWBOY GAME - GAME CARDS & BACKS (page A7-3 to A7-7): 1 set per student group
- Found objects for game pieces (e.g., different colored math manipulative cubes)
- THE BOTTOM LINE (page A7-10): 1 per student or student group

### READING STRATEGY:

Students read their assigned part (jigsaw table read) and write down three things they want to share with their group from their reading.

- Part One: Pages 35-38
- Part Two: Pages 38-42
- Part Three: Pages 43-47
- Part Four: Pages 48-51

### GAME INSTRUCTIONS:

1. Students will read Chapters 6 and 7.
2. Divide students into groups of 2, 3, or 4 to play the A DAY IN THE LIFE OF A COWBOY - GAME.
3. Students will take turns drawing a A DAY IN THE LIFE OF A COWBOY GAME - GAME CARD. Students will follow the instructions on the GAME CARD to move their game piece around the board.
4. The first student to guide their "cowboy" (game piece) to the game's "FINISH" is the winner.

### STUDENT SKILLS ASSESSMENT:

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

# A Day in the Life of a Cowboy



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

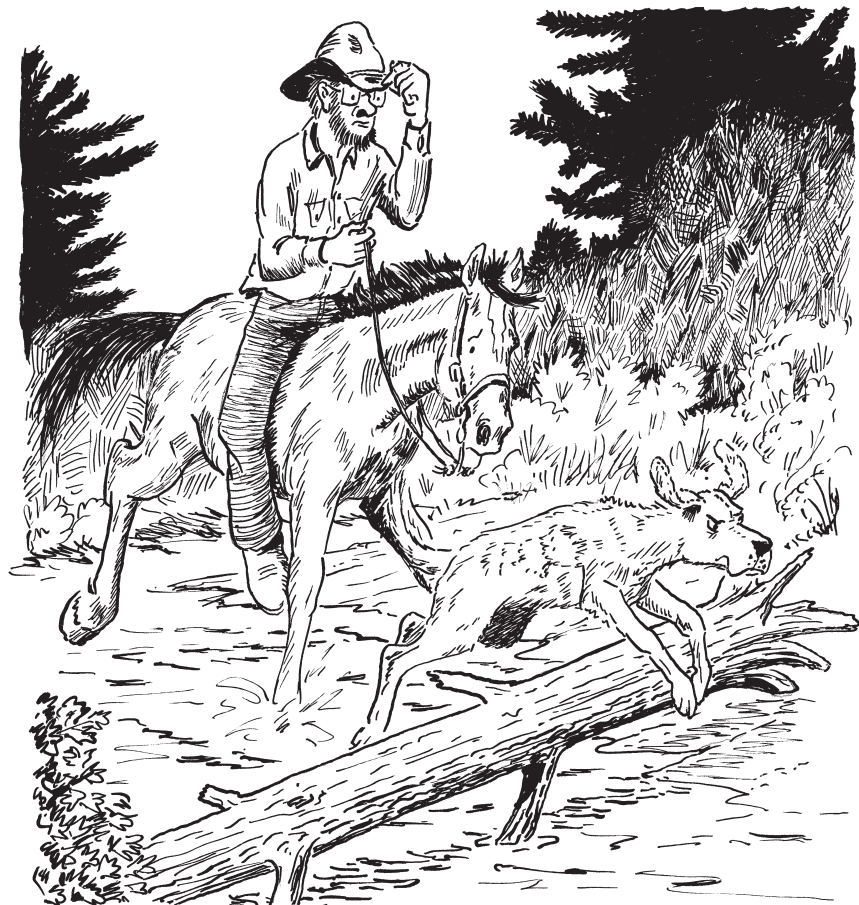
Working on a ranch is hard. Now we all know that being the Head of Security is the hardest job on the ranch, but cowboys work pretty hard too. There are many different jobs for a cowboy to do on the ranch. A cowboy never knows what his day will bring him when he wakes up in the morning. He may have a plan for what he is going to do, but the cattle, coyotes, and horses may not be aware of his plan. No matter what may happen, any cowboy worth his salt will get the job done.

### ACTIVITY INSTRUCTIONS:

1. Play A DAY IN THE LIFE OF A COWBOY board game.
2. The first player will draw a A DAY IN THE LIFE OF A COWBOY - GAME CARD and read it aloud. Player will follow the instructions on the GAME CARD in order to move his or her "cowboy" (GAME PIECE) around the board. Players will take turns reading cards and following card directions.
3. The first student to have his or her "cowboy" (GAME PIECE) make it to the "FINISH" of the workday wins the game!

### WRAP UP:

Fill out the Bottom Line worksheet after you have completed the activity.





<p><b>Your horse threw a shoe.</b></p> <p><b>GO BACK 2 SPACES</b></p>	<p><b>You branded 25 cattle.</b></p> <p><b>GO FORWARD 3 SPACES</b></p>	<p><b>You have been snake bit!</b></p> <p><b>GO TO SLIM'S HOUSE</b></p>
<p><b>You need to drive the herd to the waterhole.</b></p> <p><b>GO TO WATERHOLE 83</b></p>	<p><b>You sorted 100 cattle into pens.</b></p> <p><b>GO FORWARD 5 SPACES</b></p>	<p><b>You got kicked by a cow.</b></p> <p><b>GO BACK 2 SPACES</b></p>
<p><b>The cat spooked your horse.</b></p> <p><b>START OVER</b></p>	<p><b>You have to drive to town.</b></p> <p><b>GO TO THE ROAD TO TWITCHELL</b></p>	<p><b>You broke your rope.</b></p> <p><b>GO BACK 3 SPACES</b></p>
<p><b>You have to check the mail.</b></p> <p><b>GO TO THE MAILBOX</b></p>	<p><b>You lost a calf in the canyon.</b></p> <p><b>GO BACK 4 SPACES</b></p>	<p><b>You roped a calf.</b></p> <p><b>GO FORWARD 3 SPACES</b></p>



<p><b>You and your horse hauled a fallen tree off the road.</b></p> <p><b>GO FORWARD 1 SPACE</b></p>	<p><b>You got a new pair of chaps.</b></p> <p><b>GO FORWARD 2 SPACES</b></p>	<p><b>Your horse is sick.</b></p> <p><b>GO BACK 3 SPACES</b></p>
<p><b>You returned a calf to his mother.</b></p> <p><b>GO FORWARD 3 SPACES</b></p>	<p><b>Your truck got a flat.</b></p> <p><b>GO BACK 3 SPACES</b></p>	<p><b>Weather is sunny and clear.</b></p> <p><b>GO FORWARD 2 SPACES</b></p>
<p><b>You cleaned your saddle.</b></p> <p><b>GO FORWARD 2 SPACES</b></p>	<p><b>Your cowdog got into a cactus.</b></p> <p><b>GO BACK 5 SPACES</b></p>	<p><b>You mended the fence.</b></p> <p><b>GO FORWARD 3 SPACES</b></p>
<p><b>You are chasing coyotes away from the herd.</b></p> <p><b>GO TO THE CAPROCK</b></p>	<p><b>You helped birth a calf.</b></p> <p><b>GO FORWARD 5 SPACES</b></p>	<p><b>You repaired the windmill.</b></p> <p><b>GO FORWARD 2 SPACES</b></p>



<p><b>You trained a new colt.</b></p> <p>GO FORWARD 2 SPACES</p>	<p><b>You halter broke a foal.</b></p> <p>GO FORWARD 3 SPACES</p>	<p><b>You need cow cake.</b></p> <p>GO TO THE CAKE HOUSE</p>
<p><b>You gave antibiotics to a sick cow.</b></p> <p>GO FORWARD 2 SPACES.</p>	<p><b>Your horse has a big heart.</b></p> <p>GO FORWARD 3 SPACES</p>	<p><b>You were bucked off a horse.</b></p> <p>GO BACK 3 SPACES</p>
<p><b>You made a great "head catch."</b></p> <p>GO FORWARD 3 SPACES</p>	<p><b>You got all of your jobs done for the day.</b></p> <p>GO FORWARD 3 SPACES</p>	<p><b>You fed and watered your horse.</b></p> <p>GO FORWARD 2 SPACES</p>
<p><b>You found a dead cow.</b></p> <p>GO BACK 3 SPACES</p>	<p><b>You stepped on the cat's tail.</b></p> <p>GO FORWARD 1 SPACE</p>	<p><b>You fed your cowdog a steak bone and scraps.</b></p> <p>GO FORWARD 10 SPACES</p>





<p><b>You airmailed a loop at an unsuspecting dog.</b></p> <p><b>GO BACK 1 SPACE</b></p>	<p><b>You welded a new gate.</b></p> <p><b>GO FORWARD 2 SPACES</b></p>	<p><b>You used a heel loop to bring down a calf.</b></p> <p><b>GO FORWARD 3 SPACES</b></p>
<p><b>You removed porcupine quills from a cow's mouth.</b></p> <p><b>GO FORWARD 2 SPACES</b></p>	<p><b>You threw a loop into the dirt.</b></p> <p><b>GO BACK 1 SPACE</b></p>	<p><b>You pulled a bone out of a cow's throat.</b></p> <p><b>GO FORWARD 3 SPACES</b></p>
<p><b>You mastered the Hoolihan technique.</b></p> <p><b>GO FORWARD 2 SPACES</b></p>	<p><b>A blizzard is coming.</b></p> <p><b>GO TO THE RANCH HOUSE</b></p>	<p><b>You oiled the windmill.</b></p> <p><b>GO FORWARD 2 SPACES</b></p>
<p><b>You ran out of hay.</b></p> <p><b>GO BACK 3 SPACES</b></p>	<p><b>You spent the evening practicing throwing your rope.</b></p> <p><b>GO FORWARD 1 SPACE</b></p>	<p><b>You strung 10 miles of barbed wire.</b></p> <p><b>GO FORWARD 3 SPACES</b></p>







# A Day in the Life of a Cowboy



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## THE BOTTOM LINE

Answer the questions below:

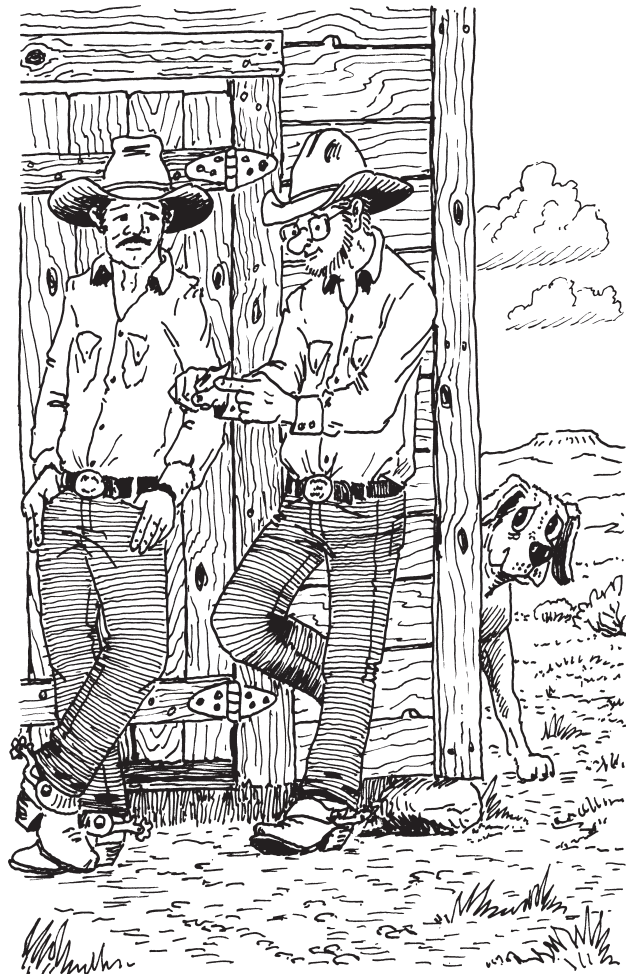
1. During the game, what were three challenges cowboys had on Hank's ranch?

- 
- 
- 

2. During the game, what were three accomplishments of a cowboy on Hank's ranch?

- 
- 
- 

3. What do you think is the BIGGEST challenge cowboys have on Hank's ranch?







# ACTIVITY 8

## *Design a Windmill*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapter 7

**Content Area**

Science

**Topic**

Physical Properties Engineering Challenge

**Objective**

Students will design blades for a windmill that will turn in the wind and lift a load.

**Texas Essential Knowledge and Skills (TEKS):**

3.6A, 4.6A, 5.6A





## Design a Windmill

**CONTENT AREA:** Social Studies

**TOPIC:** Physical Properties Engineering Challenge

### ACTIVITY MATERIALS:

#### WINDMILL BASE

Each student group will need one base/load. The following list builds one base/load:

- Large plastic 32 to 64 oz. fruit juice bottle with circular base
- 10 to 12" long 1/8" wide dowel rod or bamboo skewer
- 3 oz. paper cup
- 3" foam ball
- 12" piece of string
- Hole punch/drill
- 10 pennies (load)

#### WINDMILL BLADE DESIGNS

Each student group will be provided with the following materials, in addition to the windmill base:

- Aluminum foil
- Cardstock
- Tissue paper
- Popsicle sticks
- Foam sheets
- Index cards
- Tape and/or glue
- Scissors
- Stapler
- Electric fan
- SECURITY BRIEFING (page A8-3): 1 per student or student group
- DESIGN A WINDMILL - PLAN SHEET (page A8-4): 1 sheet per student
- THE BOTTOM LINE (page A8-5): 1 per student or student group

### READING STRATEGY:

N/A

### ACTIVITY PREP:

Teachers will build one WINDMILL BASE per student group according to the diagram before the student activity.



SIDE VIEW



TOP DOWN VIEW



## Design a Windmill

### ACTIVITY INSTRUCTIONS:

#### WINDMILL BLADE DESIGN CHALLENGE

Students will design WINDMILL BLADES capable of turning in the wind and lifting a load from the ground to the top of the windmill.

#### PLANNING PHASE

1. Students will be given one minute to individually plan and draw a WINDMILL BLADE design on the DESIGN A WINDMILL - PLAN SHEET. (*Students should not be collaborating during this individual planning time.*)
2. After the minute is up, members of the group will share their ideas with one another. Students must decide which elements of each group member's design they would like to include in the group's blade design. The group's blade design **MUST** include one design element from each group member.
3. Each group will plan and create their final design on the PLAN SHEET.
4. Students will present their group's blade design to the teacher, noting which elements in the design belong to each group member. (No plan is approved that does not include a design element from each team member.)
5. After the group's blade design has been approved by the teacher, students can begin creating their blades with the provided materials.

#### CREATING PHASE

Each group will receive the same windmill base. Team members will gather materials from the table and begin making their blades and assembling their windmill.

#### TESTING PHASE

Each group can test their windmill blades with the fan anytime during their build. The speed of the fan does not matter if the blades turn and can lift a cup with 10 pennies.

#### REDESIGNING PHASE:

If the windmill does not spin and lift the cup of 10 pennies, then the team will go redesign and retest.

### STUDENT SKILLS ASSESSMENT:

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

# Design a Windmill



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

*Living on a ranch requires a lot of careful planning by the humans. Loper must think about meeting the basic needs of his animals, which includes water. On our ranch, Loper installed a windmill to pump water for us to drink, but during a Texas wind storm the windmill blades were damaged. Now, Loper needs to repair the old windmill fast because every day without water is dangerous! He is looking at redesigning his windmill to run more efficiently using wind energy. Loper needs ideas and he put me, Hank the Cowdog, in charge of rounding up some more ideas. It makes sense, I round up his cattle... but I am not real good at designing stuff, so I need your help!*

*I rounded up some materials you can use in your blade design:*

- Aluminum Foil
- Cardstock
- Copy Paper
- Tissue Paper
- Popsicle Sticks
- Foam Sheet
- Tape
- Glue
- Stapler

### ACTIVITY INSTRUCTIONS:

*Your challenge is to design WINDMILL BLADES capable of turning in the wind and lifting a load from the ground to the top of the windmill.*

- 1. First, each student is given 1 minute to plan and draw a WINDMILL BLADE design on a blank sheet of paper.*
- 2. After time is up, group members will share their WINDMILL BLADE designs with one another.*
- 3. Together, your group will decide which elements from each member's design will be used to create a final WINDMILL BLADE group design. (All members of your group must have a design contribution to the final blade design to have your plan approved by your teacher.)*
- 4. After your plan has been approved, retrieve your windmill base and begin creating your WINDMILL BLADES out of the provided materials. Assemble your windmill to test your BLADES.*
- 5. Test your WINDMILL BLADES with the electric fan. Use THE BOTTOM LINE worksheet to record data on different materials used in your design or redesign.*
- 6. If your design isn't successful in turning or lifting the load, you must work together as a group to troubleshoot where the problem may be. A redesign may be necessary.*
- 7. Refine and test your group's WINDMILL BLADE design until it successfully turns and lifts the load.*

### WRAP UP:

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

# Design a Windmill



Your challenge is to design WINDMILL BLADES capable of turning in the wind and lifting a load from the ground to the top of the windmill.

## WINDMILL BLADE DESIGN (Individual):



## WINDMILL BLADE DESIGN (Group):







# Design a Windmill



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## THE BOTTOM LINE

Now that your group has completed the WINDMILL BLADE design for your windmill, it is time to put your design to the test. Complete the chart below with information about your windmill blades. Remember, for your design to be successful, it must be able to lift a load to the top of the windmill so Loper can throw his tools in the bucket when making repairs.

*Enter the data in the chart. Answer the questions below.*

WINDMILL BLADE DESIGN - DATA COLLECTION CHART			
Materials	Physical Properties		Successful?
	BENEFIT(S)	DRAWBACK(S)	
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

1. What problems did your group encounter during the design process and how did you work through your issues?

2. What would be the benefit of using wind power on a ranch?

3. What limitations might a ranch have in using wind power?





## ACTIVITY 9

### *The Cowboy's Equipment*



***RANCH LIFE SERIES / BOOK 2 / COWBOYS AND HORSES***

Chapter 8

**Content Area**

Social Studies

**Topic**

Geography: How People Adapt and Modify Their Environment

**Objective**

Students will be able to analyze the importance of equipment to a cowboy.

**Texas Essential Knowledge and Skills (TEKS):**

K.5B, 1.6C, 1.10B, 2.8A, 3.4A, 3.4B, 4.9C, 5.8B, 5.9A





## The Cowboy's Equipment

**CONTENT AREA:** Science & Social Studies

**TOPIC:** Geography: How People Adapt and Modify Their Environment

### ACTIVITY MATERIALS:

- SECURITY BRIEFING (pages A9-2): 1 per student or student group
- THE COWBOY'S EQUIPMENT - SADDLE/BOOTS/CHAPS/SPUR (pages A9-3 to A9-6): 1 per student
- THE BOTTOM LINE (page A9-8): 1 per student or student group

### READING STRATEGY:

Working in table groups, students will decide which piece of equipment they will research, and each will read aloud the pages corresponding to their equipment below. Groups can meet together in different areas of the classroom.

- Saddle: Pages 51-54
- Boots: Pages 55-61
- Chaps: Pages 62-65
- Spurs: Pages 66-68

### ACTIVITY INSTRUCTIONS:

1. Organize students in groups of four and assign each student one of the four pieces of equipment: saddle, boots, chaps, spurs. Student receive the THE COWBOY'S EQUIPMENT - SADDLE/BOOTS/CHAPS/SPUR sheet that corresponds with their piece of equipment.
2. As students complete their reading, they will identify 3 traits their piece of equipment has that helps a cowboy do his or her job and write them on the bottom of their equipment sheet.
3. Students will present their piece of equipment to the class using the traits they found in their reading as support evidence for the importance of their piece of equipment on the ranch.

### STUDENT SKILLS ASSESSMENT:

Have students (or student groups) complete THE BOTTOM LINE worksheet at the end of the activity.

# The Cowboy's Equipment



## SECURITY BRIEFING –

### WORDS OF WISDOM FROM HANK THE COWDOG:

*Howdy friends, it's me, Hank the Cowdog. It is amazing that as the Head of Security I don't have to have any equipment to get my job done. I can protect this ranch with just my four paws and awesome sniffer. Cowboys, on the other hand, need a lot of equipment to get their jobs done daily. What equipment do you feel is the most important for a cowboy?*

### ACTIVITY INSTRUCTIONS:

1. Students will be organized into groups of four people and assigned a different piece of equipment (saddle, boots, chaps, or spurs).
2. Each student will be given the corresponding THE COWBOY'S EQUIPMENT sheet for his or her piece of equipment.

*Students will read the following text for their piece of equipment:*

**Saddle:** Pages 51-54

**Boots:** Pages 55-61

**Chaps:** Pages 62-65

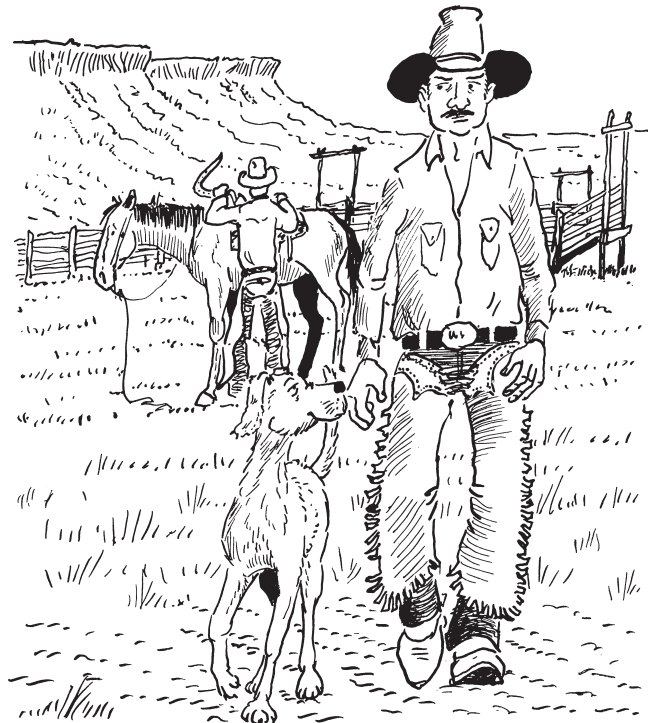
**Spurs:** Pages 66-68

*As you read, identify 3 traits that describe your piece of equipment. Write these traits on the bottom of your THE COWBOY'S EQUIPMENT sheet.*

3. Using the traits on your THE COWBOY'S EQUIPMENT sheet, present your piece of equipment to the class, describing in as much detail as you can its importance to the ranch.

### WRAP UP:

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





# – THE COWBOY'S EQUIPMENT –

# saddle



*This saddle was made by Apache Saddles (Amarillo, TX), probably 1950s or 1960s.  
It is part of the artifact collection at the National Ranching Heritage Center.*



*List 3 characteristics of the above piece of equipment that aids a  
cowhand in completing his or her ranch work on a daily basis:*

**1.**

**2.**

**3.**

– THE COWBOY'S EQUIPMENT –

# boots



*These boots were made by M.L. Leddy's in the 1970s.  
They are part of the artifact collection at the National Ranching Heritage Center.*

*List 3 characteristics of the above piece of equipment that aids a  
cowhand in completing his or her ranch work on a daily basis:*

**1.**

**2.**

**3.**

– THE COWBOY'S EQUIPMENT –

# chaps



*These chaps were made in the 1950s or 1960s.  
They are part of the artifact collection at the National Ranching Heritage Center.*

*List 3 characteristics of the above piece of equipment that aids a  
cowhand in completing his or her ranch work on a daily basis:*

**1.**

**2.**

**3.**

– THE COWBOY'S EQUIPMENT –

# spur



*These spurs were made by Oscar Crockett in the 1960s.  
They are part of the artifact collection at the National Ranching Heritage Center.*

*List 3 characteristics of the above piece of equipment that aids a  
cowhand in completing his or her ranch work on a daily basis:*

**1.**

**2.**

**3.**







# The Cowboy's Equipment



NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

## THE BOTTOM LINE

A good cowboy must rely on quality equipment. Use our cowboy and equipment visuals to answer the questions.

*Answer the questions below:*

1. Name the most important trait of a cowboy's saddle.
2. Name the most important trait of a cowboy's boots.
3. Name the most important trait of a cowboy's chaps.
4. Name the most important trait of a cowboy's spurs.
5. Which piece of equipment do you feel is the most important for a cowboy to have? Explain