

# Llama Informational Study Guide

## 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

Life span: About 15–20 years

Weight: 250–450 pounds

Height: 36–47 inches at the shoulders; 60–77 inches at the head

Average gestation: 350 days

Birth: A single baby (“cria”) is normally delivered without assistance from a standing mother during daylight hours. Twinning very rarely occurs.

Babies: Birth weight is 20–35 pounds. Babies are normally up and nursing within 90 minutes. They are weaned at about six months old.

Reproduction: 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.

Color: 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.

Health: Because llamas and their ancestors are especially 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 that 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. Rarely llamas can develop male bizerk syndrome if over handled as a baby.

Llamas require little care compared to other animals. Good hay when there is no pasture, fresh water, an iodized salt block, and loose minerals 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.

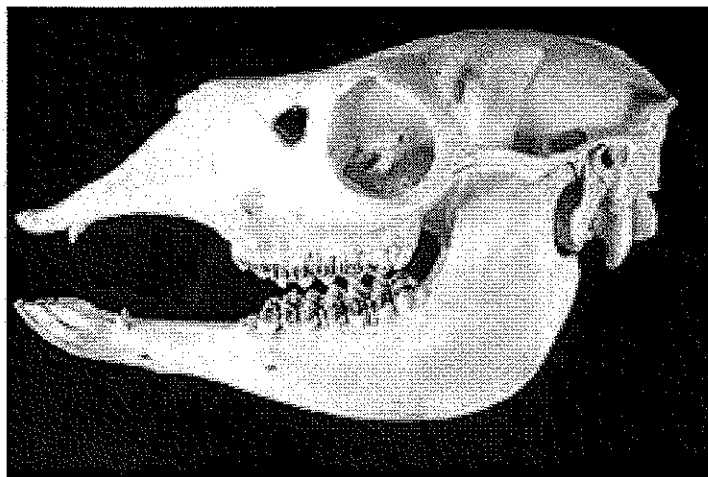
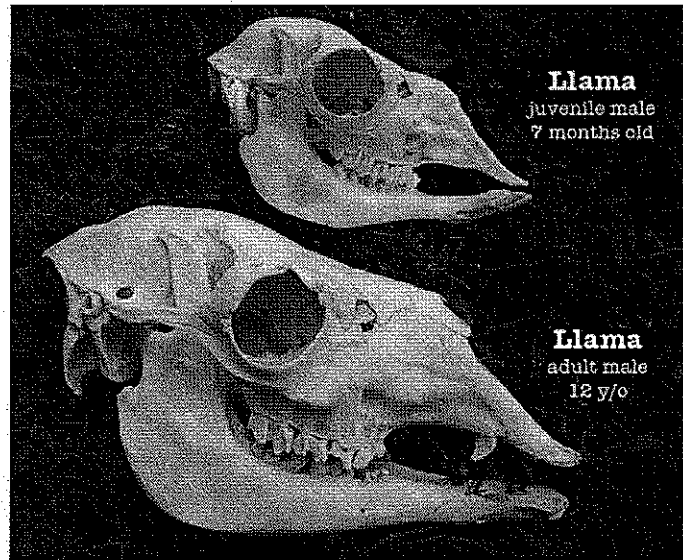
Llamas are a modified ruminant with a three-compartment stomach. They chew their cud like cattle and sheep. They have front teeth on the lower jaw only. Because of a relatively low protein requirement due to their efficient digestive systems, they can be kept on a variety of pastures or hay.

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.

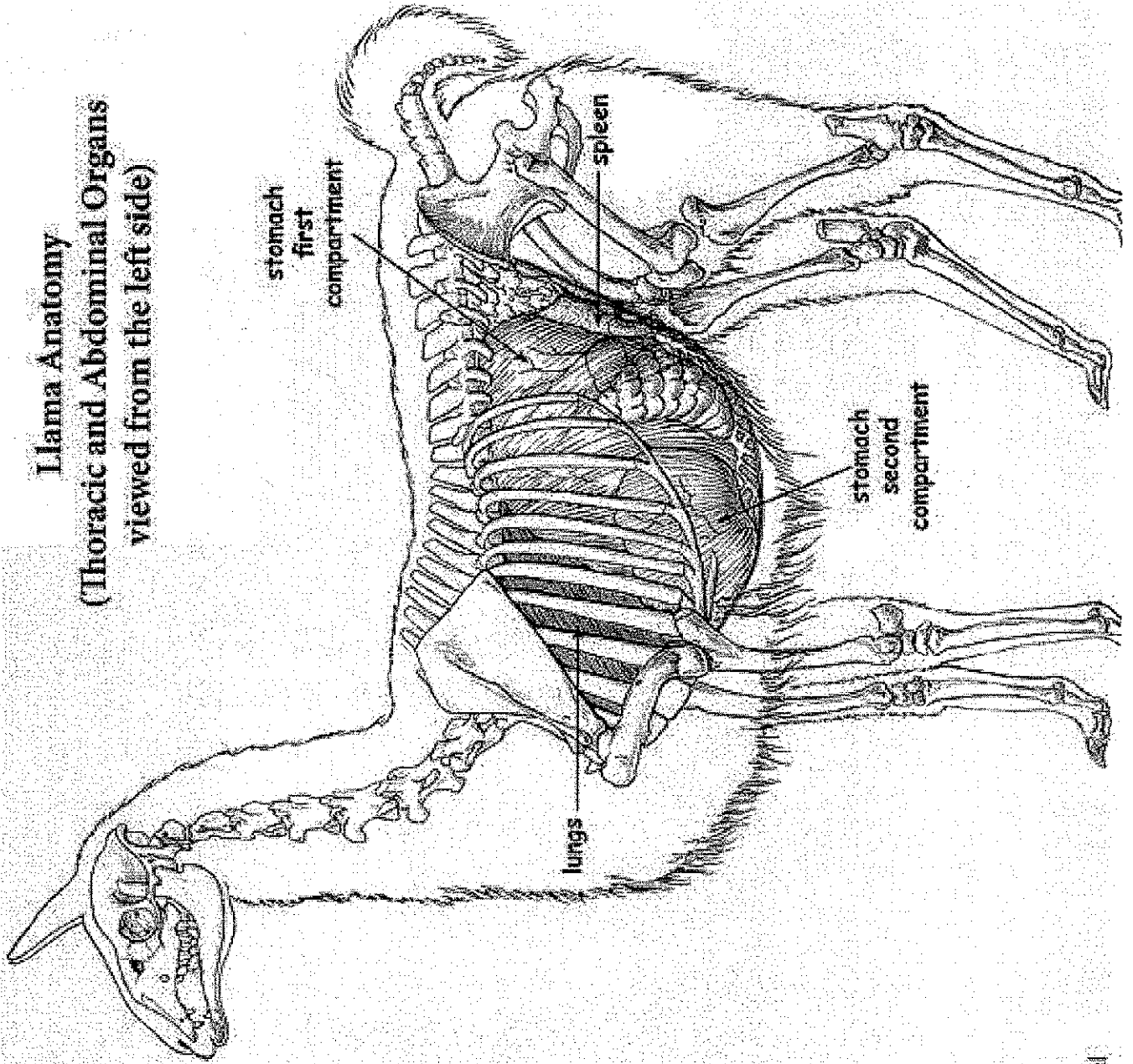
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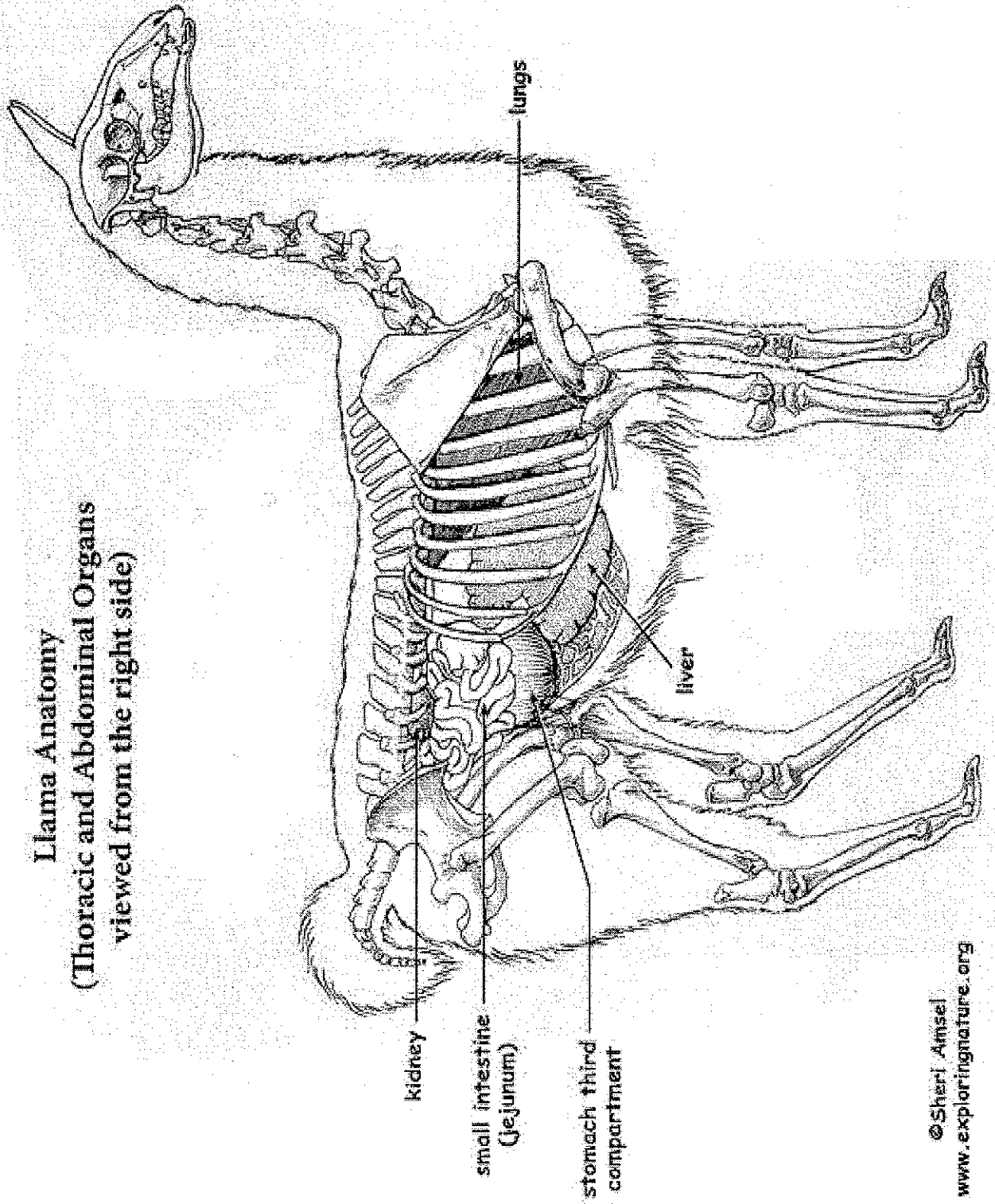
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- ❖ Larry H. Kuhl and Barbara Robertson. Introduction to the Llama. Virginia Cooperative Extension Service. Virginia Polytechnic Institute and State University, Blacksburg, VA 24061.



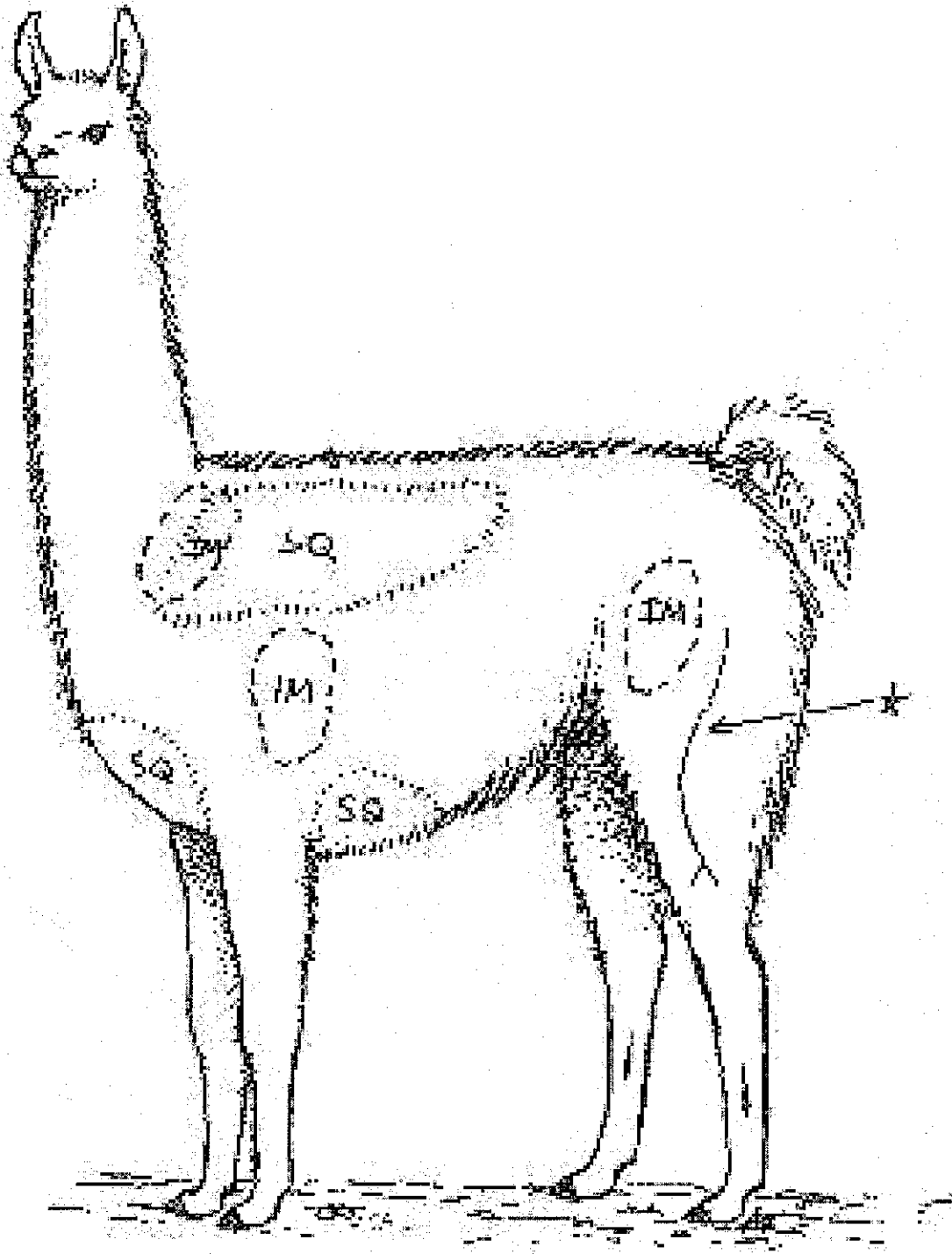
**Llama Anatomy**  
**(Thoracic and Abdominal Organs**  
**viewed from the left side)**



**Llama Anatomy**  
**(Thoracic and Abdominal Organs**  
**viewed from the right side)**

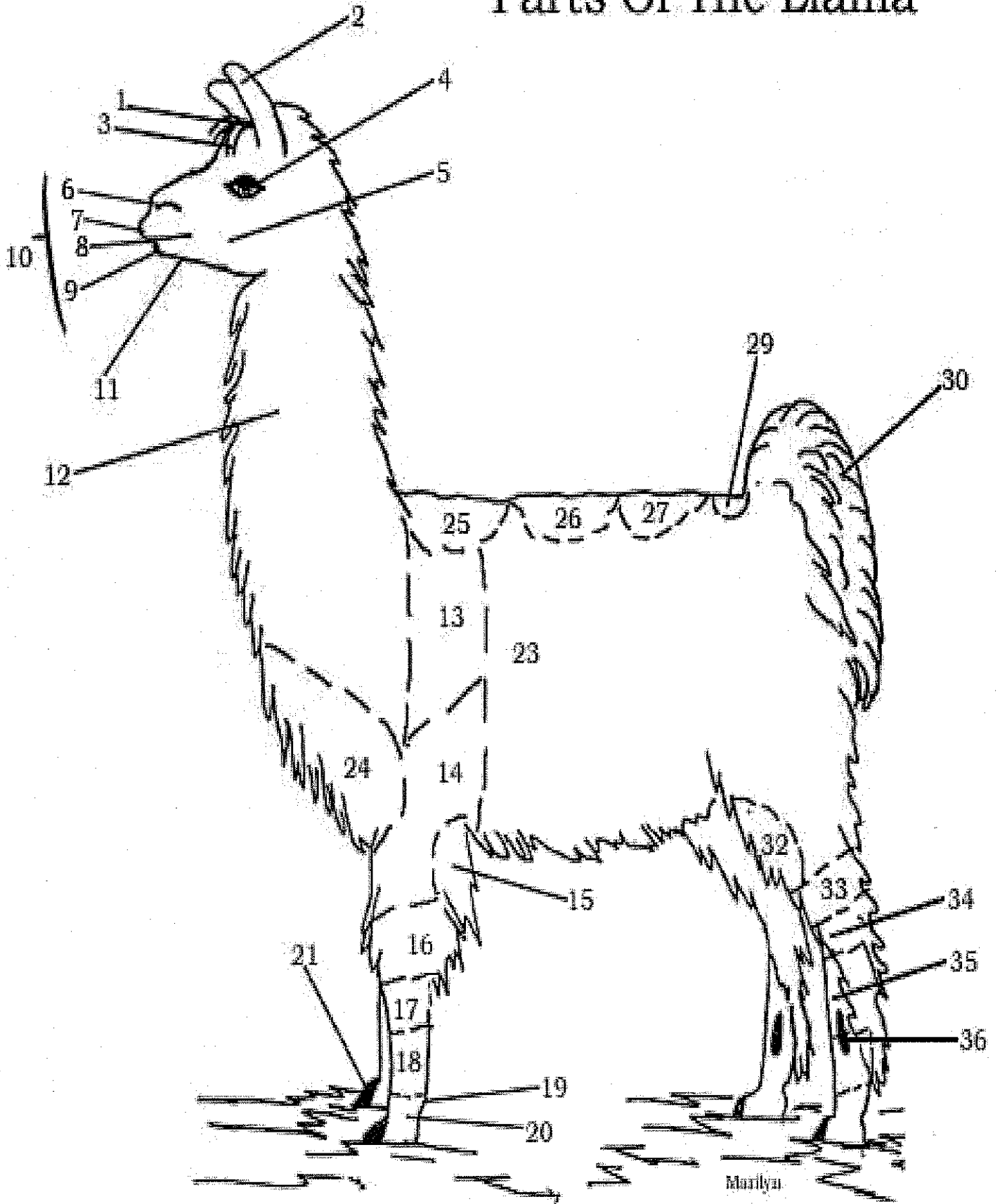


# Injection Sites for Llamas





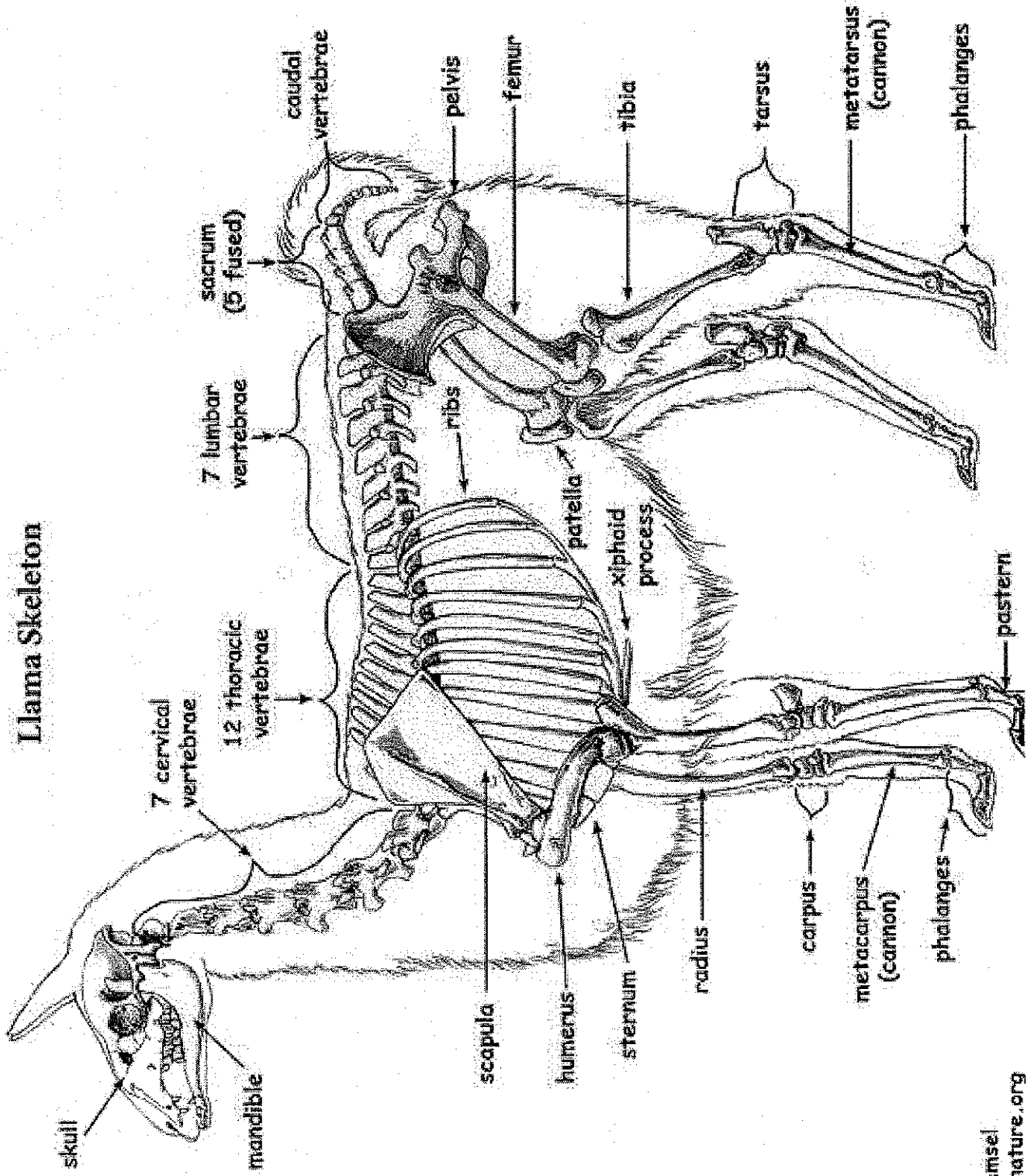
# Parts Of The Llama



# Llama Parts Key

1. Poll
2. Ear
3. Forehead
4. Eye
5. Cheek
6. Nostril
7. Upper lip
8. Mouth
9. Lower lip
10. Muzzle
11. Jaw
12. Neck
13. Shoulder
14. Arm
15. Elbow
16. Forearm
17. Knee
18. Cannon/Shank
19. Feet Lock
20. Pastern
21. Nail
22. Pad/Slipper
23. Ribs
24. Sternum/Chest
25. Withers
26. Back
27. Loin
28. Croup
29. Tail Head
30. Tail
31. Thigh
32. Stifle
33. Gaskin
34. Hock
35. Hind Cannon
36. Scent Gland

# Llama Skeleton



Label the Llama Skeleton

