



RANCH LIFE SERIES WITH HANK THE COWDOG

BY JOHN R. ERICKSON



– BOOK 1 – RANCHING AND LIVESTOCK

Activity Guide

**MICHELLE SEDBERRY
JENNY GAONA**
Co-Authors

JULIE HODGES
Editor

HARTSFIELD DESIGN, LUBBOCK, TX
Design



*Howdy, educators! Welcome to the Activity Guide for **BOOK 1: RANCHING AND LIVESTOCK** 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 10 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 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 1: RANCHING AND LIVESTOCK



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.
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 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

A Day in the Life of Hank the Cowdog



RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 1

Content Area:

Social Studies

Topic:

Map Skills

Objective:

Students will use cardinal instructions while referencing parts of a map.

Texas Essential Knowledge and Skills (TEKS):

K.4B, 1.4A, 1.6A, 2.5A, 3.5C, 4.6A, 5.6A





A Day in the Life of Hank the Cowdog

CONTENT AREA: Social Studies

TOPIC: Map Skills

GAME MATERIALS:

- RANCH MAP (33" x 25.5") - 1 per student table group, laminate (*To print additional maps, download PDF from ranchlifelearning.com*)
- SECURITY BRIEFING (page A1-2): 1 per student table group
- A DAY IN THE LIFE OF HANK THE COWDOG - HANK CARD (page A1-3): 1 per student
- A DAY IN THE LIFE OF HANK THE COWDOG - CHARACTERS (page A1-4): 1 per student table group
- Dry erase marker: 1 per student or student table group
- THE BOTTOM LINE (pages A2-14): 1 per student or student table group

READING STRATEGY:

- Students will read Chapters 1 & 2 (pages 1-7).
- Students working in table groups will place the coordinating A DAY IN THE LIFE OF HANK THE COWDOG - CHARACTERS cards on the map where they belong, as each one is mentioned in the reading.

GAME INSTRUCTIONS:

1. Each table group of students will need a RANCH MAP and one A DAY IN THE LIFE OF HANK THE COWDOG - HANK CARD.
2. Have students label the cardinal directions (*north, south, east, west*) on the map with the dry erase marker.
3. Students will take turns moving the HANK CARD by following the Game Instructions on the SECURITY BRIEFING. (You may choose to instead read the Game Instructions aloud to the class.)

Optional: The width of the HANK CARD is equal to 50 square feet. There are 43,560 square feet in an acre. As students help "HANK" travel across the map, have them calculate how many feet he travels.

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 Hank the Cowdog



SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

As head of Ranch Security, it is my job to patrol the ranch on a daily basis. If I were an average dog, like Drover, I might get lost. Understanding the lay of the land is a job requirement!

*This mapping activity will help you understand how to use **cardinal directions** when referencing parts of a map. It is important I get from place to place as quickly as possible without getting lost.*

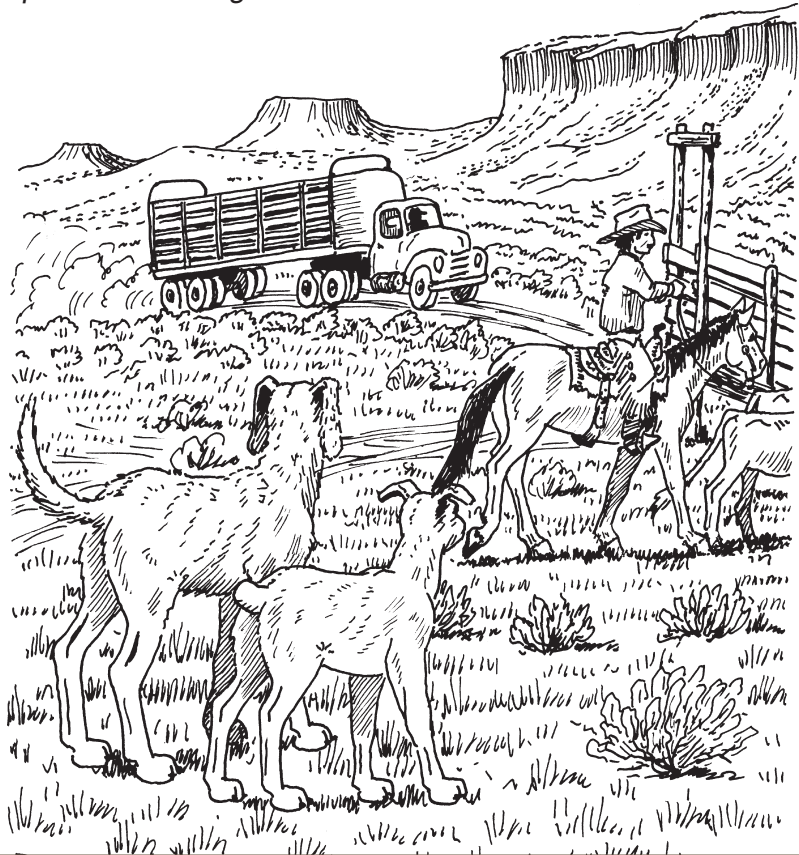
Prepare to be tuckered out!

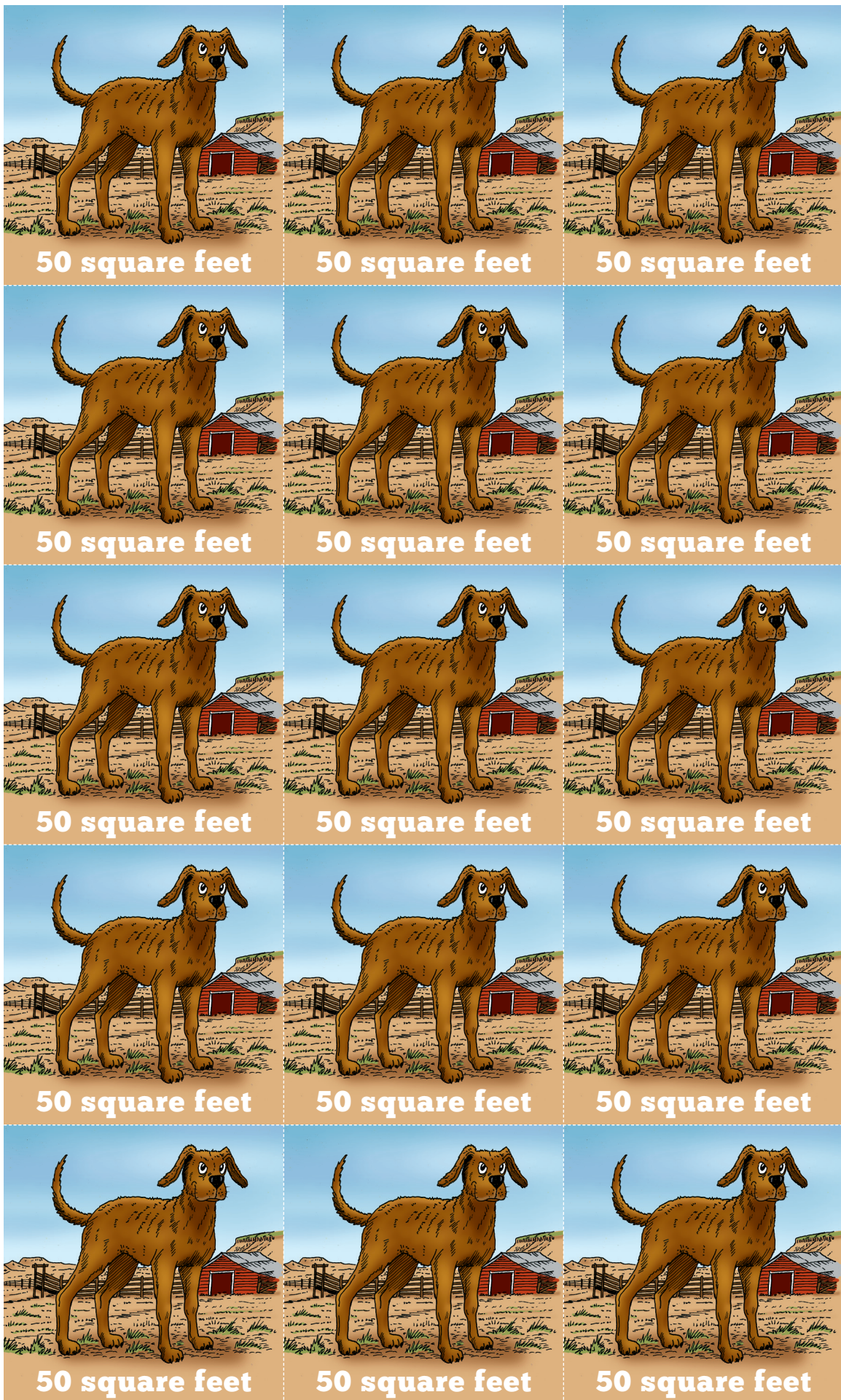
ACTIVITY INSTRUCTIONS:

1. Each group will need one RANCH MAP and one A DAY IN THE LIFE OF HANK THE COWDOG - HANK CARD, which will represent Hank as he travels across the ranch on the map.
2. Make sure you label the cardinal directions on the map (north, south, east, west) with your dry erase marker.
3. Each person in your group will take turns moving the HANK CARD by following the game instructions. After reading and accomplishing each set of instructions, answer the related question on a separate piece of paper before moving onto the next set of instructions.
4. OPTIONAL: The width of your HANK CARD is equal to 50 square feet. There are 43,560 square feet in an acre. As you travel, calculate how many feet Hank travels.

WRAP UP:

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



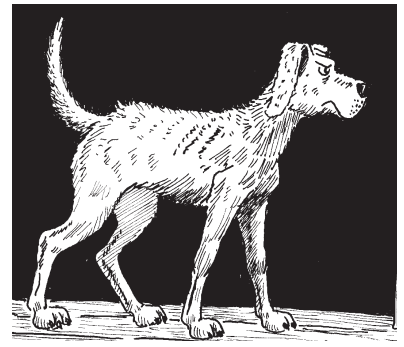




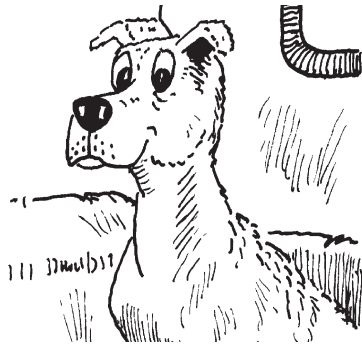
Human (Sally May)



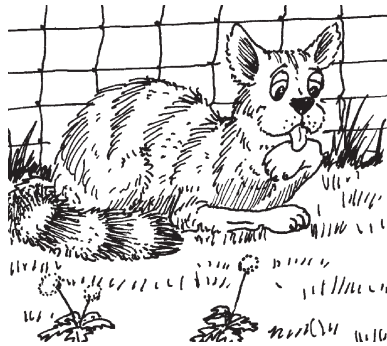
Human (Loper)



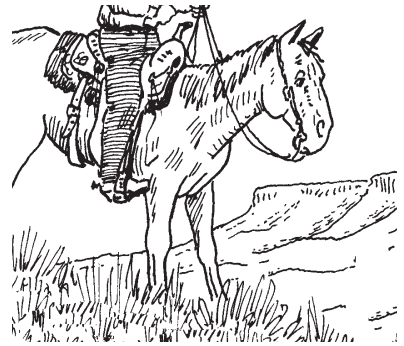
Cowdog (Hank)



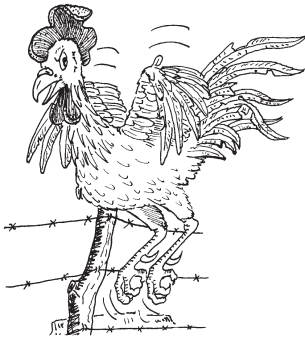
Cowdog (Drover)



Cat (Pete)



Horse



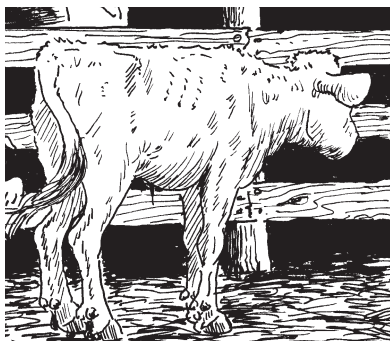
Chicken



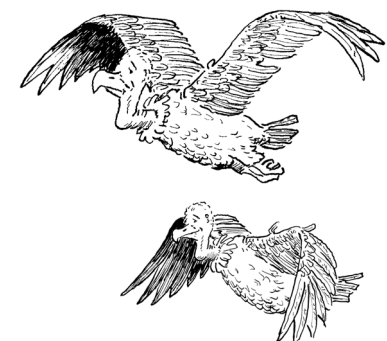
Rattlesnake



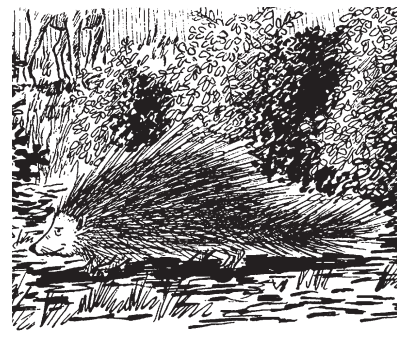
Coyotes



Calf



Buzzards



Porcupine

A Day in the Life of Hank the Cowdog



SECURITY BRIEFING –

GAME INSTRUCTIONS:

1. Begin by placing your HANK THE COWDOG CARD at the machine shed.
2. HANK saunters *northeast* to wet his whistle before the day gets started.
 - a. *Where is HANK now?*
3. HANK moves *south* to get his breakfast from Sally May at the back door.
 - a. *Where is HANK now?*
4. HANK heads *southwest* to the gas tank. This is where he and Slim meet up for the day.
 - a. *Where is HANK now?*
5. HANK jumps into Slim's truck and they head to the cake house.
 - a. *What directions would HANK give Slim for the truck to get to the cake house?*
6. After picking up the cake, Slim and HANK fire up the truck again and head *north* up the road. They take a turn to the *west* to check on the herd.
 - a. *Where is HANK now?*
7. Slim's stomach starts to rumble, they get back in the truck and head to ranch house for lunch.
 - a. *What directions would HANK give Slim for the truck to get to the ranch house?*
8. At lunch HANK hears about coyotes being spotted at waterhole 83. In order to protect the Ranch, he should check it out!
 - a. *What directions would HANK give Slim for the truck to get to waterhole 83?*
9. HANK finds coyote paw prints and follows them on paw (foot) *south* to another water source.
 - a. *Where is HANK now?*
10. After showing those pesky coyotes who was boss, HANK strutted his stuff back to the pickup. Slim decides to check the mail for Sally May on the way to the horse pasture. HANK hopped into the back of the truck because his paws were tired!
 - a. *What directions would HANK give Slim for the truck to get to get to the mail box?*
11. After grabbing the mail, Slim drove through the horse pasture to make sure all of the horses are okay after our coyote scare.
 - a. *Map out a path from the mail box to the horse pasture and back.*
 - b. *How long do you think it will take HANK and Slim to check the horse pasture and get back to the mail box? Explain.*
12. Slim dropped HANK and the mail off at the Ranch House and headed home.
 - a. *What directions would HANK give Slim for the truck to get from the mail box to the ranch house?*
13. HANK ate dinner and then headed *northwest* to get some shut eye.
 - a. *Where is HANK now?*

A Day in the Life of Hank the Cowdog



NAME: _____ DATE: _____

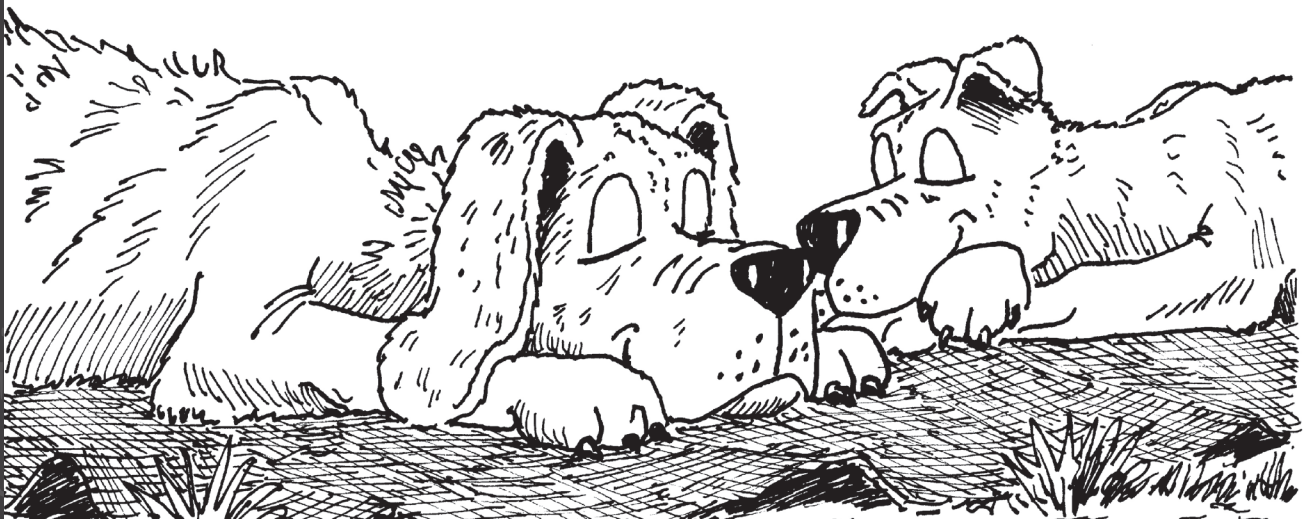
THE BOTTOM LINE

When you mapped out Hank's day on the ranch, you might have realized why, "a ranch without a Head of Ranch Security would be like... I don't know what, but it wouldn't be much."

The Head of Ranch Security's job is never done! The responsibility is gigantic and not just any dog could stand the pressure.

Answer the questions below:

1. How many feet do you think Hank traveled by paw (foot)?
2. How many feet do you think Hank traveled in the pickup truck?
3. Which location that Hank visited was the farthest from the Ranch House?
4. What was the shortest distance that Hank traveled during the day?
5. How far is it from where Hank sleeps to where Hank eats?
6. What do you think was Hank's favorite part of the day?





ACTIVITY 2

Ranch Food Web

RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 2

Content Area:

Science

Topics:

Food Chains, Food Webs, Flow of Energy

Objective:

Students will learn roles of producers, herbivores, omnivores, and carnivores on the ranch.

Texas Essential Knowledge and Skills (TEKS):

2.12B, 3.12B, 4.12B, 5.12B



Ranch Food Web

CONTENT AREA: Science

TOPICS: Food Chains, Food Webs, Flow of Energy

GAME MATERIALS:

- SECURITY BRIEFING (pages A2-2 & A2-3): Copy/Print PDF, 1 per student or student group
- RANCH FOOD WEB - CARDS #1-4 (pages A2-2 thru A2-14): Copy/Print PDF (2-sided), 1 set per student/student group
- THE BOTTOM LINE (pages A2-14): Copy/Print PDF, 1 per student or student group

READING STRATEGY:

Students will read Chapter 2 (pages 5-7) before playing the game.

GAME INSTRUCTIONS:

- Deal six RANCH FOOD WEB - CARDS to each player. Put the remaining cards in a draw pile.
- The player to the right of the dealer has the first opportunity to play. They will draw a RANCH FOOD WEB - CARDS from the draw pile and discard a PRODUCER (plant) card in a play pile spot (see illustration below). If the first player does not have a PRODUCER card, the turn passes to the next player.

PLAY PILE	PLAY PILE	PLAY PILE	PLAY PILE	DRAW PILE
--------------	--------------	--------------	--------------	--------------

EDUCATOR'S QUICK REFERENCE -

PRODUCERS

grasses, plants

HERBIVORES

grasshopper, quail,
porcupine, prairie dog,
rabbit, deer fawn, calf,
cow, longhorn steer, horse

OMNIVORES

ants, mouse, chicken,
skunk, raccoon, coyote,
wild turkey, human

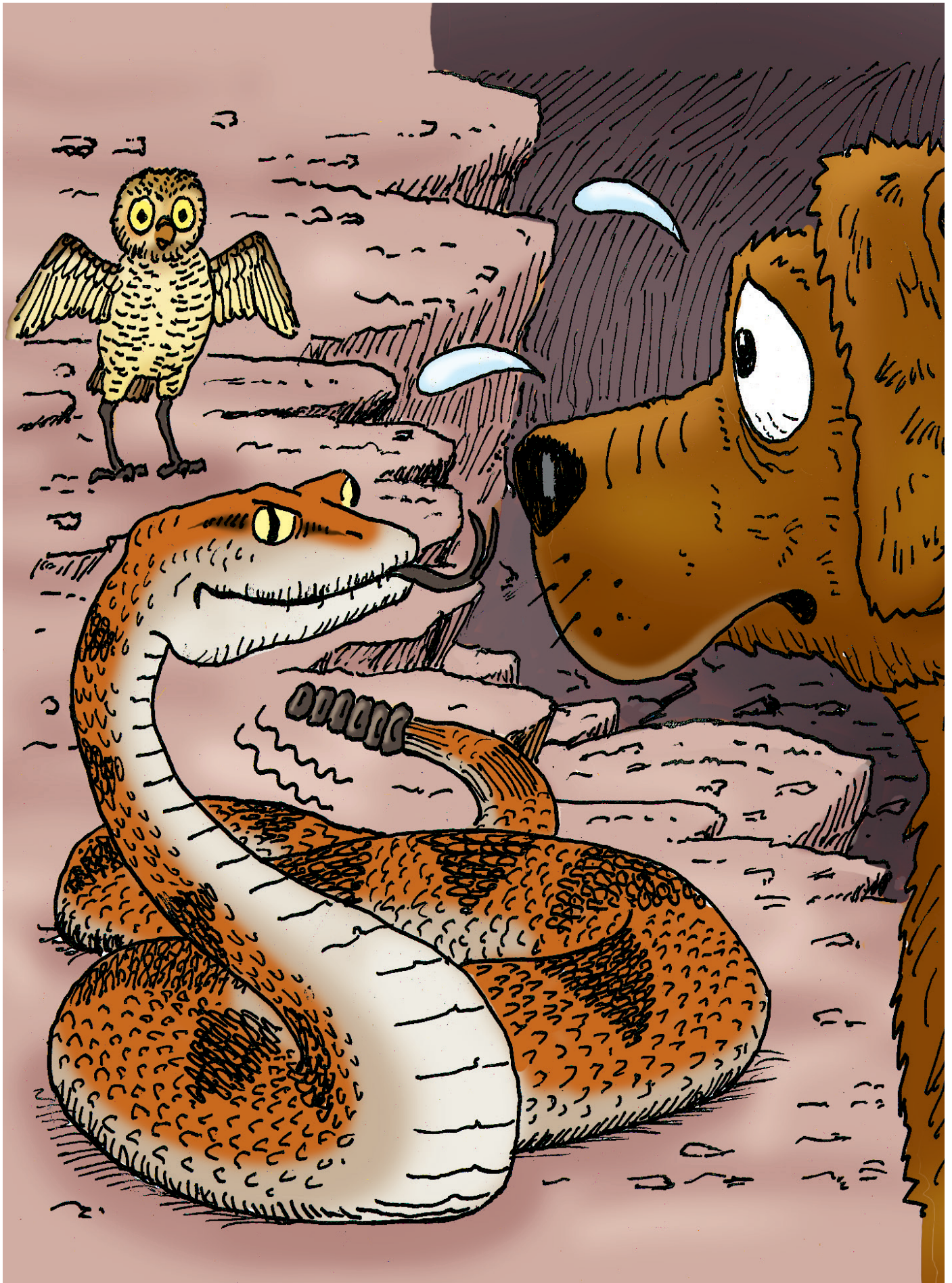
CARNIVORES

rattlesnake, burrowing owl,
cat, red tailed hawk,
buzzard, cowdog,
coyote, mountain lion

- Once a PRODUCER card has been played, the next player draws a card and can start a new pile with another PRODUCER card or play an HERBIVORE card on top of the PRODUCER card. Players may use up to 4 play piles.
- Play continues until a CARNIVORE card is played and ends the food chain in a play pile. The player who played the CARNIVORE card takes the pile and earns a point. FOOD WEB PLAYING CARDS must be played in the following order: PRODUCER, HERBIVORE, OMNIVORE, CARNIVORE.
For example: RANCH FOOD WEB - CARDS 1: Side Oats Grama (PRODUCER), CARD 2: Chicken (OMNIVORE), CARD 3: Coyote (CARNIVORE). The player who played the "Coyote" card will take the entire pile and earn 1 point.
- Play continues until all RANCH FOOD WEB - CARDS in the draw pile are gone. When the last card is drawn, play will continue until no one else can play.
- Lose a Turn: If a player draws a LOSE A TURN card they may save it or use it. To use the card, place it in front of the player who you want to skip. The skipped player will discard the LOSE A TURN card on their next turn.
- Wild Card: If a player draws a WILD CARD they may save the card or use it to play on any play pile.
- Winner: The person with the most food chains wins!

STUDENT SKILLS ASSESSMENT:

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





SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

When you get into your higher echelon of cowdogs, brains and breeding and dashing good looks are standard equipment. In order to bring you and Drover up to par, I've designed a game that will help you to understand how animals on the ranch compete for food.

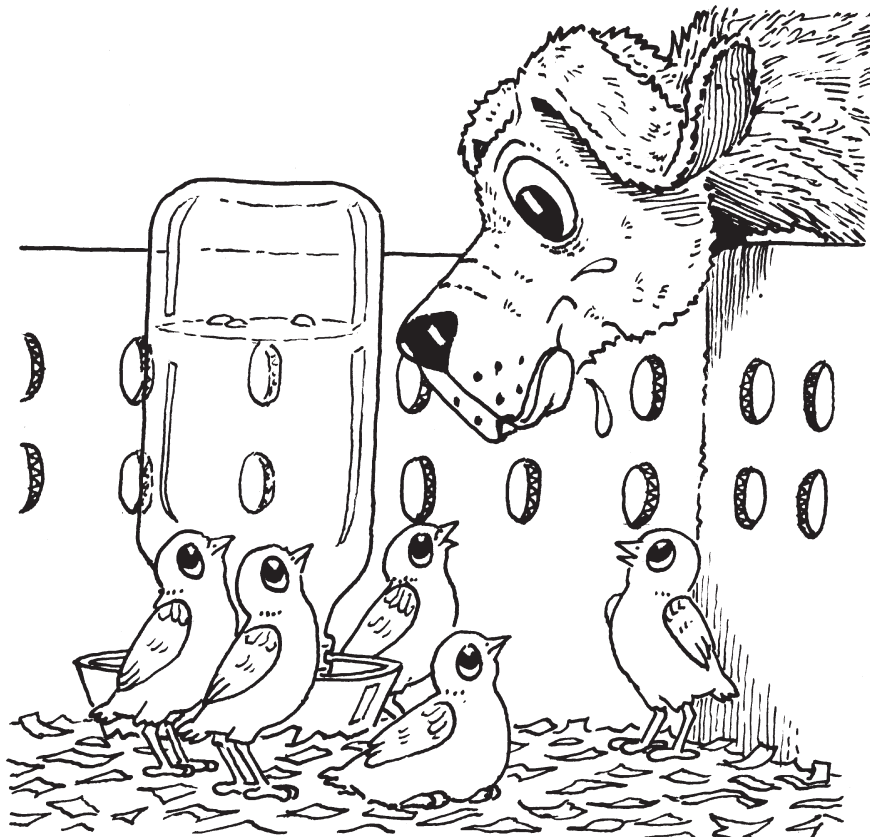
*First, there are a lot of different kinds of **plants** on the ranch, they are called **producers**. I don't happen to eat vegetables. I mean, whoever heard of a dog eating spinach?? But, some **animals** on the ranch eat plants including: cattle, horses, and [slurp] chickens... There are a lot of wild animals who wander on the ranch and eat plants, too: rabbits, deer and porcupines, just to name a few. Animals that eat plants are called **herbivores**.*

*The second category of animals are called **carnivores**. Carnivores eat other animals. I've done a lot of business with coyotes and one thing you ought to know: your average coyote will never pass up a chance to poach a chicken. That's a serious no-no on this ranch, but I must confess ...[slurp]... at certain times... you know, we probably ought to leave this alone. Why? The kids, the little children. I wouldn't want them to get the impression that I.... Now where was I? Oh yes, examples of carnivores are coyotes, bobcats, hawks, and mountain lions.*

*Finally, some animals on the ranch eat both plants and animals. They are called **omnivores**.*

An example of an omnivore is a skunk. Skunks eat insects, rodents, reptiles, eggs, berries and grasses.

*Producers, herbivores, omnivores, and carnivores are all part of the **food web**. The game you are about to play will help you learn how all living organisms depend on each other for **energy**.*





SECURITY BRIEFING –

GAME INSTRUCTIONS:

1. Deal six RANCH FOOD WEB - CARDS to each player. Put the remaining cards in a draw pile.
2. The player to the right of the dealer has the first opportunity to play. They will draw a RANCH FOOD WEB - CARD from the draw pile and discard a PRODUCER (plant) card in a play pile spot (*see illustration below*). If the first player does not have a PRODUCER card, the turn passes to the next player.



3. Once a PRODUCER card has been played, the next player draws a card and can start a new pile with another PRODUCER card or play an HERBIVORE card on top of the PRODUCER card. Players may use up to 4 play piles.
4. Play continues until a CARNIVORE card is played and ends the food chain in a play pile. The player who played the CARNIVORE card takes the pile and earns a point.
FOOD WEB PLAYING CARDS must be played in the following order:
PRODUCER, HERBIVORE, OMNIVORE, CARNIVORE.
For example: RANCH FOOD WEB - CARD 1: Side Oats Grama (PRODUCER), CARD 2: Chicken (OMNIVORE), CARD 3: Wild Dogs (CARNIVORE). The player who played the "Wild Dogs" card will take the entire pile and earn 1 point.
5. Play continues until all RANCH FOOD WEB - CARDS in the draw pile are gone. When the last card is drawn, play will continue until no one else can play.
6. Lose a Turn: If a player draws a LOSE A TURN card they may save it or use it. To use the card, place it in front of the player who you want to skip. The skipped player will discard the LOSE A TURN card on their next turn.
7. Wild Card: If a player draws a WILD CARD they may save the card or use it to play on any play pile.
8. Winner: The person with the most food chains wins!

WRAP UP:

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



Side Oats Grama Grass



Blue Grama Grass



Love Grass



Buffalo Grass



Wheat Grass



Indian Grass



Little Bluestem Grass



Grass Hay



Wheat Hay



Alfalfa

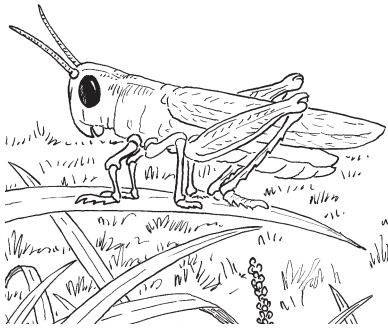


Sorghum Hay



Oat Hay





Grasshopper



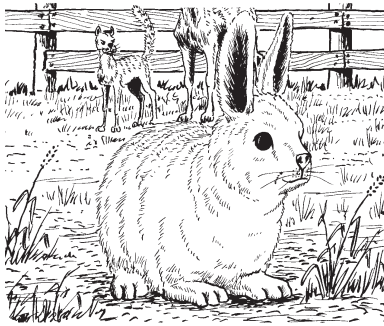
Quail



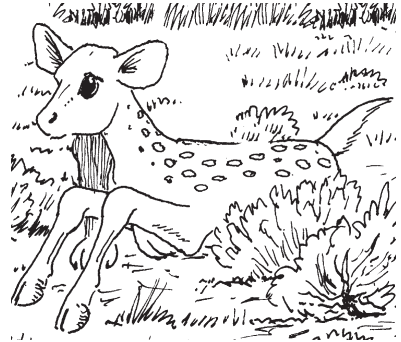
Porcupine



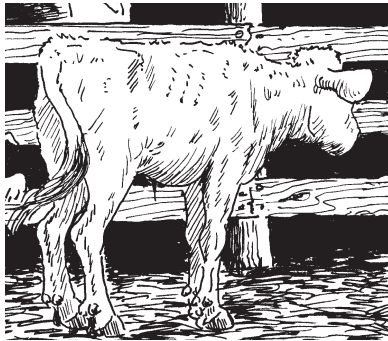
Prairie Dog



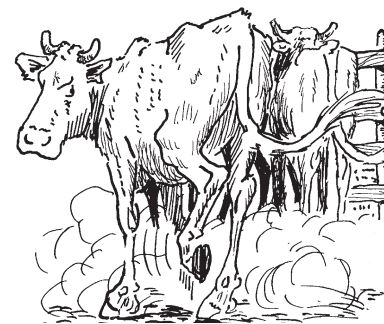
Rabbit



Deer Fawn



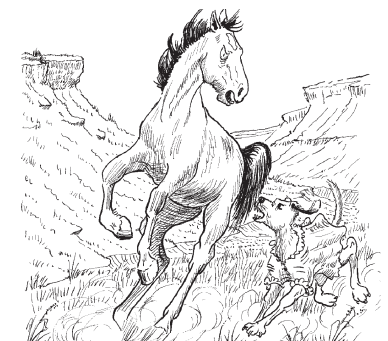
Calf



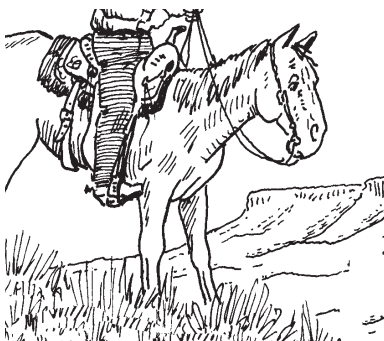
Cow



Bull



Horse



Horse

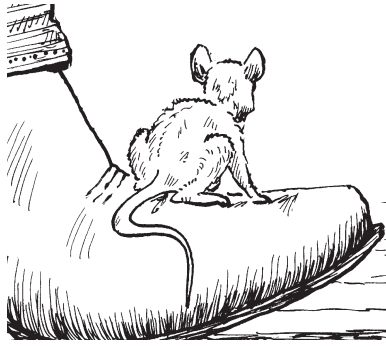


Horse

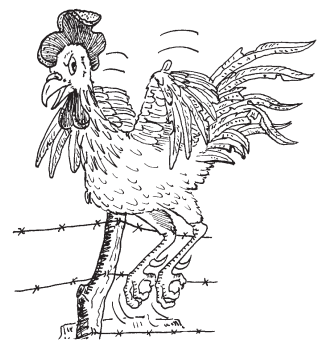




Ants



Mouse



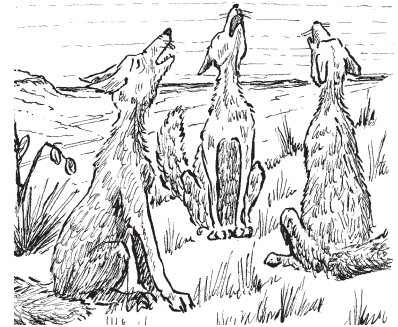
Chicken



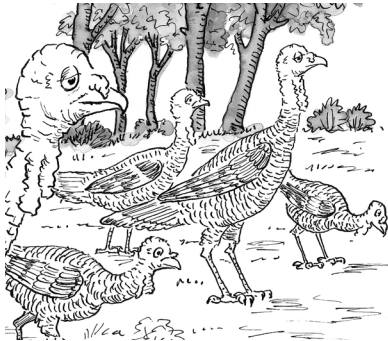
Skunk



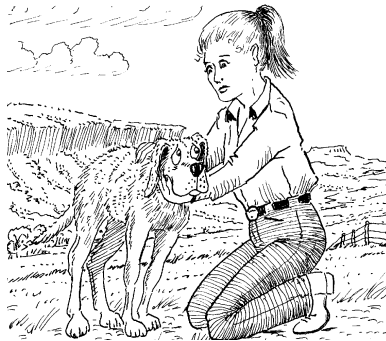
Raccoon



Coyotes



Wild Turkey



Human (Sally May)



Human (Loper)



WILD CARD

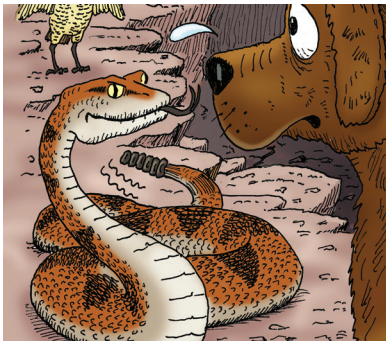


LOSE A TURN



WILD CARD

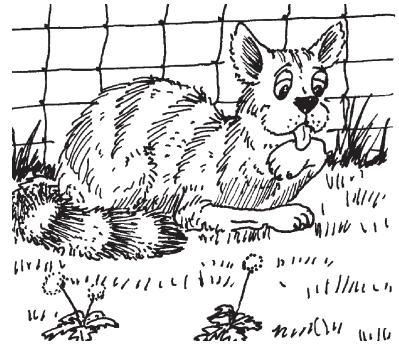




Rattlesnake



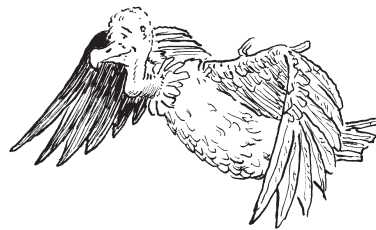
Burrowing Owl



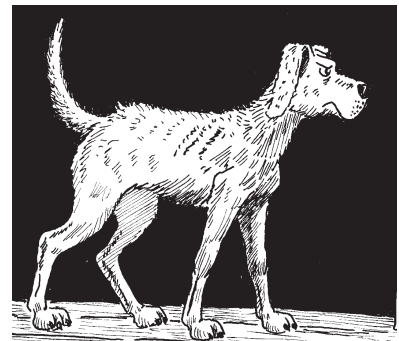
Cat (Pete)



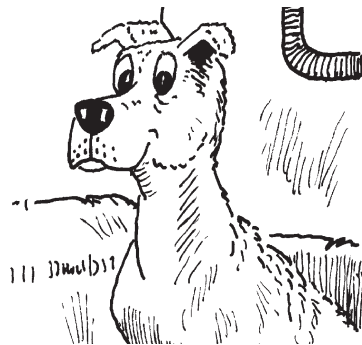
Red Tailed Hawk



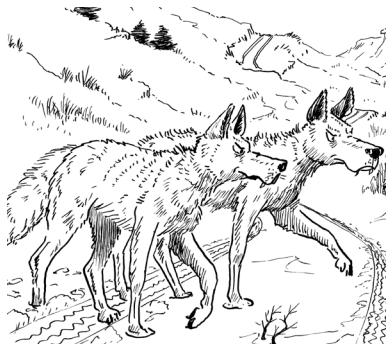
Buzzard



Cowdog (Hank)



Cowdog (Drover)



Coyotes



Mountain Lion



LOSE A TURN



WILD CARD



LOSE A TURN







NAME: _____ DATE: _____

THE BOTTOM LINE

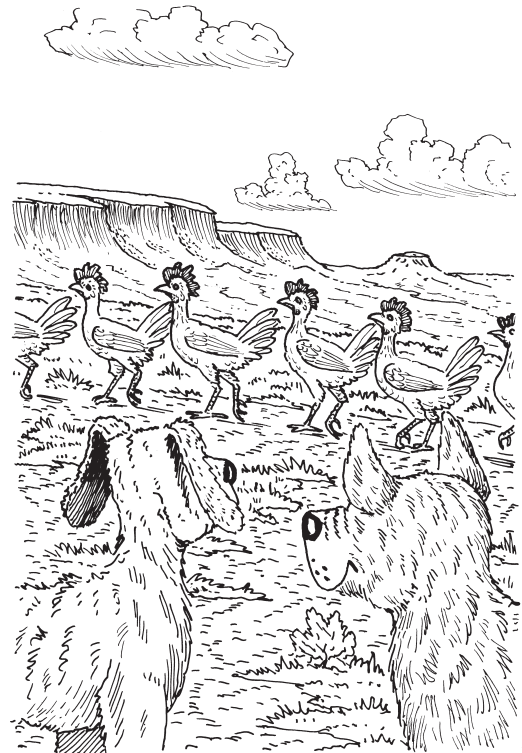
When you played the game, you might have noticed there were a lot of *producer* cards. In a balanced ecosystem, there are many more producers than *herbivores*, *omnivore* and *carnivores*.

Answer the questions below:

1. What might happen if there were not very many producers on the ranch?
2. Which type of animals would be impacted the most by a shortage of producers?
3. Draw an example of a food chain on Hank's ranch.

4. What is the difference between a food chain and a food web?

5. Why do you think the ranch has very few carnivores?





ACTIVITY 3

Choose Your Own Adventure Book

RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 4

Content Area:

Social Studies

Topic:

Choose Your Own Adventure

Objective:

Students will compare needs and wants as they learn how a ranch makes a profit.

Texas Essential Knowledge and Skills (TEKS):

K.6A, K.6B, K.6C, 1.7A, 1.8B, 1.8C, 1.10B, 2.10A, 2.10B, 3.7A,
3.7B, 3.8A, 3.8B, 4.10B, 4.12A, 4.12E, 5.12A, 5.12B, 5.13B



Choose Your Own Adventure Book

CONTENT AREA: Social Studies

TOPICS: Economics

ACTIVITY MATERIALS:

- SECURITY BRIEFING (page A3-2): 1 per student or student group
- CHOOSE YOUR OWN ADVENTURE BOOK: "WILL HANK GET TO EAT?" (pages A3-3 to A3-12): Copy/Print PDF front & back, staple bind, 1 book per student or student group.

Please note the instructions regarding production of the different versions of the resource below:

* If copying from Curriculum Guide:

- Duplex copy pages A3-3 to A3-12 (2-Sided to 2-Sided, Flip Side: Long)
- Fold each page in the middle, put pages in order, staple twice on the fold to bind book together

* If printing from the downloadable PDF for Activity 3:

- PAGES TO PRINT: 5-14
- PAGE SIZING & HANDLING: Actual Size (not Fit)
- LAYOUT/FINISH: Print Type - 2 Sided; Binding Position - LEFT Bind
- Fold each page in the middle, put pages in order, staple twice on the fold to bind book together

- THE BOTTOM LINE (pages A3-14): Copy/Print PDF, 1 per student or student group

READING STRATEGY:

Students will read Chapter 4 (pages 11-22) before completing the activity.

ACTIVITY INSTRUCTIONS:

- Give each student (or student group) the CHOOSE YOUR OWN ADVENTURE BOOK: "WILL HANK GET TO EAT?"
- Have students read through the book to make choices for Sally May and Loper. Encourage them to try again and again until Hank gets to eat.

STUDENT SKILLS ASSESSMENT:

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

Choose Your Own Adventure Book



SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

Loper and Sally May had to make a lot of choices when they decided to become ranchers. Each decision they make has an impact on everyone on the ranch. They can't feed the most important person on the ranch (their cowdog) unless they are making a **profit** in the cattle **market**. So, I have to keep on top of them to make sure Loper is not using our money for shiny new spurs instead of cow feed.

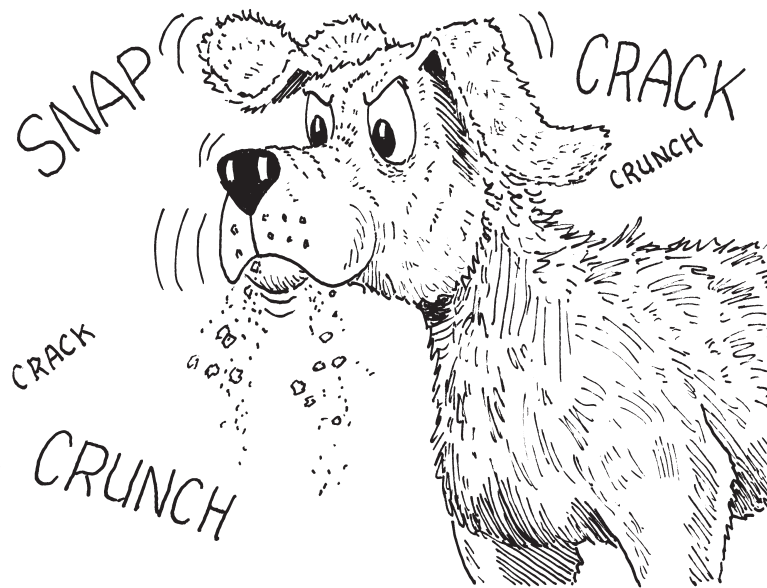
Sally May and Loper have to make sure all of the ranch's **needs** (feeding Hank) are taken care of, before they purchase their **wants** (Loper's fancy spurs). Help Sally May and Loper make good choices as you read through the book. Remember, the most important **need** of the ranch is to keep the Head Of Ranch Security well fed!

ACTIVITY INSTRUCTIONS:

1. Read through the HANK THE COWDOG CHOOSE YOUR OWN ACTIVITY BOOK "WILL HANK EAT?" and make decisions for Loper and Sally Mae.
2. Think about your budget as you make decisions that will affect the entire ranch.

WRAP UP:

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





RANCH LIFE WITH HANK THE COWDOG

**CHOOSE YOUR
OWN ADVENTURE!**



Will Hank Eat?

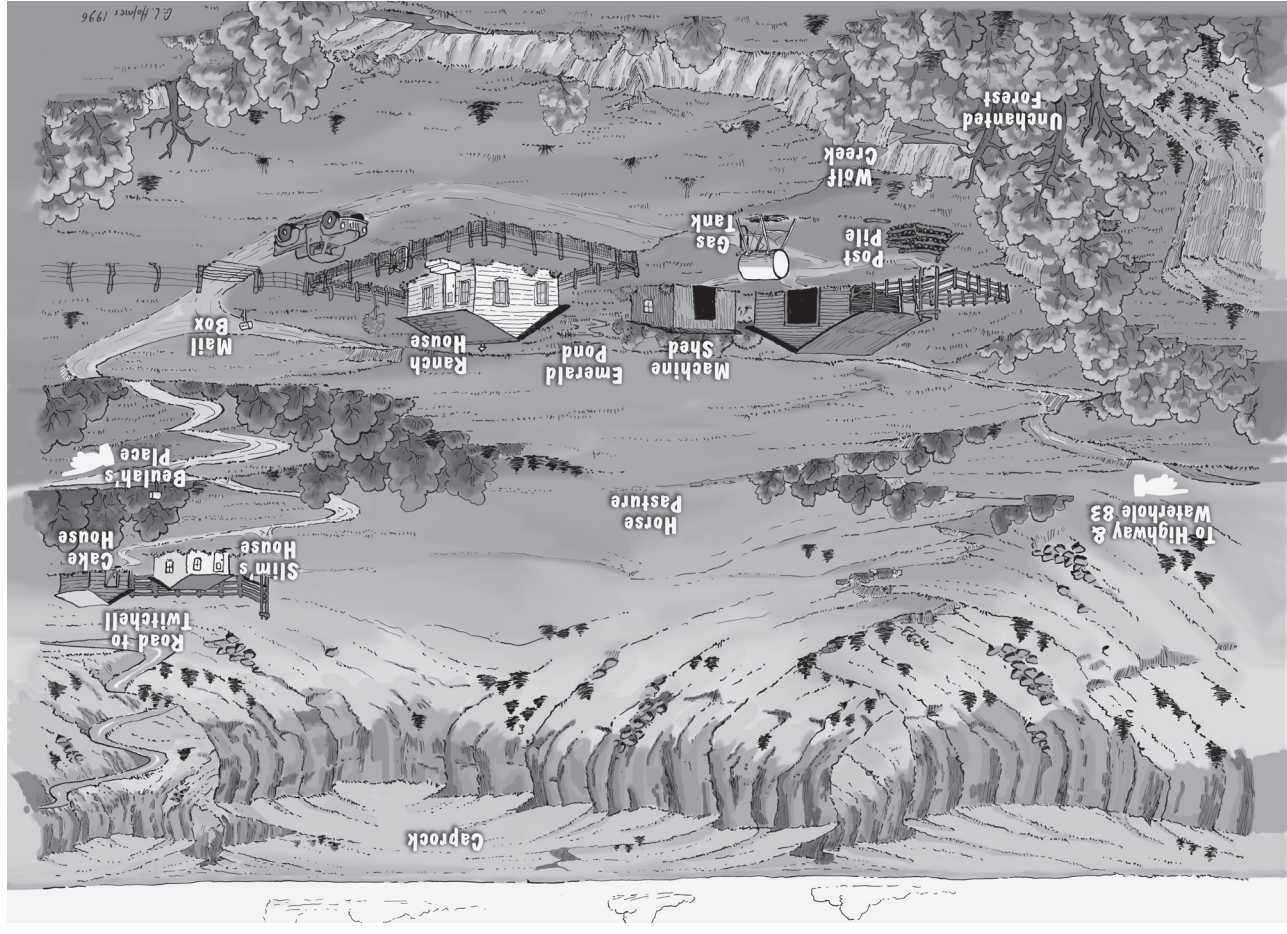


ACTIVITY CREATED BY JENNY GAONA

Loper and Sally May had to make a lot of choices when they decided to become ranchers. Each decision they make has an impact on everyone on the ranch. They can't feed the most important person on the ranch (their condog) unless they are making a profit in the cattle market. So, I have to keep on top of them to make sure Loper is not using our money for shiny new spurs instead of cow feed.

Sally May and Loper have to make sure all of the ranch's needs (feeding Hank) are taken care of, before they purchase their wants (Loper's fancy spurs). Help Sally May and Loper make good choices as you read through the book. Remember, the most important need of the ranch is to keep the Head Of Ranch Security well fed!

— Hank the Condog —





Sally May
and Loper fill
Hank's food bowl
to overflowing.

HANK GETS
TO EAT!

GREAT JOB!

The ranch is successful!

Sally May and Loper
are thinking about
purchasing land and livestock
and becoming ranchers.

What should they do?

OPTION 1

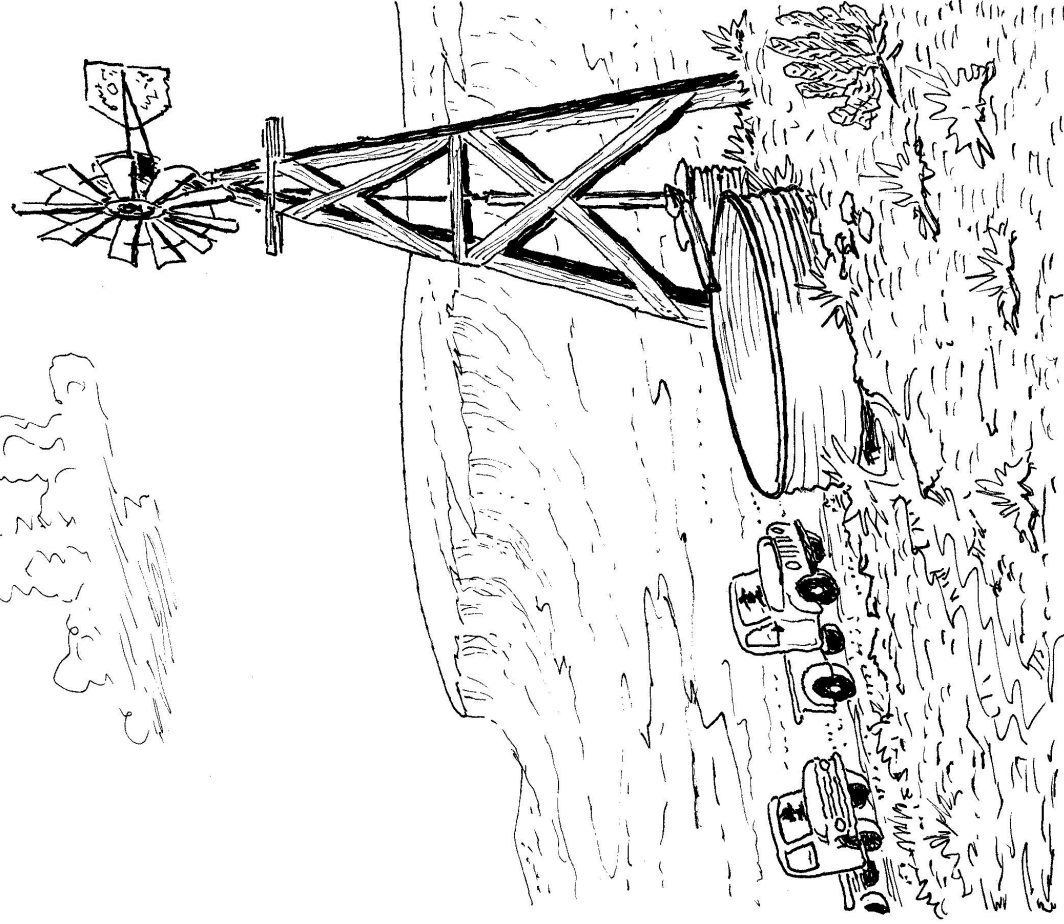
After carefully considering their options,
they get a loan from a bank and use the
money to rent land and run a ranch.

Turn to Page 3

OPTION 2

They decide ranching is too risky
and choose to stay in the city, instead.

Turn to Page 11



All of the horses do not
fit into the barn and have
to stay outdoors in the
corral. Five horses run off
during a lightning storm!

Seven cowboys leave the
ranch because they could
make more money working
for another rancher.

* TURN TO PAGE 11 *

Did Sally May and Loper make a profit on their ranch this year? The total money they borrowed from the bank was \$1,000,000.00.

RANCH EXPENSES

Land	\$40,000
Cattle	\$600,000
Feed	\$450
Pickup	\$25,000
Stock Trailer	\$50,000
Cowboys	\$100,000

OPTION 1

Yes, their expenses were less than what they borrowed and they have money left over.

Tutu ta Page 8

OPTION 2

No, expenses were greater than the loan amount, and now they're in debt.

Tutu ta Page 11

How many acres should Sally May and Loper lease? They have a land budget of \$40,000. Lease for the land is \$5 per acre, per year.

What should they do?

OPTION 1

Rent 7,500 acres of land.

Tutu ta Page 5

OPTION 2

Rent 9,000 acres of land.

Tutu ta Page 11



Loper goes to the bank
and asks if he can
borrow more money.

The bank says NO.

It looks like you have
made a choice that
will lose money.

* TURN TO PAGE 11 *

Sally May and Loper
head to the spring market
to sell their calves.
The cattle market is high.

What should they do?

OPTION 1

It's a great time to sell to make a larger profit.
Sally May and Loper sell 200 calves for
\$1,000 each.

Turn to Page 14

OPTION 2

Sally May and Loper decide against
selling any calves at this time.

Turn to Page 11



Sally May and Loper
bought too many bulls
and not enough cows.

They do not have enough
calves in the spring to
sell and make a profit.

Sally May and Loper
are not able to pay back
their loan from the bank.

* TURN TO PAGE 11 *

Sally May and Loper
need to buy both bulls and
cows for their ranch.
They need to decide how
many of each they will need.

What should they do?

OPTION 1

**Sally May and Loper buy
150 bulls and 150 cows.**

Turn to Page 12

OPTION 2

**Sally May and Loper buy
280 cows and 20 bulls.**

Turn to Page 6

Sally May and Loper
need to check their cattle,
but can't do it on their own.
They will need some help.

What should they do?

OPTION 1

Sally May and Loper buy 15 horses and will pay for 15 cowboys room and board.

Turn to Page 15

OPTION 2

Sally May and Loper buy a pickup truck and a stock trailer. They also employ two cowboys to work on the ranch.

Turn to Page 9



Sally May and Loper
do not make enough money
to feed their cowndog.

HANK HAS TO
GOES HUNGRY!

OH, NO!

Start over and try again?

* TURN TO PAGE 1 *

Sally May and Loper have to decide on how much feed they are going to buy for the cows on their ranch to make it through the winter months. Feed costs \$150 per month.

What should they do?

OPTION 1

Sally May and Loper carefully calculate what is needed, and decide to buy \$450 worth of feed.

Turn to Page 13

OPTION 2

Sally May and Loper take a guess and only buy \$100 worth of feed.

Turn to Page 7



Sally May and Loper realize they do not have enough feed for winter.

* TURN TO PAGE 11 *



Sally May and Loper
make a profit and
have a successful year
on the ranch.

They are already making
plans for next year!

* TURN TO PAGE 16 *

Fall has come and
Sally May and Loper
have to make some decisions.
The grass has stopped
growing and has no nutritional
value for the cattle.
The cattle market is low.

What should they do?

OPTION 1

Sally May and Loper would prefer to get a higher price on their cattle, so they decide not to sell until the market changes.

Turn to Page 10

OPTION 2

Sally May and Loper believe selling some of the cattle will allow them to better care for the cattle that remain on the ranch.

Turn to Page 4



Choose Your Own Adventure



NAME: _____ DATE: _____

THE BOTTOM LINE

Sally May and Loper make a lot of decisions as they run their ranch. These choices can impact the most vital *needs* of a cattle ranch, such as, what are you going to feed your cowdog? Were you able to be successful and help Sally May and Loper make a *profit* on their cattle ranch?

Answer the questions below:

1. What was the most difficult decision you had to make in the book?
2. What decisions would have made the ranch fail? Explain.
3. What decisions would have helped the ranch succeed? Explain.
4. Did the ranch make a profit? Explain.
5. What recommendations would you give Sally May and Loper for next year?





ACTIVITY 4

Ranch Life With & Without Technology

RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 4

Content Area

Social Studies

Topic

Impact of Technology

Objective

Students will compare and contrast life on a ranch with technology and without technology.

Texas Essential Knowledge and Skills (TEKS):

K.6A, K.6B, K.6C, 1.7A, 1.8B, 1.8C, 1.10B, 2.10A, 2.10B, 3.7A,
3.7B, 3.8A, 3.8B, 4.10B, 4.12A, 4.12E, 5.12A, 5.12B, 5.13B



Ranch Life With & Without Technology

CONTENT AREA: Social Studies

TOPICS: Impact of Technology

ACTIVITY MATERIALS:

- SECURITY BRIEFING (page A4-2): 1 per student or student group
- RANCH LIFE WITH AND WITHOUT TECHNOLOGY - CHART (page A4-3): 1 per student or student group
- RANCH LIFE WITH AND WITHOUT TECHNOLOGY - TEACHER KEY (page A4-4): 1 per student or student group
- Pencil or pen
- THE BOTTOM LINE (pages A4-6): 1 per student or student group

READING STRATEGY:

Students will read Chapter 4 (pages 15-22) as they complete the activity below.

ACTIVITY INSTRUCTIONS:

1. Each student (or student group) will receive a RANCH LIFE WITH AND WITHOUT TECHNOLOGY - CHART to fill out.
2. As they read through the chapter, students will identify and notate on their chart how ranch life situations would differ with the use of or the absence of technology.
3. Teachers will use the RANCH LIFE WITH AND WITHOUT TECHNOLOGY - TEACHER KEY to check student work.

STUDENT SKILLS ASSESSMENT:

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

Ranch Life With & Without Technology



SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

Loper needs a certain amount of machinery to operate his ranch. **Pickup trucks and stock trailers** make work easier for the cowboys, but it adds to the list of demands on me.

**In case you haven't already guessed, I take great pride in my ability to lay a good strong marking on a set of tires. When a vehicle leaves my ranch, I want the world to know where it's been. On a good day, I can knock out an entire pickup and stock trailer all by myself, and then rush to the yard gate to bark at the driver. That's an eight-tire job. A lot of dogs wouldn't even attempt a job that big, but it's nothing special to me. On your bigger assignments, like the eight-tire deals, a dog's overall physical condition and endurance become a major factory.*

Factor, I should say. A major factor.

And the same goes for technology. It is a major factor in the day to day operations of the ranch!

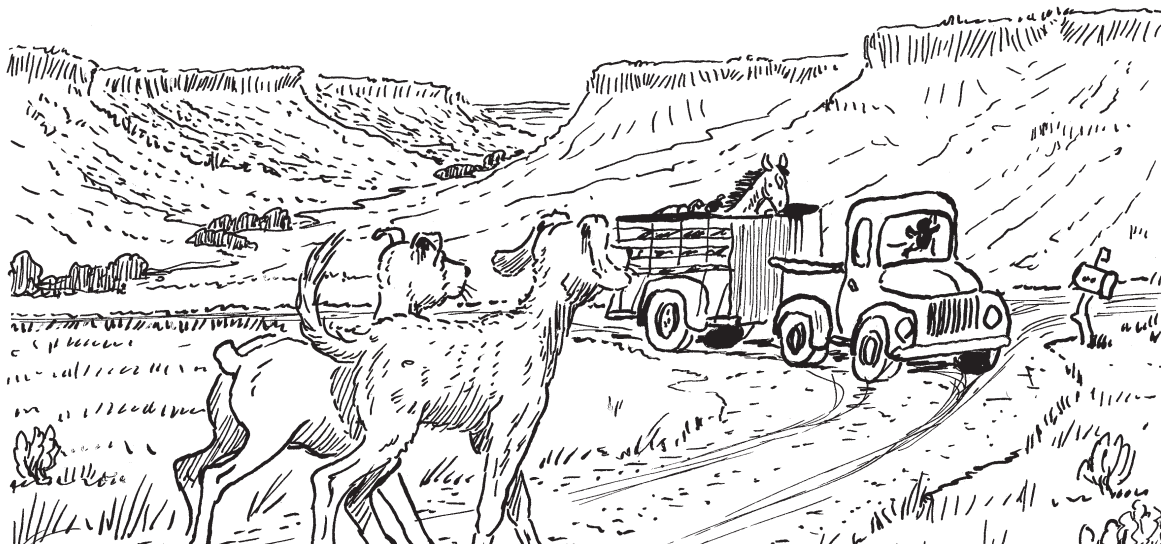
**excerpts from "Lost in the Blinded Blizzard" by John R. Erickson*

ACTIVITY INSTRUCTIONS:

1. Read Chapter 4 (pages 15-22)
2. As you are reading, fill out the RANCH LIFE WITH OR WITHOUT TECHNOLOGY - CHART

WRAP UP:

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

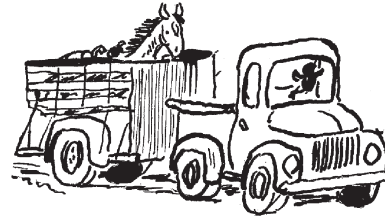


Ranch Life With & Without Technology

NAME: _____

DATE: _____

COMPARISON CHART

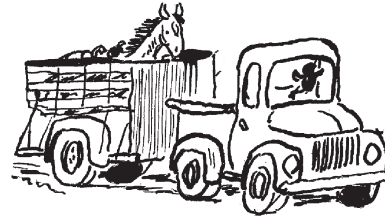


PICKUP TRUCK		STOCK TRAILER	
Life <i>WITH</i> Technology	Life <i>WITHOUT</i> Technology	Life <i>WITH</i> Technology	Life <i>WITHOUT</i> Technology

Ranch Life With & Without Technology

NAME: _____ DATE: _____

COMPARISON CHART



PICKUP TRUCK		STOCK TRAILER	
Life <i>WITH</i> Technology	Life <i>WITHOUT</i> Technology	Life <i>WITH</i> Technology	Life <i>WITHOUT</i> Technology
Carry fence supplies and windmill parts to job site	Pull wagon with horses to carry supplies	Haul cattle from one pasture to another	Would have to ride horseback or not move cattle
Load with hay	Deliver by walking or with horses pulling a wagon	Carry horses	No way to carry horses
Pull a stock trailer		Portable catch pen	Would have to build a pen in every pasture
Climb steep hills and plow through snow and mud	Can't pull a stock trailer	Take sick cattle back to headquarters	No way to carry cattle - they would have to walk
Travel several miles in one day	Horses can go all terrain		
	Would be much slower		



Ranch Life With & Without Technology



NAME: _____ DATE: _____

THE BOTTOM LINE

Technology can really make a difference in the daily life of a cowdog. Technology can change the way people work and how people meet basic *needs*. Ranching is a *business*, and it requires a big investment in technology to be successful in today's world!

Answer the questions below:

1. What was the most difficult decision you had to make in the book?
2. Do you feel that having a truck is beneficial for a ranch?
3. Give three reasons explaining how a truck can have a positive impact on ranch life.
 - a.
 - b.
 - c.
4. What do you think cowboys would have to do if they did not have a stock trailer?
5. Name one way technology has had a positive impact on how you live your daily life.
6. Name one way your life would be different without technology.





ACTIVITY 5

Ranch Life Cycles

RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 4

Content Area

Science

Topic

Life Cycles

Objective

Students will sequence life cycles and compare stages between different organisms.

Texas Essential Knowledge and Skills (TEKS):

1.13C, 2.13D, 3.13B



Ranch Life Cycles

CONTENT AREA: Science

TOPIC: Life Cycles

GAME MATERIALS:

- SECURITY BRIEFING (page A5-2): 1 per student or student group
- RANCH LIFE CYCLES - SORTING MAT (page A5-3): 1 set per student/student group
- RANCH LIFE CYCLES - SORTING/REFERENCE CARDS #1-3 (pages A5-4 to A5-6): 1 set per student or student group
- Vis-a-Vis Marker, fine tip
- THE BOTTOM LINE (page A5-8): 1 per student or student group

READING STRATEGY:

Students will read Chapter 4 (pages 15-22) before they play the game.

GAME INSTRUCTIONS:

- Give each group of students a RANCH LIFE CYCLES - SORTING MAT.
- Give students two sets of RANCH LIFE CYCLES - SORTING/REFERENCE CARDS to compare.
(There are four animal and two insect life cycles included in this activity.)
- Students will first sequence the SORTING CARDS using the REFERENCE CARDS for clues.
- Once SORTING CARDS are sequenced, students will discuss what is alike and different between the two life cycles.
- Once students are fished with the task, have them bag their SORTING/REFERENCE CARDS to pass on to another team. They will repeat steps 1 -5 until every group has compared all the cards.

STUDENT SKILLS ASSESSMENT:

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

Ranch Life Cycles



SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

*As the head of Ranch Security, I make it my business to know the **life cycles** of the animals and insects that live here.*

**Baby chickens come from eggs. Did you know that? Maybe you thought that bacon comes from eggs, but that's incorrect. Bacon comes from pigs and baby chicks come from eggs, but bacon and eggs are sometimes found together in breakfast situations because... Wait a minute, hold everything. We weren't talking about the baby chicks.*

*Back to my duties as Head of Ranch Security and **life cycles**...*

*In the early stages of life, young animals need my protection from **predators** like coyotes and other carnivores. You may recall that Sally May has trusted me to guard the chicken house in the past. The ranch also has more bugs than I can name. Insects can cause a lot of trouble. Mosquitoes drive me nuts. You want to know why cowboys always wear long-sleeved shirts, even in hot weather? **MOSQUITOES!** Without long sleeves, a cowboy's arms become Christmas dinner for mosquitoes. My role is prevention. By knowing the **stages** of mosquito **life cycles** I can predict their next move and take action! (I am fond of knocking over buckets of water to help control their **populations**.)*

** excerpt from The Case of the Tender Cheeping Chickens" by John R. Erickson*

ACTIVITY INSTRUCTIONS:

1. Grab a RANCH LIFE CYCLES - SORTING MAT and two sets of RANCH LIFE CYCLES - SORTING/REFERENCE CARDS to compare.
2. Sequence the SORTING CARDS on the SORTING MAT using the REFERENCE CARDS for clues.
3. Once you have both sets of SORTING CARDS sequenced, discuss what is alike and different about the two life cycles.
4. Place your RANCH LIFE CYCLES - SORTING/REFERENCE CARDS in bag and pass them to another group.

WRAP UP:

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



<

LIFE CYCLE OF A STABLE FLY

STAGE 1 - EGG

A female lays 25-50 eggs. Eggs hatch in 1-4 days.

STAGE 2 - LARVA

The larva eat decaying material and stay in this stage from 6-30 days.

STAGE 3 - PUPA

12-16 days
(non-feeding stage)

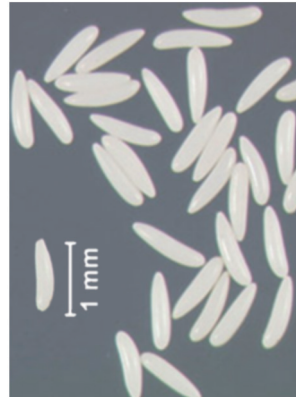
STAGE 4 - ADULT

An adult lives about 2-3 days and feeds on blood.

Total Life Span: 23-52 days



© Håkon Haraldseide



LIFE CYCLE OF A MOSQUITO

STAGE 1 - EGG

A female lays a raft of 40-400 eggs in water.
The eggs hatch in 7 days.

STAGE 2 - LARVA

The larva live in water
for four molts and eat organic matter.

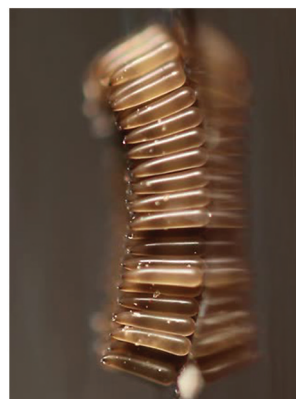
STAGE 3 - PUPA

2 days
(non-feeding stage)

STAGE 4 - ADULT

An adult lives about 1 week and feeds on blood.

Total Life Span: 14-30 days



LIFE CYCLE OF A CHICKEN

STAGE 1 - MATING

Male: Rooster // Female: Hen

A hen will start laying eggs at the age of 5 months.

STAGE 2 - GESTATION

21 days

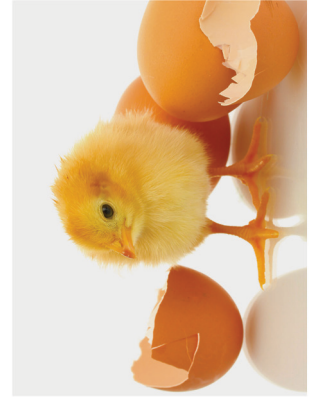
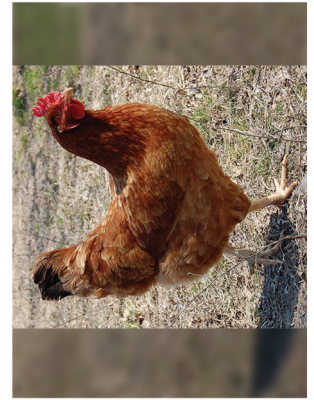
STAGE 3 - JUVENILE

Baby: Chick

The chick forges for food about 1-2 hours after hatching.

STAGE 4 - ADULT

Total Life Span: 8-10 years



LIFE CYCLE OF A DOG

STAGE 1 - MATING

A female mates at 1 year of age.

STAGE 2 - GESTATION

2 months

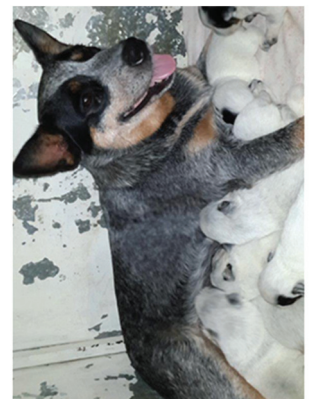
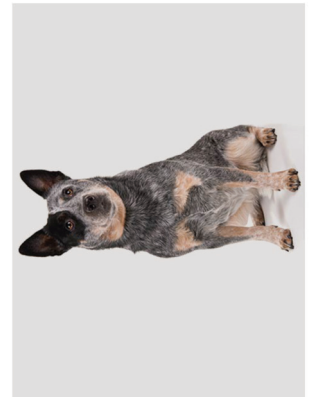
STAGE 3 - JUVENILE

Baby: Puppy

The puppy drinks its mother's milk for about 4 weeks.

STAGE 4 - ADULT

Total Life Span: 12 years



LIFE CYCLE OF A COW

STAGE 1 - MATING

Male: Bull // Female: Cow

A cow mates at 3 years of age.

STAGE 2 - GESTATION

9½ months

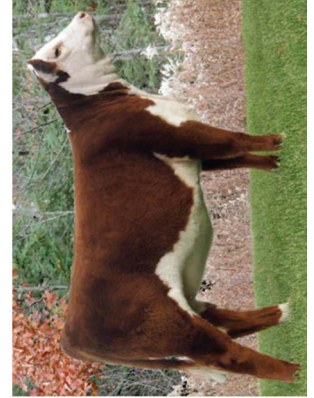
STAGE 3 - JUVENILE

Baby: Calf

The calf drinks its mother's milk for about 2 months.

STAGE 4 - ADULT

Total Life Span: 15 years



LIFE CYCLE OF A HORSE

STAGE 1 - MATING

Male: Stallion // Female: Mare

A mare mates at 3 years of age.

STAGE 2 - GESTATION

1 year

STAGE 3 - JUVENILE

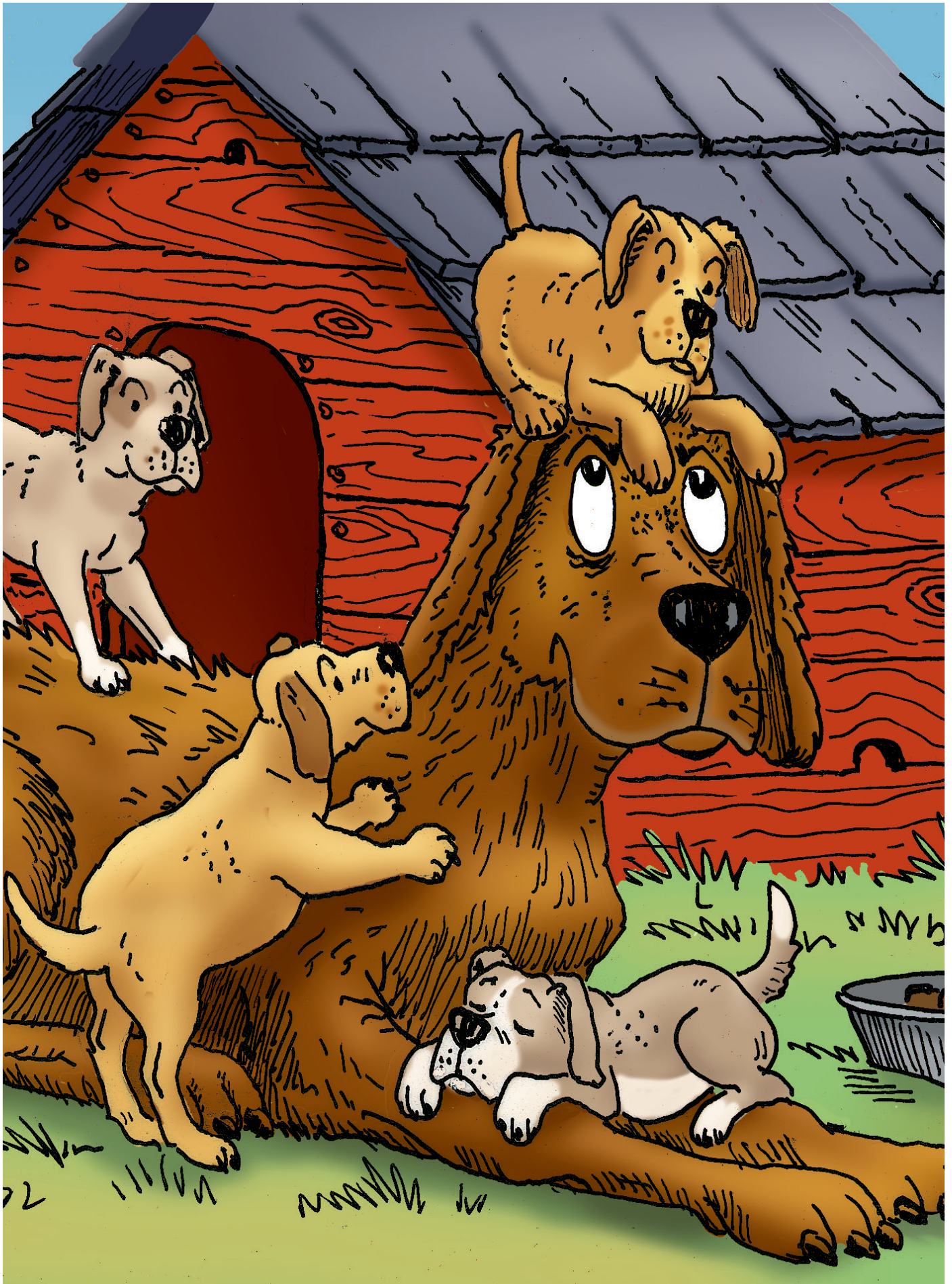
Baby: Foal

The foal drinks its mother's milk for about 1 year.

STAGE 4 - ADULT

Total Life Span: 25-30 years







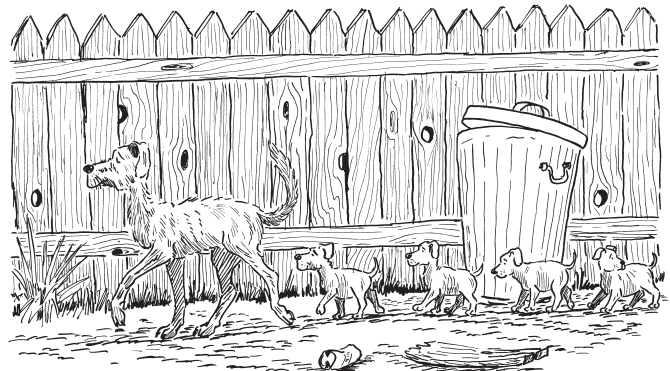
NAME: _____ DATE: _____

THE BOTTOM LINE

When you sequenced your life cycle cards you may have noticed patterns between the different life cycles.

Answer the questions below:

1. What patterns did you notice in the animal life cycles?
2. What were the main differences between the animal life cycles? Pick another animal you might find on Hank's ranch. Predict the stages of its life cycle and draw them below. Research the animal to see if you were right.
3. How was the insect life cycles different from the animal life cycles?
4. What was similar about the two insect life cycles you studied?
5. What might happen if one stage of a life cycle was disrupted? For example, if there was a drought what stage of a mosquito life cycle would be affected?





ACTIVITY 6

Weather on the Ranch



RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 5

Content Area

Science

Topic

Weather

Objective

Students will observe the cause and effect of weather on the ranch.

Texas Essential Knowledge and Skills (TEKS):

K.10B, 1.10D, 2.10B, 3.10A





Weather on the Ranch

CONTENT AREA: Science

TOPIC: Weather

ACTIVITY MATERIALS:

- SECURITY BRIEFING (page A6-2): 1 per student or student group
- WEATHER ON THE RANCH - ORGANIZER (page A6-5): 1 set per student or student group
- WEATHER ON THE RANCH - TEACHER KEY (page A6-6): 1 set per student or student group
- Pencil or pen
- THE BOTTOM LINE (page A6-6): 1 per student or student group

READING STRATEGY:

Students will read Chapter 5 (pages 23-28) as they complete the activity below.

ACTIVITY INSTRUCTIONS:

1. Each student (or student group) will receive a WEATHER ON THE RANCH - ORGANIZER to fill out.
2. As they read through the chapter, students will identify and notate on their organizer how different types of weather affect every day life on the ranch. (A few answers have been provided, as not all answers to the questions can be found in Chapter 5.)
3. Teachers will use the WEATHER ON THE RANCH - TEACHER KEY to check student work.

STUDENT SKILLS ASSESSMENT:

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

Weather on the Ranch



SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

*It's me again, Hank the Cowdog. The **weather** outside is rumblin' and I remembered I hadn't told you anything about weather on the ranch! As the Head of Security, I must be on constant alert when it comes to weather here on the ranch. It is my job to bark and alert Loper when the weather starts to get rowdy.*

Let me explain...

*When I hear **thunder** it could mean **lightning strikes**, **hail stones**, or a **Texas twister (tornado)**. When the **temperature** drops to **freezing**, I can't snuggle up to a fire. I am on high alert for a **snow storm** or even a **blizzard**! The weather on a ranch can damage property or cause harm to the **plants and animals**.*

ACTIVITY INSTRUCTIONS:

1. Read Chapter 5
2. As you read, write down the observations I describe onto the **WEATHER ON THE RANCH - ORGANIZER**.

WRAP UP:

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

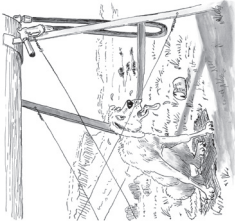
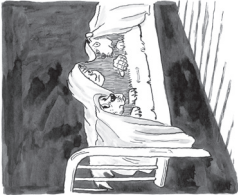

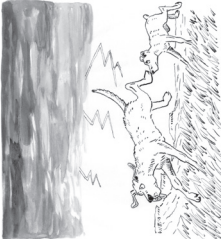




NAME: _____

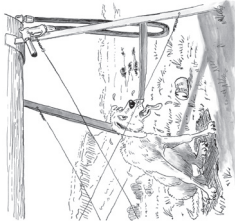
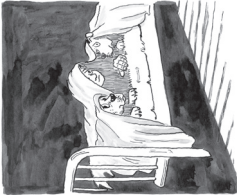
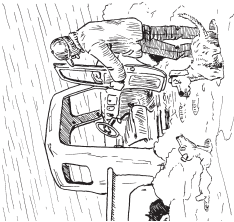
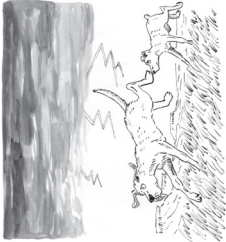
DATE: _____

The Weather on Hank the Cowdog's Ranch

TYPE OF WEATHER	OBSERVATIONS	CAUSE OF WEATHER	AFFECT OF WEATHER ON THE RANCH
 DROUGHT	<ul style="list-style-type: none"> Cracks in the ground Grass turns brown and stops growing Hot, dry winds 	<p>Prolonged periods with no rain</p>	<ul style="list-style-type: none"> Wildlife struggles to find water Cows produce less milk for their young Producers will die Natural water sources dry up
 HAIL	<ul style="list-style-type: none"> Grass gets beat down 	<p>Strong updrafts and cloud temperatures below 0°C cause hail to form.</p>	<ul style="list-style-type: none"> Cattle have to be moved to other pastures Food might have to be supplemented with hay or cow cake
 SNOW & BLIZZARDS	<ul style="list-style-type: none"> Snow piles up in drifts Fence posts, roads and equipment can be covered with snow 	<ul style="list-style-type: none"> High winds during a snow storm cause drifts Temperatures below 0°C cause precipitation to freeze and fall as snow 	<ul style="list-style-type: none"> Ranchers can't move between pastures to feed cattle Cattle can starve to death in this weather
 LIGHTNING	<ul style="list-style-type: none"> Clouds build up, but instead of rain, they deliver lightning 	<p>Dry air</p>	<ul style="list-style-type: none"> Grass fires Cattle can't eat burned grass Wind can carry grass fires for miles

NAME: _____ DATE: _____

The Weather on Hank the Cowdog's Ranch

TYPE OF WEATHER	OBSERVATIONS	CAUSE OF WEATHER	AFFECT OF WEATHER ON THE RANCH
 <p>DROUGHT</p>			
 <p>HAIL</p>		Strong updrafts and cloud temperatures below 0°C cause hail to form.	
 <p>SNOW & BLIZZARDS</p>		<ul style="list-style-type: none"> • High winds during a snow storm cause drifts • Temperatures below 0°C cause precipitation to freeze and fall as snow 	
 <p>LIGHTNING</p>			

Weather on the Ranch



NAME: _____ DATE: _____

THE BOTTOM LINE

The weather on the ranch can cause a lot of damage to *plants* and *animals*. Predict what would happen in each of the events below.

Answer the questions below:

1. During a blizzard on the ranch snow drifts covered the fences and roads to the pastures. How would this event affect the ranch?
2. After 6 months of no rain the air is dry and warm on the ranch. In the distance there are storm clouds building up. What weather might result from the storm clouds? (There are different possibilities)
3. During a drought what might happen if a West Texas wind storm hit the ranch?
4. How does weather affect your life?
How does it change your activities?





ACTIVITY 7

Cattle Characteristics

RANCH LIFE SERIES / BOOK 1 / RANCHING AND 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):

1.13A, 2.13B, 3.13A, 4.13AB, 5.13B



Cattle Characteristics

CONTENT AREA: Science

TOPIC: Structure & Function, Adaptations

GAME MATERIALS:

- SECURITY BRIEFING (page A7-2): 1 per student or student group
- CATTLE CHARACTERISTICS - QUICK REFERENCE CARDS #1-3 (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:

1. Divide students into groups and give each a complete set of the CATTLE CHARACTERISTICS - QUICK REFERENCE CARDS.
2. Each group will assume the role of "rancher."
3. Using the 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.
4. 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.
5. 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.)

1. Look at your CATTLE CHARACTERISTICS - QUICK REFERENCE CARDS and identify characteristics each breed has in common. Then identify the characteristics that are different.
2. 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!
3. 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.
4. 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.





CATTLE BREED QUICK REFERENCE

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



CATTLE BREED QUICK REFERENCE

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



CATTLE BREED QUICK REFERENCE

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



CATTLE BREED QUICK REFERENCE

BONSMARA



BENEFITS

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

ADAPTATIONS

- Sub-tropic climate

ORIGIN

- South Africa

SIZE

- Bull: 2000 lbs.
- Cow: 1100 lbs.

COLOR(S)

- Red



RED ANGUS

BULL - \$ 200 COW - \$ 160

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



ANGUS

BULL - \$ 225 COW - \$ 190

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



BONSMARA

BULL - \$ 250 COW - \$ 200

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



BEEFMASTER

BULL - \$ 295 COW - \$ 240

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



CATTLE BREED QUICK REFERENCE

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

- Bull: 1750-2000 lbs.
- Cow: 1150-1250 lbs.

COLOR(S)

- Red with white head, feet and underbelly



CATTLE BREED QUICK REFERENCE

BRAHMAN



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



CATTLE BREED QUICK REFERENCE

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

- Bull: 2000 lbs.
- Cow: 1200 lbs.

COLOR(S)

- Solid black with small amounts of white on the under belly



CATTLE BREED QUICK REFERENCE

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

- Bull: 2000-2400 lbs.
- Cow: 1250-1600 lbs.

COLOR(S)

- Cream/white



BRAHMAN

BULL - \$ 250 COW - \$ 200

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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

BULL - \$ 275 COW - \$ 225

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



CHAROLAIS

BULL - \$ 280 COW - \$ 240

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



BRANGUS

BULL - \$ 250 COW - \$ 200

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



CATTLE BREED QUICK REFERENCE

HEREFORD



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



CATTLE BREED QUICK REFERENCE

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



CATTLE BREED QUICK REFERENCE

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



CATTLE BREED QUICK REFERENCE

ZEBU



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



LONGHORN

BULL - \$ 225 COW - \$ 175

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



HEREFORD

BULL - \$ 250 COW - \$ 200

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



ZEBU

BULL - \$ 100 COW - \$ 75

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

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.



SHORTHORN

BULL - \$ 250 COW - \$ 200

WANT TO PURCHASE ADDITIONAL CATTLE FOR YOUR RANCH?

Be sure to consider the following first!

1. GEOGRAPHIC LOCATION OF YOUR RANCH

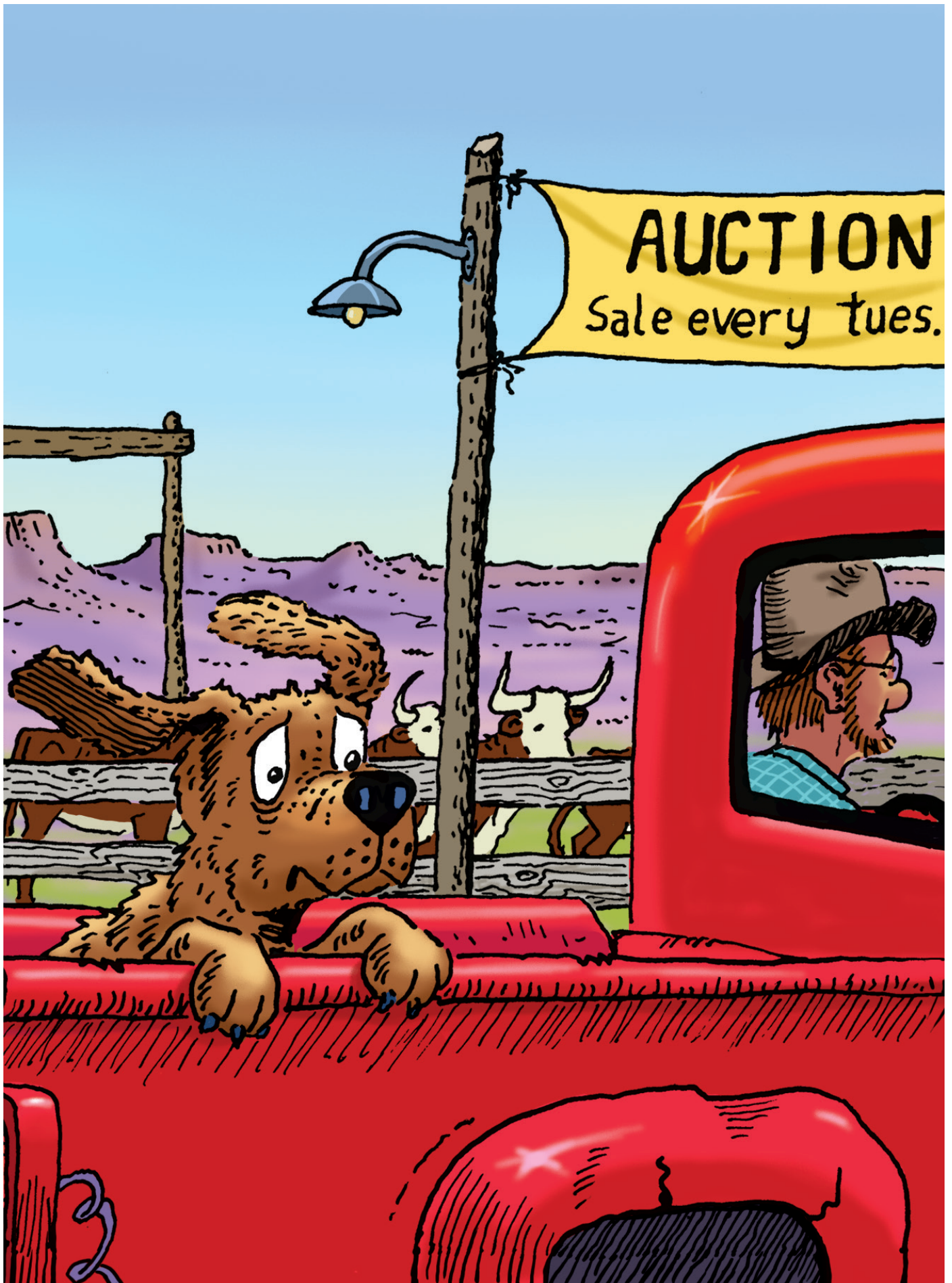
Does your region have grass as a food source for your cattle? What type of terrain is found in your region? What is your climate?

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.



Cattle Characteristics



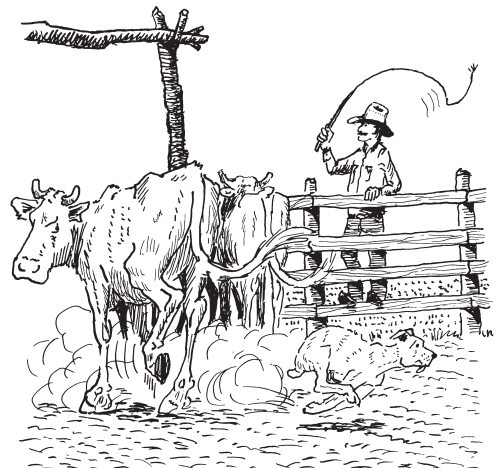
NAME: _____ DATE: _____

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?





ACTIVITY 8

Heading to the Cattle Market

RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 6

Content Area

Social Studies

Topic

Heading to the Cattle Market

Objective

Students will learn how the cattle market is impacted by geography, climate and animal characteristics.

Texas Essential Knowledge and Skills (TEKS):

K.6C, 1.8B, 3.7C, 3.8A, 3.8B, 4.12A, 5.13B



Heading to the Cattle Market

CONTENT AREA: Social Studies

TOPIC: Heading to the Cattle Market

GAME MATERIALS:

- SECURITY BRIEFING (page A8-2): 1 per student or student group
- HEADING TO THE CATTLE MARKET - CARDS #1-6 (page A8-4 thru A8-9): 1 set per student/student group
- CATTLE CHARACTERISTICS - QUICK REFERENCE CARDS (from Activity 7, pages A7-2 thru A7-6): 1 set per student or student group
- Pencil or pen
- THE BOTTOM LINE (page A8-10): 1 per student or student group

READING STRATEGY:

Students will read Chapter 6 (pages 29-42) before they play the game. They can reference the text as they play.

GAME INSTRUCTIONS:

1. Each student (or student group) needs a set of HEADING TO THE CATTLE MARKET - CARDS and CCATTLE CHARACTERISTICS - QUICK REFERENCE CARDS.
2. Students will need to read their cards and decide how many cattle they are going to buy based on their budget, geographic location, and available land. There are 12 different HEADING TO THE CATTLE MARKET - CARDS, each with different variables. (Review the climates in the different regions of the state with the students, if necessary.)
3. Use the budget guidelines below to complete your activity:
 - Each rancher has a loan from the bank for \$50,000
 - Factors students need to consider when purchasing cows at market:
 1. Geographic location of their ranch (Is the region they chose suited to their cattle?
(For example, the Beefmaster breed is heat, drought and insect resistant, making it ideal for hotter regions of the state, while the Red Angus is hardy to a variety of weather conditions, making him more suited to colder parts of the state)
 2. Cost for feed per cattle and bull (The more cattle you buy, the more feed you will need!)
 3. Feed costs \$100-\$200 per month depending on the amount of cattle you buy.
(How much they eat, time of year, and how much grass you grow on your ranch)

STUDENT SKILLS ASSESSMENT:

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

Heading to the Cattle Market



SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

If you wanted to run a ranch, you would be buying and selling cattle fairly often. When Loper buys or sells cattle, we hook up the flatbed pickup to the 24' gooseneck trailer and head off to the county auction. (He usually insists that I go along and ride shotgun on these deals, and I am glad to do it! To be real honest, I need a break from Drover.)

In order to have good, healthy cattle to sell at market, a lot of hard work must go into feeding, raising and protecting the cattle. After all, if we weren't able to sell our cattle at market, we wouldn't make a profit. If we didn't make a profit, we wouldn't be able to purchase new cattle - and then all of our hard work would be for nothing! So make sure there's enough money in your budget to care for the cattle once they're on your ranch!

ACTIVITY INSTRUCTIONS:

1. You are a rancher! The bank has given you a loan for \$50,000. You will use this money to purchase cattle for your ranch.
2. Using your CATTLE CHARACTERISTICS - QUICK REFERENCE CARD and HEADING TO THE CATTLE MARKET - CARDS, you will need to determine how many cattle you can purchase based on your budget, geographic location, and available land.
3. Consider these budget guidelines as you complete this activity:

Ranch Location - What is the geographic location of your ranch? Is the region you chose best suited for your cattle? (For example, the Beefmaster breed is heat, drought and insect resistant, making it ideal for hotter regions of the state, while the Red Angus is hardy to a variety of weather conditions, making him more suited to colder parts of the state.)

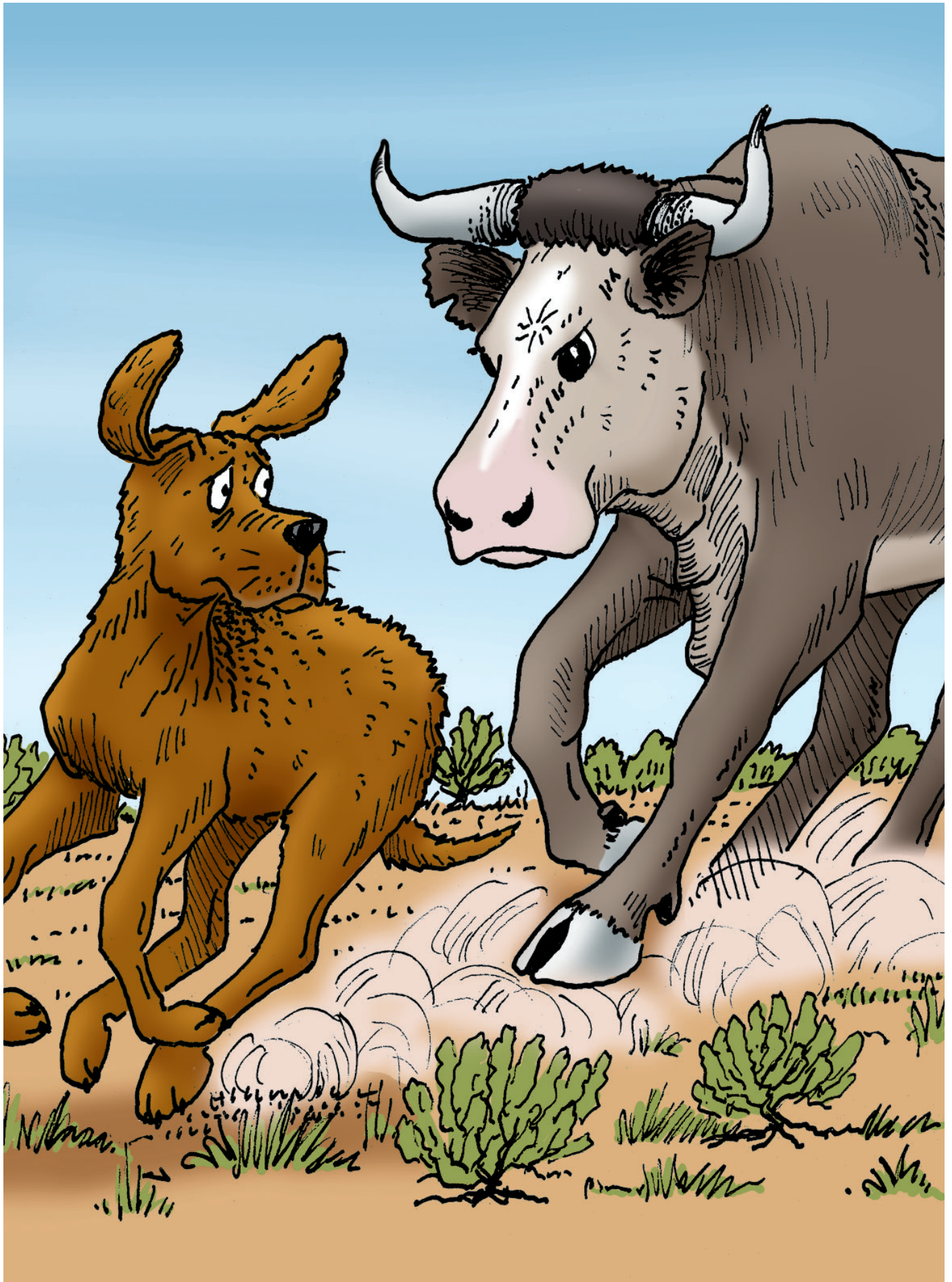
Cost of Cattle Feed - Feed costs \$100-\$200 per month depending on the amount of cattle you buy. (Remember, the more cattle you buy, the more feed you will need!) In determining how much money you will need to budget to feed your cattle, consider:

- How much each bull and cow will eat
- The season/time of year
- How much grass you grow on your ranch.

WRAP UP:

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







HEADING TO THE CATTLE MARKET

LOCATION: *Mountains & Basin Region of Texas*

LAND: *10,000 acres*

GRASS: *Short, sparse*

BUDGET: *\$50,000 (Feed costs \$100/mo)*



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: *Great Plains Region of Texas*

LAND: *10,000 acres*

GRASS: *Available April through October*

BUDGET: *\$50,000 (Feed costs \$100/mo)*



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: North Central Plains Region of Texas

LAND: 10,000 acres

GRASS: Available April through November

BUDGET: \$50,000 (Feed costs \$100/mo)



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: Coastal Plains Region of Texas

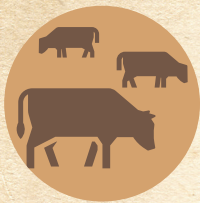
LAND: 10,000 acres

GRASS: Available Year Round

BUDGET: \$50,000 (Feed costs \$100/mo)



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: *Mountains & Basin Region of Texas*

LAND: *15,000 acres*

GRASS: *Short, sparse*

BUDGET: *\$50,000 (Feed costs \$100/mo)*



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: *Great Plains Region of Texas*

LAND: *15,000 acres*

GRASS: *Available April through October*

BUDGET: *\$50,000 (Feed costs \$100/mo)*



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: North Central Plains Region of Texas

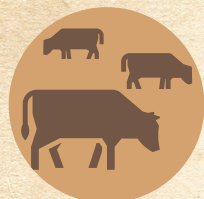
LAND: 15,000 acres

GRASS: Available April through November

BUDGET: \$50,000 (Feed costs \$100/mo)



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: Coastal Plains Region of Texas

LAND: 15,000 acres

GRASS: Available Year Round

BUDGET: \$50,000 (Feed costs \$100/mo)



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: *Mountains & Basin Region of Texas*

LAND: *20,000 acres*

GRASS: *Short, sparse*

BUDGET: *\$50,000 (Feed costs \$100/mo)*



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: *Great Plains Region of Texas*

LAND: *20,000 acres*

GRASS: *Available April through October*

BUDGET: *\$50,000 (Feed costs \$100/mo)*



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: North Central Plains Region of Texas

LAND: 20,000 acres

GRASS: Available April through November

BUDGET: \$50,000 (Feed costs \$100/mo)



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?



HEADING TO THE CATTLE MARKET

LOCATION: Coastal Plains Region of Texas

LAND: 20,000 acres

GRASS: Available Year Round

BUDGET: \$50,000 (Feed costs \$100/mo)



1. What breed of cattle are you going to buy?
2. How many bulls are you going to buy? What is the total cost of your bulls?
3. How many cows are you going to buy? What is the total costs of your cows?
4. How much of your budget are you going to set aside for feed? Explain.
5. What is your estimated profit for the year?

Heading to the Cattle Market



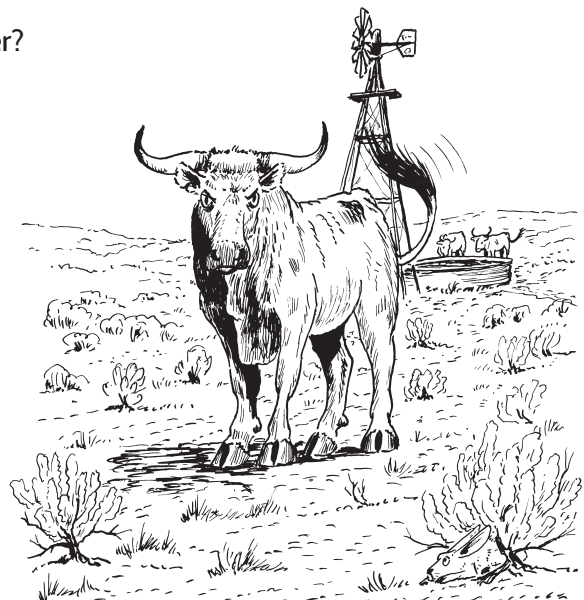
NAME: _____ DATE: _____

THE BOTTOM LINE

The cattle *market* (the price of cattle) is set by *supply and demand*. It can rise and fall at both convenient and inconvenient times for the rancher. Given that cattle have to eat regardless of the current state of the *market*, you can see how this could make things complicated! The *market* can really make or break a ranch!

Answer the questions below:

1. What was the most difficult part of the cattle market?
2. What type of cattle did you buy? Why?
3. How much of your budget did you save to buy feed for your cattle? Why?
4. Did you stay under your budget, or did you go over?
Explain.
5. Do you think you will make a profit at next year's cattle market? Explain.





ACTIVITY 9

Seasons on the Ranch



RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 7

Content Area

Science & Social Studies

Topic

Seasons

Objective

Students will identify how seasons effect ranch activities, vegetation, daylight patterns & weather patterns.
Students will identify how seasons effect work, resources & economic needs.

Texas Essential Knowledge and Skills (TEKS):

Science: 4.9A; Social Studies: K.3A, 1.3B, 1.6C, 2.2C, 2.7A, 3.4A, 4.9A, 5.9A





Seasons on the Ranch

CONTENT AREA: Science & Social Studies

TOPIC: Seasons

ACTIVITY MATERIALS:

- SECURITY BRIEFING (pages A9-2 & 3): 1 per student or student group
- SEASONS ON THE RANCH - FOLDABLES #1-4 (pages A9-4 thru A9-7): 1 set per student or student group plus a teacher's example copy
- Blue, pink, yellow and orange copy paper
- Scissors
- Pen or pencil
- Glue stick
- THE BOTTOM LINE (page A9-8): 1 per student or student group

READING STRATEGY:

Students will read Chapter 7 (pages 43-76) as they record seasonal information onto the foldable graphic organizer.

ACTIVITY INSTRUCTIONS:

BUILD FOLDABLE:

1. Copy/print SEASONS ON THE RANCH - FOLDABLES on its designated color of paper.
2. With the scissors, cut each piece of colored paper on the horizontal line that runs underneath each season name. Each sheet will now vary in length .5" from each other.
3. Using a glue stick, glue the top of the SUMMER sheet to the top of the FALL sheet (about 1" of glue at top), the SPRING (pink) sheet to the top of the SUMMER (yellow) sheet, and the WINTER (blue) sheet to the top of the SPRING (yellow) sheet.
4. Once all season sheets have been glued together at top, cut through all four sheets of paper on the dotted line in between the season names up to the end of the line at the top of the paper. The finished foldable graphic organizer will "stair step" from shortest sheet of paper to the longest sheet, with the seasons reading in the following order at the bottom: WINTER, SPRING, SUMMER, FALL.

ACTIVITY:

Students will record seasonal information on the SEASONS ON THE RANCH - FOLDABLE graphic organizer, referencing Chapter 7 as they work. Information will be recorded as follows:

1. Left Side of Flaps (SCIENCE): Ranch activities, vegetation changes, daylight patterns, weather patterns for that season
2. Right Side of Flaps (SOCIAL STUDIES): Most important ranch workers, resources needed, economic needs
3. Back Side of Flaps (SEASONAL PROBLEMS): At least one problem each season poses to Hank, the Head of Ranch Security

STUDENT SKILLS ASSESSMENT:

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

Seasons on the Ranch



SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

You might have realized by now the ranch is a very busy place, but our jobs change according to the **seasons**.

As the Head of Ranch Security, I take it upon myself to make sure everyone knows what **season** it is. I don't have a calendar to tell me when the seasons change from **fall** to **winter** or **spring** to **summer**. I have to use clues to help me figure it out. This might seem like a big job and I am not going to tell you it is easy, but with my high intelligence I am able to keep it straight and help Loper keep up with his ranch chores.

During this activity, you are going to be my Ranch Deputy and help me sniff out the clues in Chapter 7 that are clear signs that a **season** is changing.

ACTIVITY PREP - BUILD A FOLDABLE GRAPHIC ORGANIZER:

1. Cut each piece of colored paper on the horizontal line that runs underneath each season name. Each sheet will now vary in length .5" from each other.
2. Using a glue stick, glue the top of the SUMMER sheet to the top of the FALL sheet (about 1" of glue at top), the SPRING (pink) sheet to the top of the SUMMER (yellow) sheet, and the WINTER (blue) sheet to the top of the SPRING (yellow) sheet.
3. Once all season sheets have been glued together at the top, cut through all four sheets of paper on the dotted line in between the season names up to the end of the line at the top of the paper.

The finished SEASONS ON THE RANCH foldable graphic organizer will "stair step" from shortest sheet of paper to the longest sheet, with the seasons reading in the following order at the bottom:

WINTER, SPRING, SUMMER, FALL.

(Your teacher has made an example for you to reference if you get stuck!)



Seasons on the Ranch



SECURITY BRIEFING –

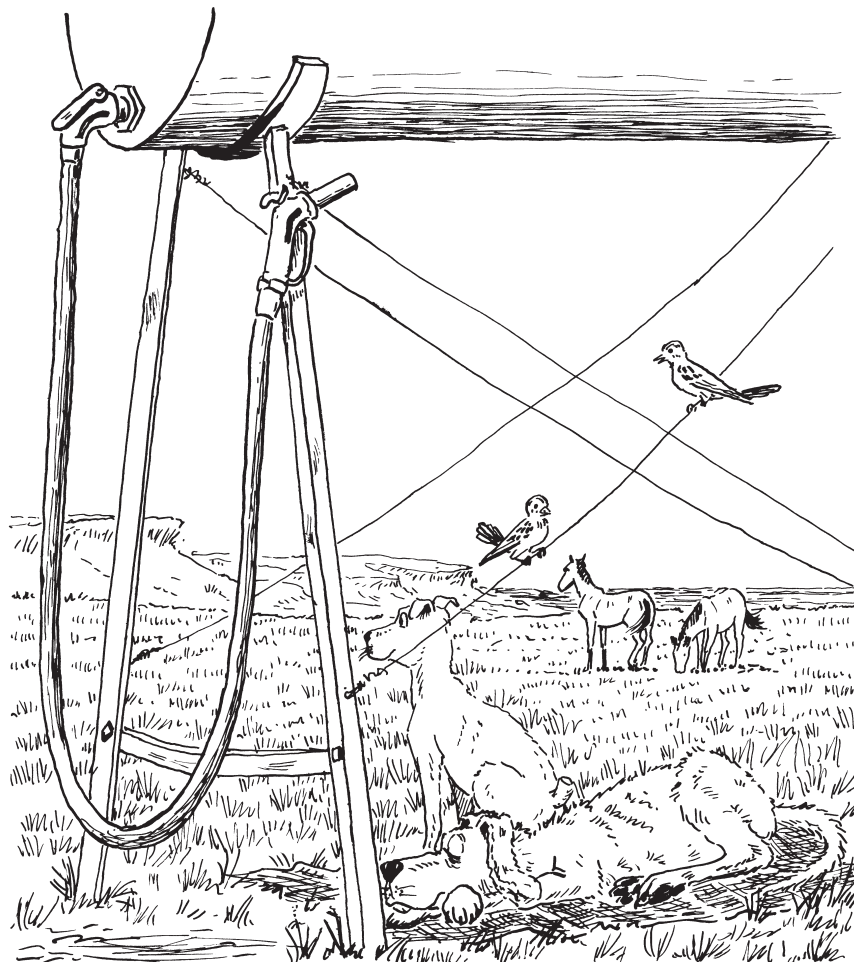
ACTIVITY INSTRUCTIONS:

As you read Chapter 7, fill out your *SEASONS ON THE RANCH - FOLDABLE* graphic organizer according to the following instructions:

1. **Left Side of Flaps (SCIENCE):** Record ranch activities, vegetation changes, daylight patterns, and weather patterns for that season
2. **Right Side of Flaps (SOCIAL STUDIES):** Record the most important ranch workers, resources needed, and economic needs
3. **Back Side of Flaps (SEASONAL PROBLEMS):** Identify at least one problem each season poses to Hank, the Head of Ranch Security

WRAP UP:

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



Seasons on the Ranch

{ SCIENCE }

Ranch Activities

Vegetation

Daylight Patterns

Weather Patterns

{ SOCIAL STUDIES }

Ranch Workers

Resources Needed

Economic Needs

W I N T E R

{ **SCIENCE** }

Ranch Activities

Vegetation

Daylight Patterns

Weather Patterns

{ **SOCIAL STUDIES** }

Ranch Workers

Resources Needed

Economic Needs

S P R I N G

{ **SCIENCE** }

Ranch Activities

Vegetation

Daylight Patterns

Weather Patterns

{ **SOCIAL STUDIES** }

Ranch Workers

Resources Needed

Economic Needs

S U M M E R

{ **SCIENCE** }

Ranch Activities

Vegetation

Daylight Patterns

Weather Patterns

{ **SOCIAL STUDIES** }

Ranch Workers

Resources Needed

Economic Needs

F A L L

Seasons on the Ranch



NAME: _____ DATE: _____

THE BOTTOM LINE

When you read about the seasons you noticed that the nonliving factors (*weather and length of day*) impact ranch activities. Also, as *seasons* changed, so did cowboy responsibilities.

Answer the questions below:

1. How did the length of the day impact ranch activities?
2. What organisms are impacted by water on the ranch?
3. How did the weather impact the ranch responsibilities of the cowboys in the:

Winter

Spring

Summer

Fall

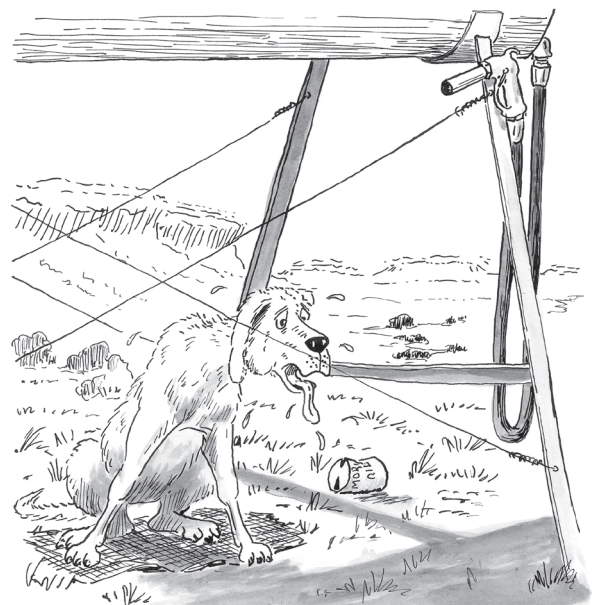
4. What economic decisions do Sally May and Loper have to make during the:

Winter

Spring

Summer

Fall





ACTIVITY 10

A Year in the Life of a Cow

RANCH LIFE SERIES / BOOK 1 / RANCHING AND LIVESTOCK

Chapter 7

Content Area:

Science

Topic:

Organism Survival Throughout the Seasons

Objective:

Students will understand how the changing of seasons can change conditions and affect survival of animals.

Texas Essential Knowledge and Skills (TEKS):

1.12A, 2.13AB, 3.12A, 4.12A, 5.12A



A Year in the Life of a Cow

GAME MATERIALS:

- Minimum of 10 student players
- SECURITY BRIEFING (page A10-7): 1 per student or student group
- A YEAR IN THE LIFE OF A COW - TOKENS #1-7 (pages A10-9 thru A10-13): See instructions below
- 1 bandana
- 3 bright, oversized t-shirts
- Flags, 1 for each student - flags can be made of strips of felt that will be tucked into students' clothing and removed/added during game play
- Cones or ribbon to designate playing area
- Envelopes, 1 for each student
- THE BOTTOM LINE (page A10-16): 1 per student or student group

READING STRATEGY:

Students will read Chapter 7 (pages 43-76) before they play the game.

GAME PREP:

1. You will need to make color-coded game tokens using YEAR IN THE LIFE OF A COW - TOKENS #1-7 according to the table provided below. Each token represents a different resource and its nutritional value:
 - a. W-1 TOKENS #1 (yellow) represent Winter Grass tokens, low nutritional value = game value of 1
 - b. H-2 TOKENS #2 (brown) represent Hay tokens, nutritional value of 10-12% = game value of 2
 - c. C-5 TOKENS #3 (orange) represent Cottonseed Cake tokens, nutritional value of 41% = game value of 5
 - d. G-10 TOKENS #4 (green) represent natural growing ranch grasses like Prairie Grass tokens, high nutritional value = game value of 10
 - e. S-5 TOKENS #5 (blue) represent the water source of a Stream tokens = game value of 5
 - f. C-10 TOKENS #6 (blue) represent the water source of a Creek tokens = game value of 10
 - g. P-15 TOKENS #7 (blue) represent the water source of a Pond tokens = game value of 15
2. You will not explain the A YEAR IN THE LIFE OF A COW - TOKENS to the students prior to the game. Students should only be told that the TOKENS represent food and water resources on the ranch.

Referencing the table on the following page, make the TOKENS for the game. The number of TOKENS you will use for each of the four seasonal rounds of the game will change, as different resources will be available different times of the year.

Use the tables provided for each season to prep the upcoming round while students are busy calculating their TOKEN totals.

Mark your pasture (game area) with cones or ribbon so students know where to find A YEAR IN THE LIFE OF A COW - TOKENS. Distribute the TOKENS in a way that simulates real conditions.

Continued on next page



TOKEN distribution examples:

- S-5 and C-10 TOKENS (Stream and Creek) should “flow” through the pasture/ranch
- P-15 TOKENS (Pond) should be arranged together in an organic circle shape
- W-1 and G-10 TOKENS (Winter Grass and Prairie Grass) should be distributed equally throughout the playing area, in the different areas where specific varieties would grow
- H-2 TOKENS (Hay) should follow a path, as if found throughout a pasture
- C-5 TOKENS (Cottonseed Cake) should be put in one spot

TOTAL NUMBER OF TOKENS REQUIRED FOR GAME						
COLOR	LABEL	REPRESENTS	NUMBER OF STUDENTS IN CLASS			
			10-15	16-20	21-25	26-30
Yellow	W-1	Winter Grass	45	40	50	60
Brown	H-2	Hay	25	30	40	50
Orange	C-5	Cottonseed Cake	40	50	60	70
Green	G-10	Prairie Grass	50	60	70	80
Blue	S-5	Stream	10	13	15	17
Blue	C-10	Creek	20	25	30	35
Blue	P-15	Pond	40	50	60	70

- Students should have an envelope that represents their stomach that will hold their consumed items. Cows are grazers and move slowly in a pasture unless there is a predator. Students should move in slow motion to represent grazing.

If a student runs or walks quickly they will use more energy than normal and the teacher should empty their ENVELOPE to simulate quick energy consumption.

- The game will be played in four seasonal rounds (spring, summer, fall, winter). Each round will last 2 minutes. After each round students should return to a common area and tabulate their TOKENS for the round using the A DAY IN THE LIFE OF A COW - CALCULATION FORM.
- Read the SECURITY BRIEFING aloud before students begin.

STUDENT SKILLS ASSESSMENT:

- Have students complete THE BOTTOM LINE worksheet at the end of the game.



A Year in the Life of a Cow

GAME INSTRUCTIONS:

Teacher will distribute TOKENS for first round. Once the round is completed, the teacher will redistribute for subsequent rounds until all seasons have been played - a total of four rounds.

* ROUND 1 - SPRING

SPRING TOKEN DISTRIBUTION						
COLOR	LABEL	REPRESENTS	NUMBER OF STUDENTS IN CLASS			
			10-15	16-20	21-25	26-30
Yellow	W-1	Winter Grass	30	40	50	60
Brown	H-2	Hay	0	0	0	0
Orange	C-5	Cottonseed Cake	0	0	0	0
Green	G-10	Prairie Grass	50	60	70	80
Blue	S-5	Stream	10	13	15	17
Blue	C-10	Creek	20	25	30	35
Blue	P-15	Pond	40	50	60	70

CONDITIONS:

This round will represent spring conditions. The spring typically has abundant rain fall and there is a lot of plant growth. H-2 TOKENS and C-5 TOKENS will not be used in this round.

LIMITATIONS:

This season is also when many cows will have calves. Select 2 or 3 students to have a calf during this round. The calf will not gather food TOKENS because it drinks milk from its mother. The calf must hold hands or link arms with the mother during the round.

After students gather TOKENS for 2 minutes they will return to the common area signaling the changing of seasons. At this time you will reveal what the TOKENS represent and the value of the TOKENS. Students should tabulate their TOKENS using the A DAY IN THE LIFE OF A COW - CALCULATION FORM provided. If a student consumes 25 pounds of food and 30 gallons of water they survived the spring. The mother cows are producing milk for their young and must consume 50 pounds of food for the baby to survive.

Students will learn that some types of food are more nutritious and seek out those TOKENS. This simulates the learned behaviors of the cows after the first year of life and the competition for resources. *(Cows are intelligent, they learn quickly, and most breeds are very adaptable.)*

Continued on next page



* ROUND 2 - SUMMER

SUMMER TOKEN DISTRIBUTION						
COLOR	LABEL	REPRESENTS	NUMBER OF STUDENTS IN CLASS			
			10-15	16-20	21-25	26-30
Yellow	W-1	Winter Grass	0	0	0	0
Brown	H-2	Hay	0	0	0	0
Orange	C-5	Cottonseed Cakes	0	0	0	0
Green	G-10	Prairie Grass	40	50	60	70
Blue	S-5	Stream	DO NOT RESTOCK WATER			
Blue	C-10	Creek				
Blue	P-15	Pond				

CONDITIONS:

This round will represent the summer. During this season the water begins to dry up so there will be less water available. The W-1 TOKENS are removed because the dormant winter grass has been replaced with ranch grass. H-2 TOKENS and C-5 TOKENS are not needed in the summer.

LIMITATIONS:

The summer season presents additional challenges for the cattle. During the summer months porcupines roam the pasture causing trouble for cattle who get too close and get quilled in the face. Select one student who will wear a BLINDFOLD during this round to represent a cow who was blinded by the quills of a porcupine.

Another hazard during the warm months are rattlesnakes. Unless a rattlesnake bites a cow in the face they can usually survive an attack because of their large size. Select a student to hop during the round to represent a rattlesnake bite to the leg.

After 2 minutes have students come to the common gathering place and tabulate their food and water TOKEN totals. Students should tabulate their TOKENS using the A DAY IN THE LIFE OF A COW - CALCULATION FORM provided. If a student consumes 25 pounds of food and 30 gallons of water they survived the summer.

This round will teach students that cows must not only consume enough food and water to survive they must also be careful of wildlife in the pasture.



* ROUND 3 - FALL

FALL TOKEN DISTRIBUTION						
COLOR	LABEL	REPRESENTS	NUMBER OF STUDENTS IN CLASS			
			10-15	16-20	21-25	26-30
Yellow	W-1	Winter Grass	25	30	40	45
Brown	H-2	Hay	25	30	40	45
Orange	C-5	Cottonseed Cake	20	30	40	45
Green	G-10	Prairie Grass	20	30	40	45
Blue	S-5	Stream	10	13	15	17
Blue	C-10	Creek	20	25	30	35
Blue	P-15	Pond	40	50	60	70

CONDITIONS:

This round will represent the fall. During this season we see the return of rain and water is more abundant on the ranch. As the length of days and temperature decrease the producers become dormant. Feed runs will begin to supplement the nutrients needed by the cows. The playing area will now include H-2 TOKENS and C-5 TOKENS.

LIMITATIONS:

During the fall there is an increase of predator behavior because food supplies begin to diminish. Select one student to be a coyote during the round. The student must walk in the pasture and seek out a cow that is separated from the herd. Isolated cows can be tagged by removing their FLAGS.

After 2 minutes have students come to the common gathering place and tabulate their food and water totals. Students should tabulate their TOKENS using the A DAY IN THE LIFE OF A COW - CALCULATION FORM provided. If a student consumes 25 pounds of food and 30 gallons of water they survived the fall.

This round will teach students that predators in a pasture are very dangerous for cattle that do not stay with the herd.

Continued on next page



* ROUND 4 - WINTER

WINTER TOKEN DISTRIBUTION						
COLOR	LABEL	REPRESENTS	NUMBER OF STUDENTS IN CLASS			
			10-15	16-20	21-25	26-30
Yellow	W-1	Winter Grass	45	30	40	45
Brown	H-2	Hay	20	30	40	50
Orange	C-5	Cottonseed Cake	40	50	60	70
Green	G-10	Prairie Grass	0	0	0	0
Blue	S-5	Stream	5	7	9	10
Blue	C-10	Creek	10	25	13	20
Blue	P-15	Pond	30	35	40	45

CONDITIONS:

This round will represent winter. This season is the most difficult for cattle to survive. The cattle rely on the rancher for food supplements because winter grass is not nutritious enough for a cow to survive through the winter. If the weather prevents the rancher from moving around the pastures to feed the cattle they must go without food. Water supplies must also be kept available for the cattle in severe cold temperatures. G-10 TOKENS will not be used in this round.

LIMITATIONS:

During the winter there is an increase of predator behavior because food supplies begin to diminish. Select three students to be coyotes during the round. The students must walk in the pasture and seek out a cow that is separated from the herd. Isolated cows can be tagged by removing their FLAGS.

After 2 minutes have students come to the common gathering place and tabulate their food and water TOKEN totals. Students should tabulate their TOKENS using the A DAY IN THE LIFE OF A COW - CALCULATION FORM provided. If a student consumes 25 pounds of food and 30 gallons of water they survived the winter.

This round will teach students that as food decreases predators become most dangerous during the winter. Cattle that have white coloring are able to use camouflage to help protect them from predators during the snowy winter months.

A Year in the Life of a Cow



SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

Being the Head of Security is the most important job on the ranch, but Loper has to make sure all the **animals** on the ranch have their **basic needs** met (**food** to eat and water to **drink**). I guess that makes his job the second most important...

Anyways, you may not know, but a cow eats a lot of food every day! One cow will eat about 25 pounds of food and drink 30 gallons of water every day! That is 175 pounds of food and 210 gallons of water a week. Those numbers make me a little nervous because I never know if Loper will have enough money to get around to buying my dog food. I eat one bowl of dog food and have one bowl of water a day making my **consumption** a low priority on Loper and Sally May's to-do list.

Now where was I? Oh yes, cows need a lot of **natural resources** to **survive** the different **seasons**.

This game is going to let you experience a year in the life of a cow!

GAME INSTRUCTIONS:

Your teacher will read your instructions to you.

During the game, you will use your **A DAY IN THE LIFE OF A COW - CALCULATION FORM** to calculate your **TOKEN** totals for each round.

WRAP UP:

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



A Year in the Life of a Cow

CALCULATION FORM

Use the space below and the back of the page for your calculations, then chart your results in the table below.

SEASONS	TOKEN TOTALS	SURVIVAL			
		Food 25 lb	Water 30 G		
Round 1 - SPRING					
Food TOKENS		Circle	Yes	OR	No
Water TOKENS		Circle	Yes	OR	No
Round 2 - SUMMER					
Food TOKENS		Circle	Yes	OR	No
Water TOKENS		Circle	Yes	OR	No
Round 3 - FALL					
Food TOKENS		Circle	Yes	OR	No
Water TOKENS		Circle	Yes	OR	No
Round 4 - WINTER					
Food TOKENS		Circle	Yes	OR	No
Water TOKENS		Circle	Yes	OR	No

W-1 W-1 W-1 W-1 W-1

W-1 W-1 W-1 W-1 W-1

W-1 W-1 W-1 W-1 W-1

W-1 W-1 W-1 W-1 W-1

W-1 W-1 W-1 W-1 W-1

W-1 W-1 W-1 W-1 W-1

W-1 W-1 W-1 W-1 W-1

W-1 W-1 W-1 W-1 W-1

H-2	H-2	H-2	H-2	H-2
H-2	H-2	H-2	H-2	H-2
H-2	H-2	H-2	H-2	H-2
H-2	H-2	H-2	H-2	H-2
H-2	H-2	H-2	H-2	H-2
H-2	H-2	H-2	H-2	H-2
H-2	H-2	H-2	H-2	H-2
H-2	H-2	H-2	H-2	H-2

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

C-5

G-10	G-10	G-10	G-10	G-10
-------------	-------------	-------------	-------------	-------------

G-10	G-10	G-10	G-10	G-10
-------------	-------------	-------------	-------------	-------------

G-10	G-10	G-10	G-10	G-10
-------------	-------------	-------------	-------------	-------------

G-10	G-10	G-10	G-10	G-10
-------------	-------------	-------------	-------------	-------------

G-10	G-10	G-10	G-10	G-10
-------------	-------------	-------------	-------------	-------------

G-10	G-10	G-10	G-10	G-10
-------------	-------------	-------------	-------------	-------------

G-10	G-10	G-10	G-10	G-10
-------------	-------------	-------------	-------------	-------------

G-10	G-10	G-10	G-10	G-10
-------------	-------------	-------------	-------------	-------------

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

S-5

C-10 C-10 C-10 C-10 C-10

C-10 C-10 C-10 C-10 C-10

C-10 C-10 C-10 C-10 C-10

C-10 C-10 C-10 C-10 C-10

C-10 C-10 C-10 C-10 C-10

C-10 C-10 C-10 C-10 C-10

C-10 C-10 C-10 C-10 C-10

C-10 C-10 C-10 C-10 C-10

P-15	P-15	P-15	P-15	P-15
P-15	P-15	P-15	P-15	P-15
P-15	P-15	P-15	P-15	P-15
P-15	P-15	P-15	P-15	P-15
P-15	P-15	P-15	P-15	P-15
P-15	P-15	P-15	P-15	P-15
P-15	P-15	P-15	P-15	P-15
P-15	P-15	P-15	P-15	P-15

A Year in the Life of a Cow



NAME: _____ DATE: _____

THE BOTTOM LINE

A cow's life is a hard and dangerous one. A rancher must make sure the cattle's *needs* are met every day of the year, with each *season* bringing different challenges.

Answer the questions below:

1. Based on your experience as a cow, which season did you find the hardest to survive and why?
2. Based on this game, what problems could have been solved by having a cowdog? How would the cowdog have solved those problems?
3. If a rancher experienced a drought, how would that affect all the wildlife on the ranch (cows and its predators)? Would a drought affect the role of a rancher?
4. If you were a rancher, how would you solve the problem of predators and wildlife in your pasture?

