

# 4-H Leader's Manual for Llama Activities



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## **4-H MOTTO**

**“TO MAKE THE BEST BETTER”**

## **4-H CLUB PLEDGE**

**I PLEDGE:  
MY HEAD TO CLEARER THINKING  
MY HEART TO GREATER LOYALTY  
MY HANDS TO LARGER SERVICE, AND  
MY HEALTH TO BETTER LIVING FOR MY CLUB,  
MY COMMUNITY, MY COUNTRY, AND MY WORLD.**

## **PLEDGE TO THE FLAG**

**I PLEDGE ALLEGIANCE TO THE FLAG OF THE  
UNITED STATES OF AMERICA AND TO THE  
REPUBLIC FOR WHICH IT STANDS, ONE  
NATION UNDER GOD, INDIVISIBLE, WITH  
LIBERTY AND JUSTICE FOR ALL.**

**This manual has been approved by the Wyoming State 4-H Office. It has not yet been submitted to the National 4-H Office for approval. You may wish to submit this for approval in your individual state.**

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# INTRODUCTION TO THE LLAMA

## BACKGROUND BASICS

Llamas are members of the camel (camelid) family. Originating on the Central Plains of North America about 40 million years ago, llama-like animals dispersed to South America about 2.5 million years ago. By the end of the last Ice Age (10,000–12,000 years ago), camelids were extinct in North America. Llamas were domesticated from guanacos in the Andean highlands of Peru 5,000 to 6,000 years ago, and are among the oldest domestic animals in the world. Primarily a beast of burden for the native herdsman, llamas also provided them with meat, wool for clothing, hides for shelter and dried manure pellets for fuel. They were sometimes used as offerings to the gods. Today there are an estimated seven million llamas and alpacas (in approximate equal numbers) in South America and 74,000–77,000 llamas and 5,300–5,700 alpacas in the United States and Canada.

## PHYSICAL FACTS ABOUT LLAMAS

<b>Life span:</b>	About 15–20 years
<b>Weight:</b>	250–450 pounds
<b>Height:</b>	36–47 inches at the shoulders; 60–77 inches at the head
<b>Average gestation:</b>	350 days
<b>Birth:</b>	A single baby (“cria”) is normally delivered without assistance from a standing mother during daylight hours. Twinning very rarely occurs.
<b>Babies:</b>	Birth weight is 20–35 pounds. Babies are normally up and nursing within 90 minutes. They are weaned at about six months old.
<b>Reproduction:</b>	Females are first bred at 16–24 months of age. Llamas do not have a heat cycle, but are induced ovulators (ovulation occurs 24–36 hours after breeding). Thus, they can be bred at any time of year.
<b>Color:</b>	Wool ranges from white to black, with shades of gray, beige, brown, red and roan in between. It may be solid, spotted, or marked in a variety of patterns.
<b>Health:</b>	Because llamas and their ancestors are specially suited to the harsh environment of their Andean homeland, North American owners will find them remarkably hardy, healthy, easy to care for, and remarkably disease free.

## LLAMA FACTS

Llamas are adaptable to any climate or altitude. In extreme weather, a three-sided shelter is recommended for protection from wind, snow, or heat.

Llamas communicate in several ways. Sometimes, they communicate with a series of ear, body and tail postures. At other times, they make a shrill alarm call or clucking sound. They also make a humming sound.

Llamas have a useful coat of wool. It takes 24 months to grow the longest fibers, but a complete coat will come back in 12 months. They could be sheared yearly. A llama will produce from 3–8 pounds of wool per year. If shorn, one should not clip closer than one inch from the skin with sheep shears so the llama has ample protection from the sun. It is acceptable to brush and comb the llama's wool. Wool fibers are from 2–8 inches in length.

Spitting is the llama's way of saying, "Bug off!" Normally it is used only among llamas to divert annoying suitors, ward off a perceived threat, or most commonly, to establish pecking order at mealtime. Occasionally a llama who has been forced to tolerate excessive human handling may have developed an intolerance for or fear of humans, and will spit if it feels threatened by them.

Llamas require little care compared to other animals. Good hay when there is no pasture, fresh water, an iodized salt block, and a mineral block are all they need. Most United States pastures are low in selenium, a mineral important to llamas. It is important to know if pastures in your area are deficient and if they are, to provide supplements. They also like a variety of grains but it is not necessary with good pasture or hay. One 50 pound bale of grass hay will feed one llama for one week.

Any type of standard fence is adequate for llamas. Forty inches in height is sufficient. Board, wire mesh, pole, or barbed wire are all fine. If there is too much space between the ground and the fence, a baby can crawl under. Llamas can be trained to jump, but under normal circumstances, have no desire to escape an enclosure. Little land is required; one acre is enough for several llamas.

Llamas are very clean animals and have no odor. They defecate in one place, and the manure, high in nitrogen, is excellent fertilizer for gardens.

## THINGS TO KNOW ABOUT LLAMAS

Llamas are used in many ways. These include breeding stock, pack animals, wool production, therapy, and pets.

Llamas are intelligent and easy to train. In just a few repetitions they will pick up and retain many behaviors such as accepting a halter, being fed, loading in and out of a vehicle, and pulling a cart or carrying a pack.

When training a llama, it is very important to remember that practicing with the llama often and repeating the actions will help the llama become familiar with what is expected. Be sure to give the llama verbal praise as it completes the required task. As the llama works with the trainer, it learns to trust the trainer and becomes more and more cooperative.

To help a llama become comfortable with being touched, move slowly and talk softly to help it relax. Stroke the llama while talking and move to different areas such as the head, legs and belly. This is called desensitizing the llama. With practice, the llama will become comfortable with being stroked all over its body.

Llamas have wool. The wool is grease-free. Lightweight llama wool is warm and luxurious and popular with spinners and weavers. Llama wool is made of two kinds of fiber. Guard hair is coarse and shiny. Undercoat is soft and used by the spinners and weavers.

Llamas are excellent packers. They can carry 50–120 pounds, but are not ridden except by children. Their two-toed foot with its leathery bottom pad gives them great surefootedness. This foot, and the llama's ability to browse, gives the llama a low impact on the environment equivalent to that of a large deer.

Llamas are a modified ruminant with a three-compartment stomach. They chew their cud like cattle and sheep. They have front teeth on the lower jaw only. Because of a relatively low protein requirement due to their efficient digestive systems, they can be kept on a variety of pastures or hay.

Llamas are a highly social animal and need the companionship of their species. Independent yet shy, llamas are gentle and curious. Their calm nature and common sense make them easy for anyone, even children, to handle. They treat each other and each other's babies with affection and concern. They lay down at night in family groups and bad weather finds them side by side in large groups.

## REFERENCES

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Huff, Arden N. *Introduction To the Horse* (Publication 406-120). Reprinted 1989. Virginia Cooperative Extension Service. Virginia Polytechnic Institute and State University, Blacksburg, VA 24061.

Hoffman, Clare, DVM, and Ingrid Asmus. *Caring for Llamas: A Health and Management Guide*. Rocky Mountain Llama and Alpaca Association, 168 Emerald Mountain Center, Livermore, CO 80536.

*LANA News*. Llama Association of North America, 1800 S. Obenchain Rd, Eagle Point, OR 97524. Phone: (503)830-5262.

*Llama Facts and Frequently Asked Questions*. International Llama Association, 2755 S. Locust St #114, Denver, CO 80222. Phone: (303)756-9004.

Larry H. Kuhl and Barbara Robertson. *Introduction to the Llama*. Virginia Cooperative Extension Service. Virginia Polytechnic Institute and State University, Blacksburg, VA 24061.

# 4-H MINI LEVEL PROJECT BOOK

## Introduction to the Llama

Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_

Address: \_\_\_\_\_ Age: \_\_\_\_\_

Town or City: \_\_\_\_\_ Zip: \_\_\_\_\_

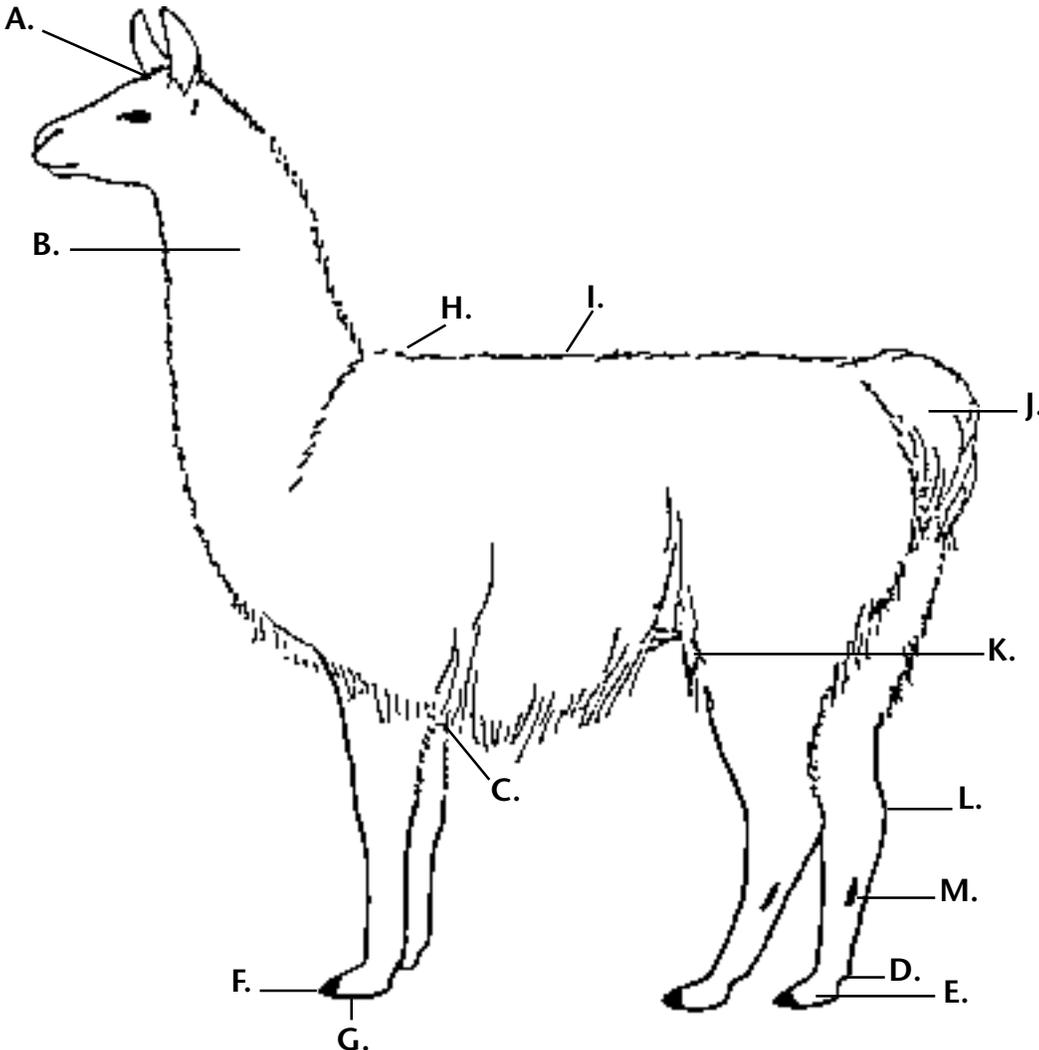
Name of Club: \_\_\_\_\_

## MINI YOUTH PROJECT QUESTIONS

1. Llamas are a member of the family \_\_\_\_\_
2. List three ways in which a llama is used:
  1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
3. How many toes are on a llama's foot? \_\_\_\_\_
4. How many compartments are in a llama's stomach? \_\_\_\_\_
5. How many years does the average llama live? \_\_\_\_\_
6. How many days are there during the average gestation period of a female llama? \_\_\_\_\_
7. What is a baby llama called? \_\_\_\_\_
8. A baby "weighs in" at birth, on the average of how many pounds? \_\_\_\_\_
9. How many feet tall (from the toe to the top of the head) is the average llama? \_\_\_\_\_
10. Give two reasons why a llama may spit:  
\_\_\_\_\_  
\_\_\_\_\_
11. Identify the following body parts on the llama diagram on page M/6.

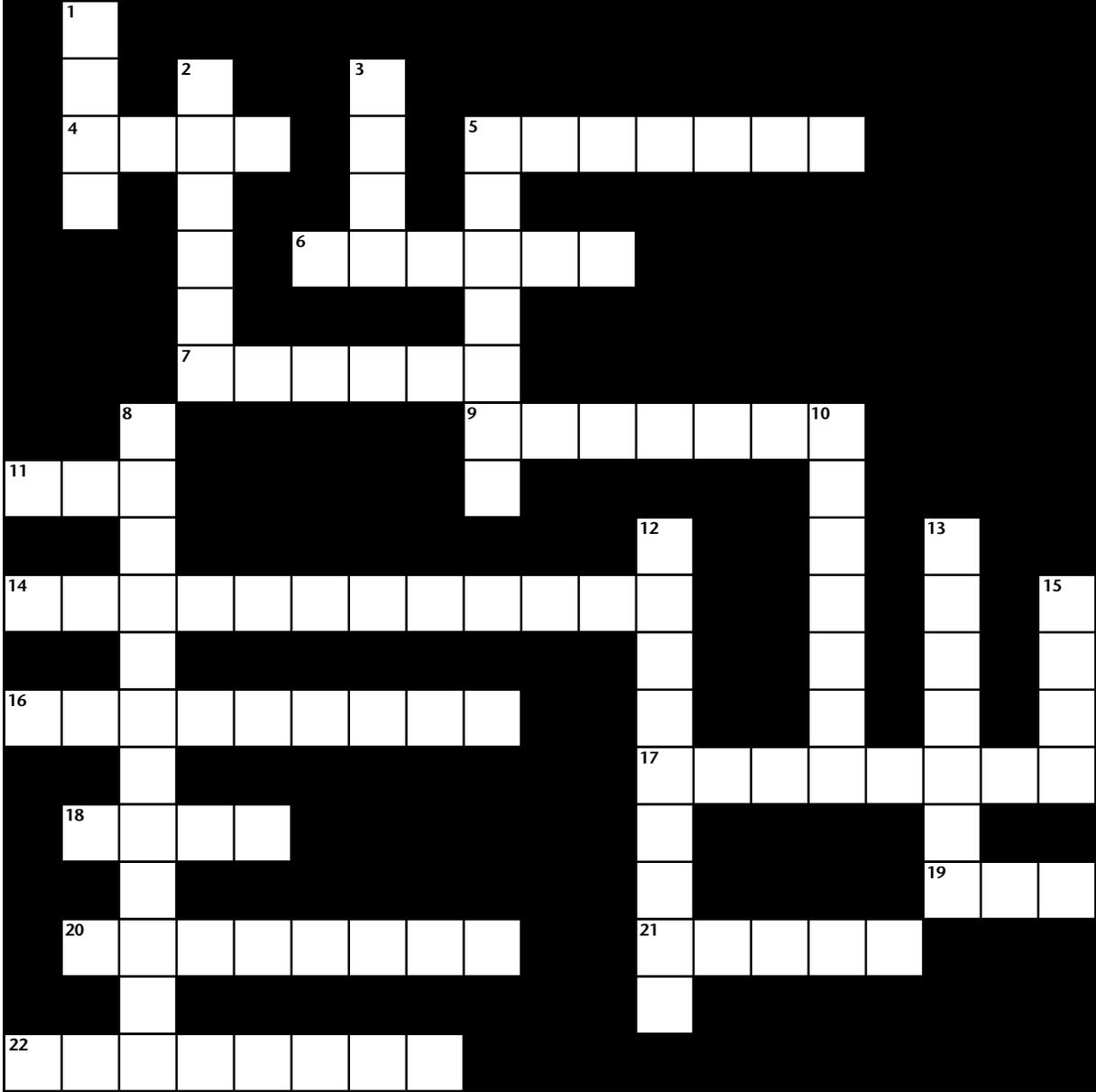
_____ Scent Gland	_____ Fetlock
_____ Hock	_____ Elbow
_____ Neck	_____ Stifle
_____ Poll	_____ Tail
_____ Pastern	_____ Back
_____ Toenail	_____ Pad
_____ Withers	

# MINI LEVEL DIAGRAM





# MINI LEVEL CROSSWORD PUZZLE



## CLUES: MINI LEVEL CROSSWORD PUZZLE

### ACROSS CLUES

4. A baby llama.
5. A neutered llama.
6. A girl llama.
7. A camelid that is short and used primarily for its wool.
9. Llamas are members of this family.
11. How many toes on each foot does a llama have?
14. A person you should know and who you can call if a llama is sick.
16. Stiffer more coarse part of wool.
17. Animals that chew cud.
18. Approximately how long is a llama's gestation?
19. A sound a llama makes.
20. These kind of teeth should be trimmed or removed from a male llama.
21. The mountain range from which llamas originated in South America.
22. Lots of this will help a llama feel comfortable in a show ring. " \_\_\_\_\_ makes perfect!"

### DOWN CLUES

1. The word that describes what a llama does when it carries a load.
2. Smaller South American wild camelid.
3. A boy llama.
5. The camelid from which llamas are domesticated.
8. Continent from which llamas originated.
10. Any animal that has been developed to help man.
12. The part of wool that is fine and primarily used for spinning.
13. A llama has three compartments in this.
15. The way a llama says, "Bug Off!"

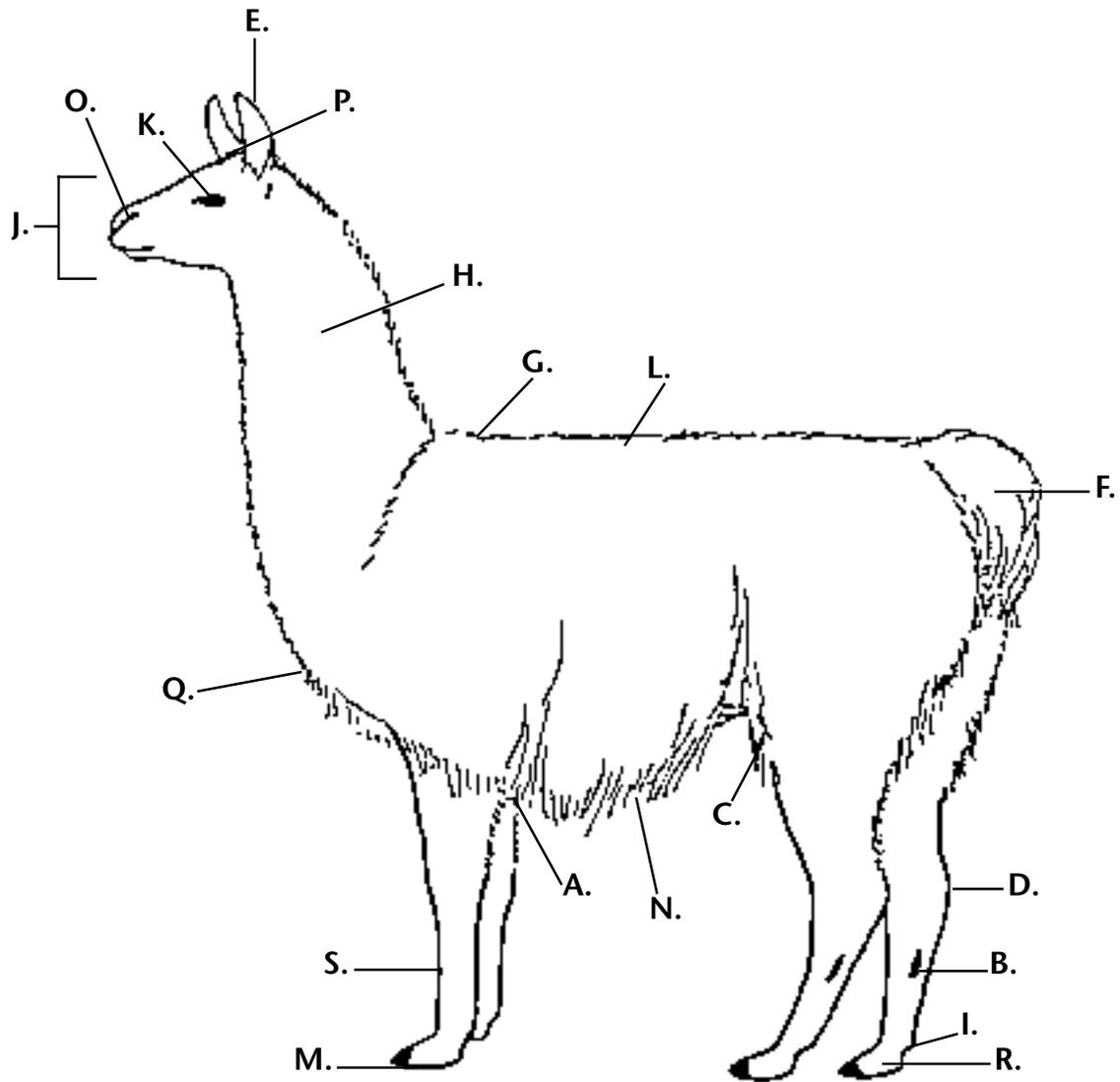
## WORD LIST: MINI LEVEL CROSSWORD PUZZLE

ALPACA  
ANDES  
CAMELID  
CRIA  
DOMESTIC  
FEMALE  
FIGHTING  
GELDING

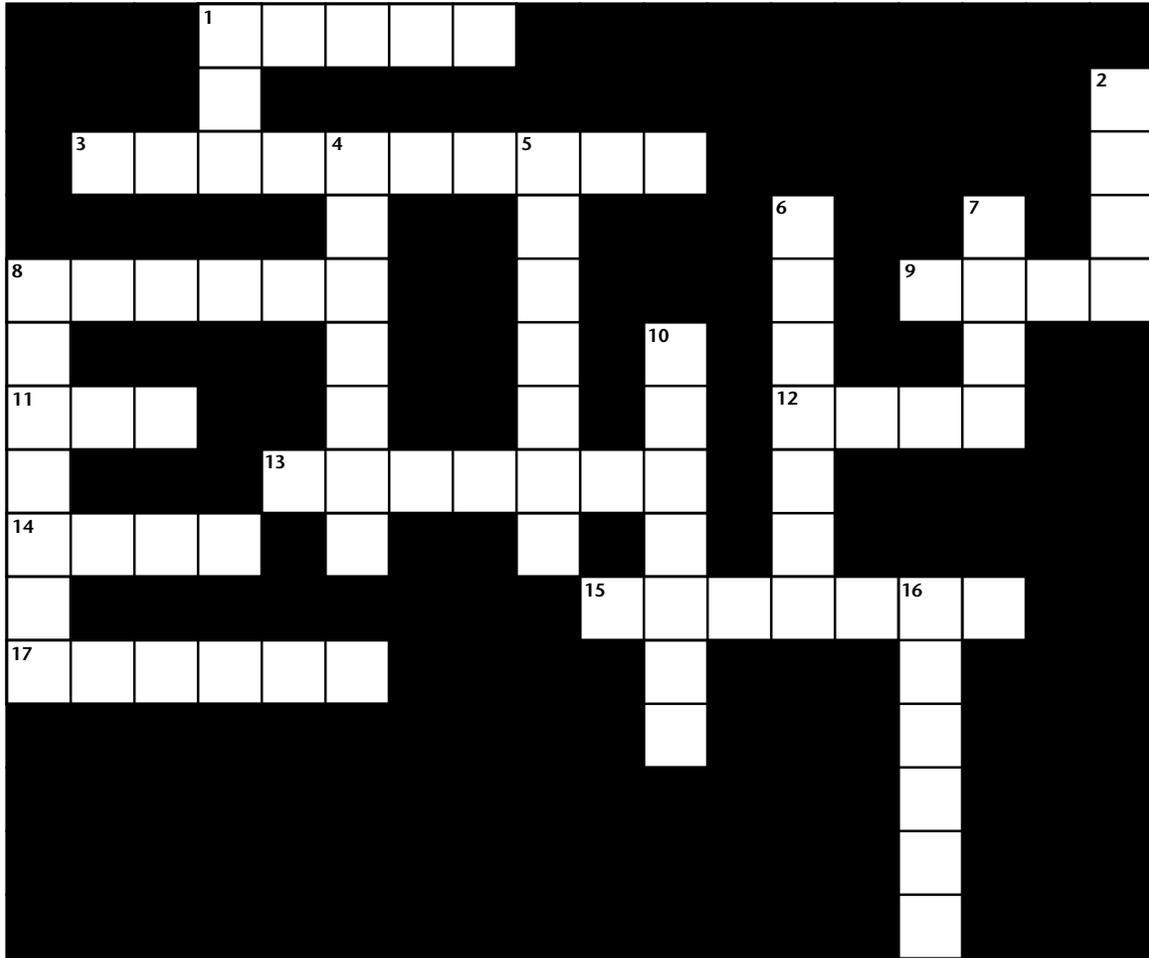
GUANACO  
GUARD HAIR  
HUM  
MALE  
PACK  
PRACTICE  
RUMINANT  
SOUTH AMERICA

SPIT  
STOMACH  
TWO  
UNDERCOAT  
VETERINARIAN  
VICUNA  
YEAR

# MINI LEVEL DIAGRAM CROSSWORD PUZZLE



# MINI LEVEL DIAGRAM CROSSWORD PUZZLE



## CLUES: MINI LEVEL DIAGRAM CROSSWORD PUZZLE

ACROSS	CLUES	DOWN	CLUES
1.	A	1.	K
3.	B	2.	L
8.	C	4.	M
9.	D	5.	N
11.	E	6.	O
12.	F	7.	P
13.	G	8.	Q
14.	H	10.	R
15.	I	16.	S
17.	J		

## WORD LIST: MINI LEVEL DIAGRAM CROSSWORD PUZZLE

ABDOMEN  
BACK  
CANNON  
EAR  
ELBOW  
EYE  
FETLOCK

HOCK  
MUZZLE  
NECK  
NOSTRIL  
PASTERN  
POLL

SCENT GLAND  
STIFLE  
STERNUM  
TAIL  
TOENAIL  
WITHERS

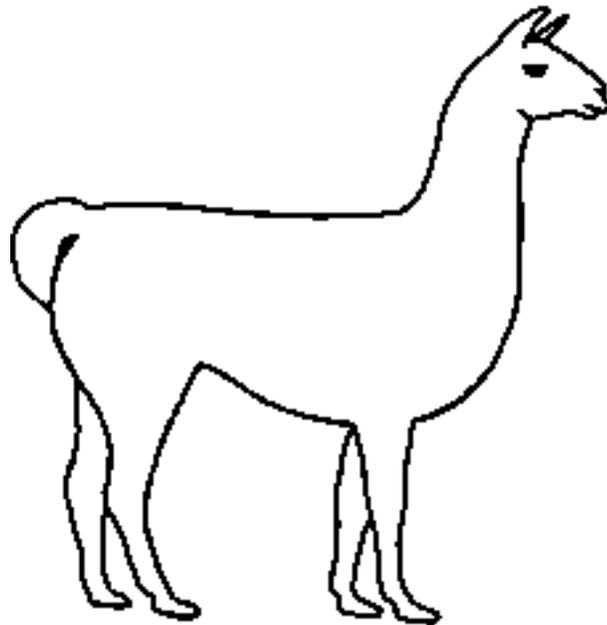
# My Llama Photo Page

(Give activities, dates, and captions. Add more sheets as needed)

This project was completed on \_\_\_\_\_  
date member signature  
club leader

# **LLAMA**

## **4-H BEGINNER PROJECT BOOK**



# LLAMA BEGINNER PROJECT

## OUTLINE FOR PROJECT LEVEL

- I. History and Background
- II. The Llama and His Behavior
- III. Types
- IV. Conformation and Correctness
- V. Temperament
- VI. Purchasing a Llama
- VII. Shelter
- VIII. Diet
- IX. General Health and Maintenance
  - A. Vaccinations
  - B. Parasites
  - C. Teeth and Feet
- X. Llama Training
  - A. Equipment
  - B. Procedure
  - C. Packing

Youth Llama Project Personal Journal

# BEGINNER LEVEL

## I. HISTORY & BACKGROUND

Name four members of the South American Camelid family.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Explain the difference between a wild and domestic animal.

Wild: \_\_\_\_\_

Domestic: \_\_\_\_\_

Name two uses for llamas.

1. \_\_\_\_\_
2. \_\_\_\_\_

Looking at the map of the Western Hemisphere on page 22, identify the continent from which llamas and alpacas originate. Label and color it green.

Locate on this map where you live. Color that continent blue.

## II. THE LLAMA & HIS BEHAVIOR

An average adult llama is \_\_\_\_\_ inches tall at the shoulders.

I am \_\_\_\_\_ feet tall from head to foot.

Where are llamas missing teeth? \_\_\_\_\_

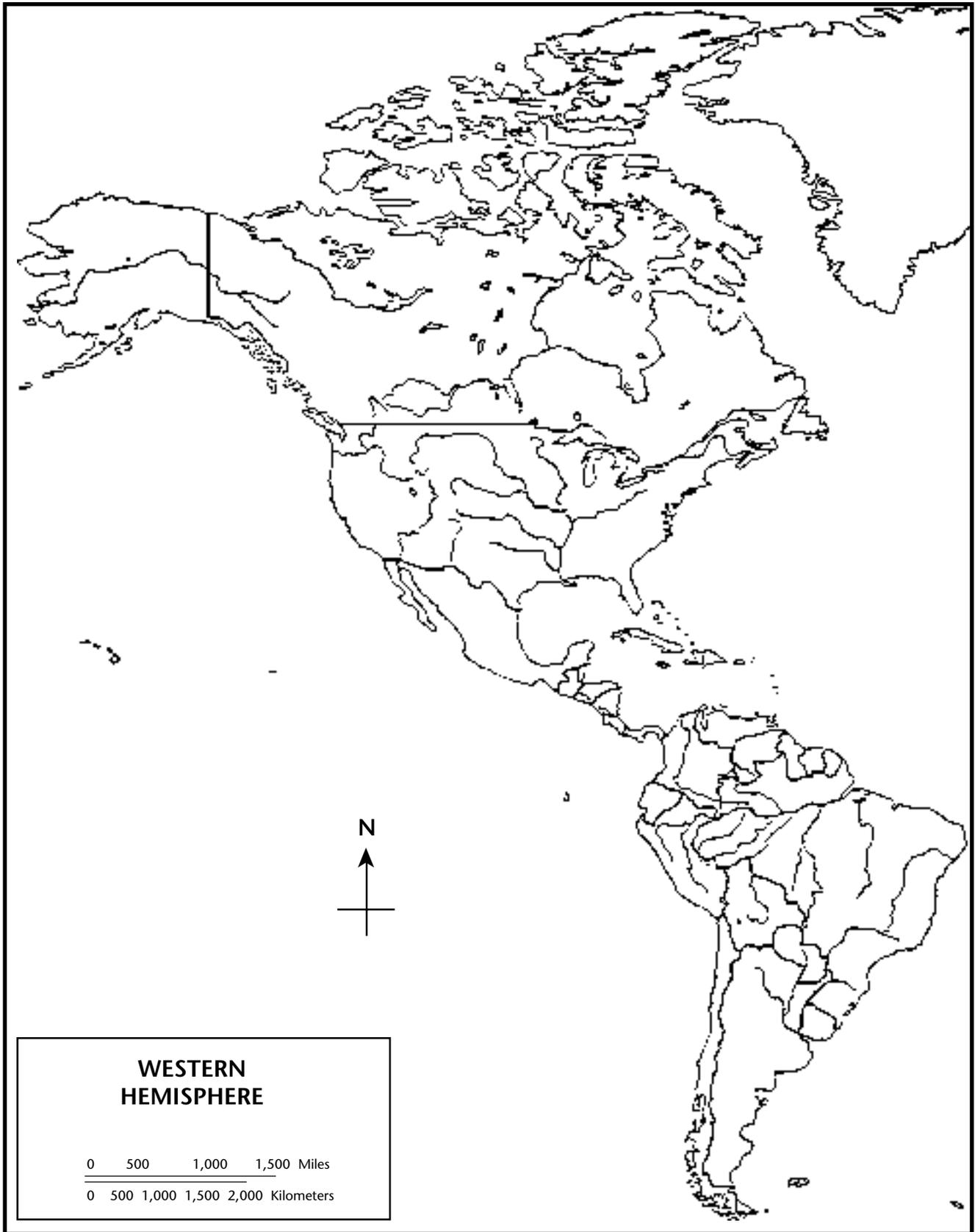
How many compartments are in a llama's or alpaca's stomach? \_\_\_\_\_

Since llamas and alpacas are herd animals, they should always have \_\_\_\_\_ with them.

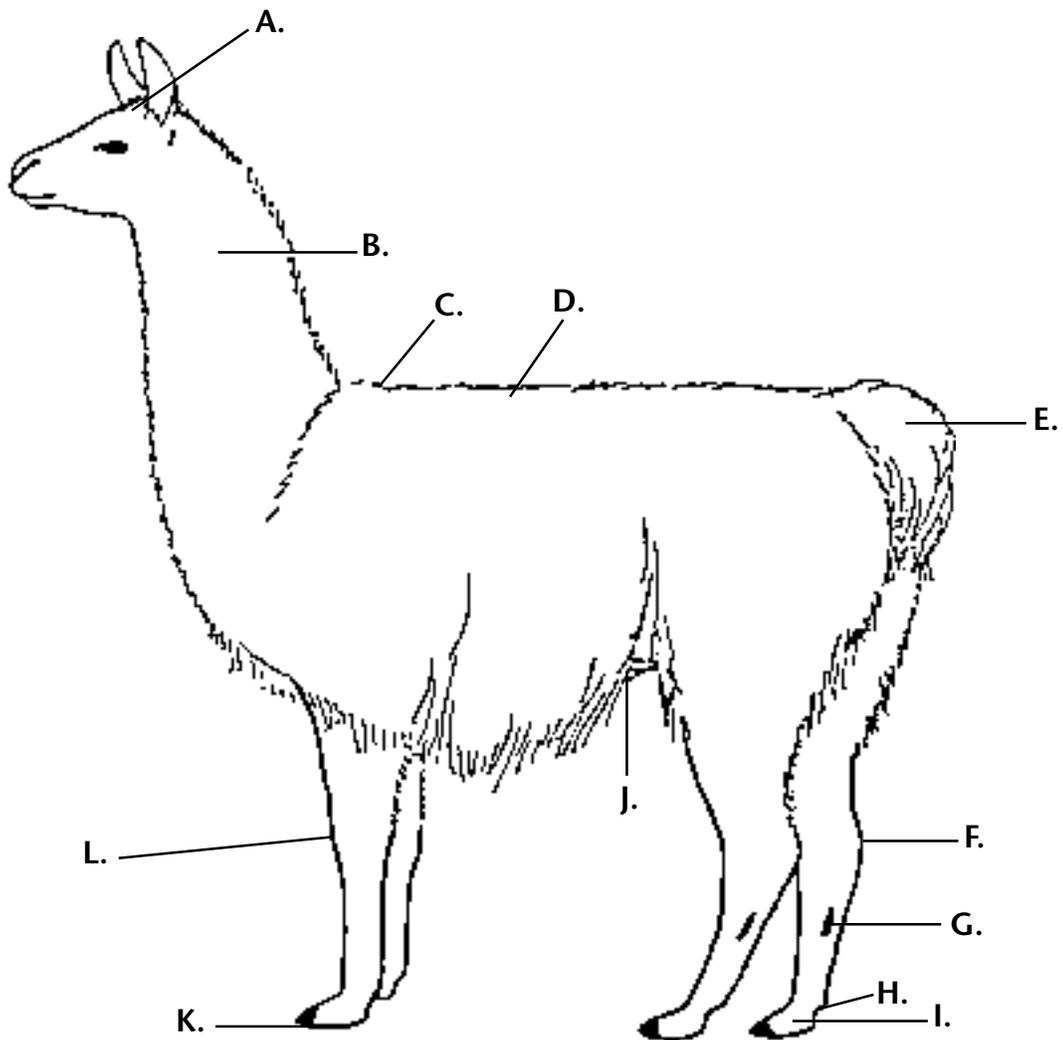
When or why does a llama spit? \_\_\_\_\_

Identify the following body parts on the llama diagram on page 23.

- |                       |                              |
|-----------------------|------------------------------|
| _____ Pastern         | _____ Withers                |
| _____ Abdomen (belly) | _____ Fetlock                |
| _____ Poll            | _____ Hock                   |
| _____ Back            | _____ Toenail                |
| _____ Tail            | _____ Neck                   |
| _____ Knee (carpus)   | _____ Chestnut (scent gland) |



# BEGINNER LEVEL DIAGRAM



**III. TYPES**

Name four colors of llama wool.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

For shows, llamas are typed or grouped according to the length of their \_\_\_\_\_

**IV. CONFORMATION & CORRECTNESS**

The way a llama is put together is called \_\_\_\_\_

**V. TEMPERAMENT**

Llamas, like all other animals and people, have their own \_\_\_\_\_

**VI. PURCHASING A LLAMA**

Llamas are good companions because they are \_\_\_\_\_  
and \_\_\_\_\_

**VII. SHELTER**

How can a llama be protected from sun, rain, and wind? \_\_\_\_\_  
\_\_\_\_\_

**VIII. DIET**

What are the three main parts of a llama's diet?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_

**IX. GENERAL HEALTH & MAINTENANCE**

Describe one type of preventive medicine a llama owner should use to help keep a llama healthy. \_\_\_\_\_  
\_\_\_\_\_

A. *VACCINATIONS*

Why do llamas and alpacas need to be vaccinated? \_\_\_\_\_  
\_\_\_\_\_

B. *PARASITES*

Worms living inside a llama are an example of \_\_\_\_\_

C. *FEET*

List two parts of a llama's toe.

1. \_\_\_\_\_
2. \_\_\_\_\_

D. *HEAT STRESS & COLD WEATHER*

What is the normal temperature of an adult llama? \_\_\_\_\_

What types of weather cause the most stress on a llama? \_\_\_\_\_

Is it healthy for a trainer to drastically change the type of food fed to a llama? \_\_\_\_\_  
\_\_\_\_\_

**X. LLAMA TRAINING**

List two ways to decrease stress on a llama while showing the animal.

1. \_\_\_\_\_
2. \_\_\_\_\_

If a trainer talks softly to a llama, what will probably happen? \_\_\_\_\_  
\_\_\_\_\_

A. *EQUIPMENT*

Is it acceptable for the trainer to wrap a llama's lead rope around his/her hand? \_\_\_\_\_

Where should the noseband of a halter lay on a llama's or alpaca's face? \_\_\_\_\_  
\_\_\_\_\_

How far away from the halter should a trainer grip the lead rope? \_\_\_\_\_

**B. PROCEDURE**

Should a trainer move **fast** or **slow** around a llama and/or alpaca to help the animal gain trust in the trainer? \_\_\_\_\_

List three ways to gain a llama's trust.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What are the two most important things a trainer can do while working with a llama, when teaching him to accept a brush or halter?

1. \_\_\_\_\_
2. \_\_\_\_\_

If a llama does not want to walk with its trainer, how might it be encouraged by that trainer? \_\_\_\_\_

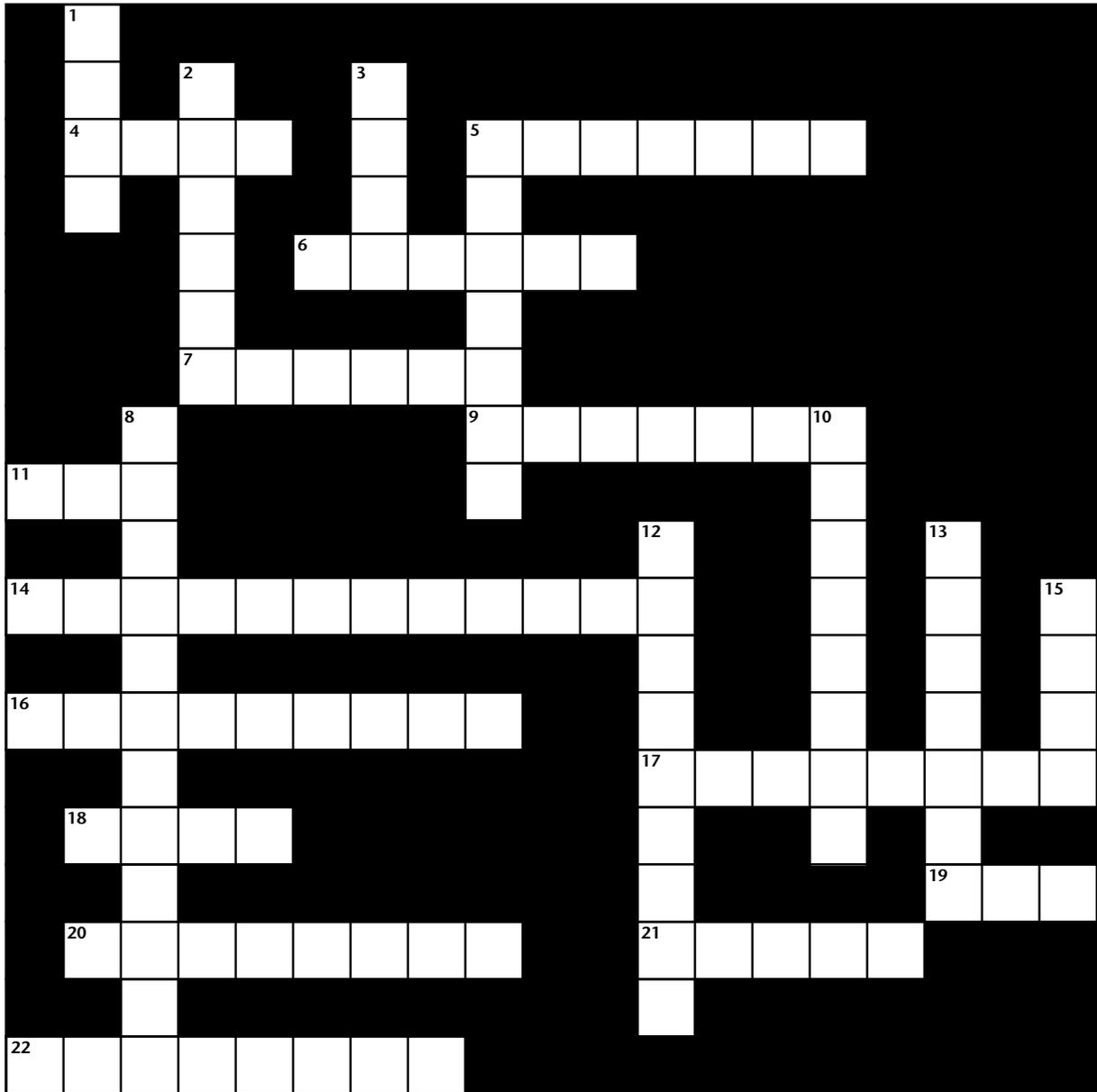
What does desensitize mean? \_\_\_\_\_

What is the word that means lying down on command? \_\_\_\_\_

**C. PACKING**

What can be done for a llama by its trainer to show approval and to help the llama enjoy packing? \_\_\_\_\_

# BEGINNER LEVEL CROSSWORD PUZZLE



## CLUES: BEGINNER LEVEL CROSSWORD PUZZLE

### ACROSS CLUES

4. A baby llama.
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9. Llamas are members of this family.
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14. A person you should know and who you can call if a llama is sick.
16. Stiffer, more coarse wool.
17. Animals that chew cud.
18. Approximately how long is a llama's gestation?
19. A sound a llama makes.
20. These kind of teeth should be trimmed or removed from a male llama.
21. The mountain range from which llamas originated in South America.
22. Lots of this will help a llama feel comfortable in a show ring. " \_\_\_\_\_ makes perfect!"

### DOWN CLUES

1. The word that describes what a llama does when it carries a load.
2. Smaller South American wild camelid.
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8. Continent from which llamas originated.
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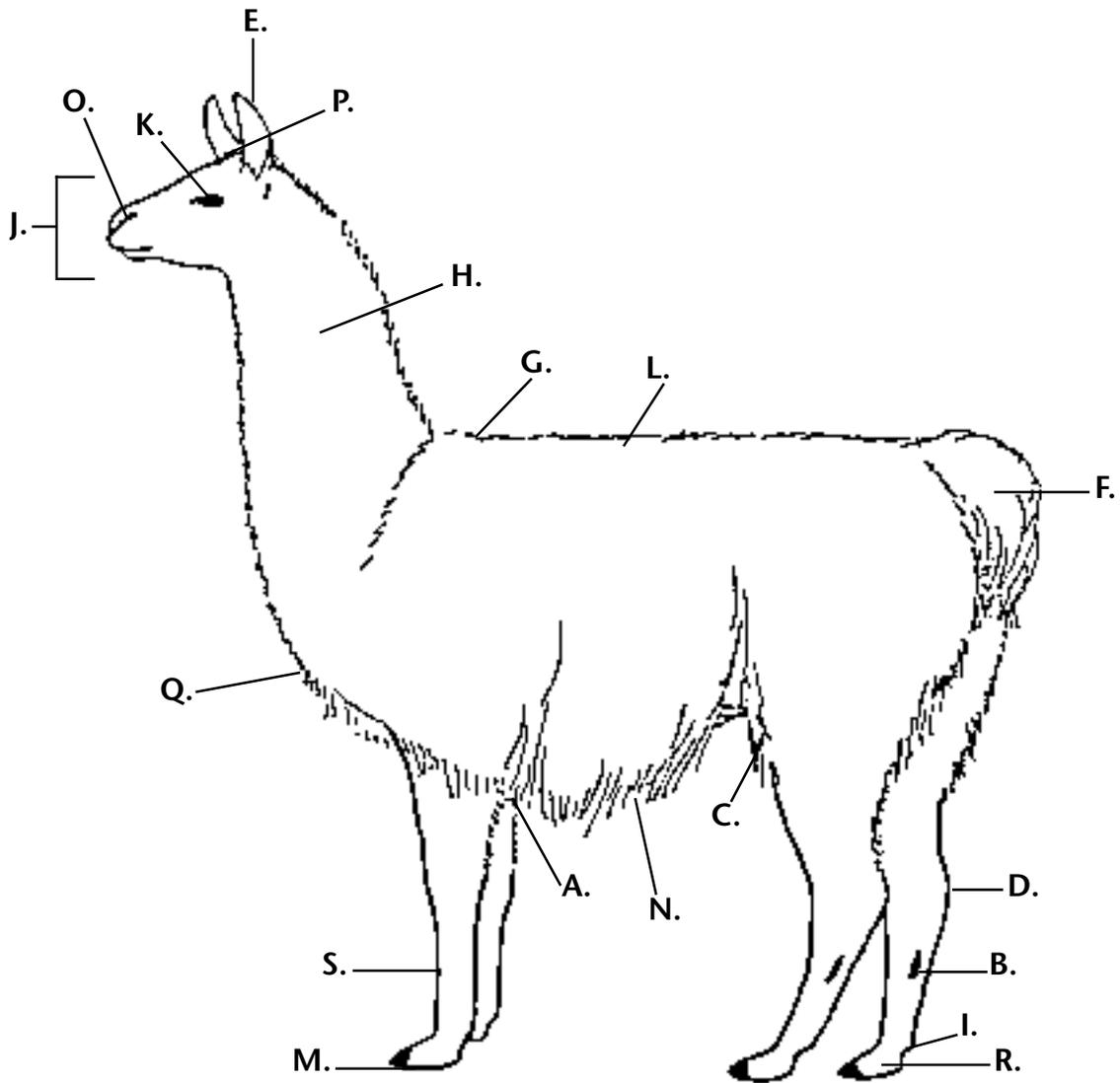
## WORD LIST: BEGINNER LEVEL CROSSWORD PUZZLE

ALPACA  
ANDES  
CAMELID  
CRIA  
DOMESTIC  
FEMALE  
FIGHTING  
GELDING

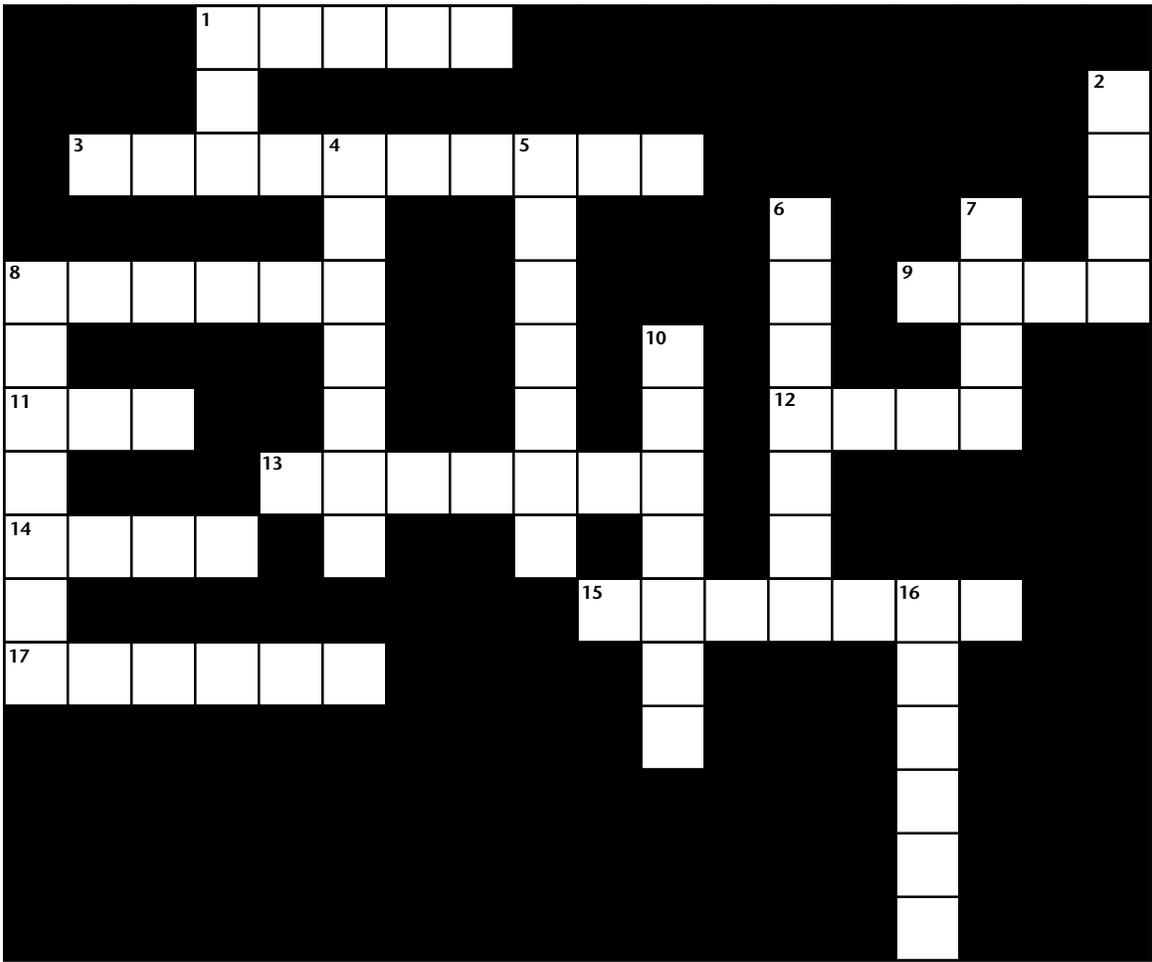
GUARD HAIR  
GUANACO  
HUM  
MALE  
PACK  
PRACTICE  
RUMINANT  
SOUTH AMERICA

SPIT  
STOMACH  
TWO  
UNDERCOAT  
VETERINARIAN  
VICUNA  
YEAR

# BEGINNER LEVEL DIAGRAM CROSSWORD PUZZLE



# BEGINNER LEVEL DIAGRAM CROSSWORD PUZZLE



## CLUES: BEGINNING LEVEL DIAGRAM CROSSWORD PUZZLE

ACROSS	CLUES	DOWN	CLUES
1.	A	1.	K
3.	B	2.	L
8.	C	4.	M
9.	D	5.	N
11.	E	6.	O
12.	F	7.	P
13.	G	8.	Q
14.	H	10.	R
15.	I	16.	S
17.	J		

## WORD LIST: BEGINNING LEVEL DIAGRAM CROSSWORD PUZZLE

ABDOMEN  
 BACK  
 CANNON  
 EAR  
 ELBOW  
 EYE  
 FETLOCK

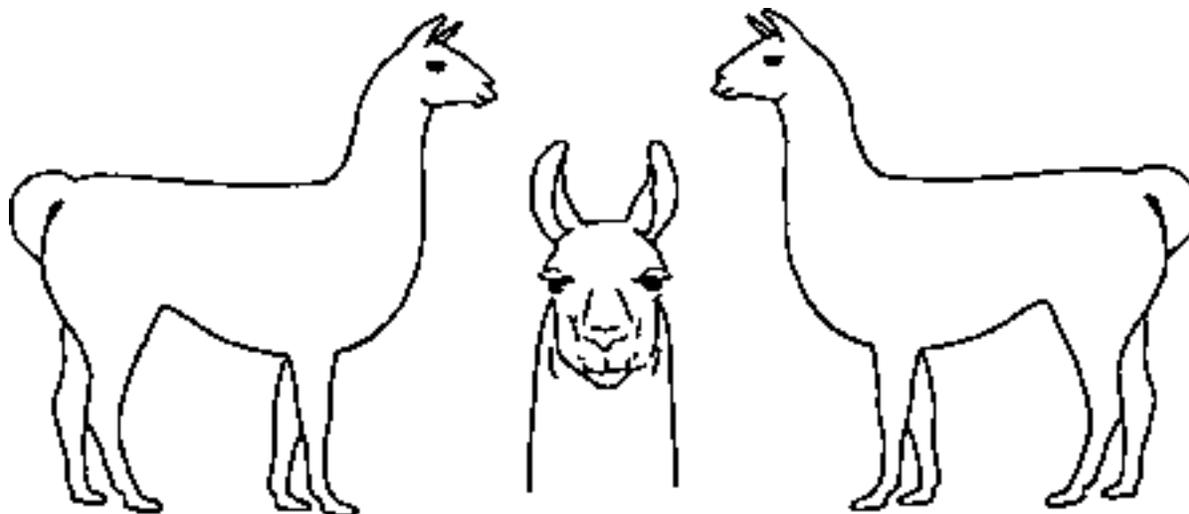
HOCK  
 MUZZLE  
 NECK  
 NOSTRIL  
 PASTERN  
 POLL

SCENT GLAND  
 STIFLE  
 STERNUM  
 TAIL  
 TOENAIL  
 WITHERS



# LLAMA

## 4-H INTERMEDIATE PROJECT BOOK



# LLAMA INTERMEDIATE PROJECT

## OUTLINE FOR PROJECT LEVEL

- I. History and Background
- II. The Llama and His Behavior
- III. Types
- IV. Conformation and Correctness
- V. Temperament
- VI. Purchasing a Llama
- VII. Shelter
- VIII. Diet
- IX. General Health and Maintenance
  - A. Vaccinations
  - B. Parasites
  - C. Teeth and Feet
- X. Llama Training
  - A. Equipment
  - B. Procedure
  - C. Packing

Youth Llama Project Personal Journal

## INTERMEDIATE LEVEL

### I. HISTORY & BACKGROUND

Name four members of the South American Camelid family.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

State four reasons why llamas have become popular in the United States.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

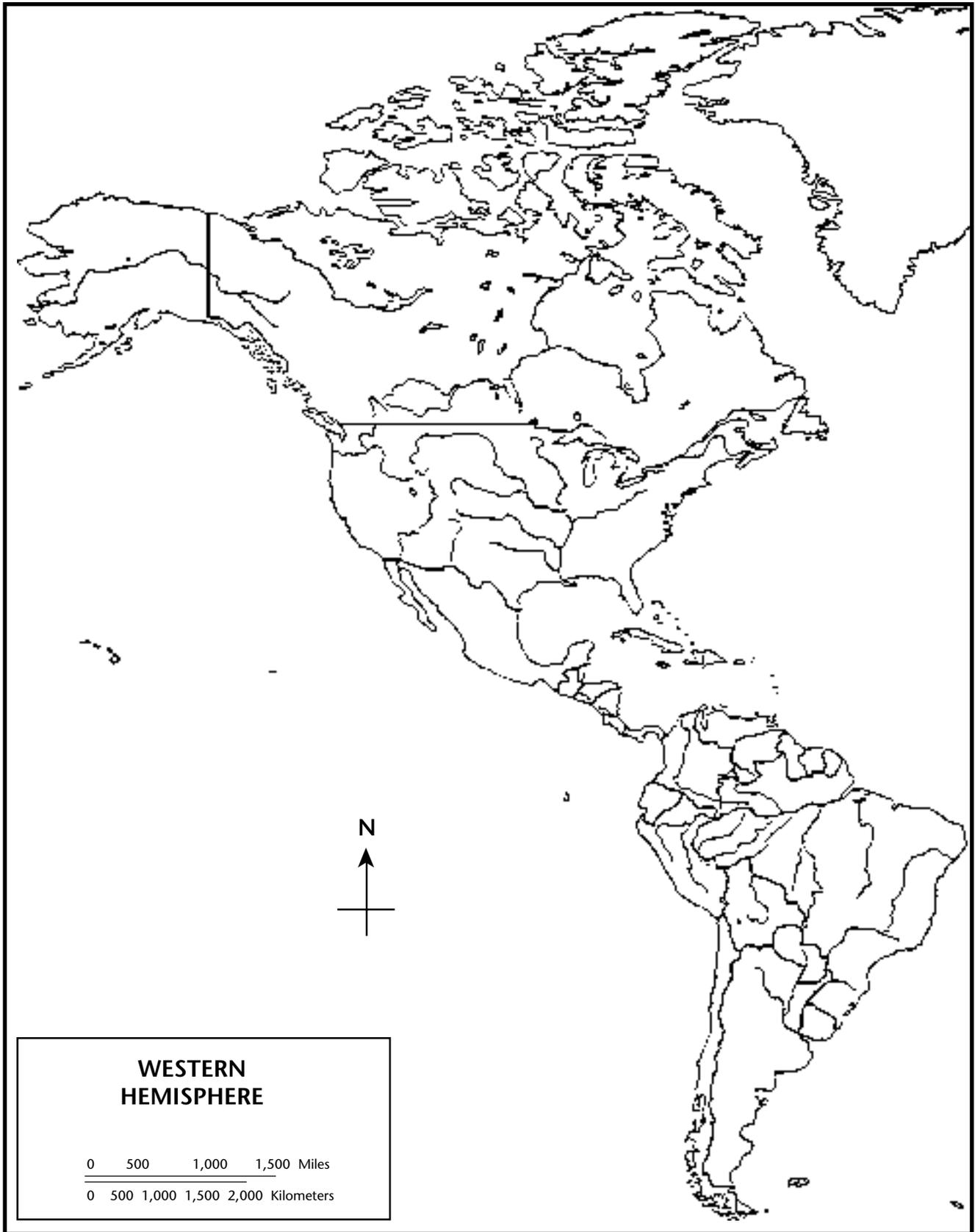
Baby llamas are called \_\_\_\_\_

Which of the South American camelids are domestic? \_\_\_\_\_

Which of the South American camelids are wild? \_\_\_\_\_

What group of people are given credit for domesticating the llama and alpaca? \_\_\_\_\_

Looking at the map of the Western Hemisphere on page 36, identify the countries in South America where llamas and alpacas originated. Locate where you live, too. Color the map.



## II. THE LLAMA & HIS BEHAVIOR

An adult llama weighs between \_\_\_\_\_ and \_\_\_\_\_ pounds.

My pet \_\_\_\_\_ weighs \_\_\_\_\_ pounds.

Why are llamas and alpacas called cloven footed? \_\_\_\_\_

\_\_\_\_\_

Why is it impossible to find a "buck-toothed" llama? \_\_\_\_\_

\_\_\_\_\_

Name four animals that are ruminants.

1. \_\_\_\_\_ 3. \_\_\_\_\_

2. \_\_\_\_\_ 4. \_\_\_\_\_

The best companion for a llama or alpaca is \_\_\_\_\_

Can llama spit really hurt someone? \_\_\_\_\_

## III. TYPES

What two basic types of fiber comprise a llama's coat?

1. \_\_\_\_\_

2. \_\_\_\_\_

Match the llama type that is probably best suited for each kind of activity listed below.

Short-woolled \_\_\_\_\_ Spinning & weaving

Long-woolled \_\_\_\_\_ Packing

\_\_\_\_\_ Companion

What are the two basic types of llamas?

1. \_\_\_\_\_ 2. \_\_\_\_\_

Identify the following body parts on the llama diagram on page 38.

\_\_\_\_\_ Elbow

\_\_\_\_\_ Pad

\_\_\_\_\_ Fetlock

\_\_\_\_\_ Poll

\_\_\_\_\_ Pastern

\_\_\_\_\_ Toenail

\_\_\_\_\_ Cheek

\_\_\_\_\_ Fetlock

\_\_\_\_\_ Chestnut (scent gland)

\_\_\_\_\_ Ear

\_\_\_\_\_ Hock

\_\_\_\_\_ Knees (carpus)

\_\_\_\_\_ Stifle

\_\_\_\_\_ Croup

\_\_\_\_\_ Withers

\_\_\_\_\_ Back

\_\_\_\_\_ Abdomen (belly)

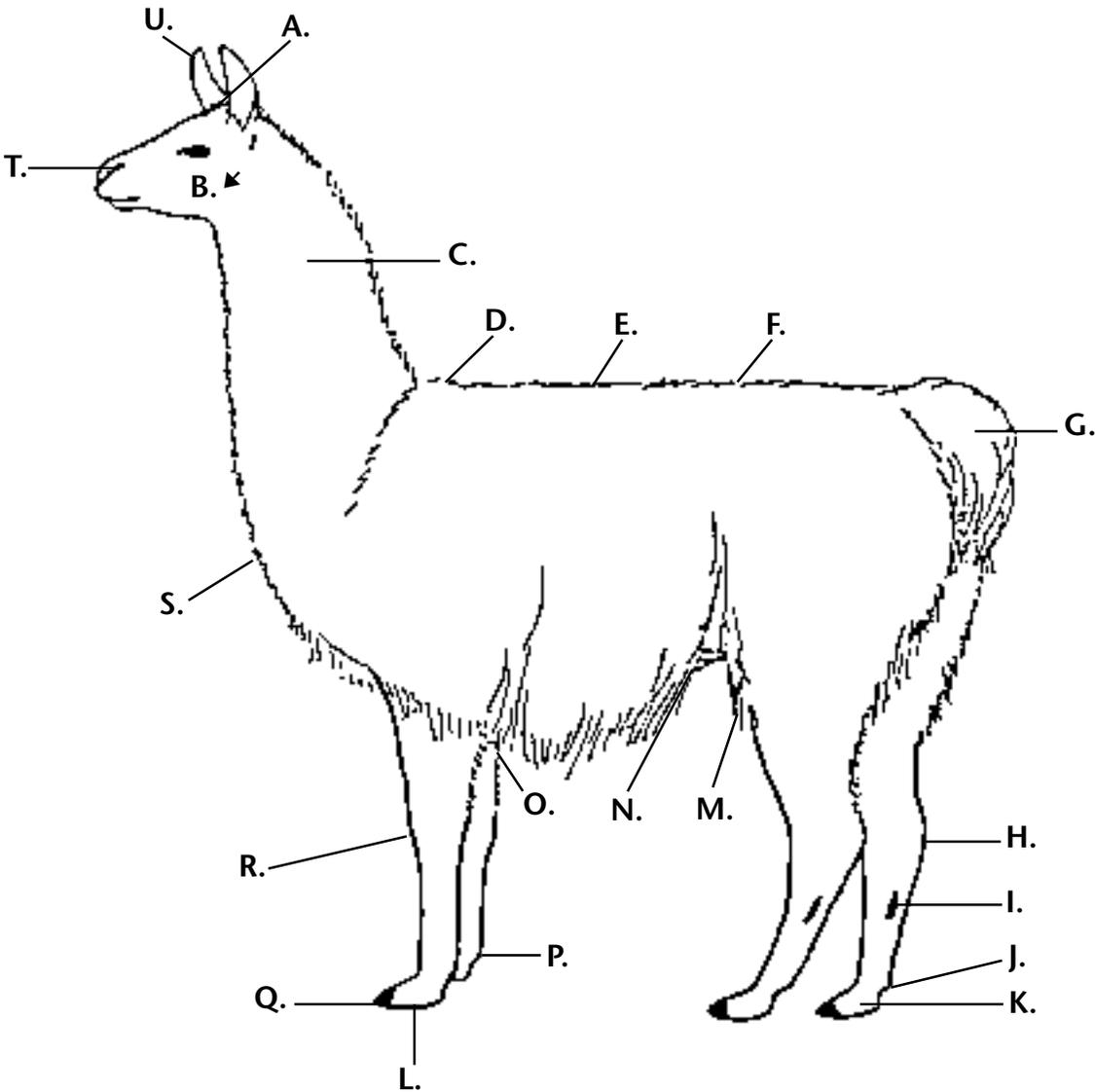
\_\_\_\_\_ Sternum (breastbone)

\_\_\_\_\_ Tail

\_\_\_\_\_ Nostril

\_\_\_\_\_ Neck

# INTERMEDIATE LEVEL DIAGRAM



**IV. CONFORMATION & CORRECTNESS**

If a llama is correct, it has good \_\_\_\_\_

**V. TEMPERAMENT**

Explain why caution should be taken if a llama is too friendly when young. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**VI. PURCHASING A LLAMA**

List three things to consider when choosing a llama for a 4-H project.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**VII. SHELTER**

Does a llama need shelter? \_\_\_\_\_ Why? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**VIII. DIET**

During which season of the year might it be most important to provide supplemental feeding for a llama? \_\_\_\_\_

## IX. GENERAL HEALTH & MAINTENANCE

List two types of preventative medicine a llama owner should use to help keep a llama healthy.

1. \_\_\_\_\_
2. \_\_\_\_\_

### A. VACCINATIONS

What are two things llamas and alpacas should be vaccinated for?

1. \_\_\_\_\_
2. \_\_\_\_\_

### B. PARASITES

List three ways internal parasites can affect a llama.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

List two types of external parasites.

1. \_\_\_\_\_
2. \_\_\_\_\_

### C. TEETH & FEET

When is a llama more likely to need its toenails trimmed? \_\_\_\_\_

\_\_\_\_\_

What are the purpose of fighting fangs and who gets them? \_\_\_\_\_

\_\_\_\_\_

### D. HEAT STRESS & COLD WEATHER

What is the normal temperature of an adult llama versus the temperature of a cria?

\_\_\_\_\_

List three signs of heat stress.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What will a sudden change in diet cause to happen with a llama? Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**X. TRAINING**

List four ways to decrease stress on a llama while showing the animal.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

List two ways to help a llama or alpaca relax when training.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

**A. EQUIPMENT**

Why is it not acceptable for the trainer to wrap a llama's lead rope around his/her hand? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

How does more experience help a good llama trainer become a better llama trainer?

\_\_\_\_\_  
\_\_\_\_\_

Name two styles of halters and the differences in each.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

Explain why you should not hold onto the snap when your llama is on lead. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**B. PROCEDURE**

Sessions of approximately \_\_\_\_\_ minutes are appropriate when starting to train a llama.

List six places that are important to desensitize when training a llama.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_

Why is brushing considered to be such a good way to desensitize your llama? \_\_\_\_\_

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List two important things a trainer can do while working with a llama, when teaching the llama to accept a halter.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

Why would it be dangerous to have a llama's halter resting below the nose bone?

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Why must a llama trainer continually check a llama's halter fit? \_\_\_\_\_

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What is a slipknot and why should it be used? \_\_\_\_\_

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How long might it take to desensitize a llama? \_\_\_\_\_

List three times it might be helpful for a llama to kush for its trainer?

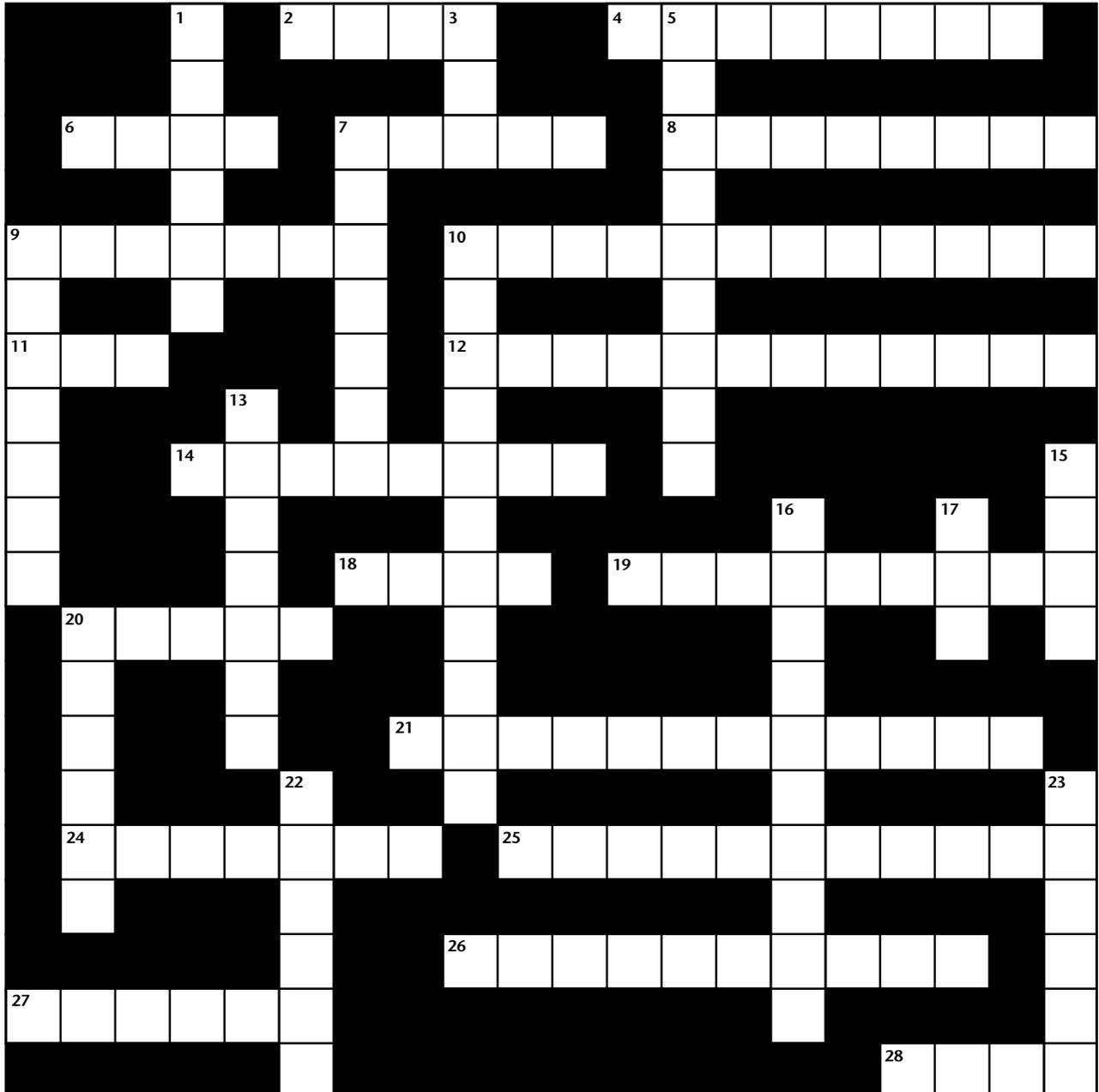
- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_

**C. PACKING**

How old should a llama be before a trainer should expect him to pack 30 pounds?

---

# INTERMEDIATE LEVEL CROSSWORD PUZZLE



## CLUES: INTERMEDIATE LEVEL CROSSWORD PUZZLE

### ACROSS CLUES

2. The way a llama says, "Bug-Off!"
4. Animals that chew cud.
6. The word that describes what a llama does when it carries a load.
7. A word that describes animals that do not show signs if they are not feeling well.
8. Any animal that has been developed to help man.
9. The camelid from which llamas originated.
10. A person you should know and who you can call if a llama is sick.
11. The \_\_\_\_\_ of a llama tears off the grass with the lower teeth and is called prehensile.
12. Looking at a llama: the way a llama is put together.
14. Kind of teeth that should be removed from a male llama.
18. Approximately how long is a llama's gestation?
19. Stiffer, more coarse part of llama wool.
20. Mountain region where llamas originate.
21. Continent from which llamas originate.
24. Llamas are members of this family.
25. Word that describes helping a llama to be comfortable with being touched on legs, head, etc.
26. Dry spot on lower leg that is non-functioning.
27. On the back legs, a joint area that gets dirty easily and is often worn.
28. A boy llama.

### DOWN CLUES

1. Smaller South American camelid.
3. Number of toes on each foot.
5. Part of wool that is fine and primarily used for spinning.
7. A llama has three compartments in this.
9. Name of a male llama that has been neutered.
10. Shots given to animals to prevent sickness.
13. Base of neck near the back.
15. Name the country in South America where llamas have been domesticated.
16. Kind of upper lip that a llama has.
17. The bottom of a llama's foot.
20. Animal from the camelid family that is short and used primarily for wool.
22. The kind of foot that has two toes.
23. A girl llama.

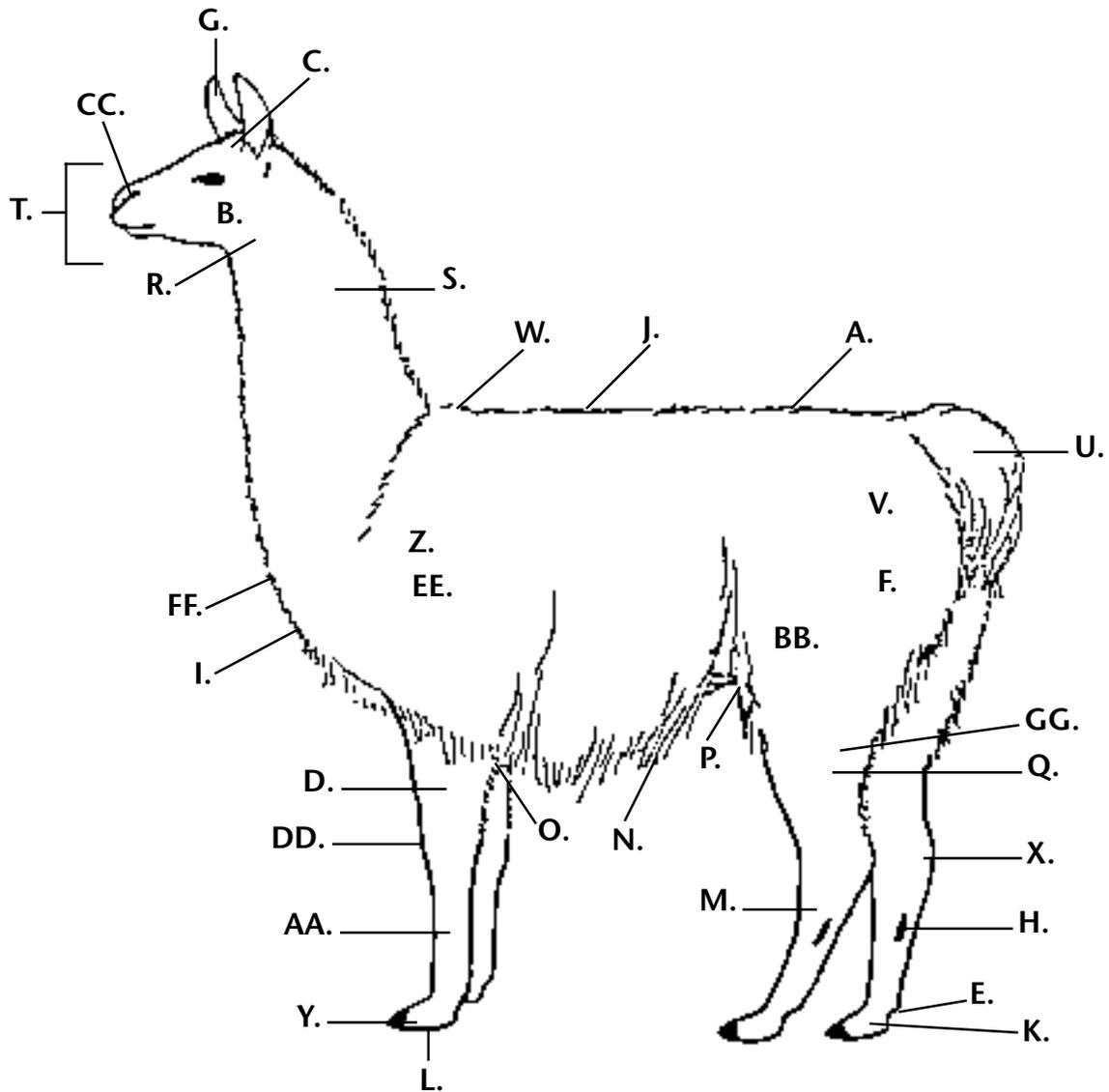
## WORD LIST: INTERMEDIATE LEVEL CROSSWORD PUZZLE

ALPACA  
ANDES  
CAMELID  
CLOVEN  
CONFORMATION  
DESENSITIZE  
DOMESTIC  
FEMALE  
FIGHTING  
GELDING  
GUANACO

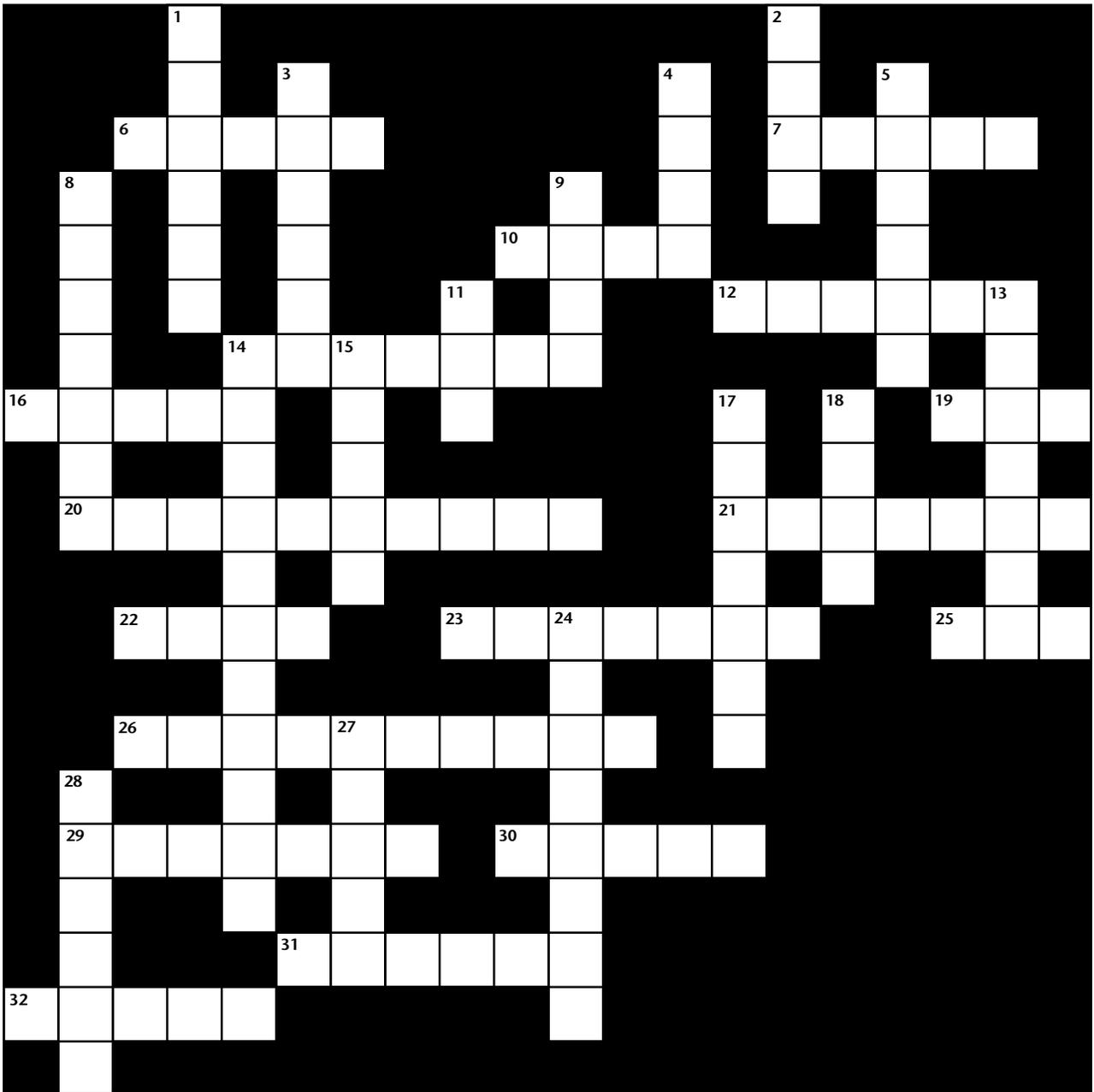
GUARD HAIR  
LIP  
MALE  
PACK  
PAD  
PERU  
PREHENSILE  
RUMINANT  
SCENT GLAND  
SOUTH AMERICA  
SPIT

STOIC  
STIFLE  
STOMACH  
TWO  
UNDERCOAT  
VACCINATION  
VETERINARIAN  
VICUNA  
WITHERS  
YEAR

# INTERMEDIATE LEVEL BODY PARTS DIAGRAM CROSSWORD PUZZLE



# INTERMEDIATE LEVEL BODY PARTS DIAGRAM CROSSWORD PUZZLE



## CLUES: BODY PARTS DIAGRAM CROSSWORD PUZZLE

ACROSS	CLUES	DOWN	CLUES
6.	A	1.	R
7.	B	2.	S
10.	C	3.	T
12.	D	4.	U
14.	E	5.	V
16.	F	8.	W
19.	G	9.	X
20.	H	11.	Y
21.	I	13.	Z
22.	J	14.	AA
23.	K	15.	BB
25.	L	17.	CC
26.	M	18.	DD
29.	N	24.	EE
30.	O	27.	FF
31.	P	28.	GG
32.	Q		

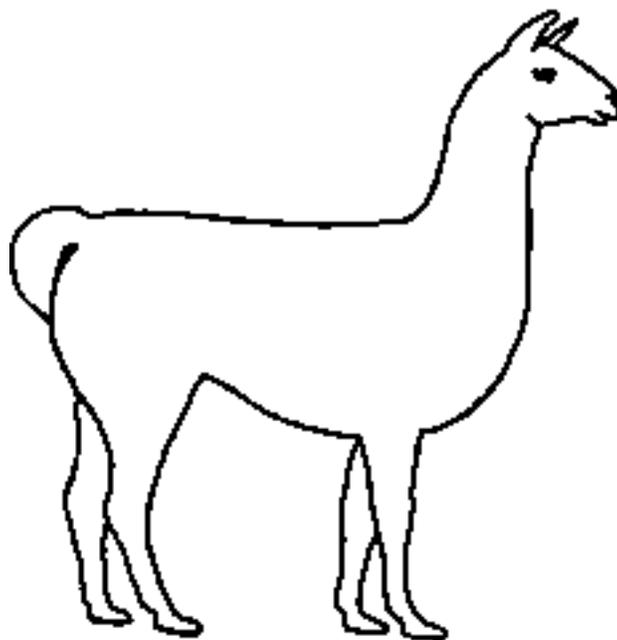
## WORD LIST: BODY PARTS DIAGRAM CROSSWORD PUZZLE

<p>                     ABDOMEN                      BACK                      CHEEK                      CHEST                      CROUP                      EAR                      ELBOW                      FETLOCK                      FEMUR                      FRONT CANNON                      GASKIN                 </p>	<p>                     HIND CANNON                      HOCK                      KNEE                      MUZZLE                      NECK                      NOSTRIL                      PASTERN                      PAD                      PELVIS                      POLL                      RADIUS                 </p>	<p>                     SCENT GLAND                      SCAPULA                      SHOULDER                      STERNUM                      STIFLE                      TAIL                      THROAT                      THIGH                      TIBIA                      TOE                      WITHERS                 </p>
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# **LLAMA**

## **4-H ADVANCED PROJECT BOOK**



# LLAMA ADVANCED PROJECT

## OUTLINE FOR PROJECT LEVEL

- I. History and Background
- II. The Llama and His Behavior
- III. Types
- IV. Conformation and Correctness
- V. Temperament
- VI. Purchasing a Llama
- VII. Shelter
- VIII. Diet
- IX. General Health and Maintenance
  - A. Vaccinations
  - B. Parasites
  - C. Teeth and Feet
- X. Llama Training
  - A. Equipment
  - B. Procedure
  - C. Packing

Youth Llama Project Personal Journal

## ADVANCED LEVEL

### I. HISTORY & BACKGROUND

List four members of the South American camelid family and explain in detail the differences in each.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

4. \_\_\_\_\_

\_\_\_\_\_

List three countries in South America that llamas come from.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

What is the genus for the South American camelids? \_\_\_\_\_

Why are llamas and alpacas classified in the camelid family? \_\_\_\_\_

\_\_\_\_\_

Describe the South American climate in which llamas and alpacas live. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

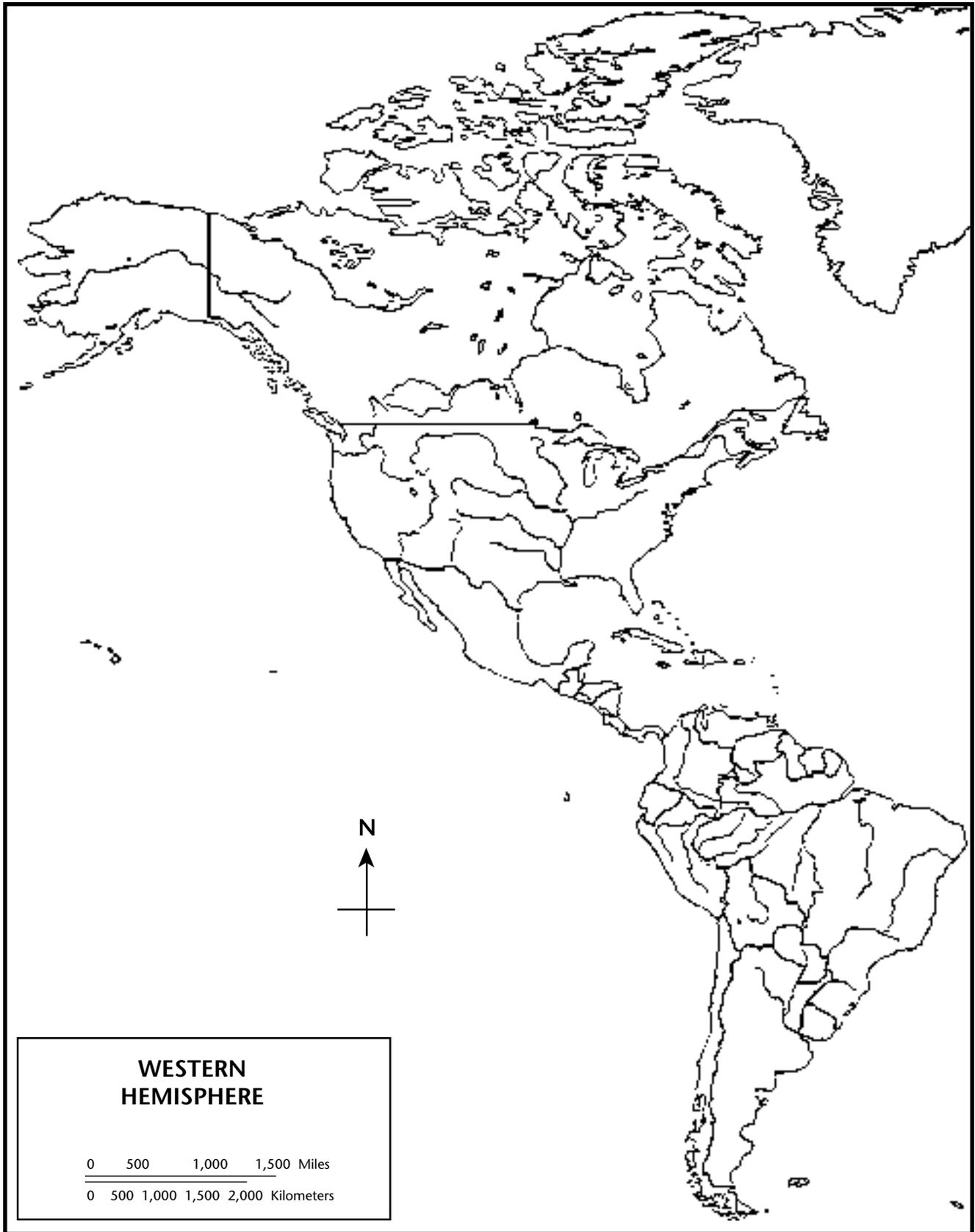
Look at the map of the Western Hemisphere on page 52 and identify the following information about where llamas and alpacas originate.

A. The continent

B. The countries

C. The mountain ranges in those countries

Locate where you live. Color the entire map.



## II. THE LLAMA & HIS BEHAVIOR

An average horse weighs 1500 pounds. How many average size llamas would it take to equal a horse's weight? \_\_\_\_\_

What is the size comparison of llamas and alpacas? \_\_\_\_\_

\_\_\_\_\_

List three other cloven-footed animals.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Why are llamas less destructive to terrain than horses? \_\_\_\_\_

\_\_\_\_\_

Why is a llama's upper lip called prehensile? \_\_\_\_\_

\_\_\_\_\_

What is the term for an animal with many compartments in its stomach? \_\_\_\_\_

List four different ruminants including one which occurs in the wild throughout the United States.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

A llama may live as long as \_\_\_\_\_ years.

A llama may have a cria for \_\_\_\_\_

Define the function of the following parts of a llama:

Lungs: \_\_\_\_\_

\_\_\_\_\_

Heart: \_\_\_\_\_

\_\_\_\_\_

Liver: \_\_\_\_\_

\_\_\_\_\_

Kidneys: \_\_\_\_\_

\_\_\_\_\_

Cud/Stomach: \_\_\_\_\_

\_\_\_\_\_

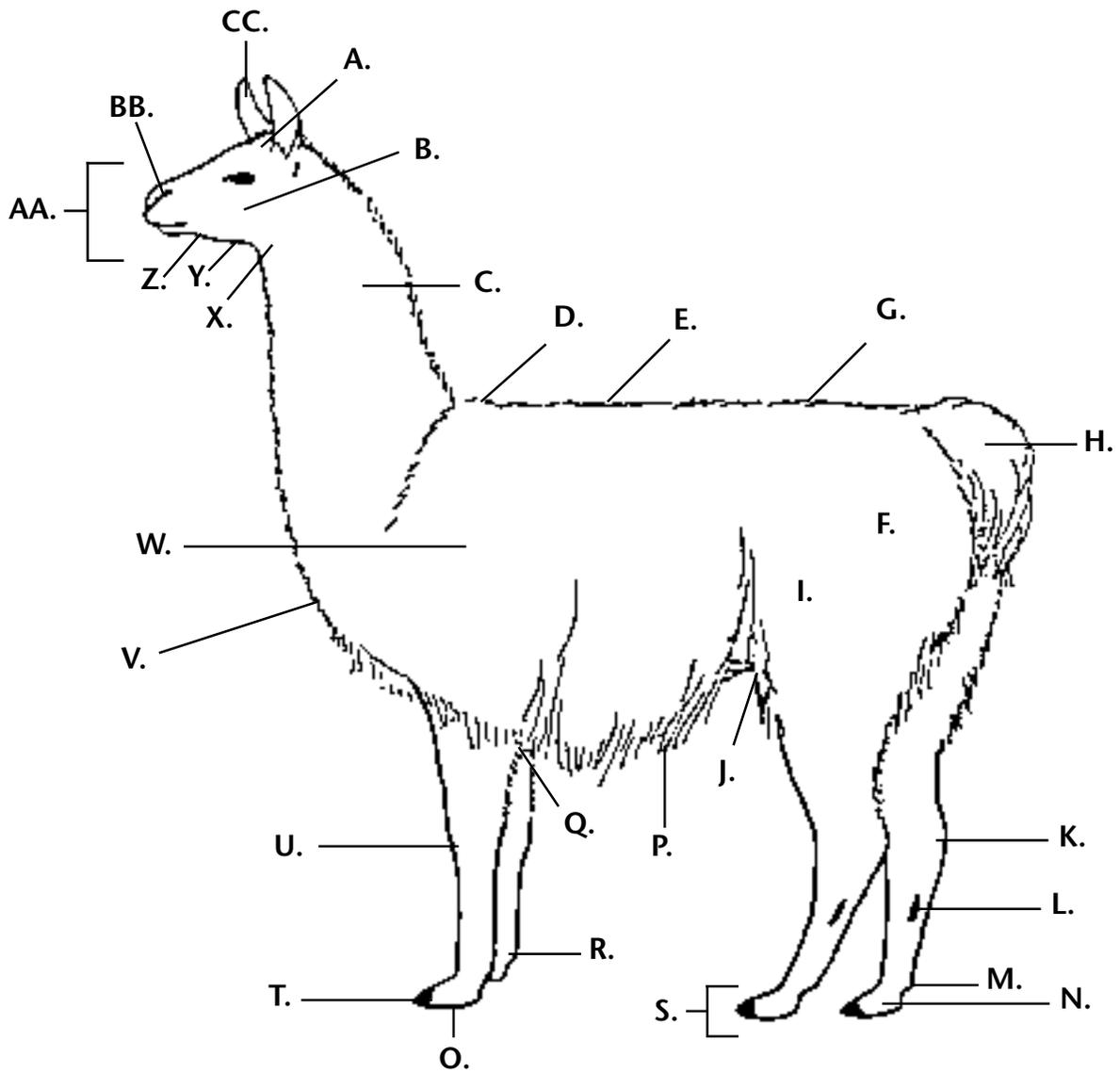
**Identify the following body parts on the external llama diagram.**

- |       |                        |       |                 |
|-------|------------------------|-------|-----------------|
| _____ | Pastern                | _____ | Abdomen (Belly) |
| _____ | Poll                   | _____ | Back            |
| _____ | Tail                   | _____ | Knee (Carpus)   |
| _____ | Withers                | _____ | Cheek           |
| _____ | Fetlock                | _____ | Elbow           |
| _____ | Neck                   | _____ | Toenail         |
| _____ | Chestnut (Scent gland) | _____ | Ear             |
| _____ | Croup                  | _____ | Fetlock         |
| _____ | Nostril                | _____ | Pad             |
| _____ | Hock                   | _____ | Stifle          |
| _____ | Chin                   | _____ | Jaw             |
| _____ | Throat                 | _____ | Hip             |
| _____ | Chest                  | _____ | Shoulder        |
| _____ | Thigh                  | _____ | Foot            |
| _____ | Muzzle                 |       |                 |

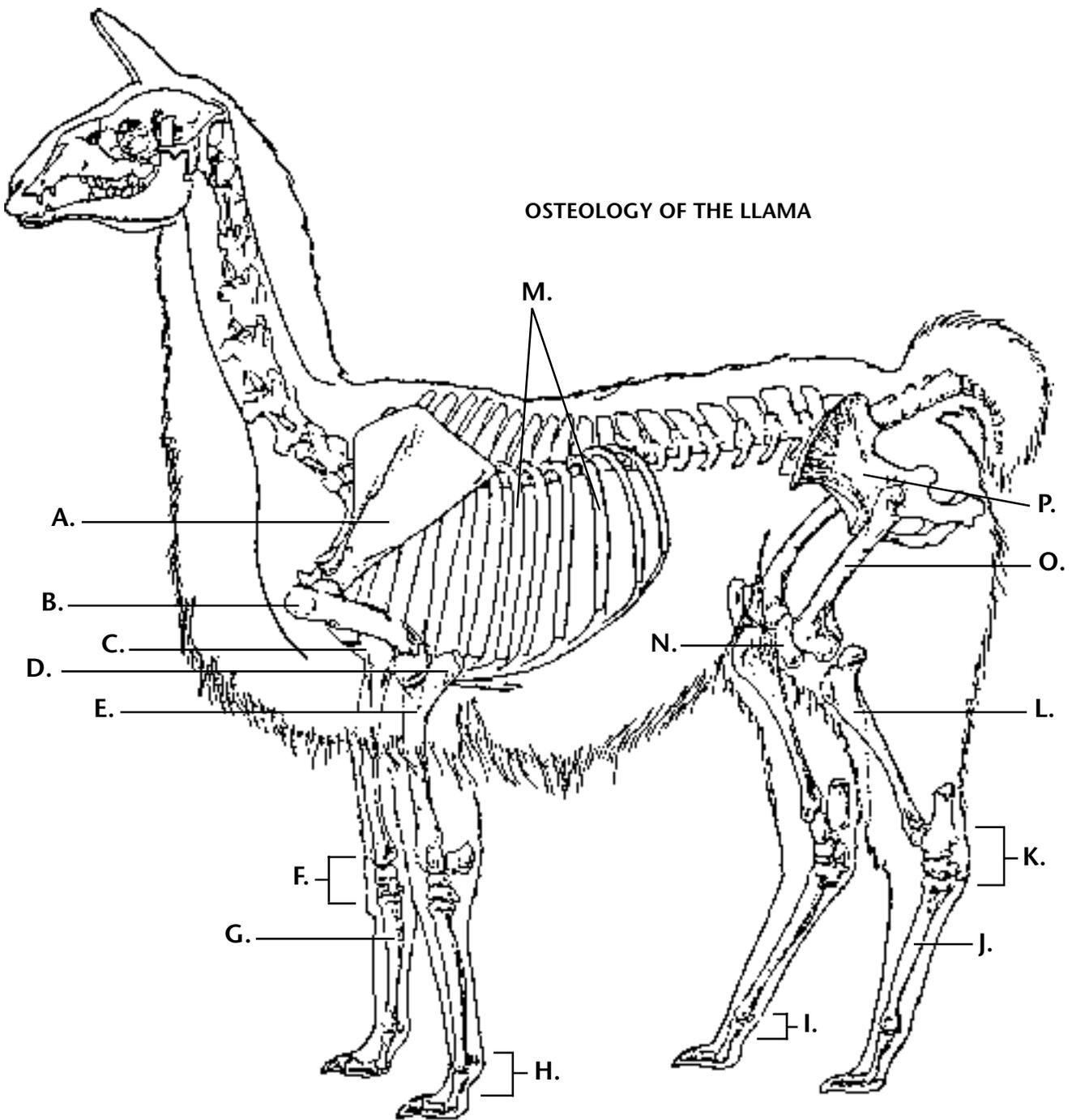
**Identify the following bones on the internal llama diagram.**

- |       |         |       |         |       |              |
|-------|---------|-------|---------|-------|--------------|
| _____ | Fetlock | _____ | Scapula | _____ | Femur        |
| _____ | Ribs    | _____ | Hock    | _____ | Hind Cannon  |
| _____ | Humerus | _____ | Tibia   | _____ | Knee         |
| _____ | Pelvis  | _____ | Stifle  | _____ | Front Cannon |
| _____ | Radius  | _____ | Sternum | _____ | Elbow        |
| _____ | Fetlock |       |         |       |              |

# EXTERNAL LLAMA DIAGRAM



# INTERNAL LLAMA DIAGRAM



List two other types of animals that naturally live in herds.

1. \_\_\_\_\_
2. \_\_\_\_\_

List two reasons why a llama might spit.

1. \_\_\_\_\_
2. \_\_\_\_\_

Explain the process that enables a llama to spit. \_\_\_\_\_

\_\_\_\_\_

### III. TYPES

What is the purpose of guard hair? \_\_\_\_\_

What is the purpose of a llama's finer undercoat? \_\_\_\_\_

If you plan to make a sweater, would you prefer llama wool or alpaca wool? Why? \_\_\_\_\_

\_\_\_\_\_

### IV. CONFORMATION & CORRECTNESS

List three conformation points to observe in a correct llama.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

### V. TEMPERAMENT

Explain Aberrant Male Behavior, why it happens and signs of an animal with it. \_\_\_\_\_

\_\_\_\_\_

### VI. PURCHASING A LLAMA

List three organizations from which someone could gain information concerning llamas.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**VII. SHELTER**

What is the minimum height of a fence required to contain a llama? \_\_\_\_\_  
\_\_\_\_\_

**VIII. DIET**

A llama consumes \_\_\_\_\_ % of it's total body weight of food per day.

How much feed does your llama require per day? \_\_\_\_\_

State a mineral that should be provided for all llamas at all times. \_\_\_\_\_

**IX. GENERAL HEALTH & MAINTENANCE**

What is the best way to detect if a llama is or is not healthy? \_\_\_\_\_  
\_\_\_\_\_

Define the word "stoic." \_\_\_\_\_  
\_\_\_\_\_

How might "stoic" apply to a llama? \_\_\_\_\_  
\_\_\_\_\_

List four types of preventative medicine a llama owner should use to help keep a llama healthy.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**A. VACCINATIONS**

What are three things llamas and alpacas need to be vaccinated for?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**B. PARASITES**

Describe how two different farms in your area control parasites.

1. \_\_\_\_\_
2. \_\_\_\_\_

What deadly parasite might a white tail deer pass on to llamas? \_\_\_\_\_

List two reasons why a llama could lose wool in patches.

1. \_\_\_\_\_
2. \_\_\_\_\_

**C. TEETH & FEET**

How can a llama owner tell if a llama needs its toenails trimmed? \_\_\_\_\_

How old are llamas when they grow their fighting teeth? \_\_\_\_\_

How many fighting teeth do male llamas grow and where are they? \_\_\_\_\_

**D. HEAT STRESS & COLD WEATHER**

What is the normal temperature of an adult llama and how do you check it? \_\_\_\_\_

How does a llama trainer prevent heat stress? \_\_\_\_\_

List three signs of heat stress.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

List three ways to help a llama experiencing heat stress.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

What should be done to prevent problems when changing a llama's diet? \_\_\_\_\_

List six ways to decrease stress on a llama while showing the animal.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

**X. LLAMA TRAINING**

In your opinion what are the two most important places to desensitize and why?

1. \_\_\_\_\_

2. \_\_\_\_\_

List four steps in desensitizing the back legs.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

A good llama trainer can anticipate a llama's actions by first \_\_\_\_\_ and \_\_\_\_\_ the llama's movements.

If working with a llama who spits or kicks, explain how you would try to change this behavior.

---

---

#### A. EQUIPMENT

Why is it important to put a halter on and off continually when training a llama? \_\_\_\_\_

List three things a llama trainer might do to help an untrained llama follow on a lead rope.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

#### B. PROCEDURE

List three ways to gain a llama's trust.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What is the tug and release technique? \_\_\_\_\_

---

List the two most important things to remember when desensitizing a llama.

1. \_\_\_\_\_
2. \_\_\_\_\_

#### C. PACKING

How does a trainer know how much weight a llama can pack? \_\_\_\_\_

---

What is a good first step when getting ready to train your llama to pack? \_\_\_\_\_

---

How can a trainer help a llama keep its balance while packing? \_\_\_\_\_

---



## CLUES: ADVANCED LEVEL CROSSWORD PUZZLE

### ACROSS CLUES

2. The way a llama says, "Bug-Off!"
4. Animals that chew cud.
6. The word that describes what a llama does when it carries a load.
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8. Any animal that has been developed to help man.
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28. A boy llama.

### DOWN CLUES

1. Smaller South American camelid.
3. Number of toes on each foot.
5. Part of wool that is fine and primarily used for spinning.
7. A llama has three compartments in this.
9. Name of a male llama that has been neutered.
10. Shot given to animals to prevent sickness.
13. Base of neck near the back.
15. Name the country in South America where llamas originated.
16. Kind of upper lip that a llama has.
17. The bottom of a llama's foot.
20. Animal from the camelid family that is short and used primarily for wool.
22. The kind of foot that has two toes.
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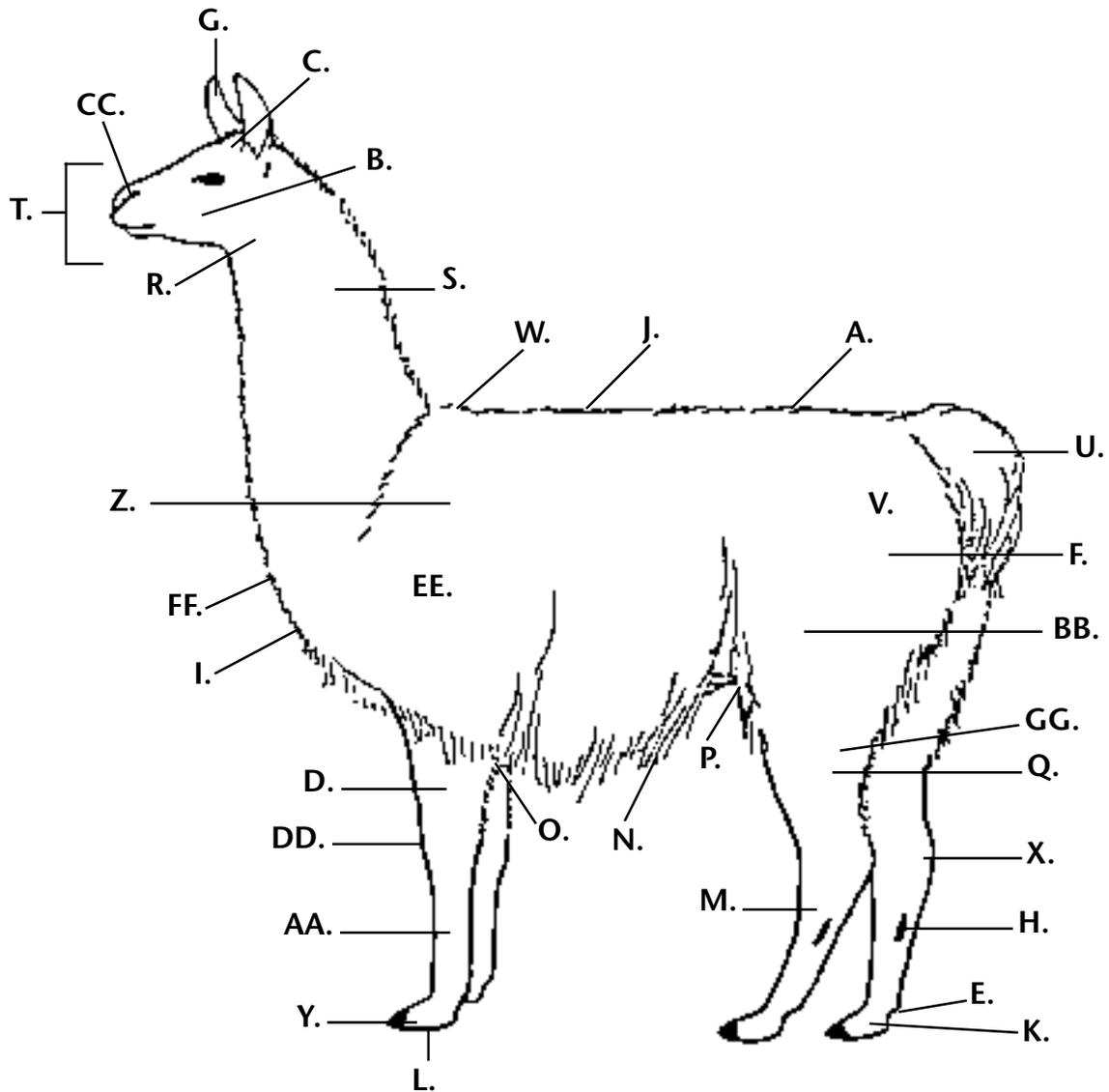
## WORD LIST: ADVANCED LEVEL CROSSWORD PUZZLE

ALPACA  
ANDES  
CAMELID  
CLOVEN  
CONFORMATION  
DESENSITIZE  
DOMESTIC  
FEMALE  
FIGHTING  
GELDING  
GUANACO

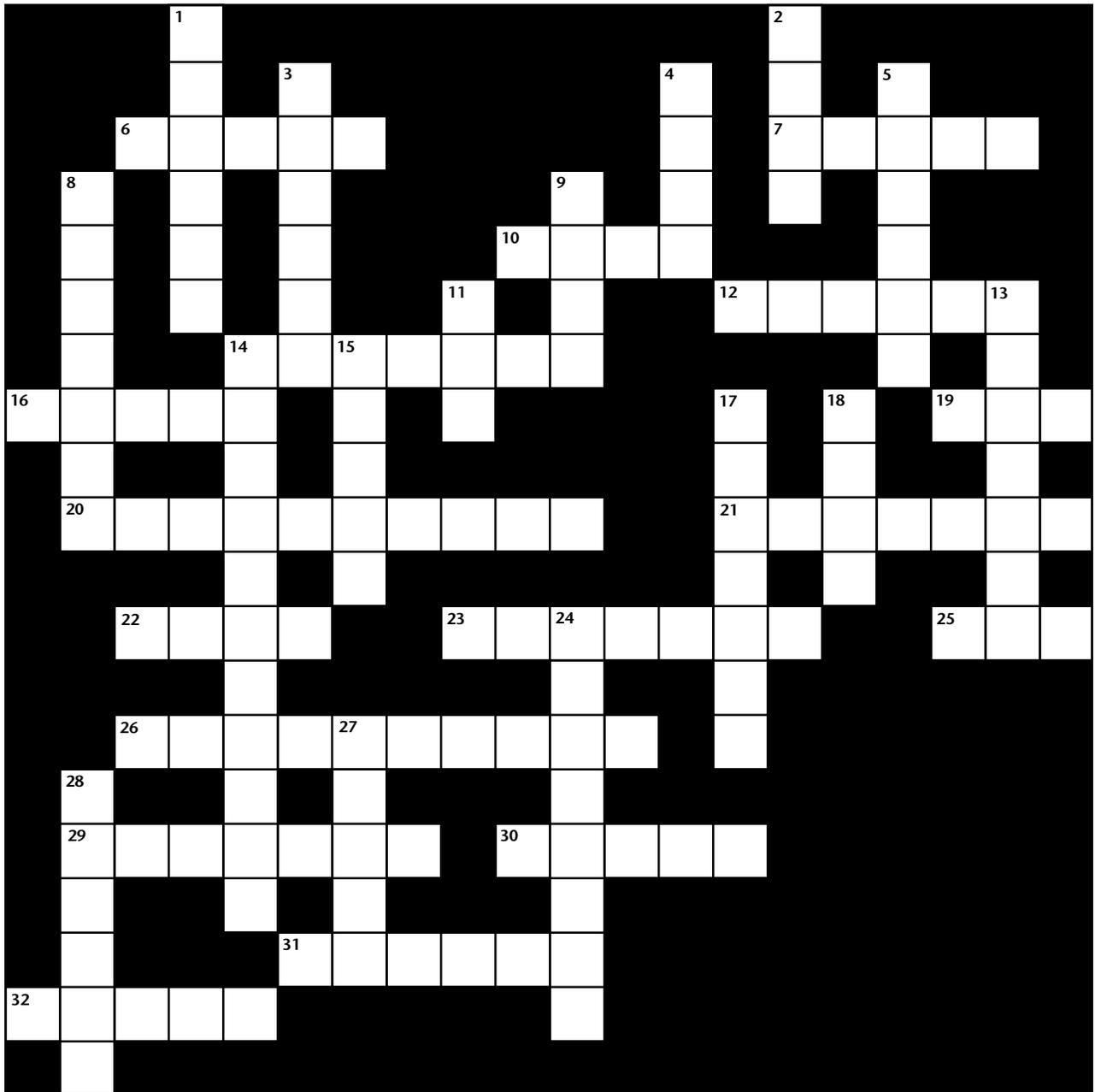
GUARD HAIR  
LIP  
MALE  
PACK  
PAD  
PERU  
PREHENSILE  
RUMINANT  
SCENT GLAND  
SOUTH AMERICA  
SPIT

STOIC  
STIFLE  
STOMACH  
TWO  
UNDERCOAT  
VACCINATION  
VETERINARIAN  
VICUNA  
WITHERS  
YEAR

# ADVANCED LEVEL EXTERNAL LLAMA DIAGRAM CROSSWORD PUZZLE



# ADVANCED LEVEL EXTERNAL LLAMA DIAGRAM CROSSWORD PUZZLE



## CLUES: EXTERNAL LLAMA DIAGRAM CROSSWORD PUZZLE

ACROSS	CLUES	DOWN	CLUES
6.	A	1.	R
7.	B	2.	S
10.	C	3.	T
12.	D	4.	U
14.	E	5.	V
16.	F	8.	W
19.	G	9.	X
20.	H	11.	Y
21.	I	13.	Z
22.	J	14.	AA
23.	K	15.	BB
25.	L	17.	CC
26.	M	18.	DD
29.	N	24.	EE
30.	O	27.	FF
31.	P	28.	GG
32.	Q		

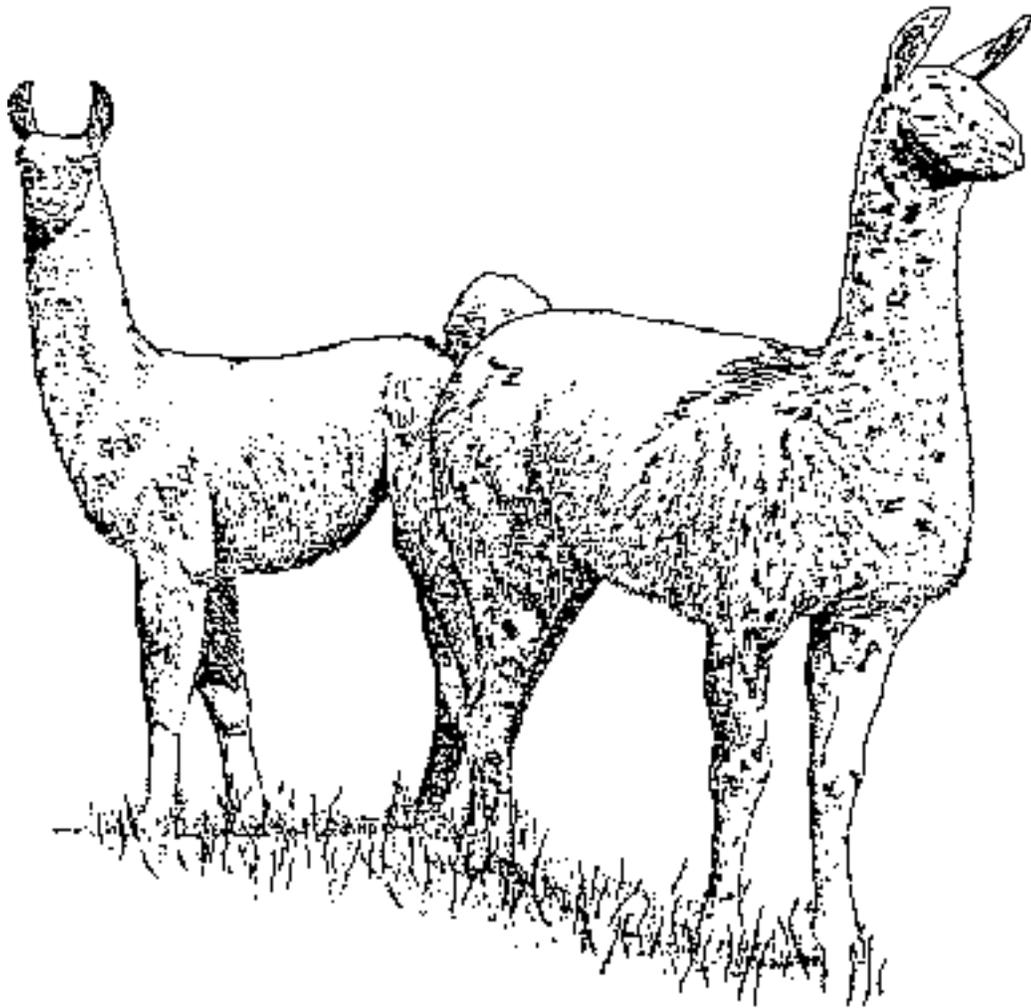
## WORD LIST: EXTERNAL LLAMA DIAGRAM CROSSWORD PUZZLE

ABDOMEN	HIND CANNON	SCENT GLAND
BACK	HOCK	SCAPULA
CHEEK	KNEE	SHOULDER
CHEST	MUZZLE	STERNUM
CROUP	NECK	STIFLE
EAR	NOSTRIL	TAIL
ELBOW	PASTERN	THROAT
FETLOCK	PAD	THIGH
FEMUR	PELVIS	TIBIA
FRONT CANNON	POLL	TOE
GASKIN	RADIUS	WITHERS



# **4-H LEADERS MANUAL**

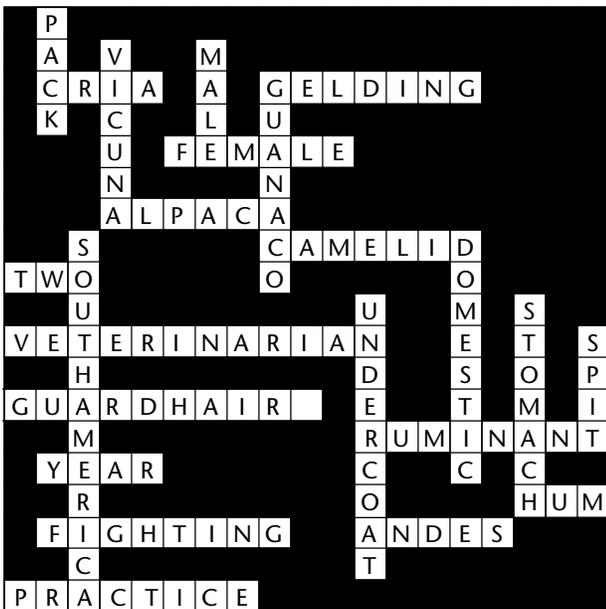
## **ANSWER GUIDE**



## MINI 4-H PROJECT ANSWER GUIDE

1. Camelid
2. Packing, pets, breeding stick, wool production, therapy
3. Two
4. Three
5. 15–20 years
6. 350 days
7. cria
8. 20–35 pounds
9. 60–77 inches
10. A llama spits to determine pecking order at meal time.  
A female llama spits to scare off a male if she is pregnant  
A llama spits to say, "Bug Off!"
11. M            D  
L            C  
B            K  
A            J  
E            I  
F            G  
H

### ANSWERS: MINI LEVEL CROSSWORD PUZZLE



### ANSWERS: MINI LEVEL DIAGRAM CROSSWORD PUZZLE



# BEGINNER LLAMA PROJECT ANSWER GUIDE

## I. HISTORY & BACKGROUND

1. Llama
2. Alpaca
3. Guanaco
4. Vicuna

Wild: An animal in its natural environment

Domestic: An animal developed to help man

Uses:

1. Work animals to carry loads
2. Wool producers

## II. THE LLAMA AND HIS BEHAVIOR

An average llama is 36–47 inches at the shoulder.

A llama has *no top front teeth*.

A llama has *three* compartments in its stomach.

They should always have *other animals, preferably camelids* with them.

A llama spits *to communicate among other llamas and to say, "Bug off."*

BEGINNER LEVEL DIAGRAM:

- I. Pastern
- J. Abdomen (belly)
- A. Poll
- D. Back
- E. Tail
- L. Knee
- C. Withers
- H. Fetlock
- F. Hock
- K. Toenail
- B. Neck
- G. Chestnut (scent gland)

### III. TYPES

Colors:

1. White
2. Black
3. Brown
4. Tan
5. Other combinations of these.

Grouped according to their *wool*.

### IV. CONFORMATION & CORRECTNESS

The way a llama is put together is called *conformation*.

### V. TEMPERAMENT

Llamas have their own *personality*.

### VI. PURCHASING A LLAMA

Llamas are good companions because they are alert and *intelligent*.

### VII. SHELTER

Llamas need some sort of *shelter*, a basic three sided structure will usually be adequate.

### VIII. DIET

1. Water
2. Food
3. Minerals

### IX. GENERAL HEALTH & MAINTENANCE

A llama owner should provide a mineral supplement for the llamas.

#### A. VACCINATIONS

Vaccinate llamas to *prevent them from getting parasites*. This can cause negative affects on the llama's system.

#### B. PARASITES

Internal parasites

#### C. FEET

1. Toenails
2. Pads

#### D. HEAT STRESS & COLD WEATHER

Normal temperature of an adult llama is  $99^{\circ}$ – $101.8^{\circ}$ F.

Extreme heat or extreme cold.

DO NOT drastically change diet because a sudden change in ruminant's diet can cause serious problems.



## INTERMEDIATE LEVEL ANSWER GUIDE

### I. HISTORY & BACKGROUND

1. Vicuna
2. Alpaca
3. Guanaco
4. Llama

Reasons for popularity:

1. Pets
2. Pack animals
3. Sheep guards
4. Entertainment
5. Companions
6. Wool producers
7. Cart pullers, etc.

Crias

Domestic: *Llamas and alpacas*

Wild: *Guanaco and vicuna*

People from Peru

### II. THE LLAMA & HIS BEHAVIOR

An adult llama weighs between *250 and 450 pounds*.

Llamas are called cloven footed *because they have two toenails*.

Because llamas *do not have top front teeth*.

Ruminants:

1. Cows
2. Camels
3. Sheep
4. Goats

The best companion for a llama or alpaca is *another llama or alpaca*.

*No*. it smells unpleasant but it does not hurt.

### III. TYPES

1. Guard
2. Down

Spinning and weaving: Either

Packing: Short

Companion: Either

Basic types of llamas;

1. Short-woolled
2. Long-woolled

INTERMEDIATE LEVEL DIAGRAM:

- |           |                    |                           |
|-----------|--------------------|---------------------------|
| O. Elbow  | L. Pad             | P. Fetlock                |
| A. Poll   | K. Pastern         | Q. Toenail                |
| B. Cheek  | J. Fetlock         | I. Chestnut (scent gland) |
| U. Ear    | H. Hock            | R. Knee                   |
| M. Stifle | F. Croup           | D. Withers                |
| E. Back   | N. Abdomen (belly) | S. Sternum                |
| G. Tail   | T. Nostril         | C. Neck                   |

#### IV. CONFORMATION & CORRECTNESS

If a llama is correct it has good *conformation*.

#### V. TEMPERAMENT

Because the llama *might bond with people*.

#### VI. PURCHASING A LLAMA

Consider:

1. Good bone structure
2. Conformation
3. Temperament

#### VII. SHELTER

Yes. A llama needs shelter because it needs to be protected from rain, wind, and sun.

#### VIII. DIET

A llama owner should provide supplemental feeding during the *winter* because of the lack of actively growing pasture.

#### IX. GENERAL HEALTH MAINTENANCE

Preventative medicine:

1. Vaccinate llamas to prevent parasites.
2. Watch llamas to recognize odd or unusual behavior.

##### A. VACCINATIONS

1. Worms
2. Tetanus

##### B. PARASITES

Ways internal parasites affect llamas:

1. Lose weight
2. Digestive problems
3. Get sick more easily

Two types of external parasites:

1. Lice
2. Mange

##### C. TEETH & FEET

A llama is more likely to need its toenails trimmed in the *spring* because it is living on soft grassland.

To prove *male dominance* (usually in males 2–3 years old).

##### D. HEAT STRESS & COLD WEATHER

Temperature of an adult llama: 99°–101.8°F; *Cria* : 100°–102°F.

Signs of heat stress:

1. Extreme laziness
2. Open-mouth panting
3. Loss of coordination

A change in diet causes serious problems such as *diarrhea due to shock to the system*.

## X. TRAINING

Ways to decrease stress:

1. Talk softly
2. Be consistent
3. Hold firm
4. Interpret llama's body language
5. Practice the activities often
6. Stroke the animal to comfort
7. Anticipate llama's action

Ways to relax a llama or alpaca when training:

1. Go SLOWLY
2. Try not to corner the llama

### A. EQUIPMENT

*You could be dragged or injured* if the llama should become excited or scared.

To get better, *PRACTICE!!* That will give you more experience.

Two styles of halters and their differences:

1. X - style gives more movement and comfort if worn for extended period of time.
2. Standard style gives the handler more control when training.

The llama *could jerk and get loose*.

### B. PROCEDURE

*15 minutes* at a time (even several times a day).

Six places to desensitize a llama:

1. Head
2. Legs
3. Belly
4. Feet
5. Ears
6. Tail
7. Mouth

Teaches them *to be touched all over without being afraid*.

To teach a llama to accept halter:

1. Move slowly
2. Be patient

*It could shut off the airflow through the nose* because of the soft cartilage.

*Llamas grow fast*. If a halter is too tight it can cut into the nose.

A slipknot is a knot that *can be released quickly in case the llama gets distressed* in any way.

Some llamas seem to be more receptive than others and training sessions may *vary*. Be patient and move slowly.

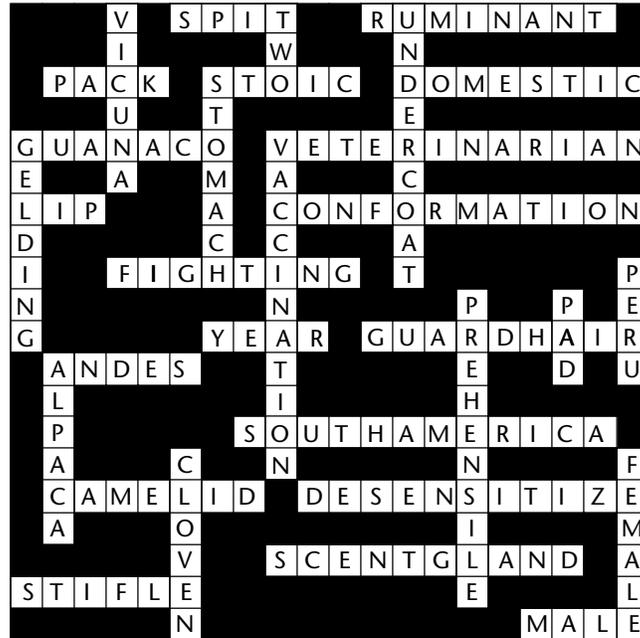
Times it might be helpful for the llama to kush:

1. To do vet work
2. To pack
3. To trailer
4. For emergencies

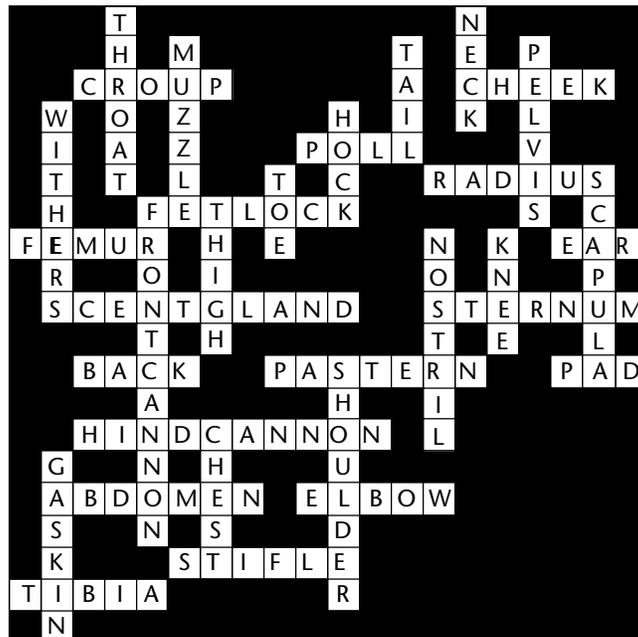
### C. PACKING

To pack 30 pounds, a llama should be *two years old*.

**ANSWERS: INTERMEDIATE LEVEL CROSSWORD PUZZLE**



**ANSWERS: INTERMEDIATE LEVEL BODY PARTS DIAGRAM CROSSWORD PUZZLE**



## ADVANCED LEVEL ANSWER GUIDE

### I. HISTORY & BACKGROUND

1. Llama Largest, domesticated
2. Alpaca Smaller, primarily used for wool production
3. Guanaco Original type markings same on all, wild
4. Vicuna Endangered, smallest, wild

Three countries llama come from:

1. Peru
2. Chile
3. Bolivia

Genus: *Lama Glama*

Llamas and alpacas are classified in the camelid family because *they are both descended from guanacos.*

The climate is tierra fria which means cold at the top of the Andes, tierra templada which means mild on the plateau area of the middle of the Andes, and tierra caliente which means warm on the low lands.

### II. THE LLAMA AND HIS BEHAVIOR

*Five llamas would equal one average horse in size.*

Llamas are tall and slender while alpacas are shorter.

Other cloven-foot animals:

1. Cow
2. Goat
3. Pig

*The pad on the bottom of a llama's foot is less destructive than a horse's hard hoof.*

*A llama's lip is called prehensile because it is structured to seize or grasp grasses when eating.*

An animal with compartments in its stomach: *ruminant*

Other ruminants:

Wild: deer

Domesticated: sheep, cow, and goat

A llama can live 15–20 years.

A llama can have a *cria until she dies!*

Lungs: Lungs bring oxygen into the body to send it through the system.

Heart: The heart sends blood throughout the entire body to deliver oxygen and nutrition so that the body can function.

Liver: The liver works in the formation of blood, secretes bile, metabolizes carbohydrates, fats, proteins, minerals, and vitamins.

Kidneys: A pair of organs that function to maintain proper water balance, regulate acid base concentration, and excrete wastes as urine.

Cud/Stomach: Food regurgitated from the first stomach to the mouth to be chewed again. The stomach is where food is broken down so that the nutrients can be used by the body.

## ANSWERS: ADVANCED LLAMA DIAGRAMS

### EXTERNAL:

N.	Pastern	P.	Abdomen (belly)
A.	Poll	E.	Back
H.	Tail	U.	Knee
D.	Withers	B.	Cheek
M.	Fetlock	Q.	Elbow
C.	Neck	T.	Toenail
L.	Chestnut (scent gland)	CC.	Ear
G.	Croup	R.	Fetlock
BB.	Nostril	O.	Pad
K.	Hock	J.	Stifle
Z.	Chin	Y.	Jaw
X.	Throat	F.	Hip
V.	Chest	W.	Shoulder
I.	Thigh	S.	Foot
AA.	Muzzle		

### INTERNAL:

H.	Fetlock	L.	Tibia
M.	Ribs	N.	Stifle
B.	Humerus	C.	Sternum
P.	Pelvis	O.	Femur
E.	Radius	J.	Hind Canon
I.	Fetlock	F.	Knee
A.	Scapula	G.	Front Cannon
K.	Hock	D.	Elbow

Herd animals:

1. Elephants
2. Antelope

Why llamas spit:

1. If they are pregnant
2. Males showing dominance
3. If the llama does not like something

Because they are *ruminants*, this process enables them to project stomach contents.

### III. TYPES

Guard hair is long, shiny, and coarser than other wool. *Guard hair allows air to circulate and keeps the coat more manageable.*

Undercoat is soft and fine and is *used for spinning.*

To make a sweater, you would *probably choose alpaca wool because it includes no guard hair. Llama wool that is long and well carded would also be a good choice.*

### IV. CONFORMATION & CORRECTNESS

Conformation points to look for in a sound and structurally correct llama:

1. Back legs that are straight
2. Front legs that are straight
3. Head held high
4. Neck that is in proportion to the body and legs
5. Ears that are correct, etc.

### V. TEMPERAMENT

An animal that has bonded to people can be very dangerous. They become aggressive because they have been bottle fed.

### VI. PURCHASING A LLAMA

Organizations: International Llama Association and its 24 affiliated organizations: 303-756-9004; Llama Association of North America: 702-265-3177; and Rocky Mountain Llama & Alpaca Association: 303-241-7921. Also check with your local Extension Office.

### VII. SHELTER

Minimum fence height; *four feet*

### VIII. DIET

A llama consumes *one to two percent* of its total body weight.

(Calculate how much your llama eats.)

*Salt* should be provided at all times.

## IX. GENERAL HEALTH & MAINTENANCE

Best way to detect if llama is healthy or not: *observation*.

Stoic: Does not show signs if sick or not feeling well. This describes a llama because they usually do not indicate that they are in pain or discomfort.

Types of preventative medicine for a llama:

1. Vaccinations
2. Cut fighting teeth from males
3. Provide minerals
4. Provide proper food
5. Provide clean, fresh water
6. Trim toenails
7. Clean pens

### A. VACCINATIONS

Llamas need to be vaccinated to prevent:

1. Tetanus
2. Worms
3. Clostridium C & D

### B. PARASITES

(Local parasite control response.)

Deadly parasite a white tailed deer could pass on: *Meningeal worm*.

A llama could lose wool because of:

1. Shedding
2. Skin parasites

### C. TEETH & FEET

A llama owner can tell if a llama needs its toenails trimmed *by looking at its feet and toenails regularly*.

A llama generally grows fighting teeth at *2 1/2 years old*.

A male llama has *six* fighting teeth. Normally *two on top and one on the bottom of each side*.

### D. HEAT STRESS & COLD WEATHER

Normal temperature of an adult llama; *99°–101.8°F*. *Check with a rectal thermometer*.

To prevent heat stress: *Have plenty of fresh water at all times and provide shade*.

Three signs of heat stress:

1. Extreme laziness
2. Open-mouth panting
3. Loss of coordination

To help a llama experiencing heat stress:

1. Spray the llama's underbelly, legs, and wool-free leg quarters with cool water
2. Use a fan to circulate air
3. Wading pools
4. Shade

Diets *should be changed slowly by combining the old and the new for a period of time* so that their system can adjust.

To decrease stress while showing llama's:

1. Practice
2. Talk softly
3. Stroke llama
4. Hold firmly
5. Interpret llama's body language
6. Be patient
7. Anticipate llama's actions
8. Be consistent

## X. LLAMA TRAINING

Two most important areas to desensitize:

1. Head
2. Legs

Four steps in desensitizing the back legs:

1. Get the llama used to you standing at its side.
2. Brush down the back and front of legs with your hand.
3. Use the brush on the legs.
4. Run your hand down the legs, finally picking up the legs.

A good llama trainer can anticipate a llama's actions by *recognizing* and *interpreting* the llama's movements.

*Move slow and work easily using lots of repetitions.*

### A. EQUIPMENT

A growing llama *will periodically need a larger halter, and it helps to desensitize.*

When training a llama to walk with a lead rope:

1. Say WALK
2. Tug sideways
3. Have the llama walk with a llama buddy
4. Have a friend (human) walk behind the llama

### B. PROCEDURE

To gain trust:

1. Talk
2. Feed
3. Stroke

To tug and release *gives them a choice instead of forcing them to move.*

When desensitizing:

1. Move slowly and be patient
2. Reward llama with verbal praise

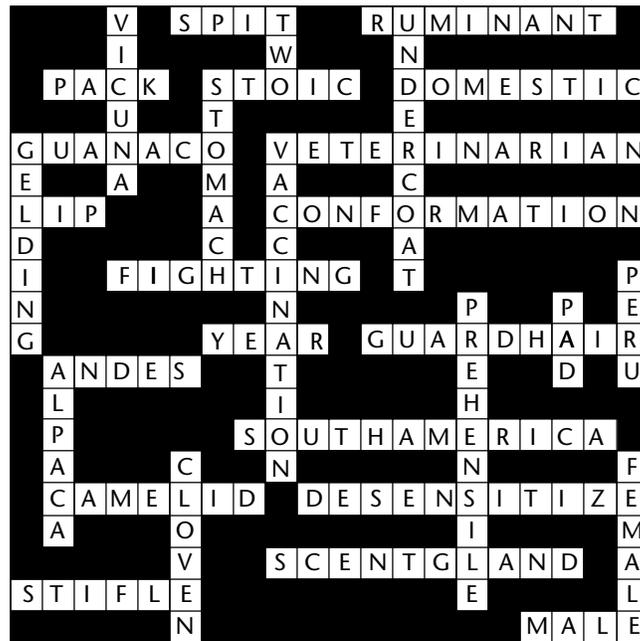
### C. PACKING

A full grown llama can hold  $1/4$  to  $1/3$  of its body weight when packing.

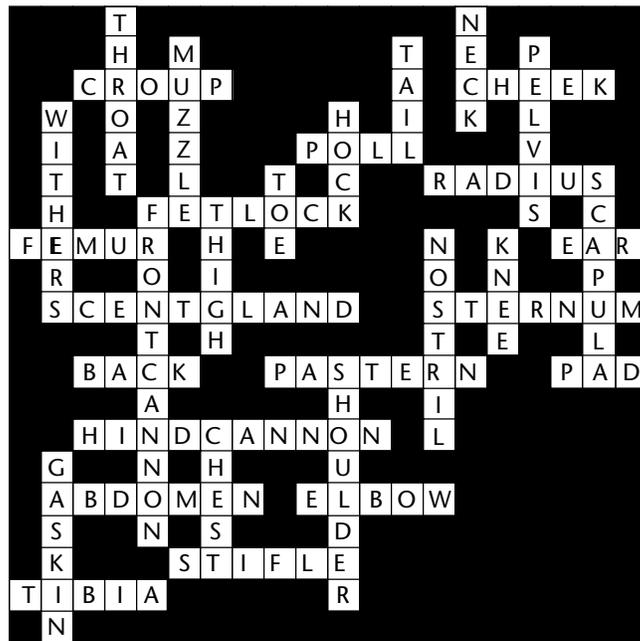
A llama must *trust* its trainer before it will feel comfortable while packing.

*Be sure to pack the load so it is weighted evenly on both sides.*

**ANSWERS: ADVANCED LEVEL CROSSWORD PUZZLE**



**ANSWERS: EXTERNAL LLAMA DIAGRAM CROSSWORD PUZZLE**







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