



SKILL-A-THON STUDY GUIDE



THE UNIVERSITY OF ARIZONA
Cooperative Extension





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About the Skillaton

The Navajo Nation, the largest American Indian tribe in the United States, spans more than 27,000 square miles across Arizona, New Mexico, and Utah and includes over 300,000 enrolled members. Recent research has shown significant declines in Navajo language use have occurred over the past four decades. While 51% of adults speak Diné at home, only 4.5% of children ages 5–17 do so, underscoring urgent cultural revitalization needs. Research indicates that 4-H programming in Indigenous communities is limited and often lacks cultural components critical to belonging, such as language, place, and tradition. A literature review conducted by Farella et al. (2021) found only 13 articles contained information regarding 4-H programming efforts in Indigenous Communities.

In response to community requests, Agent's prioritized culturally grounded, non-formal 4-H educational efforts integrating Diné language, cultural knowledge, and Indigenous ways of knowing. Guided by Hartman and Martin's (2021) framework—centering community goals, collaborating with local cultural leaders, and creating relevant pedagogy—the adapted programming sought to strengthen cultural connectedness, belonging, and positive youth development. Culturally integrated 4-H programs support youth identity, resilience, mental health, and academic success while sustaining traditional knowledge. These efforts ensure equitable access to high-quality youth development opportunities for Navajo youth and reflect a holistic, community-driven model for culturally responsive Extension programming in tribal communities.

Purpose:

1. Help 4-H members apply their knowledge in a fun and educational contest at county, tribal, state, and national levels.
2. Provide an introductory guide for new and experienced 4-H youth to broaden their knowledge regarding multiple species and management practices of them.
3. To increase 4-H youth's ability to communicate through related activities such as demonstrations, talks, judging events, and the fair.
4. To support and encourage the use of Dine' language in topics/ areas of interest to Navajo 4-H youth in livestock and FCHS projects.

General Rules:

- This contest will be held in a timed format with alternating practicum stations.
- Each contestant must work independently on their worksheet. They cannot confer with each other. If questions arise, they need to be directed to the contest officials only. If requested, a contest official is allowed to read questions out loud for youth contestant(s).
- Individuals can compete in only one age category for high point junior and senior awards for the 4-H year. Ties will be broken by scores from animal ID, equipment ID, and herbs, fabric, and feeds (in this order).
- Parents and other adults are not allowed in the skill-a-thon testing area, unless they are serving in a volunteer role for an event station.
- The contest will be scored for high point awards. Stations and quiz scores will be combined to determine total score. Worksheets will be graded by extension staff; their grading is final.
- Contestants are not allowed to have any electronic devices on their person during the contest.
- Rule violations may result in disqualification.

Ages:

Ages are based on the current 4-H year of the contest. 4-H Year is from October 1st to September 30th.

Juniors – ages 8 – 13 years old (must be this age on January 1 of the current year)

Seniors – ages 14 - 18 years old (must be this age on January 1, of the current year)

Eligibility:

This is often an open event, meaning a youth participant does not need to be enrolled in 4-H or FFA to participate. To be eligible they must register for the event within the allotted time. No late entries will be accepted in order to keep the time rotations on schedule.

Skill-a-thon Topics:

Junior and Senior contests will include the following components: Breed Identification, Animal Identification, Tool Identification, General Knowledge, Navajo terminology, FCHS Tools, Nutrition, and Hands on components. Senior contest will consist of more questions per topic and additional practicum scenarios.

Identification Section

Navajo Term: Béeégashii

Pronunciation: Bay-ga-she
(Cattle Breeds)



Red Angus

Origins: Developed in the early 19th century in Scotland from polled and predominantly black cattle. Originally, it was brought in by the Vikings from Europe and introduced to England and Scotland, these cattle were small, dun-colored, and polled.

Characteristics: Medium in size, beefy carcass, red in color with pigmented skin.



Black Angus:

Origins: Has the same origins as the Red Angus.

Characteristics: Naturally polled, predominantly black. Can be mistaken for the Auberdeen Angus, that is also black and polled. They are adaptable, mature early, and resistant to harsh weather. They also typically have easy calving, making them desired over other breeds.



Red Hereford

Origins: Origin of the Hereford has been lost over time. Generally agreed that it was founded along the border of England and Wales.

Characteristics: Bred for high yield beef and efficiency of production. Dark red with red-yellow or white face, crest, dewlap, underline. Known for their vigor and foraging ability and longevity



Black Hereford

Origins: Derived mainly from Red Hereford cattle with some mix from black Angus cattle.

Characteristics: Like red Herefords, black Herefords are known for their feed efficiency and docile temperament. Black in color with a white head and underline



Brahman

Origins: Originated from Bos Indicus cattle from India, the “sacred cattle of India.” Bred in United States beginning in 1885. Characteristics: Large hump over top of the shoulder and neck. Vary in color from very light grey or red to almost black. They are good mothers, hardy, adaptable, heat tolerant



Charolais

Origins: Originated in west-central France. White cattle were first noticed in the region as early as 878 A.D. and were popular in markets by the sixteenth and seventeenth centuries. Characteristics: White in color with a pink muzzle and pale hooves, horned, with good milking ability. They typically have a medium to large frame with a short broad head and long body.



Longhorn

Origins: Stemming from ancestors that were the first cattle to set foot on American soil almost 500 years ago. Characteristics: Color varies widely with variegated color patterns. They are slow to mature with a reproductive period that is twice as long as other breeds. They have a natural resistance to most common cattle diseases and parasites. Most notable for horn size which can reach 100 inches between each horn point.



Shorthorn

Origins: Evolved over the last two centuries from Teeswater and Durham cattle found in the Northeast of England. The breed was used primarily as a dual-purpose for both meat and milking ability. Characteristics: Come in three colors: Red, White, and Roan. The breed may be horned or polled. They have an excellent rate of gain, good feed conversion, increased marbling, and tenderness



Limousin

Origins: Originated in the West of the Massif Central between Central and Southwest France, a rainy region with harsh climatic conditions and poor granite soil. Limousin cattle evolved into a breed of unusual sturdiness, health, and adaptability.

Characteristics: They have a large frame with strong-boned structures, and a small head with a broad forehead. Originally golden-red in color, coloration has evolved to include black genes.



Simmental

Origins: History dates back to the Middle Ages. Early records indicate that they were the result of a cross between large German cattle and a smaller breed from Switzerland.

Original selection criteria in Europe included milk, meat, and strength to do agricultural chore such as pull equipment.

Characteristics: Originally varied from gold to red with white markings on the face and underside. Modern Simmental are mostly black and may have white on face and underside. They are highly adaptable, heavily muscled, and well conformed.

Navajo Term: Bisóodi

Pronunciation: B-So-Dii

(Swine Breeds)



Berkshire

Origins: Named after Berkshire County, England, where they were first discovered. First brought to the US in the 1820's.

Characteristics: A terminal breed (breeds that are selected for their meat-producing abilities and growth rates) that is medium size, with black coloring that typically have six white points (four white socks, white snout, and white tipped tail), erect ears. They produce well marbled and highly palatable meat



Chester White

Origins: Originated in Chester County, Pennsylvania around 1815-1818. Developed using strains of large, white pigs common to the Northeast US and a white boar imported from Bedfordshire County, England.

Characteristics: Known for their muscular build, white coat, and high-quality meat production. They are adaptable, resilient, and have great maternal abilities. They are the most durable of white breeds with solid white, drooping ears.



Duroc

Origins: In 1812, early large "Red Hogs" were bred in New York and New Jersey. Their large litters and the ability to grow quickly were prominent characteristics.

Characteristics: A terminal breed with reddish-brown and light golden to dark-red coloring. They have a large muscular frame and drooping ears. Tend to be one of the least aggressive swine breeds.



Hampshire

Origins: Originated in Hampshire, Wessex, UK in 1832

Characteristics: A terminal breed with erect ears, black body with a full white belt around the middle covering the front legs. They are muscled and known to be rapid growers, have longevity, and produce a lean carcass quality.



Spotted

Origins: Descended from the Spotted Hogs which trace their ancestry to the original Poland China

Characteristics: A terminal breed with black and white spots with drooping ears. They are known for being feed efficient with fast gaining weight and early to mature.



Yorkshire

Origins: Developed in the county of York, England. The first Yorkshires in the United States were brought into Ohio around 1830.

Characteristics: Known for having good mothering abilities also known as a maternal breed. They are white in color with erect ears. They are productive and performance oriented.



Poland China

Origins: Developed between 1835 and 1870 in Butler and Warren counties in Ohio by crossing Polish pigs and Big Chinas.

Characteristics: A terminal breed with black coloring and has a white face, feet, and a white-tipped tail. They have drooped ears. Known for their large size, excellent feeders, quiet disposition, sound feet and legs

Navajo Term: Dibé

Pronunciation: De-beh

(Sheep Breeds)



Suffolk

Origins: Result of crossing Southdown rams on Norfolk Horned ewes. Adapted for traveling great distances for food and developing a superbly muscular body

Characteristics: Large, framed sheep, polled, dark face and legs, fine boned. Derives meatiness and quality of wool from the old original British Southdown.



Finnsheep

Origins: Native to Finland, were first imported to North America by the University of Manitoba, Canada in 1966.

Considered to be several hundred years old, descending from the Mouflon that live in the wild on Sardinia and Corsica.

Characteristics: Known for multiple births of three, four, even five lambs at a time. Lambs are often small but are vigorous at birth and grow well. Most often white, but are seen in all colors, solid or spotted, wool is medium to fine. Usually polled, dual purpose breed.



Merino

Origins: Founded in Spain near the beginning of the 12th century.

Characteristics: Known for excellent, soft fine wool quality. They are medium sized with white legs and face. Are excellent foragers and very adaptable.



Rambouillet

Origins: Originated with Spain's Merino flocks, which were known to have the world's finest wool.

Characteristics: Largest of fine wool sheep, white face and legs, heavy fleece. Well, known for its wool, but also for its meat, both lamb and mutton



Dorper

Origins: South African mutton breed developed in the 1930s from the Dorset Horn and the Blackheaded Persian.

Characteristics: Adaptable, does well in various range and feeding conditions. Easy to care for, required minimum labor. Its skin covering is a mix of hair and wool and will drop off naturally if not shorn to keep tidy.



Navajo Churro

Origins: Descended from the Chura in the late 16th century from the Spanish. First breed of domesticated sheep in the New World.

Characteristics: Has a double coated fleece that is made up of a long-fleeced topcoat that is fine to medium with an undercoat that is medium to coarse. Rams have fully developed horns. Highly disease resistant with high rates of twins and triplet births. Used for food and fiber. Its fleece was used in weaving for its luster, silky feeling, color absorption, and durability. Remarkable hardiness, adaptability, and fertility.

Navajo Term: Tł'íí

Pronunciation: Tliz-ii

(Goat Breeds)



Angora

Origins: Originated in the district of Angora in Asia Minor. Dates back to early biblical history.

Characteristics: Bucks have a pronounced spiral to their horns, which comes back and away from their head. Except for the face, the breed is entirely covered in a coat of long ringlets of fine mohair. The face and coat are normally white, but black, brown, and grey also occur.



Boer

Origins: An Indigenous breed improved with some infusion of European, Angora, and Indian goat genetics.

Characteristics: Largest meat breed goat. Horned breed with lop ears and showing a variety of color patterns, however white with a reddish-brown head and ears is most common.



Kiko

Origins: Breed of meat goat originating from New Zealand. Developed in the 1980s by crossbreeding local feral goats with imported dairy goat bucks.

Characteristics: Generally solid white or cream in color, however darker colors, including black, can be seen. Rapid growth, meat breed. Tolerant of rustic conditions, resistant to internal parasites



Spanish

Origins: Developed through natural selection from goats first placed in Texas in the early 1540s by Spanish explorers.

Characteristics: Can be any color or color pattern. Moderate in size and growth rate. Especially tolerant of difficult conditions and forage well on local plants. Used often from meat and brush clearing. Spanish does are prolific milk producers for the moderate growth rate of their kids

Navajo Term: Łjǫ'

Pronunciation: Lhii

(Horse Breeds)



Quarter Horse

The Quarter horse originated in the early 1600's. Characteristics: They tend to have a stockier build, heavier muscling in the hind quarters, lower head carriage, and triangular face. Can come in many colors that include black, bay, sorrel, grey, roan, palomino, perlino, cremello, grulla, buckskin, and dun. Known for being sprinters with high speeds over short distances.



Arabian

Originated from the Arabian Peninsula from over 3,500 years ago. Characteristics include having a flatter shorter back, small “dished” face, upright neck carriage, and high tail carriage. They can come in many colors including black, bay, chestnut, and grey. Most do not have excessive white markings. They are considered hot blooded horses with high speed, stamina, and spirited. They have one less lumbar vertebra, pair of ribs, and tail bone than other breeds.



Thoroughbred

Originated in England in the 17th Century for racing and jumping. Characteristics include having a longer leaner build, larger heart girth, and on the taller side. Common colors include black, bay, chestnut, and grey. Is the most used breed for racing events. Known for speed, agility, and temperament and commonly used for racing, jumping, fox hunting, and polo.



American Paint Horse

Originated in North America from horses brought by Spanish explorers in the 16th century. Characteristics include having a stockier build and heavy muscling. They are often noted for their striking appearance, athletic nature, gentle temperament, and willing disposition. Have three main color patterns, tobiano, overo, and tobiano.



Friesian

Originated from Friesland in the northern Netherlands in the 13th century. There were originally used for riding and farmwork and are descendants of “Great Horses” in Europe. Characteristics include being a larger body breed with thicker bones, feathering on the legs, thicker mane & tail, with animated motion. Black is the only allowed recognized color for the breed registry.



Clydesdale

Originated in the early 19th century in Lanarkshire Scotland. Characteristics include being a draft horse with a large body to carry heavy loads. Their legs often have feathering. They often come in a bay color with white stockings and face markings.



Appaloosa

Originated in the 16th century from Spanish explorers but was bred to have great endurance, strength, and distinctive coat patterns by the Nez Perce tribe. Characteristics include having a stockier build, heavier muscling, lower head carriage, mottled skin, striped hooves and spotted coloring. Colors include a blanket, snowflake, leopard print variations of black, bay, sorrel, grey, roan, palomino, buckskin, and dun.



Shetland Pony

Originated in the 19th century on the Shetland Islands off the coast of Scotland. The breed evolved from the Scandinavian tundra by Viking raiders. Originally used as a pit pony for coal mines and is used today for kid ponies and circus acts.

Characteristics include being often short in stature with a thick mane and tail. They are often found in solid and pinto variations of black, bay, chestnut, and grey.

Navajo Term: Gah

Pronunciation: G-ah

(Rabbit Breeds)



American Fuzzy Lop

Became a recognized breed in 1989. Known for its lopped ears, large head, and woolled coat, the AFL is a sweet tempered, rabbit that is energetic and popular for beginning and seasoned exhibitors alike. Maximum weight 4 lbs.



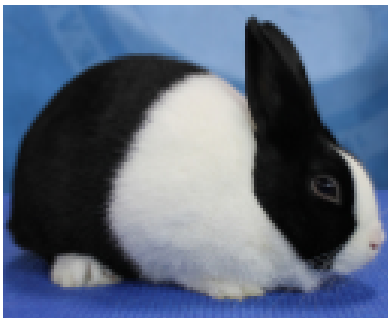
Californian

Developed in Southern California in the 1920s by George West and is one of the most popular breeds of rabbits in the American Rabbit Breeders Association (ARBA). Prized for its meat producing qualities as well as its pelt, the “Cal” is a competitive commercial breed in all 50 states and beyond. – Maximum weight 10.5 lbs.



Checked Giant

Recognized by the ARBA in 1919, is also known as the “rabbit beautiful”. Easily recognized by its distinctive bold markings and arched body type. They are a running breed and require a large cage to move comfortably. – No maximum weight.



Dutch

Developed in England during the 1830s and one of the most recognized breeds. Selecting for correct markings paired with type can be challenging, but the fact that the Dutch remains one of the top 10 most popular breeds, is evidence that many are up to this task. – Maximum weight 5.5 lbs.



Himalayan

The only cylindrical type of breed recognized by the ARBA. The body is white with colored points, recognized colors are black, blue, chocolate and lilac. Their laid-back demeanor makes them easy to handle and a joy to exhibit. They are ideal for youth competing in showmanship and challenging enough for seasoned breeders. – Maximum weight 4.5 lbs.



Lionhead

Recognized breed in the United States since 2014, it has the distinctive mane around its head giving it the look of a male lion, as the name implies. It is steadily gaining in popularity throughout the rabbit world. Maximum weight 3.75 lbs.



Netherland Dwarf

Breed was first produced in the Netherlands in the early 20th century and soon made its way to America. Since then, their popularity has only grown and new color varieties have also grown, there are currently 25 recognized color varieties. – Maximum weight 2.5 lbs.



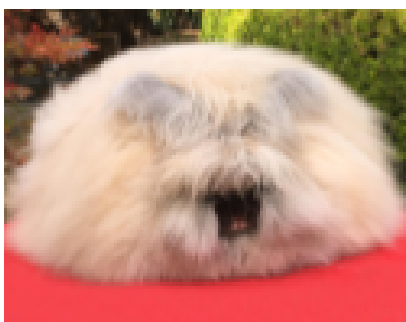
Belgian Hare

One of the oldest breeds of rabbits in America, its roots trace back to the 1880s. They were developed in the early part of the 18th century in Eastern Europe through selected breeding of wild and domestic rabbits. Has a very distinct, lithe and elegant body and makes a striking presence on the show table. – Maximum weight 9.5 lbs.



Cinnamon

Became a recognized breed in 1972. The color of the Cinnamon is a rust or ground cinnamon with a uniform gray ticking across the back, smoky grey coloring on its sides, a dark underbelly, and an orange under-color all over. They are a commercial breed and are also valued for their meat production. – Maximum weight 11 lbs.



English Angora

One of four breeds of Angora recognized by the ARBA. The English is the only breed of Angora that is classified as a compact breed. It possesses a silky, luxurious wool that is both beautiful and sought after for spinning – Maximum weight 7.5 lbs.

Navajo Term-Naa'ahóóhai

Pronunciation: Nah-ah-hoo-hi

(Poultry Breeds)



Brahma

Originated in Shanghai, China. Its combs, wattles, and earlobes are bright red. This chicken breed comes in multiple colors. Plumage is silvery white with a black and white cape. Main tail is mostly solid black with increasing white lace towards the base of the tail. These birds are a favored for shows. They are good mothers (broody) but are unable to withstand cold temperatures. Generally, an all-purpose breed used for heavy meat production that are 9 to 12 pounds and are fair layers with brown eggs.



Cochin

Originated in Asia. They are moderately long, broad, deep, and well-rounded from the breast to the abdomen. They have golden yellow eyes, yellow skin, legs, and toes. They have a mass of soft fluffy feathers. They come in black, blue, buff, partridge, cuckoo, and white. They are around 8 to 9 pounds. They are poor flyers and are calm and friendly. They are mostly bred for exhibition but can be meat producers and moderate egg producers.



Leghorn

Originated in Italy and is the most popular layer breed in the United States. They have bright red combs and wattles with white earlobes. Body is long, deep, and carried nearly horizontal. They are small, sprightly, noisy, good foragers, capable of flight, and like to roam. They are used mostly for egg production and produce white eggs.



Polish

Originated in Poland and Italy. The breed has a mixture of brown, white, and black feathers with a variation of patterns. They have a distinct pom-pom hairdo that is unique to the breed. They range from 4 to 6 pounds and are good for egg production. They are known to be calm and gentle birds. They do not do well with cold damp weather.



Rhode Island Red

Originated in Rhode Island. Body is long, broad, moderately deep, and appears oblong. Plumage is rich, dark red with greenish black sickles in the tail. They are hardy, dual-purpose birds, and good for small flock owner. Used for meat and egg production. Weight ranges between 8 to 6 pounds. Known for being somewhat aggressive and territorial. Not recommended as a pet or kept with other chickens.

Silkie



Originated in the Far East in China and is also called the Bearded White. Has soft, fluffy plumage with a moderately long, deep, broad and rounded body. Has a muff of ear feathers and beard that make the appearance stand out. Shanks and toes are leaden blue and well covered with feathers. They live 7 to 9 years and are 3 to 4 pounds. They come in a variety of colors with cream-colored eggs. Their main usage is egg production. They generally have a calm disposition and can easily be raised in smaller areas.



Barred Rock

Originated in the United States in the 1800's around Massachusetts and is also called Plymouth Rock. Their body is long, broad, and deep. Its plumage has sharp, parallel bars of alternating light and dark colors with a dark tip. They are good general farm chickens, hardy, broody, docile, and tame easily. They are excellent dual-purpose breeds used for meat and egg production.

Wyandotte



Originated in the Northeastern part of the United States. They are dual-purpose breeds and have a lifespan of 6-12 years. They come in several colors with feathers that are laced. Lacing refers to the intricate pattern of coloration in which the edges of their feathers where the darker feather edging forms a striking lace-like pattern against the lighter background color. The average size is 6 to 8 pounds. They have a good temperament but are not cuddly. They are adaptable to any weather conditions.

Navajo Term: Nááná

Pronunciation: Nah-NA

(Herbs & Spices)



Basil

An Old World aromatic annual herb (*Ocimum basilicum*) in the mint family, cultivated for its leaves. Also called sweet basil. The leaves of this plant are used as a seasoning. Many of various plants in the genus *Ocimum*, native to warm regions, having aromatic foliage and terminal clusters of small, usually white flowers



Bay Leaves

The leaf of the bay laurel or “true laurel”, *Laurus nobilis*, is a culinary herb often used to flavor soups, stews, and braises and palate in Mediterranean Cuisine.



Chives

A Eurasian bulbous herb (*Allium schoenoprasum*) in the lily family, having clusters of usually pink to rose-violet flowers and cultivated for its long, slender, hollow leaves. Often used in the plural. The leaves of this plant are used as a seasoning.



Cilantro

Parsley-like herb that is used as a seasoning or garnish, usually in Mexican dishes and salsas, sometimes referred to as Mexican parsley.



Ginger

A plant (*Zingiber officinale*) of tropical Southeast Asia having yellowish-green flowers and a pungent aromatic rhizome. The rhizome (root which grows horizontally) of this plant is often dried and powdered and used as a spice. Also called gingerroot



Paprika

A mild flavored powdered seasoning made from sweet red peppers. Coloring ranges from a dark to deep or vivid reddish orange.

Sumac (Chiitchin)- Chil-chin



Tangy, smoky, earthy, and slightly sour, sumac is an essential spice in Middle Eastern cooking. With its deep red hue and fruity, citrusy flavor, sumac spice is the perfect way to add acidity and color to your meals. Sumac spice that is used in cooking is red, more like a deeper berry color. It comes from sumac berries, which are turned into a coarse powder and sifted. This deep red spice is the main flavor maker in some traditional Middle Eastern dishes

Juniper Berries



Comes from the Juniper evergreen shrub which grows throughout the northern hemisphere. The berries are about a quarter-inch wide and bluish-purple. Their flavor is intensely spicy with a slight touch of pine. Commonly used with lamb (or mutton) and is particularly good with venison, wild boar, and even domestic pork. A rustic flavor that complements ground smoked Chile peppers. It is also used as a fermentation starter in sauerkraut or bread baking



Cinnamon

Obtained from the inner bark of several tree spices from the genus *Cinnamomum*. It can be purchased in its reddish-brown ground form or in the form of curled sticks called quills. Used in many baking dishes and as a topping.



Sage (Ts'ah)-Tss-Ah

Is a perennial evergreen shrub with grayish leavers and blue to purple flowers. Used in cooking and traditional herbal medicine. Belongs in the mint family with a strong flavor of citrus and pine. Many cultures use the plant to cleanse spaces of negative energy.

Navajo Term: Diyogí

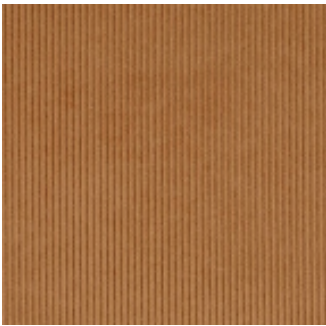
Pronuicaiton: Dy-yo-Gi

(Fabric Identification)



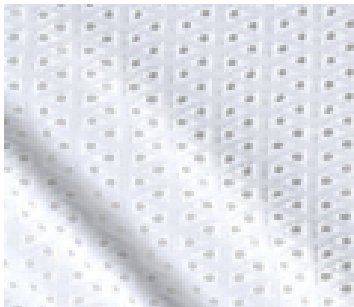
Broadcloth

Is very lightweight, smooth, flat looking fabric, with no pattern in the weave of the threads. It is similar in quality to pinpoint fabric but has less texture. This usually means it is slightly more transparent and not as shiny as the pinpoint. Pinpoint fabric has a tighter weave and more texture but still has a soft hand feel.



Corduroy

A textile with a distinct pattern, a "cord" or wale. Modern corduroy is most commonly composed of tufted cords, sometimes exhibiting a channel (bare to the base fabric) between the tufts. Both velvet and corduroy derive from fustian fabric (or twilled).



Eyelet fabric

A type of lace made by creating holes in a fabric medium. Each hole is edged using a buttonhole stitch. The holes are precisely sized and situated to create a pattern or patterns, often floral designs or abstract geometric arrangements.



Faux Fur

Faux (or fake) fur is a type of textile fabric fashioned to simulate genuine animal fur. It is known as a pile fabric and is typically made from polymeric fibers that are processed, dyed, and cut to match a specific fur texture and color. Today's fake furs can be nearly indistinguishable from the natural furs they imitate.



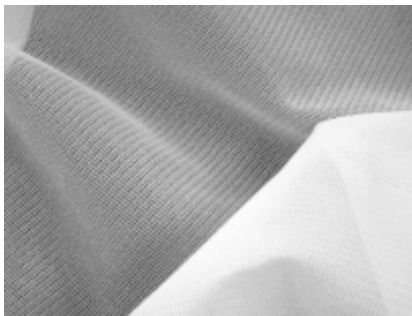
Iron on Interfacing

Used to add stiffness to fabric. The interfacing you'll find in a craft store today is fusible, and it's applied to the wrong side (also known as the inside) of the fabric with an iron.



Jersey

A knit fabric used predominantly for clothing manufacture. Originally made of wool, but is now made of wool, cotton, and synthetic fibers. Jersey Channel Islands, where the material was first produced, had been an important exporter of knitted goods. The fabric can be a very stretchy single knitting, usually light-weight, jersey with one flat side and one piled side. Most often used to make T-shirts



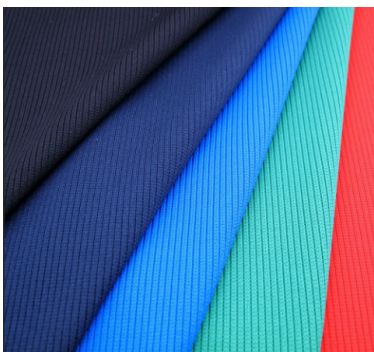
Knit®

A fusible knit interfacing and supple stabilizer for dresses, jackets, and pants. It is best used with light to midweight knits, wovens, sweater knits, and machine knitted fabrics and is excellent with fabrics such as wool, flannel, and gabardine.



Leather ('Akał)- Aa-Kah-L

Leather is a durable and flexible material created by tanning animal rawhides, mostly cattle hide. It can be produced at manufacturing scales ranging from cottage industry to heavy industry



Spandex

A strong fiber with medium weight and good elasticity. Used for clothing and swimsuits.



Wool (Aghaa')- Ahh-Gaahh

A rough fiber with good crimp. Has a stiff drape and good cover. Use in carpets and some clothing

Navajo Term: 'Óola

Pronunciation: O-l

(Tool Identification)



Barnes Dehorner

Used to dehorn calves, sheep, and goats.



Clippers

Used to clip and groom the hair on cattle, sheep, horses, and goats.



All Weather Paint Stick

A nontoxic, weather-resistant marking crayon for temporary identification of livestock. (e.g. to identify calves who have already been treated or vaccinated).



Chain End Twitch

The twitch is placed on the horse's nose and twisted until snug to restrain the horse as required using pressure points.



Balling Gun

Used to administer various pills (medications) to cattle and horses. It is placed down the throat to administer the pills.



Ear Tag

Placed in an animal's ear to provide an easy to read form of individual identification



Disposable Syringes

Used to measure precise amounts of a vaccine and to administer vaccines to livestock and horses.



Drench Gun

Used to administer precise amounts of liquid medications to cattle, sheep, goats, and horses. The hooked portion is placed in the animal's mouth to administer the liquid medication.



Ear Notchers

Used to clip small notches in a pig's ear to provide a form of permanent, individual pig identification.



Ear Tag Pliers

Used to place ear tags into the ears of cattle, sheep, goats, and pigs to provide a means of animal identification.



Elastrator

An instrument used for the bloodless castration (young male calves, lambs, and goats) and docking of tails (young lambs and goats). It is used to place a small rubber ring over the scrotum or tail to shut off circulation.



Electric Branding Iron

Used to brand cattle. The branding iron can be designed to brand numbers and letters. Unique brands can be ordered.



Hand Sheep Shears

Used to shear and groom the wool from sheep. Blade lengths typically range from 3 to 6-1/2 inches



Hanging Scale

Used to weigh young animals, feed ingredients to include in a diet, or the amount of feed to feed to an animal.



Fencing Pliers

Used when building fences. These pliers will cut, splice, and stretch wire, and drive in and pull out staples.



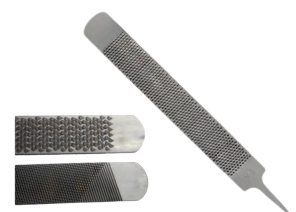
Hoof Pick

Used for the regular daily cleaning of the bottom of a horse's hoof.



Plastic Sleeve

Placed over the hand and arm when artificially breeding cattle or when pulling newborn animals during difficult births (dystocia).



Rasp

Used by farriers to smooth the foot after the excess hoof wall has been removed during trimming.



Grooming and show table

A table used to prop small livestock on during grooming and showing events.



Saboten Hoof Trimmer

Device used to trim the hooves of sheep and goats.



Scalpels

Used by veterinarians for various surgical procedures, and by farmers for various health related and management practices (such as castration)



Scotch Comb

Used to comb (groom) the hair of cattle.



Syringe Needles

Used for injecting vaccines and medication (intramuscularly, subcutaneously, intraperitoneally) into livestock and horses.



Tattoo Pliers

Used to place tattoo numbers on a pig's ear to serve as a form of permanent identification.



Poultry Feeder

Metal or plastic container used to hold and store poultry feeder. Individual holes minimize waste and spillage.



Small Animal Nail Clipper

Used to safely clip the nails of small animals including dogs, cats, and rabbits.



Exhibitor Back Number Harness

Used to hold the exhibitor number during competition.



Air fryer

A kitchen appliance that uses superheated air to cook foods, giving results very similar to deep-frying or high-temperature roasting but without all the oil and fat needed to deep-fry. Is much more efficient and creates an intense environment of heat from which the food cannot escape.



Countertop Mixer

A countertop mixer (stand mixer) with different attachments that blends or beats ingredients, beats dough, or whips eggs. A handheld mixer can do many of the things a stand mixer can, but a stand mixer enables you to work hands free.



Kitchen Scales

A kitchen scale is specifically designed to measure various ingredients that are used for preparing all sorts of dishes. It can quantify liquid, dry, chopped or mixed ingredients and give the accurate weight measurement. That way, you do not have to rely solely on kilograms or pounds.



Grater

A device with sharp edged holes against which something is rubbed to reduce it to shreds. Which allows food (e.g. cheeses, spices, etc.) to be ground into much smaller pieces or shreds.



Food Processor

An appliance consisting of a container in which food is cut, sliced, shredded, grated, blended, beaten or liquidized. Used to prepare foods.



Bench Knife

Sometimes also called a bench scraper or dough scraper, is a flat, rectangular piece of steel with a handle along one edge. It's a sort of wide, dull knife that bakers use to divide, portion, scoop and transfer chunks of dough from one place to another.



Butter Dish

A small dish with cover used to store and serve butter.



Cake Icing Knife

A utensil designed especially for the use of spreading a substance onto a flat surface, such as frosting on a cake. It is also an ideal tool for applying spreads onto sandwiches in mass quantities.



Ground Meat Chopper

A non-stick-safe tool to break up ground meat while cooking. Silicone edge is great for scraping and transferring food out of pans



Instant-read Thermometer

A thermometer with a stainless-steel stem that serves as a temperature probe that is inserted into the meat. Can have either a dial or a digital readout.



Egg Separator

A spoon shaped utensil, which has a hole in the bottom and is used to separate the white from the yolk of the egg.

Navajo Term: Ch'iyáán íílééh

Pronouncaition: Ch-ee-Yawn-I-Leh

(Traditional Cooking Tools)



Navajo Stir Sticks (Ádítsiin)

Are made from Greasewood and used to stir hot items. Usually, seven sticks are tied together in a bundle. In the Navajo culture, the sticks represent seven stars and are often used in female womanhood ceremonies. They are believed to fend off hunger and poverty.



Grinding Stone (Tsédaashjéé')

A tool used to grind corn and seeds into flour or meal. Consists of two parts: a metate is a flat stone used with another stone (a mano) for grinding maize or other grains.



Corn Husk (Áádóó)

A tool that can be used to wrap food for grilling or baking. This method helps keep the food moist and adds a hint of corn flavor.

Rabbits General Knowledge Quiz Questions

1. What is a baby rabbit called?
 - a. Bunny
 - b. Kit
 - c. Doe
 - d. Buck
2. Large breeds of rabbits weigh?
 - a. 14 - 16 pounds
 - b. 9 - 12 pounds
 - c. 2 - 4 pounds
3. What age are rabbits sexually mature?
 - a. 3 - 8 months
 - b. Over 12 months
 - c. 9 - 12 months
4. Which of the following characteristics could be used to describe a “meat pen” of rabbits?
 - a. same breed
 - b. not over 10 weeks old
 - c. At least 3 pounds but not more than 5 pounds each
 - d. All of the above
5. What is the gestation period of a rabbit?
 - a. 28 - 33 days
 - b. 18 - 24 days
 - c. 35 - 45 days
 - d. 60 days

Answer Key:

- 1)B
- 2)A
- 3)A
- 4)D
- 5)A

Poultry General Knowledge Quiz Questions

1. A young chicken from hatch to five weeks of age is called?
 - a. Baby chick
 - b. Baby bird
 - c. Chicklings
2. What is the body temperature of a chicken?
 - a. 98.7 F
 - b. 106 F
 - c. 100 F
 - d. 88 F
3. A mature female greater than one year of age may be called a hen.
 - a. True
 - b. False
4. How long is the incubation period of a chicken egg?
 - a. 20 - 22 days
 - b. 25 - 28 days
 - c. 18 - 20 days
 - d. 30 - 32 days
5. What is the average life span of a chicken?
 - a. 2 - 4 years
 - b. 3 - 5 years
 - c. 6 - 7 years
 - d. 1 - 2 years

Answer Key:

- 1)C
- 2)B
- 3)A
- 4)A
- 5)B

Nutrition General Knowledge

Quiz Question

1. Shelled corn is used in rations primarily as a source of?
A Protein
B Fat
C Energy
D Minerals
2. Which of the following is not a legume?
A. Alfalfa
B. Bluegrass
C. Clover
D. Soybeans
3. A feed low in fiber and high in nutritional value is?
A Roughage
B Silage
C Haylage
D Concentrate
4. Which of the following is a mineral?
A Thiamine
B Riboflavin
C Copper
D Niacin
5. Which of the following is not considered an energy feed?
A Barley
B Steam Flakes
C Soybean Hulls
D Fish Meal
6. When feeding corn silage to lactating beef cows, which two nutrients are usually deficient?
A Calcium & phosphorous
B Calcium & protein
C Protein & energy
D Protein & phosphorous
7. A good source of protein for beef and sheep rations is:
A Grass
B Trace mineral salt
C Soybean meal
D Steak

Answer Key:

- 1) C
- 2) B
- 3) D
- 4) B
- 5) D
- 6) A
- 7) C

Veterinary General Knowledge Quiz Questions

1. Which substance is used to treat an animal with a disease?
 - A. Fertilizer
 - B. Vaccine
 - C. Antibiotic
 - D. Implant
2. Which of the following chemicals would not be used in a foot bath to treat foot rot?
 - A Copper Sulfate
 - B Formaldehyde
 - C Wormer
 - D All of the above
3. If we are to give a steer an intramuscular injection of a product which causes tissues irritation, which is the preferred injection site?
 - A Rump
 - B Quarter
 - C Loin
 - D Neck
4. Which of the following is not an example of internal parasites?
 - A Lung Worms
 - B Ticks
 - C Tape Worms
 - D Flukes
5. Which two types of twine should not be used to tie wool bags?
 - A Jute and Sisal
 - B Plastic and Sisal
 - C Plastic and Cotton
 - D Jute and Cotton
6. Which of the following occurrences can be prevented by vaccination?
 - A Foot Rot
 - B Founder
 - C Brucellosis
 - D Overeating Disease
7. A symptom of bloat is?
 - A Lameness
 - B Abortion
 - C Bulging on the left side
 - D Severe bulging on the right side
8. The mating of animals of different breeds is known as?
 - A Inbreeding
 - B Rebreeding
 - C Crossbreeding
 - D None of the above

Veterinary General Knowledge

9. The female reproductive organ where the embryo develops is called?
A Uterus
B Ovary
C Oviduct
D Cervix
10. What is an animal called that has two or more breeds in its ancestry?
A Crossbred
B Purebred
C Toxoplasmosis
D Goiter
11. What does A.I. stand for (as it pertains to animal agriculture)?
A Adjusted information
B Artificial intelligence
C Adjusted intake
D Artificial insemination
12. An animal whose sire and dam are both from the same breed is called a _____.
A Grade
B Outcross
C Crossbred
D Purebred
13. What is the inflammation, becoming infected and hardening of the udder called:
A Constipation
B Lactation
C Productivity
D Mastitis

Answer Key:

- 1) C 8) C
2) C 9) A
3) D 10) A
4) B 11) D
5) A 12) D
6) C 13) D
7) C

Processing General Knowledge

1. Which quality grade of beef is not sold in grocery stores?
A Prime
B Choice
C Good
D Select
2. Which of the following is the poorest quality grade for cattle?
A Prime
B Standard
C Choice
D Select
3. What are the top 5 USDA beef carcass cutability grades, from leanest to fattest?
A Prime, choice, select, standard, utility
B Utility, Cutter, Commercial, Standard, Select
C Utility standard, select choice, prime
D Select, Standard Commercial, Cutter, Utility
4. What is the term for money made on a hog after the purchase price and cost of raising is subtracted from the selling price?
A Initial Cost
B Invoice
C Profit
D Loss
5. Which of the following is not a factor in determining beef yield grade?
A Rib eye area
B Age
C Carcass weight
D Live weight
6. The small flecks of fat in a cut of beef which gives meat its flavor and is also one of the factors' indicating quality is called:
A Seam Fat
B Marbling
C External Fat
D Speck Fat

Answer Key:

- 1) C
- 2) B
- 3) B
- 4) C
- 5) A
- 6) B

Cattle General Knowledge

1. What is another word for calving difficulty?
A Laminitis
B Founder
C Enterotoxemia
D Dystocia
2. At what age should a heifer first be bred?
A 9 months
B 12 months
C 15 months
D 20 months
3. Two seasons of the year when most purebred calves are born?
A Spring and Fall
B Spring and Winter
C Summer and Fall
D Fall and Winter
4. The largest compartment of the 4-part stomach of cattle or sheep is the?
A Cecum
B Reticulum
C Abomasum
D Rumen
5. When selecting a bull to breed to heifers, which piece of information would be helpful in predicting the birth weight of his calves?
A His birth weight
B His sire's birth weight
C His birth weight EPD
D His frame size

Answer Key:

- 1) D
- 2) B
- 3) B
- 4) D
- 5) C

Sheep General Knowledge

1. A two-year old sheep will have how many permanent front teeth?
A 2
B 4
C 6
D 8
2. What is another name for white muscle disease?
A Grass Tetany
B Bloat
C Hypomagnesemia
D Stiff lamb disease
3. Which term refers to sheep?
A Ovine
B Bovine
C Porcine
D Equine
4. What is the term used to describe a castrated male sheep?
A Steer
B Wether
C Gelding
D Buck
5. When a lamb is born, you should.....
A Check the ewes' udder
B Identify the lamb
C Dip the navel in an iodine solution
D All of the above
6. What is the first milk from a ewe called?
A Lactaid
B Colostrum
C Syrup
D Milk
7. Which of the following is a hair breed of sheep?
A Hampshire
B Soughdown
C Lincoln
D Dorper
8. What is the carcass from an old sheep called?
A Rack of Lamb
B Easter Lamb
C Mutton
D Leg of Lamb
9. Lambs born in this month would be the least costly to raise?
A December
B January
C February
D April

Answer Key:

1)B 2)D 3)A 4)B 5)D 6)B 7)D 8)D 9)C

Goat General Knowledge

1. What is goat meat called?
 - A. Mutton
 - B. Cabrito
 - C. Chevron
 - D. Both B&C
2. What breed of goat is all white?
 - A. Angora
 - B. Boar
 - C. Saanen
 - D. All of the Above
 - E. Both A & C
 - F. Both B& C
3. What should a goat's navel be dipped in immediately after being born?
 - A. Alcohol
 - B. Iodine
 - C. Colostrum
 - D. Water
4. How many compartments does a goat stomach have?
 - A. 1
 - B. 3
 - C. 2
 - D. 4
5. What is the best food for goat kids less than 4 months old?
 - A. Milk
 - B. Alfalfa
 - C. Corn
 - D. Water
6. Which state has the most goat dairies?
 - A. Texas
 - B. New Mexico
 - C. Wisconsin
 - D. Indiana
7. How many teats should a goat have?
 - A. 1
 - B. 2
 - C. 4
 - D. 0
8. During what season of the year are both dairy and meat goats most likely to get pregnant?
 - A. Winter
 - B. Summer
 - C. Spring
 - D. Fall

Goat General Knowledge

9. What part of a goat is directly above the hoof and below the dewclaw?
A Pastern
B Knee
C Hock
D Wither
10. Which state in the US has the highest meat goat population?
A Oklahoma
B Texas
C California
D Kentucky
11. What is the reproductive organ in a doe where kids grow and develop?
A Fallopian Tube
B Uterus
C Cervix
d None of the above
12. What is the term that refers to a sheep or goat that has a jaw defect in which the top jaw is overshot (teeth hit in the back of the dental pad)?
A Monkey Mouth
B Scrapie
C Parrot Mouth
D Spider Syndrome

Answer Key:

- 1) D 8) D
2) E 9) A
3) B 10) B
4) D 11) B
5) A 12) C
6) C
7) B

Swine General Knowledge

1. Which breed of swine has erect ears?
A Tamworth
B Duroc
C Chester White
D Landrace
2. The average dressing percent of a market hog is?
A 40%
B 50%
C 60%
D 70%
3. A castrated male pig is called a?
A Steer
B Wether
C Barrow
D Gilt
4. How old should a gilt be when she first farrows?
A 7 months
B 1 Year
C 2 Years
D 3 Years
5. What breed of hogs originated in Pennsylvania?
A Poland China
B Herford
C Duroc
D Chester White
6. How old should gilt be when they are bred?
A 6-7 months of age
B 8-9 months of age
C 12-13 months of age
D 15-16 months of age
7. What is the average length of gestation in pigs?
A 28 days
B 114 days
C 150 days
D 283 days
8. What is the average weight in pounds when hogs are marketed for slaughter?
A 170 lbs -190 lbs
B 240 lbs -280 lbs
C 180 lbs -200 lbs
D 300 lbs -350 lbs

Swine General Knowledge

9. What are the main two feed ingredients in a swine ration?
A Corn and Soybean Meal
B Lysine and Corn
C Ivomec and Barley
D Ground Limestone and Soybean Meal
10. What is a baby pig born dead called?
A Weanling
B Active
C Barrow
D Stillborn
11. Which sex tends to be the heaviest in a group of hogs that are the same age?
A Gilt
B Barrow
C Boar
D No difference
12. Ear notches on the left side of swine denote the _____?
A. Size
B. Litter
C. Number
D. Age

Answer Key:

- 1) A 8) B
2) D 9) A
3) C 10) D
4) A 11) B
5) D 12) C
6) A
7) B

Equine General Knowledge

1. A stallion does not reach full reproductive capacity until years of age?
A 2
B 3
C 4
D 5
2. What is the term for a mare that has never been bred?
A Maiden
B New
C Virgin
D Young
3. Which of the following is not a part of a horse's foot?
A Pastern
B Frog
C Sole
D White line
4. How tall is a 14.2 hand equine?
A 48 inches
B 52 inches
C 56 inches
D 58 inches
5. The mother of a horse is called a ?
A Dam
B Dame
C Damsel
D Lady
6. The father of a horse is called a .
A Lord
B Mare
C Pater
D Sire
7. The are attached to the bit and used by the rider to communicate with the horse.
A Dams
B Ears
C Foals
D Reins
8. This type of saddle is rugged; seat is medium deep for added security; always has a back cinch.
A All-purpose Saddle
B Barrel Racing Saddle
C Endurance Saddle
D Roping Saddle

Equine General Knowledge

9. What is the approximate capacity of a horse's stomach?
A 4 gallons
B 5 gallons
C 12 gallons
D 3 quarts
10. Where on the horse is the pastern bone located:
A Head
B Leg
C Neck
D Tail
11. What part of the body supports the weight of the saddle and rider?
A Hind Quarter
B Neck
C Rump
D Back
12. The _____ is a rope attached to the halter for leading.
A Cinch
B Lead Rope
C Tree
D War Bridle
13. The back of the saddle is the _____ .
A Bosal
B Cantle
C Cinch
D Honda
14. What is the most important winter feed for horses?
A Beet pulp
B Corn
C Hay
D Oats
15. What features of the horse can be used to determine age?
A Eyes
B Hair Coat
C Legs
D Teeth
16. A _____ is a person who works on horses' feet.
A Farrier
B Float
C Manger
D Shoderr

Equine General Knowledge

17. Horses drink _____ to _____ gallons of water a day.

- A 1 to 2
- B 4 to 6
- C 10 to 12
- D 5 to 10

18. The leather flap on the side of an English saddle covering area where the stirrup attaches to the saddle is called the _____ ?

- A Cantle
- B Girth
- C Panels
- D Skirt

Answer Key:

- | | |
|------|-------|
| 1) B | 10) B |
| 2) A | 11) B |
| 3) A | 12) B |
| 4) D | 13) B |
| 5) A | 14) C |
| 6) D | 15) D |
| 7) D | 16) A |
| 8) A | 17) D |
| 9) A | 18) D |

Financial General Knowledge

1. Financial Goals should be:
A Specific and Realistic
B Verbal
C Flexible
D Both A and C
2. Credit reports are used to determine your credit:
A Standing
B Need
C Worthiness
D None of the above
3. True or False: You should consider the weather in planning a garage sale?
True
False
4. What should you do before signing a contract?
A Read it
B Look for blank lines or spaces
C Consult an attorney
D All of the above
5. You should always pay for services up front to guarantee you get results.
True
False

Answer Key:

- 1) D
- 2) A
- 3) True
- 4) D
- 5) True

Fabric General Knowledge

1. A fabric that is strong and elastic?
 - A. Leather
 - B. Spandex
 - C. Cotton
 - D. Silk
2. _____ used for cutting fabric, not paper. They are 7-8 inches long, are sharp, and have bent handles making them easier to cut with.
 - A. Knief
 - B. Shears
 - C. Pliers
 - D. Seam Ripper
3. _____ a fold in cloth made by doubling the material upon itself and then pressing or stitching it into place.
 - A. Zipper
 - B. Button
 - C. Hem
 - D. Rip
4. _____ is a cylinder on which thread is wound for sewing. Holds the bottom thread.
 - A. Lever
 - B. Spool
 - C. Needle
 - D. Bobbin
5. The _____ is part of the upper threading sequence, they direct the flow of thread to keep the tread going straight in one direction.
 - A. Stitch Selector
 - B. Thread Guide
 - C. Pressure Foot
 - D. Tension Control

Answer Key:

- 1) B
- 2) B
- 3) C
- 4) D
- 5) B

Navajo Based General Knowledge

1. What three states make up the Navajo Nation?
 - A. New Mexico, Utah, and California
 - B. New Mexico, Arizona, and Utah
 - C. Arizona, California, Utah
 - D. Utah, Colorado, South Dakota
2. What is used to make blue corn mush blue in color?
 - A. White corn
 - B. Juniper Ash
 - C. Food Coloring
 - D. Sugar
3. What is the Navajo word for the term Navajo Tea?
 - A. Dilchxoshí
 - B. Dééh
 - C. Tó
 - D. Gohwééh
4. What sheep breed was created by the Navajo people?
 - A. Churro
 - B. Suffolk
 - C. Rambouillet
 - D. Chevron

Answer Key:

- 1) B
- 2) B
- 3) B
- 4) A

Navajo Term: Ch'iyáán

Pronunciation: Ch-ee-yawn

(Feeds-Nutrition)

Water- The most critical component of any ration. Is needed for most of the physiological functions in the body. Animals should always have access to this nutrient to prevent illness or death.

Protein- Is needed for the structuring of muscles, skin, hair, and internal organs and the only source of nitrogen. Crude protein is noted on feed labels to indicate the protein level in that feed.

Energy- Allows the animal to do physical work. It provides the ability to grow, lactate, reproduce, digestion, and other functions. Total digestible nutrient (TDN) is the energy value most commonly used in simple rations.

Fiber- Crude fiber is an estimate of structural carbohydrates found in plants and grains. Fiber helps regulated the digestive



Shelled Corn

Most extensively produced feed grain in U.S. Typically the energy standard to which other grains are compared. Has a high energy content, but low in protein and low fiber content. Usually processed in some way prior to feeding (ground, cracked, steam, flaked, etc.).



Whole Oats

Widely grown in cool, moist climates of the U.S. Compared to corn, it is lower in energy and higher in protein. Used extensively in horse feeds and feeds for starting young animals. Can be fed whole, but usually processed prior to feeding (rolled, ground, crushed, crimped, steamed, etc.).



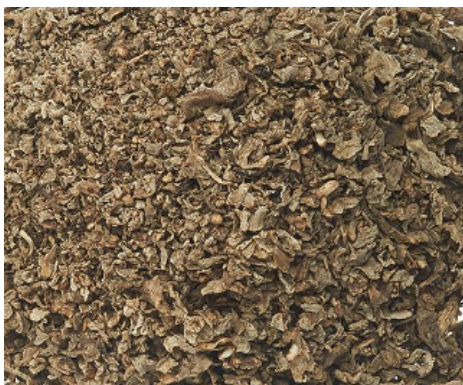
Dehydrated Alfalfa Pellets

Excellent feedstuff for horses and ruminants (high in protein, minerals, and vitamins). Lower fiber content than traditional alfalfa hay. Limited use in monogastric diets (sometimes used as a laxative in prefarrowing sow diets).



Soybean Meal

Most widely used protein supplement in the U.S. Produced by grinding the flakes that remain after oil is extracted from whole soybean. Very palatable with the highest nutritional value of any plant protein source. Excellent source of protein and amino acids.



Dried Beet Pulp

Produced by extracting the sugar from sugar beets and drying the remaining pulp. Good source of digestible fiber for ruminants and horses. Sometimes added to sow diets to prevent constipation. Often soaked before feeding to horses, so they don't get choke



Vegetable Oil

A very potent energy (fat) source supplying about 2.25 times more energy than starch or sugar. Used primarily to increase the caloric density of the diet. Increases diet palatability. Sometimes added to diets to reduce dustiness.



Liquid Molasses

Liquid by-product of the manufacture of sugar from either sugar beets, or more commonly, sugarcane. Highly palatable, readily available source of energy. Most commonly added to ruminant and horse diets.



Alfalfa

High quality, cool season perennial legume with an extensive root system that makes it drought resistant. Can grow to heights of 2 to 3 feet. Grows best in hot, dry climates in soils that are deep, fertile, and well drained. As a pasture forage, it is not very tolerant to continuous grazing ruminants. As hay it is very palatable, high in protein, and excellent for general feeding purposes.



Oat Hay

Annual or perennial grass that grows in dense, upright clumps. Can reach heights of 2 to 4 feet at maturity. High-quality, palatable forage that is well-suited for grazing and hay production, especially in cooler climates. Drought tolerant and resistant to cold, but not tolerant of excessive heat or frequent cutting.



Timothy

Perennial bunchgrass with a fairly shallow and fibrous root system. Can grow to heights of 2 to 5 feet in seed head stage. Primarily a hay plant but can be used for pasture when part of a mixture - grows well with Alfalfa and (or) Red Clover. Disadvantages include a short stand life, low quality when cut late, clumpy growth habits, and sensitivity to hot temperatures.

Practicum Section

Navajo Term: Dééh

Pronunciation: D-e-H

(Navajo Tea)

Scientific Name: Thelesperma Subnudum

Navajo word : Ch'ilgohwéhí'déí

Plant type: Forb

Growing season: Warm season

Habitats: Piñon- Juniper woodland and brushlands

Flower color: Yellow

Bundling Navajo tea

Harvesting Navajo Tea

- Harvest by cutting plant stem two inches from its base to encourage a resprout.
- The plant is most favorable before the flower opens.

Preparation of bundle

- After harvesting plant stems, gather the stems together make a bundle that is about 1 inch wide.
- Gently fold the stems from one end to another and repeat the process twice.
- The bundle should be 1 inch in width, used another single stem to wrap around and tie the bundle together.
- Wrap the single stem around the bundle tightly.
- The bundle can then be stored in a cool dry place or in a container until ready to use.

Making Navajo Tea

- 1) Fill a coffee or tea pot with water.
- 2) Heat the water on the stove.
- 3) 1 tea bundle for 32 oz of water.
- 4) Add Navajo tea bundles to the tea pot.
- 5) Let it boil until brown, red color appears.
- 6) Pour and serve.



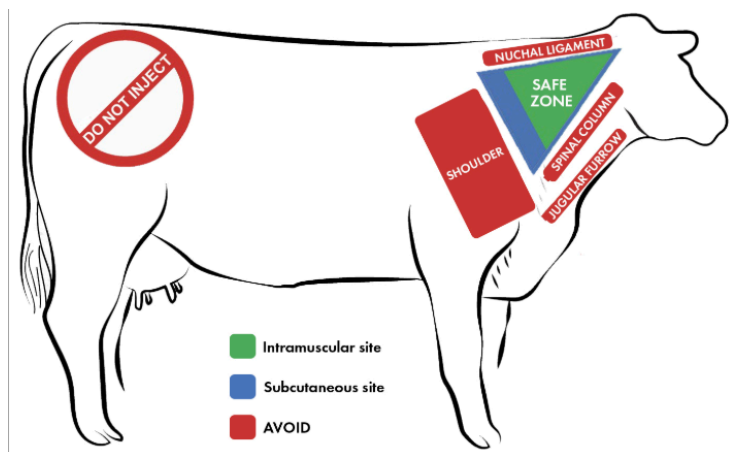
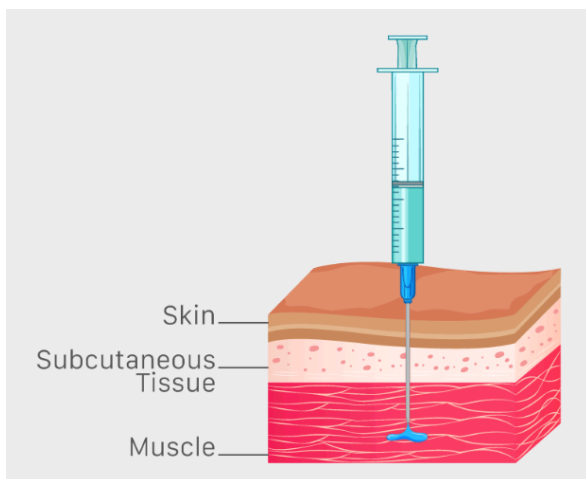
Administering Injections

Intramuscular (IM) Injection

An IM injection is typically given into a muscle. This method is commonly used for larger volumes of medication.

Steps for IM Injection:

1. Choose the injection site: For cattle, the neck muscle is the preferred site (avoiding the meat cuts and near the spinal cord). For swine, the neck or hindquarters are common. For sheep and goats, the neck or hind leg is appropriate.
2. Clean the area: Use an alcohol swab to clean the area where the injection will be given.
3. Insert the needle: Use a sterile needle (typically 1.5 to 2 inches for larger animals) at a 45-degree angle to the skin. Aim for the muscle tissue, avoiding veins and nerves.
4. Inject the medication: Insert the needle, draw back the plunger (aspiration), and ensure there is no blood. If there is blood, you have hit a vein, so adjust the needle placement.
5. Withdraw the needle: Once the medication has been injected, remove the needle quickly and apply pressure to the site.

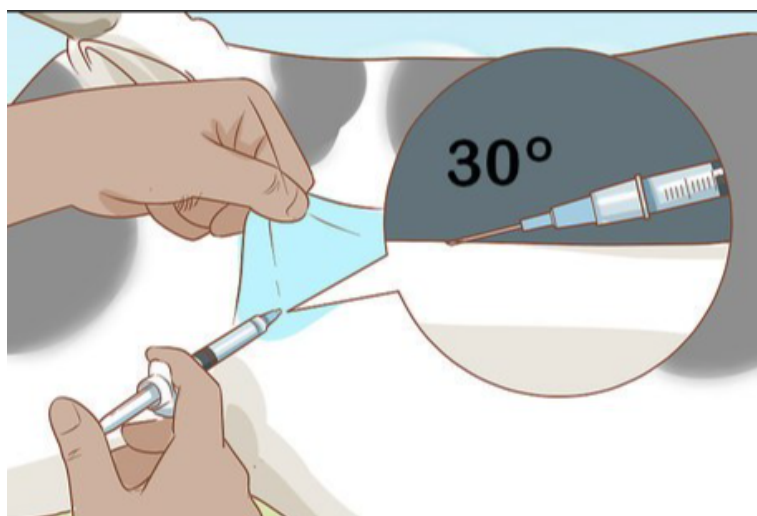
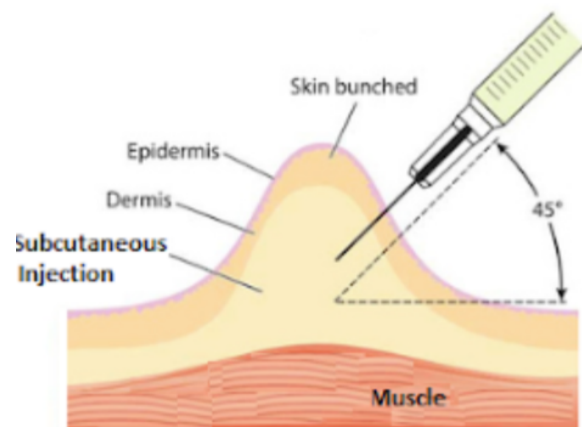
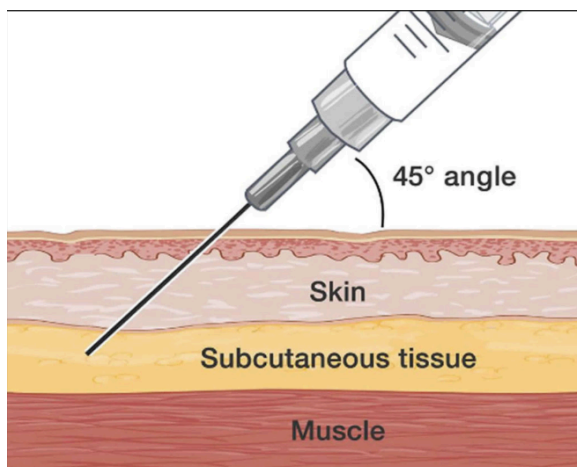


Subcutaneous (SQ) Injection

Subcutaneous injections are administered just beneath the skin and are typically used for fluids and certain medications.

Steps for SQ Injection:

1. Choose the injection site: Common sites for livestock are the loose skin over the neck or behind the shoulder. In swine, the neck is often used. In sheep and goats, the loose skin over the neck or flank is ideal.
2. Clean the area: Wipe the injection site with an alcohol swab to disinfect.
3. Insert the needle: Use a shorter, smaller needle (usually $\frac{1}{2}$ to 1 inch) and insert it at a 30- to 45-degree angle to the skin.
4. Gently lift the skin to form a “tent” and insert the needle just below the skin.
5. Inject the medication: Slowly push the plunger to administer the medication.
6. Withdraw the needle: Once the injection is complete, quickly remove the needle and gently massage the area.

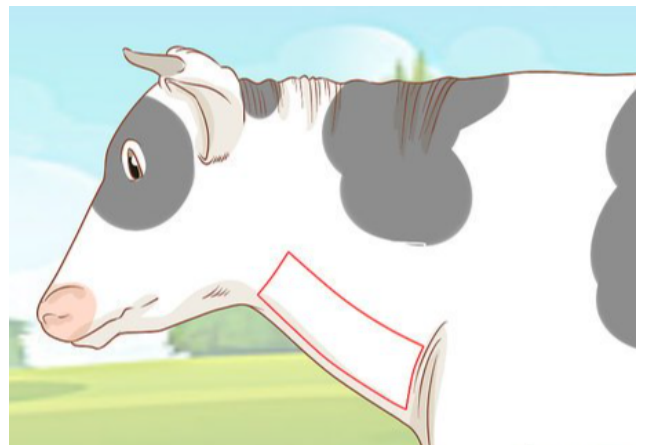
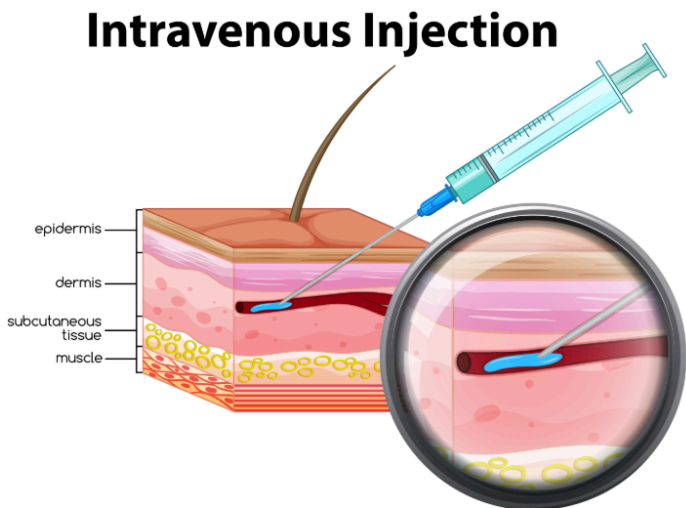


Intravenous (IV) Injection

IV injections are given directly into a vein and are often used for fluids or medications that need to act quickly.

Steps for IV Injection:

1. Choose the injection site: For cattle, the jugular vein (on either side of the neck) is the most common. For sheep, goats, and swine, the jugular vein or ear vein can be used.
2. Clean the area: Wipe the site with an alcohol swab to disinfect.
3. Locate the vein: For the jugular vein, gently press on the vein to make it more prominent.
4. Insert the needle: Use a longer needle (1.5 to 2 inches) at a 15- to 20-degree angle to the skin, aiming toward the vein.
5. Once the needle is in the vein, you should see a flash of blood in the hub of the needle if you draw back slightly on the syringe plunger (this indicates you're in the vein).
6. Inject the medication: Once you confirm proper placement, slowly inject the medication.
7. Withdraw the needle: Remove the needle and apply pressure to the vein to stop any bleeding.

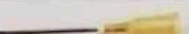
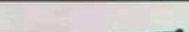
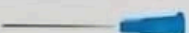
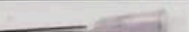
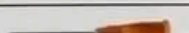


General Tips:

- **Sterility:** Always use sterile needles and syringes and ensure proper sanitization.
- **Needle Size:** Choose needle sizes appropriate for the animal and medication volume (e.g., larger animals typically require larger needles).
- **Site Rotation:** Avoid injecting in the same location repeatedly to prevent tissue damage or scarring.
- **Monitor for Reactions:** After the injection, observe the animal for any signs of swelling, inflammation, or adverse reactions.
- **Restraint:** Ensure the animal is properly restrained during the procedure to prevent injury to both the animal and handler.

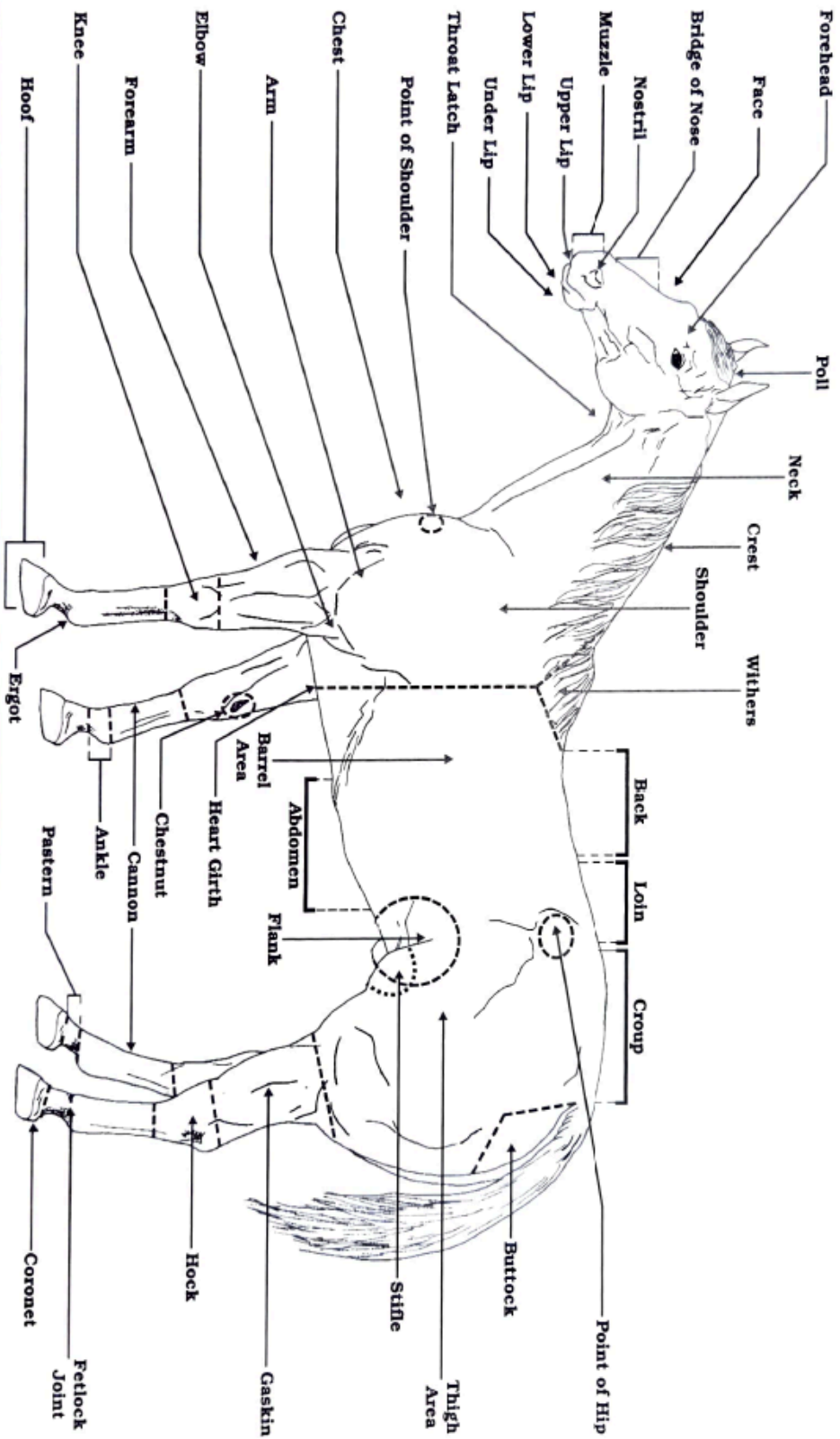
Conclusion

Proper injection techniques help ensure the health of livestock and the safety of both the animals and the person administering the injection. Always follow veterinary guidelines and consult with a veterinarian for specific instructions on medication, dosage, and injection sites based on the species and individual health conditions of the animal.

NEEDLE GAUGE SIZE CHART				
S.No	Gauge size	Colour	Needle	Species used in
1	16G	WHITE		Cattle and Horses
2	18G	PINK		Cattle, Horse, Swine
3	19G	CREAM		Cattle, Horse, Swine
4	20G	YELLOW		Sheep, Goat, Piglets
5	21G	GREEN		Large Dogs, Kids of small ruminants
6	22G	BLACK		Small Animals
7	23G	BLUE		Dogs and Cats
8	24G	MEDIUM PURPLE		Puppies and Kittens
9	25G	ORANGE		Poultry and Kittens
10	26G	BROWN		Lab animal
11	31G	INSULIN NEEDLE		Poultry and Lab animals



Parts of a Horse



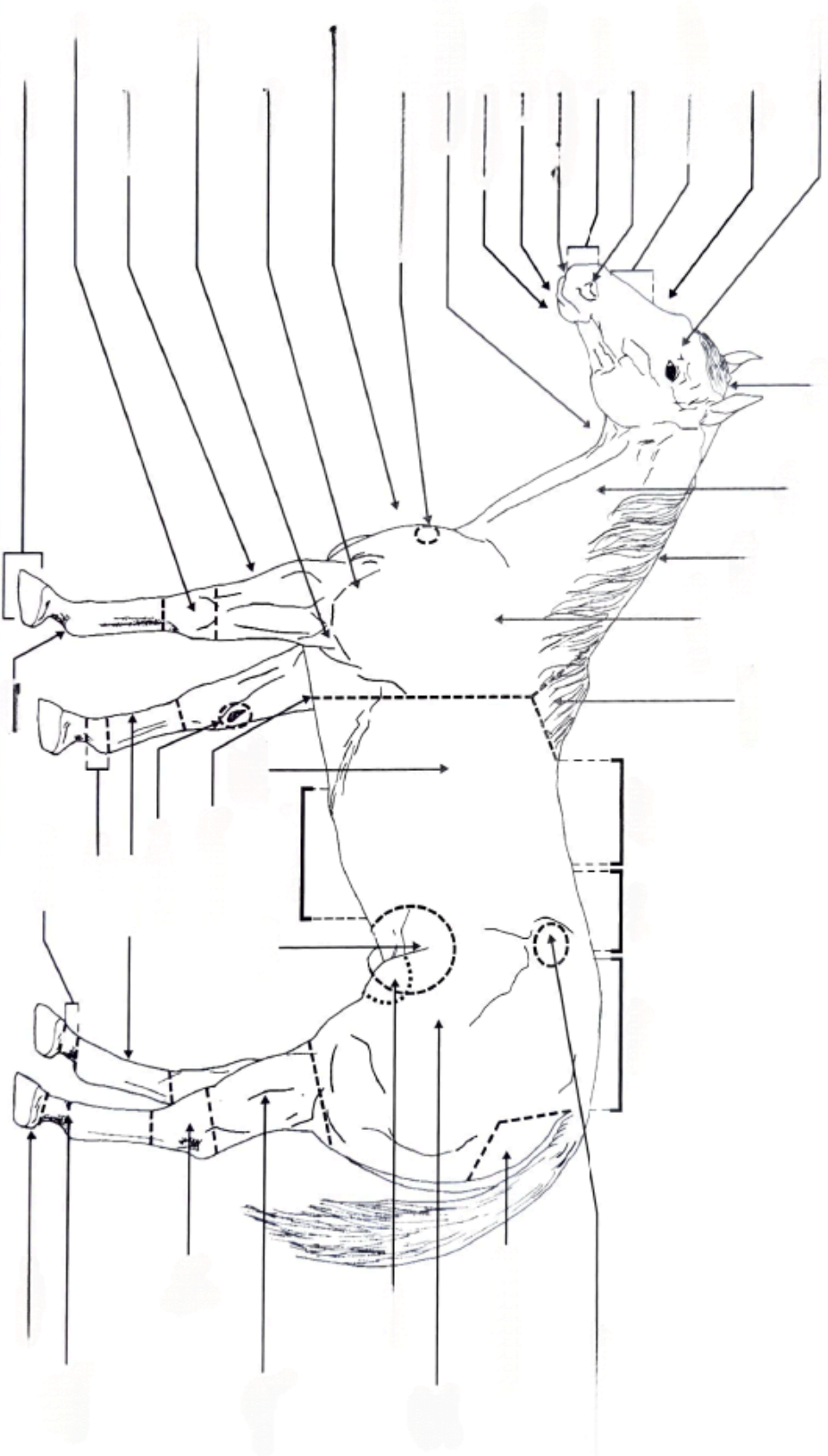
HORSE

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Exploratory Learning: Educational Program

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Parts of a Horse



HORSE

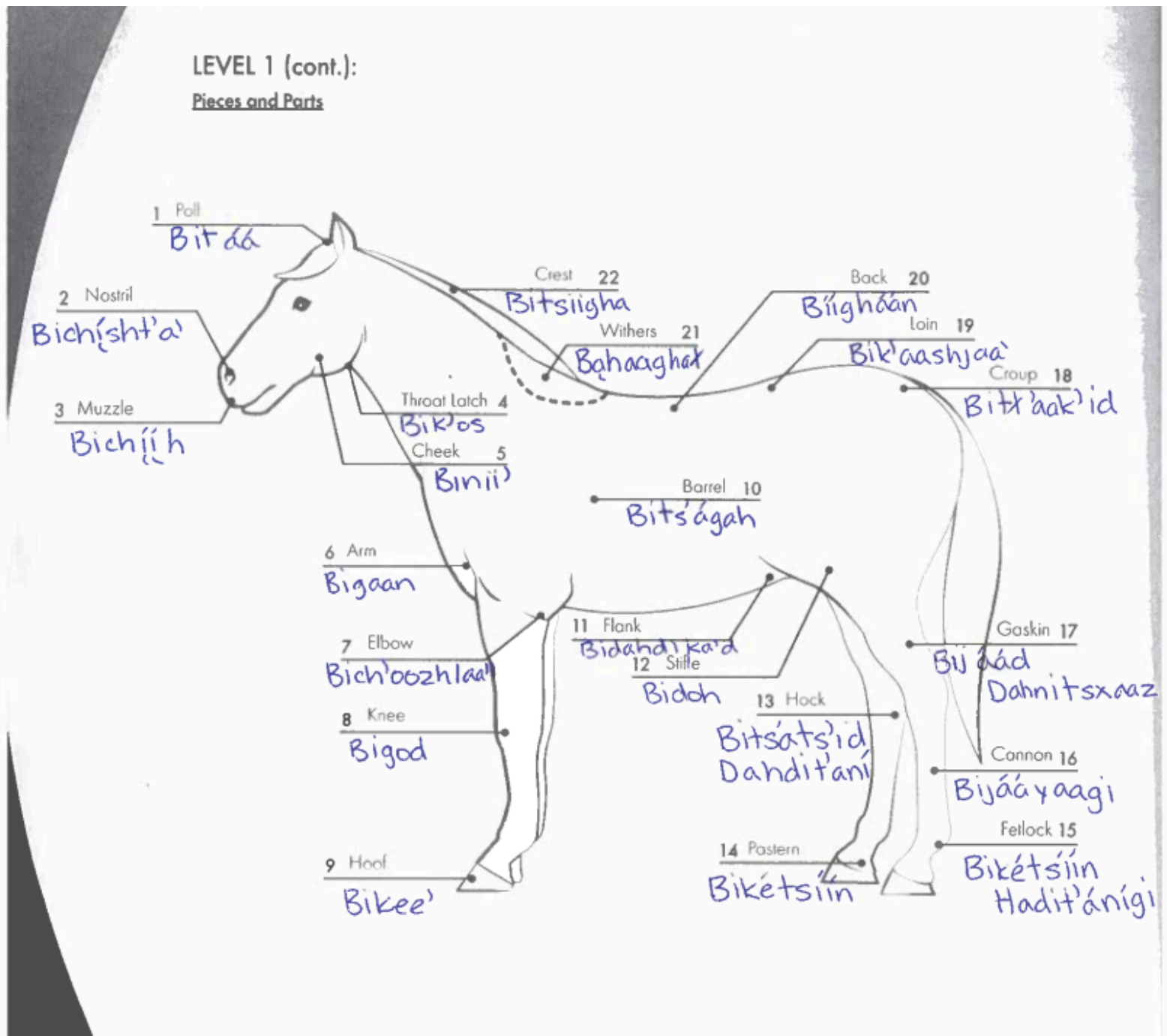
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Exploratory Learning: Educational Program

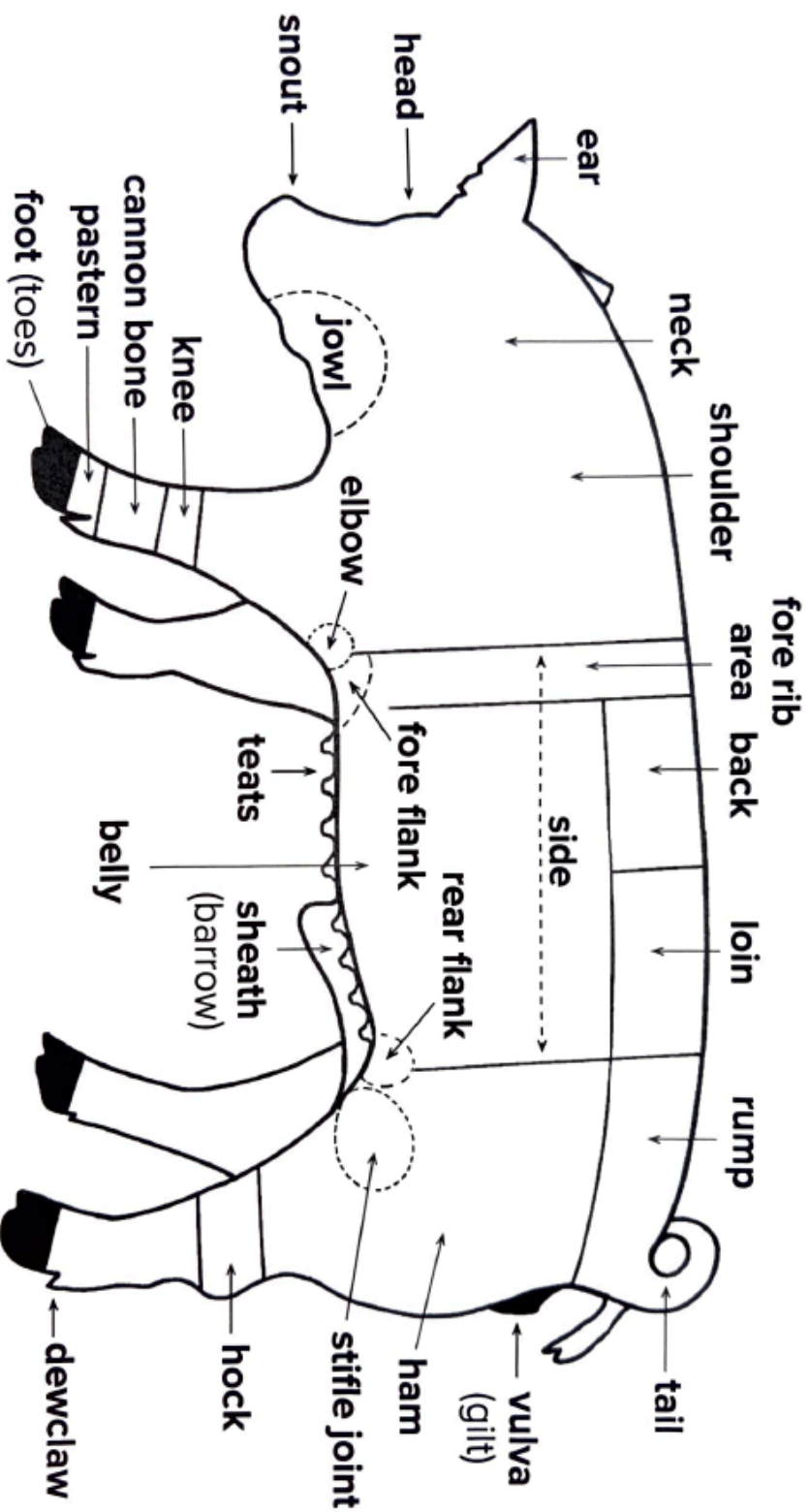
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Horse Anatomy

English & Navajo Body Part Identifications

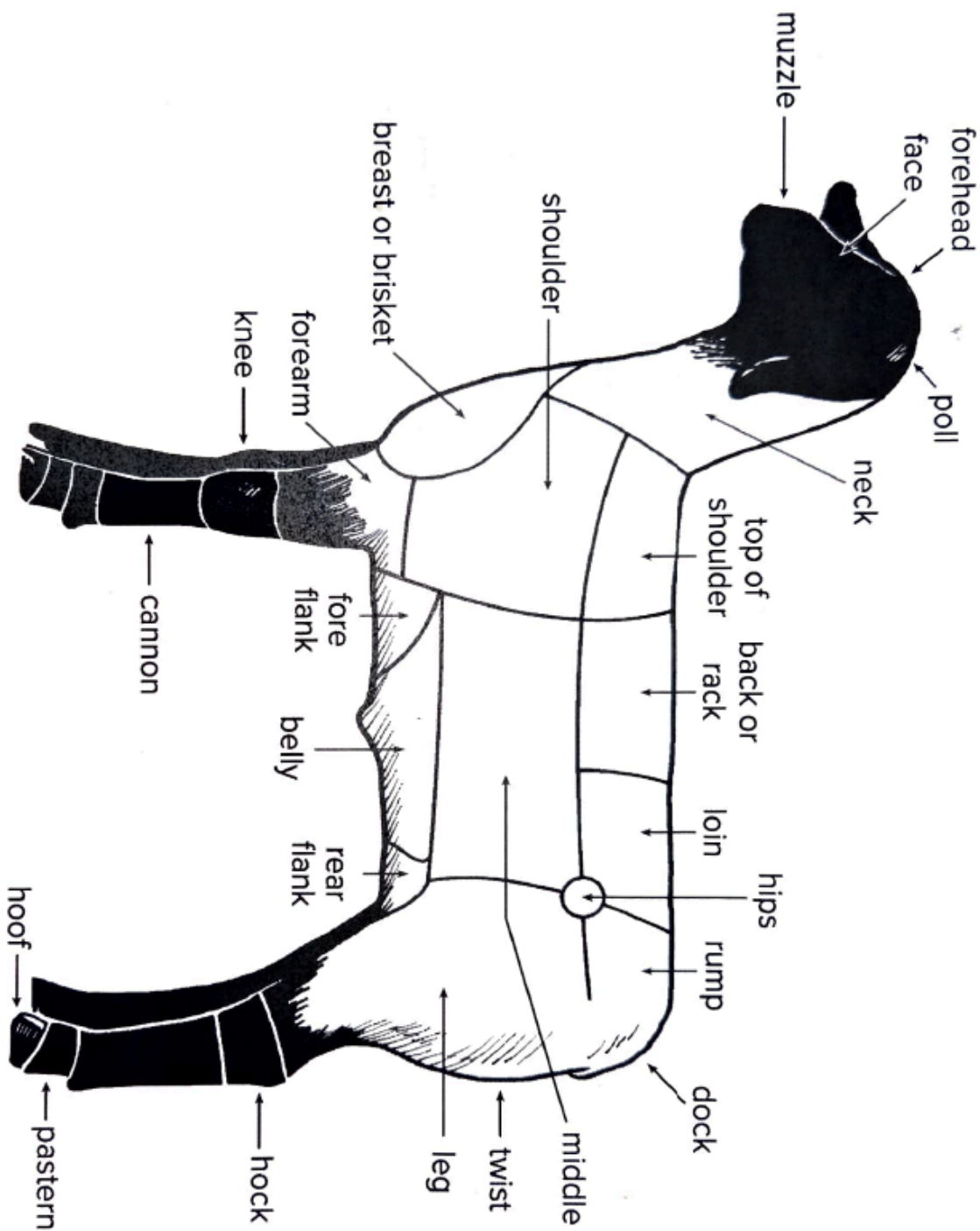


Parts of a Hog

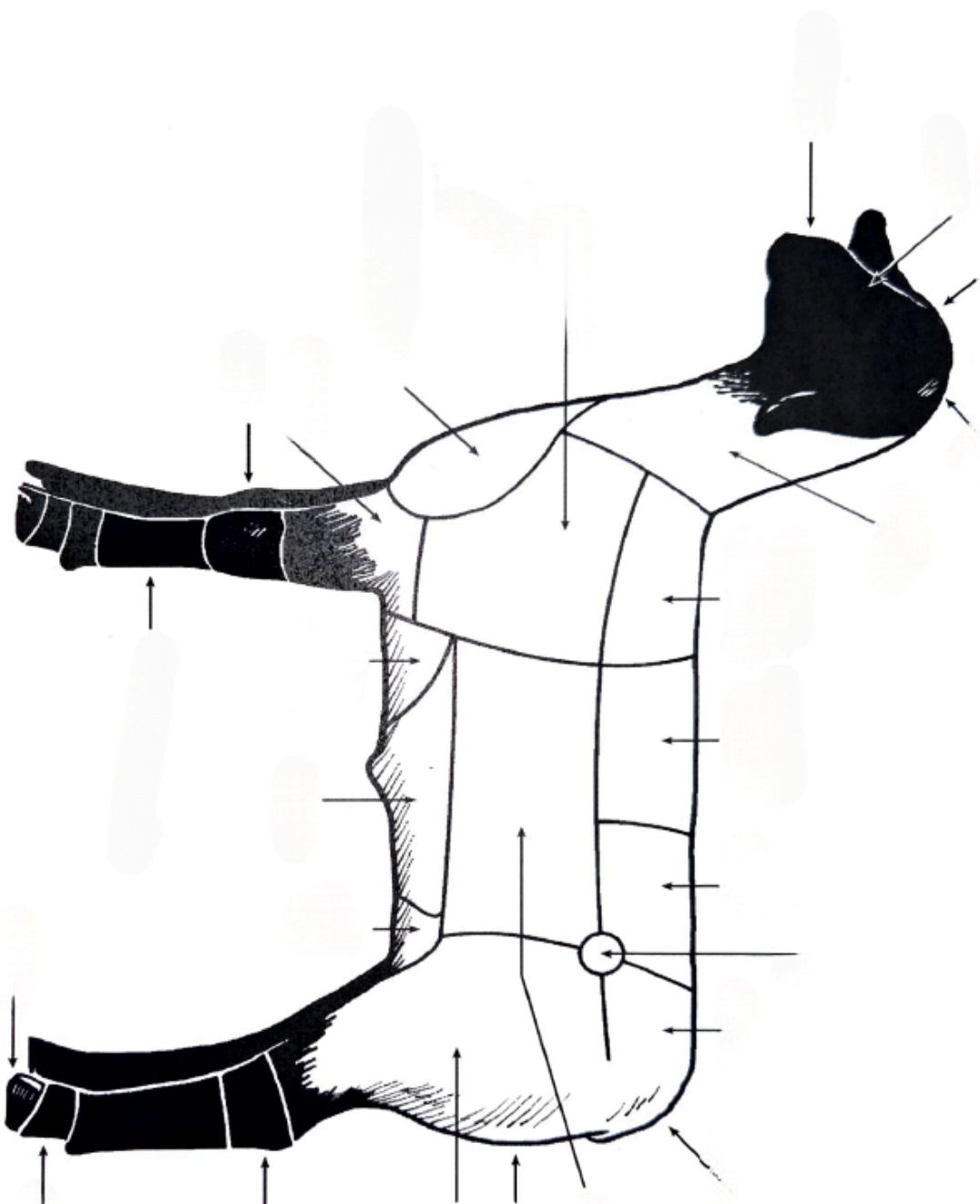


6009 SWIN_LUX_PNT_AMT

Parts of a Sheep

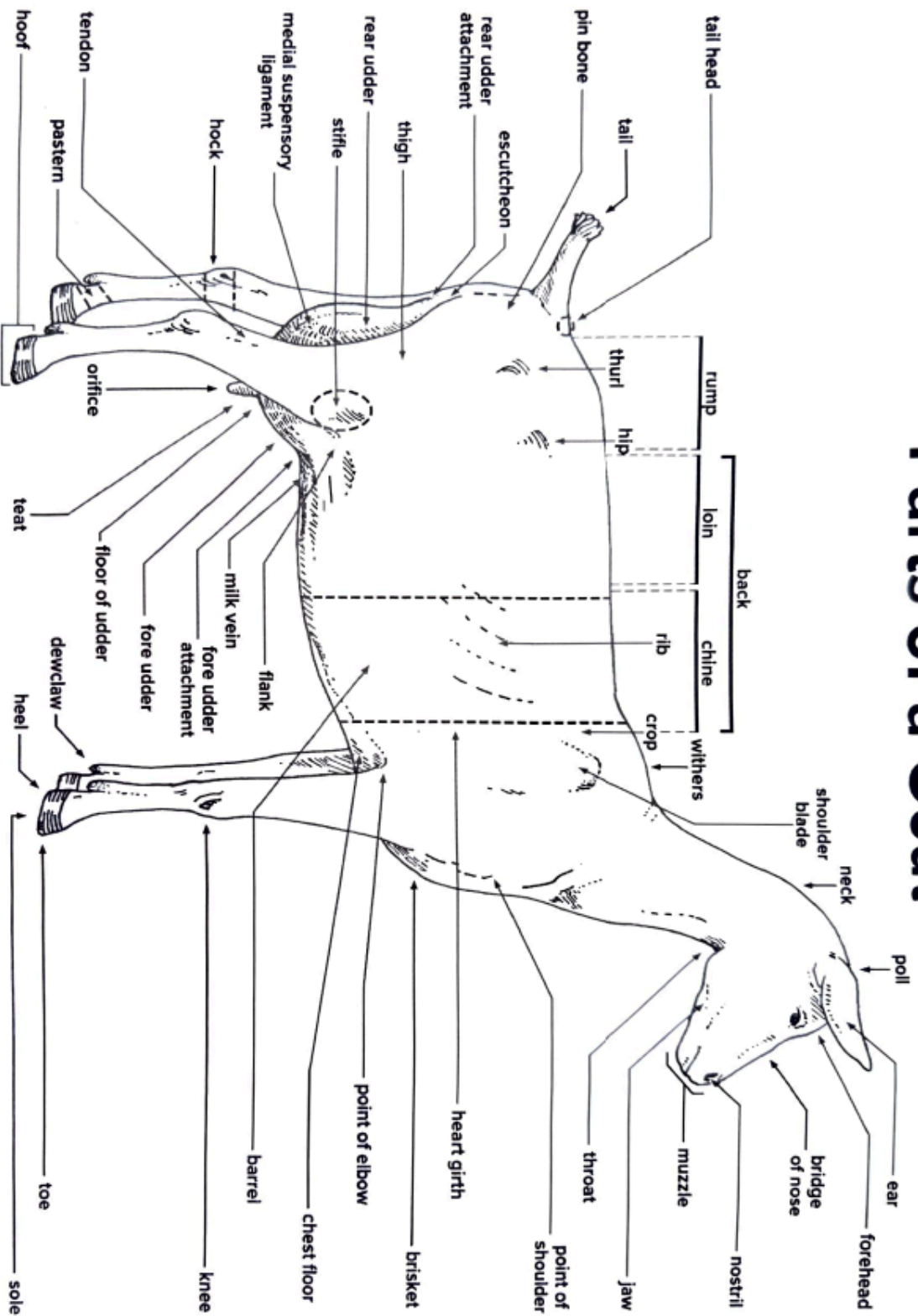


Parts of a Sheep

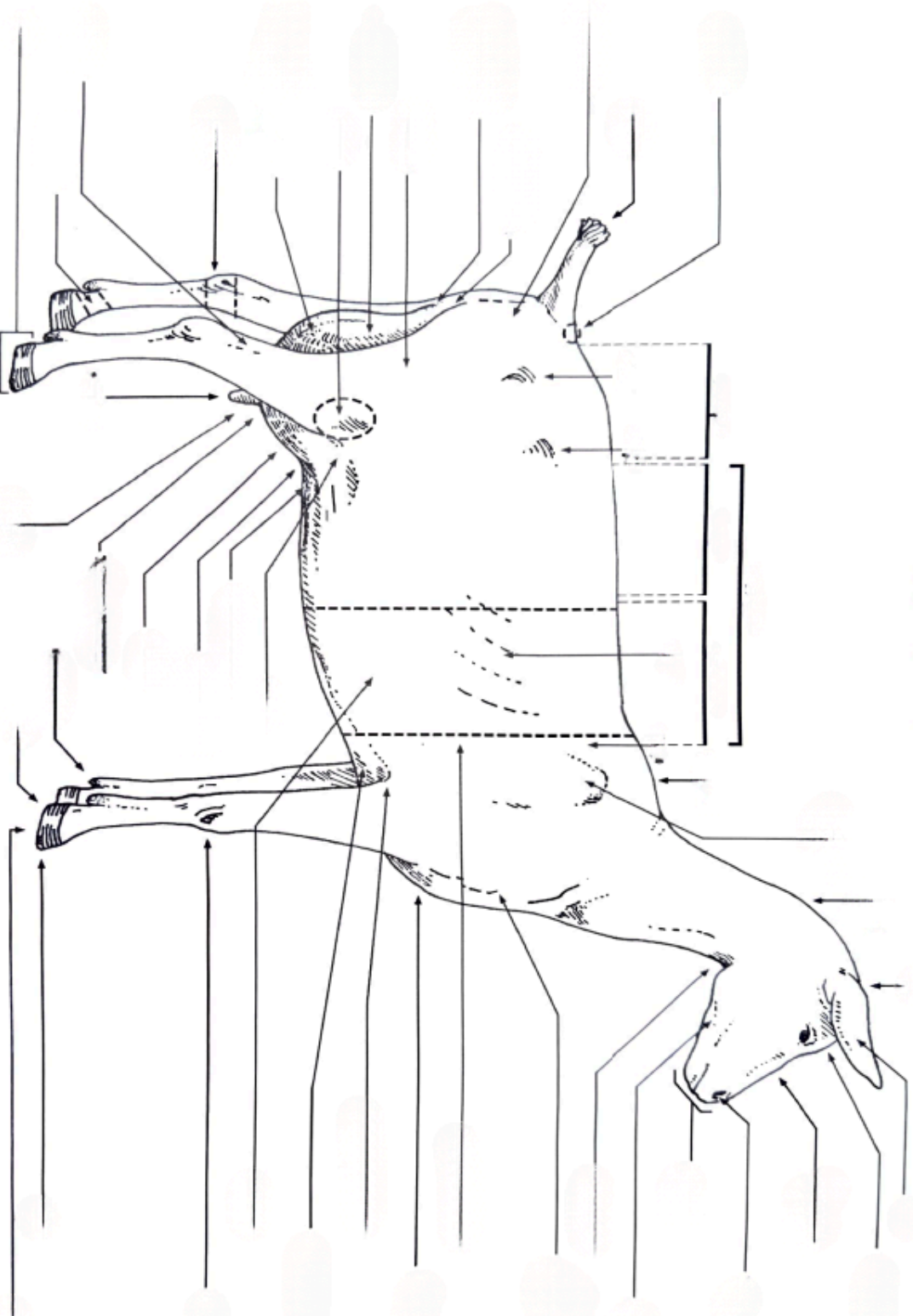


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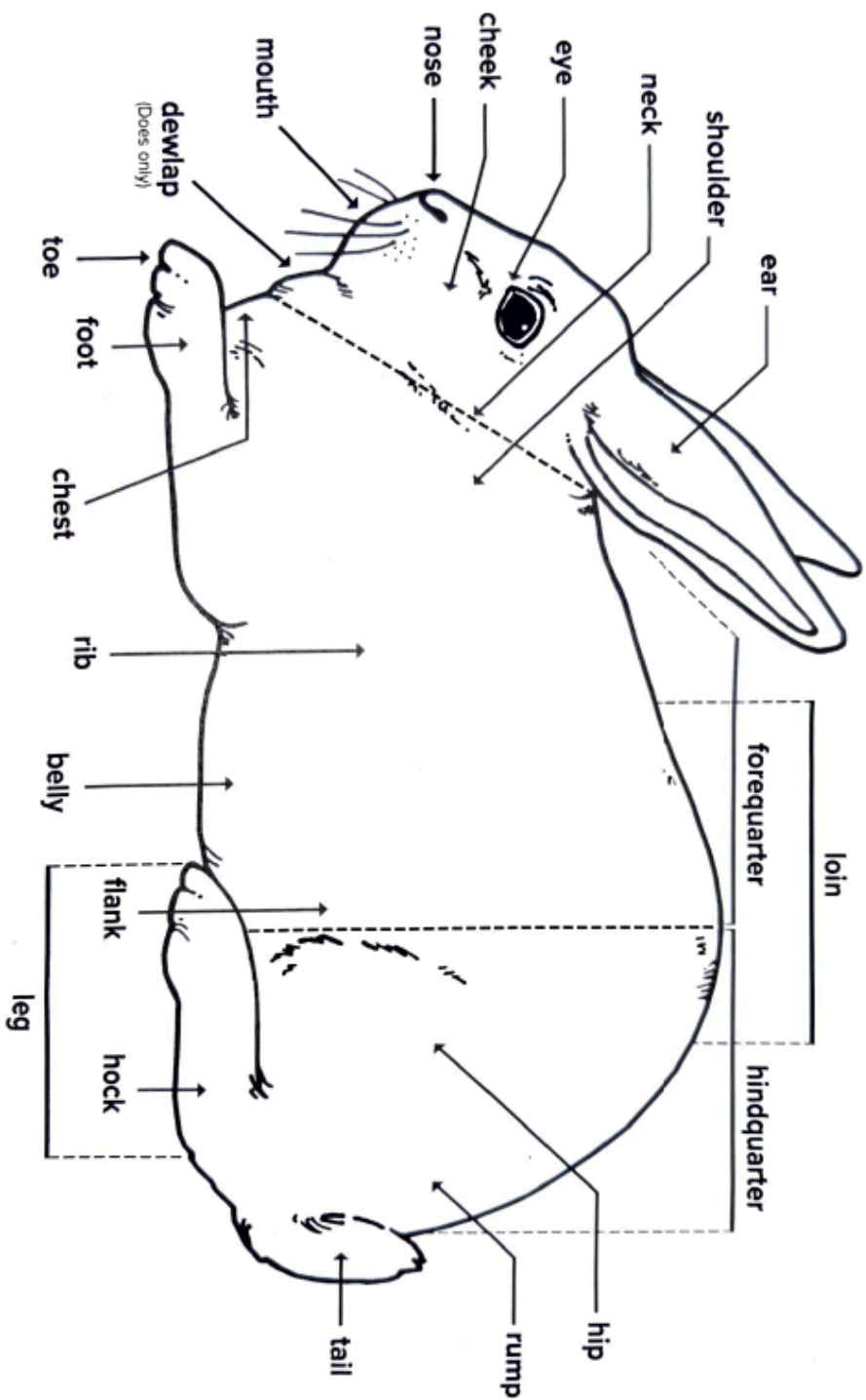
Parts of a Goat



Parts of a Goat

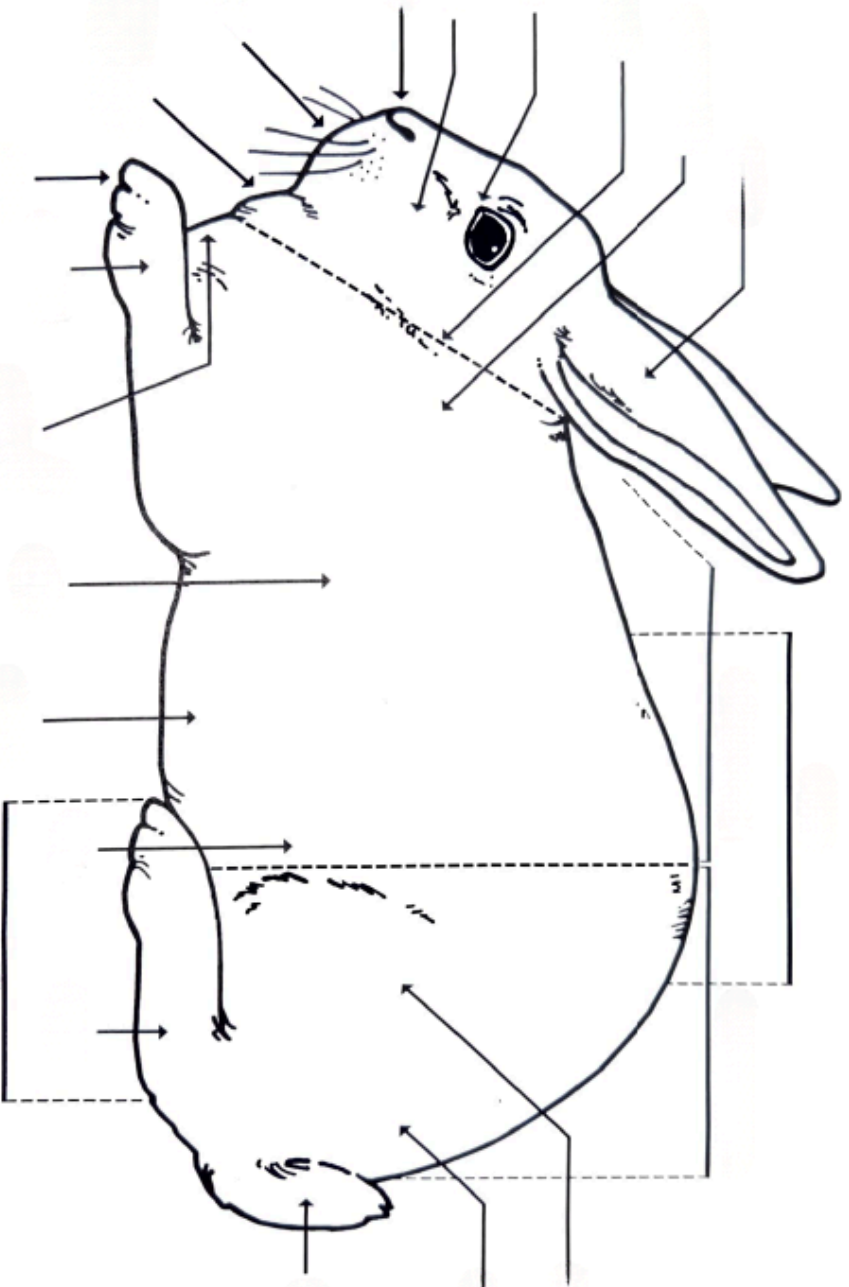


Parts of a Rabbit



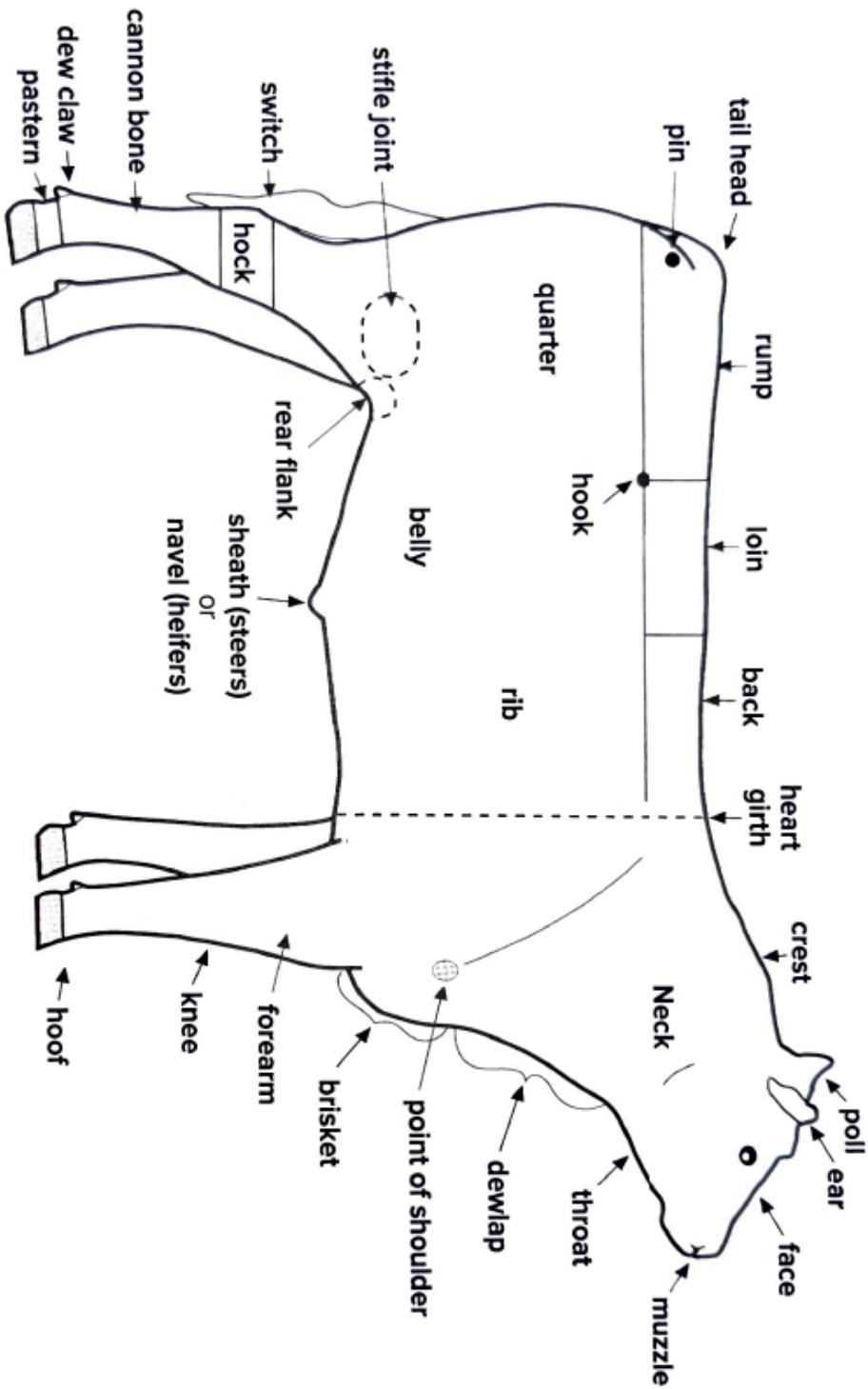
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Parts of a Rabbit



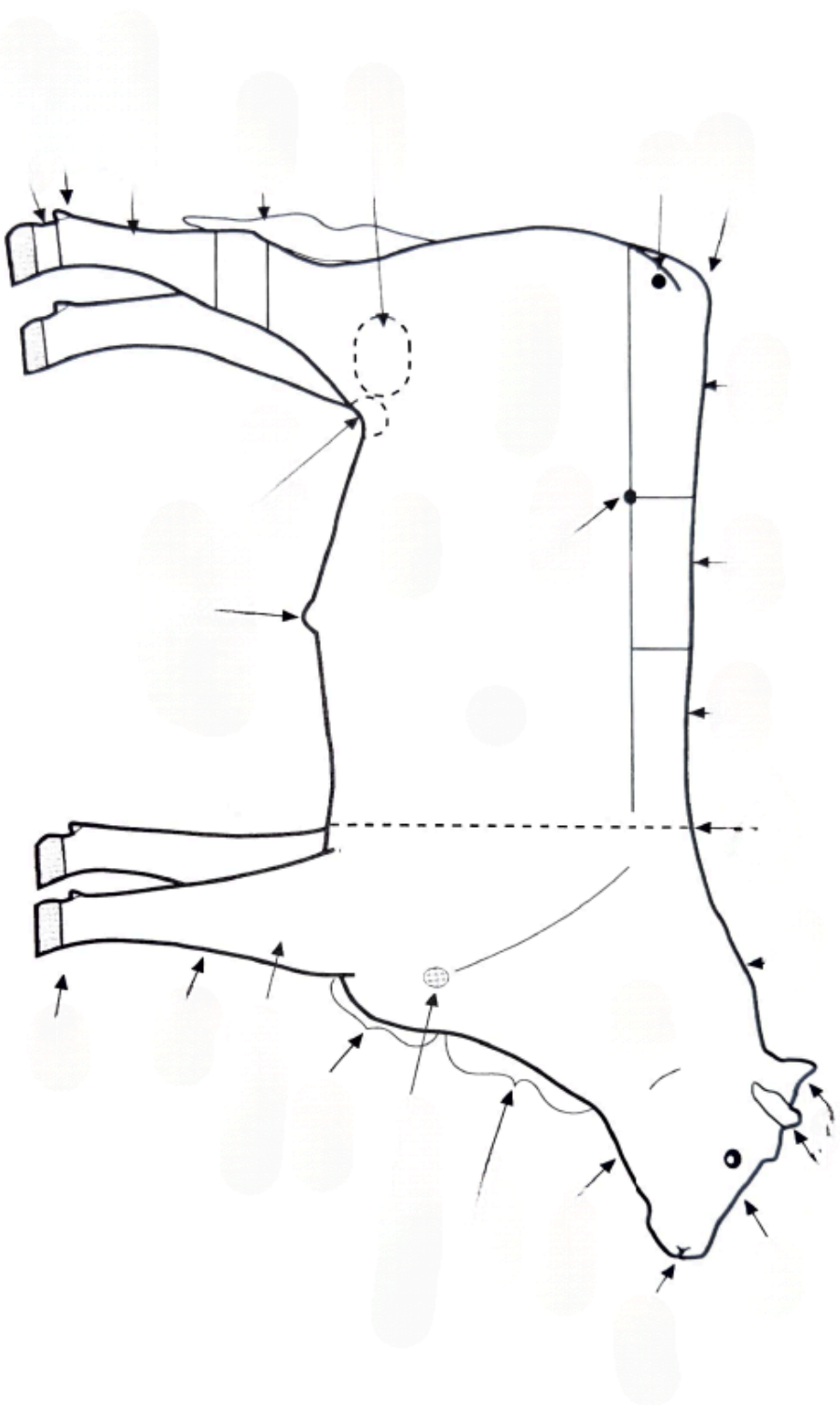
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Parts of a Beef Animal



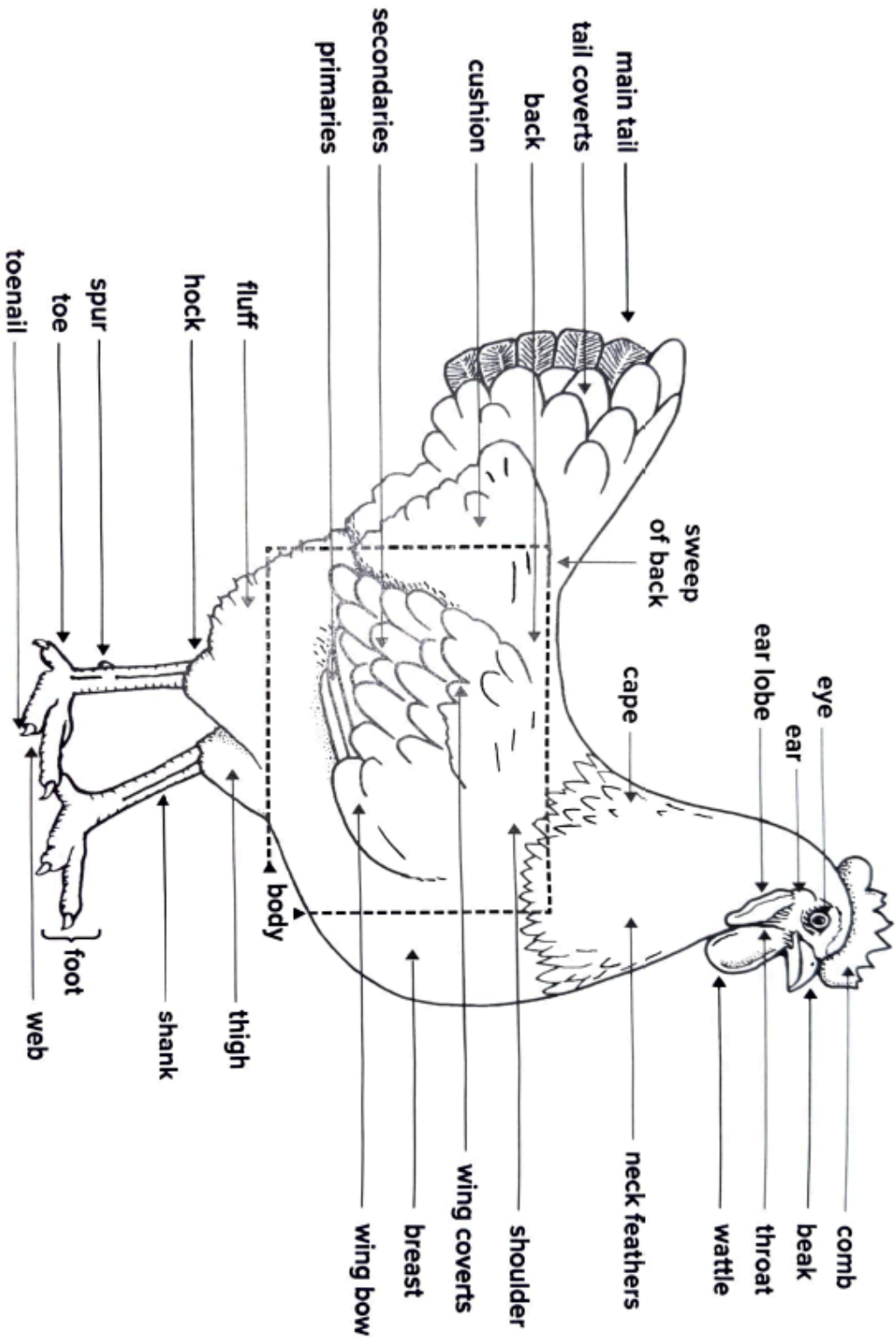
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Parts of a Beef Animal



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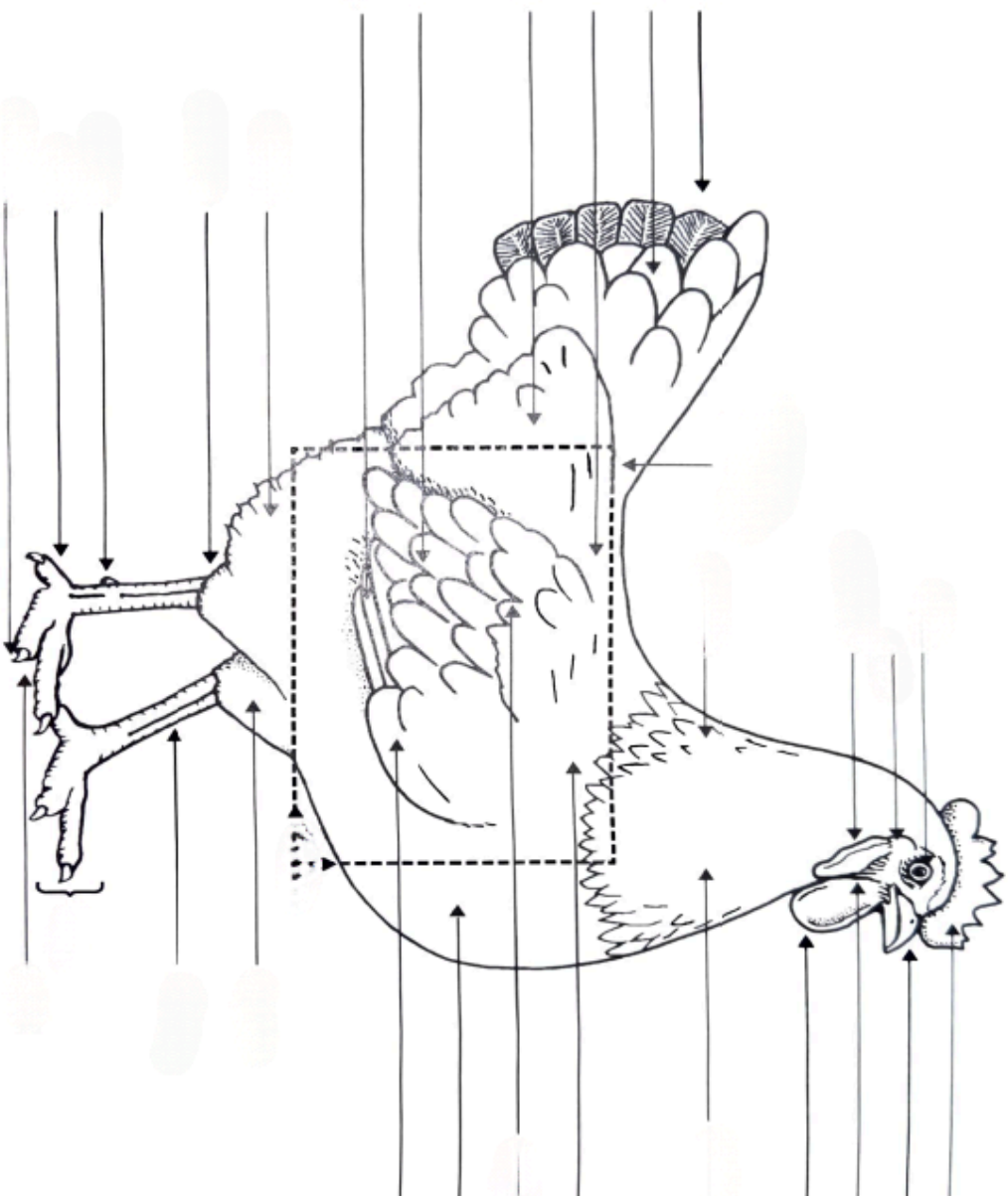
Parts of a Chicken (Hen)



0002 PIV ALK PIV JAN



Parts of a Chicken (Hen)



0002 PIV ALK PIV AMT



Resource List

Skillathon Study Guide pictures, descriptions, questions, and materials were generated from the following open-source sites and platforms.

- American Poultry Association
- American Rabbit Breeders Association
- Arizona Nationals Horse Skillathon Study Guide
- Arizona Nationals Livestock Skillathon Study Guide
- Ohio State Lab Learning Kit- Beef
- Ohio State Lab Learning Kit- Goat
- Ohio State Lab Learning Kit- Horse
- Ohio State Lab Learning Kit- Lamb
- Ohio State Lab Learning Kit- Poultry
- Ohio State Lab Learning Kit- Rabbit
- Ohio State Lab Learning Kit- Swine
- Oklahoma State & New Mexico State University- 4-H FCS Skill-a-thon Sewing and Clothing ID
- Oklahoma State & New Mexico State University- 4-H FCS Skill-a-thon Foods and Cooking ID
- Utah State 4-H Small Animal Livestock Skill-a-thon
- Utah State University-Poultry Skill-a-thon Study Guide



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