



ARIZONA NATIONAL *Horse Show*

HORSE SKILL-A-THON

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ROTATION LIST

JUNIOR CONTEST:

Team Rotations – 100 points possible

1. Practicum 1 – 50 points possible
2. Practicum 2– 50 Points possible

Individual Rotations – 100 points possible

1. Breed Identification List (10 breeds) – 20 points possible
2. Equipment Identification List (10 items) – 20 points possible
3. Feed Identification List (10 samples) – 20 points possible
4. Tack Identification List (10 items) – 20 points possible
5. Knowledge Test (10 questions) – 20 points possible

SENIOR CONTEST:

Team Rotations – 100 points possible

1. Practicum 1 – 50 points possible
2. Practicum 2– 50 Points possible

Individual Rotations – 300 points possible

1. Breed Identification List (20 breeds with 10 questions) – 60 points possible
2. Equipment Identification List (20 items with 10 questions) – 60 points possible
3. Feed Identification List (20 samples with 10 questions) – 60 points possible
4. Tack Identification List (10 samples) – 20 points possible
5. Color and Marking Identification (20 sample – 40 points
6. Knowledge Test (20 multiple choice, 10 matching questions) – 60 points possible

TENTATIVE CONTEST SCHEDULE

	All Group 1	All Group 2	All Group 3	All Group 4
15 min	Breed ID	Tack/ Color ID	Feed ID	Equipment ID
15 min	Equipment ID	Breed ID	Tack/ Color ID	Feed ID
15 min	Feed ID	Equipment ID	Breed ID	Tack/ Color ID
15 min	Tack/ Color ID	Feed ID	Equipment ID	Breed ID
	Jr Teams Group 1	Jr Teams Group 2	Sr Teams Group 1	Sr Teams Group 2
15 min	Practicum 1	Practicum 2	Practicum 1	Practicum 2
15 min	Practicum 2	Practicum 1	Practicum 2	Practicum 1
30 min	All Individual Test			

BREED & COLOR IDENTIFICATION LIST

DRAFT

BELGIAN

Origin: Belgium

Size: 16 to 18 Hands

Important Traits:

- Power, high stepping action, flaxen mane and tail

Uses:

- Horse pulls, workhorse

Color Pattern:

- Normally chestnut, roan, or sorrel with four white stockings, white mane and tail, and a blaze.



CLYDESDALE

Origin: Scotland

Size: 16 to 18 Hands

Important Traits:

- Powerful, active, intelligent, feathered legs

Uses:

- Multi-horse hitches and pulling

Color Pattern:

- Bay, black, and brown are the most common but can also be roan, gray and chestnut. Nearly always white markings on face, feet, and legs. Some white spots on lower belly.



PERCHERON

Origin: France

Size: 15 to 18 Hands

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[Full Rules in Premium Book](#)

Important Traits:

- Elegant, Substance, Soundness

Uses:

- Workhorse, harness and carriage

Color Pattern:

- Predominately black and gray, also bay, sorrel, and brown. Minimal white markings



SHIRE

Origin: England

Size: 16.2 to 19 Hands

Important Traits:

- Tallest of draft breeds and one of the heaviest

Uses:

- Workhorse, pulling carriages or wagons

Color Pattern:

- Usually bay, brown, black or gray with feathering on legs



BREED & COLOR IDENTIFICATION LIST

GAITED

ICELANDIC HORSE

Origin: Iceland

Size: 13 to 14 Hands

Important Traits:

- Known for fast and smooth gait, the tölt, lack of spookiness, and sturdy.

Uses:

- Pleasure riding, Endurance

Color Pattern:

- Any color or pattern. The most common colors include chestnut, brown, bay, and black. The most rare colors are roan and the wind dapples. The coats change with the season although they always have abundant mane and tail. In the winter the coats are very dense. In the summer they are sleek.



KENTUCKY MOUNTAIN SADDLE HORSE

Origin: Eastern Kentucky

Size: 11-15.2 Hands

Important Traits:

- Ability to carry rider safely over rough ground, Gaited Horses known for sure-footedness

Uses:

- Family Horse, Trail Riding, small-scale farming

Color Pattern:

- May be any solid color with white on the lower legs or face. White body spots, above the knee or the hocks is permitted by the Kentucky Mountain Saddle Horse Association, which has a branch called Spotted Mountain Horse Association.



MISSOURI FOX TROTTER HORSE

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[Full Rules in Premium Book](#)

Origin: Ozark Mountains, Missouri

Size: 14- 16 Hands

Important Traits:

- Known for its rhythmic diagonal gait called the fox trot

Uses:

- Team penning, showing, ranch work, trail riding, handicapped riding programs

Color Pattern:

- Colors include bay, black, roan, brown, buckskin, chestnut, gray, palomino, sorrel, white, cremello, perlino, or champagne. Patterns may be either solid or spotted. White marking on their face and lower legs are common.



MOUNTAIN PLEASURE HORSE

Origin: Eastern Kentucky

Size: than 14.2 Hands

Important Traits:

- Sure-footed, easy gait

Uses:

- Trail and Pleasure riding, showing

Color Pattern:

- Any solid color including bay, black, roan, gray, buckskin, palomino, chocolate, chestnut, and sorrel. Spotted horses are not encouraged.



PASO FINO

Origin: Puerto Rico

Size: 14-15 Hands

Important Traits:

- Unique, short-strided, four-beat gait, gentle in hand but show great spirit under saddle

Uses:

BREED & COLOR IDENTIFICATION LIST

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[Full Rules in Premium Book](#)

- Showing, Pleasure Riding

Color Pattern:

- Horses can be any solid or spotted color. Appaloosa patterns are excluded.



TENNESSEE WALKING HORSE

Origin: Tennessee

Size: 14.3 to 17 Hands

Important Traits:

- Intelligence, naturally smooth gaited, nodding their head at the running walk

Uses:

- Showing, Trail and Pleasure riding

Color Pattern:

- Come in all colors and patterns.



BREED & COLOR IDENTIFICATION LIST

PONIES & MINIATURE

AMERICAN MINIATURE HORSE

Origin: Developed in the US, original stock probably from England

Size: Max of 34 to 38 in

Important Traits:

- Intelligence, strength, athleticism

Uses:

- Companion animals, showing, driving, and competition

Color Pattern:

- Any color or patterns are accepted



HAFLINGER

Origin: Austria and Italy

Size: 13- 15 Hands

Important Traits:

- Sturdy and small horses

Uses:

- Pleasure and trail ridings, dressage, driving, eventing, jumping, farm work.

Color Pattern:

- Always chestnut, ranging from rich gold to chocolate. White markings on the face and white on lower legs are common. Mane and tail range from flaxen to white.



NORWEGIAN FJORD

Origin: Norway

Size: 13.2 to 14.2 Hands

Important Traits:

- Endurance, comfortable gaits, easily trained

Uses:

- Harness, Saddle, Pleasure

Color Pattern:

- 90% of Norwegian Fjords are brown dun, the remaining 10% are red, gray, pale gold, or yellow dun. They always have a dorsal stripe running from the forelock down the neck through the middle of the mane, across the back and into the tail. Norwegian Fjord's have zebra markings on their legs and may also have dark stripes over their withers.



PONY OF THE AMERICAS

Origin: Iowa

Size: 11.5 to 14 Hands

Important Traits:

- Rugged and athletic, colored with Appaloosa patterns, jumping ability

Uses:

- Competition mount and pleasure ridding, especially for children and young adults

Color Pattern:

- Blanket and Leopard patterns are common. Many pony's are roan. Any irregular edges on patches, similar to a paint or pinto, are prohibited. The horse must have mottled skin somewhere on its body, have visible white sclera, and striped hooves.



SHETLAND PONY

Origin: Shetland Islands, Great Britain

Size: 10.2 Hands or less

Important Traits:

- Hard and strong, gentle, versatile

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[Full Rules in Premium Book](#)

Uses:

- Pet, child mount, driving small vehicles

Color Pattern:

- Any color except Appaloosa. No particular coat or eye color is preferred. The most popular colors are black and dark brown. May come is silver dapple, which is unique to the Shetland pony.



BREED & COLOR IDENTIFICATION LIST

RACING

STANDARD BRED

Origin: New York

Size: 15 to 16 Hands

Important Traits:

- Speed, tolerant, ground-covering gait

Uses:

- Harness Racing (trotting or pacing), pleasure driving or riding

Color Pattern:

- Most common colors are bay, brown, and black. The horse may have minimal white on lower legs and the face. Typically have a long and thick mane and tail.



THOROUGHBRED

Origin: England

Size: 15 to 17 Hands

Important Traits:

- Speed

Uses:

- Racing, Polo, Foxhunting, showing, dressage, jumping, eventing

Color Pattern:

- Colors are bay, black, chestnut, or gray. It is common for white marking on lower legs and the face.



BREED & COLOR IDENTIFICATION LIST

SADDLE & PLEASURE

AMERICAN SADDLEBRED

Origin: Kentucky, Eastern United States

Size: 15.2- 17 Hands

Important Traits:

- Smooth gait, charisma, dependability, stamina, animation

Uses:

- Show, harness racing, trail and pleasure riding

Color Pattern:

- Nearly all colors, including bay, brown, black, chestnut, roan, and gray. There are no color restrictions in the breed registry.



ARABIAN

Origin: Middle East

Size: 14 to 15.3 Hands

Important Traits:

- High intelligence and trainability, spirited disposition, and stamina

Uses:

- Trail riding, endurance, English and Western pleasure show, cutting and reining, jumping and dressage, etc.

Color Pattern:

- Bay, gray, black, chestnut, and roan. Arabian's have black skin. White markings can be on face and lower legs.



MORGAN

Origin: Springfield, Massachusetts

Size: 14.1- 15.2 Hands

Important Traits:

- Versatility, staying power, solid gait

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[Full Rules in Premium Book](#)

Uses:

- Showing, dressage, western pleasure, etc

Color Pattern:

- Typically chestnut, bay or brown, may also be black, gray, palomino, creme, dun, or buckskin.



BREED & COLOR IDENTIFICATION LIST

SPORT

HANOVERIAN

Origin: Germany

Size: 16- 17.2 Hands

Important Traits:

- Athletic ability, light and elastic gaits

Uses:

- Show and field hunters, show jumping, dressage, combined driving, eventing.

Color Pattern:

- Colors include chestnut, bay, black, and brown. Grays are not favored in Germany but are allowed. White markings on face and lower legs are common.



HOLSTEINER

Origin: Germany

Size: 16- 17 Hands

Important Traits:

- Athletic ability, light and elastic gaits, highly versatile.

Uses:

- Show and field hunters, show jumping, dressage, combined driving, eventing

Color Pattern:

- Solid colors, include chestnut, bay, black, gray and brown.



TRAKEHNER

Origin: East Prussia

Size: 16 to 17 Hands

Important Traits:

- Strong joints and muscle, ground-covering gaits

Uses:

- Dressage, jumping and eventing

Color Pattern:

- Can be any solid color with the most popular being chestnut. May also be bay, brown, black, and gray. Minimal white markings on face and lower legs are common.



BREED & COLOR IDENTIFICATION LIST

STOCK

AMERICAN PAINT HORSE

Origin: Spain, North America

Size: 14.2 to 16.2 Hands

Important Traits:

- Striking appearance, athletic, gentle temperament, willing disposition

Uses:

- Showing, western competitions, ranch work, trail rides, rodeos, etc.

Color Pattern:

- There are three main color patterns, tobiano, overo and tovero. The tobiano has white markings that are regular and distinct, that extends across the dorsal midline, often with four white legs. The head markings are similar to those of a solid horse. The overo has at least one dark leg, rarely any white extending across the dorsal midline. The markings are scattered and irregular. The base color may be any color. The tovero is a mix of the tobiano and the overo.



AMERICAN QUARTER HORSE

Origin: North America

Size: 14.2- 17 Hands

Important Traits:

- Short Distance Racing, rodeos, Western competitions, dressage and jumping, ranch work, etc .

Uses:

- Short distance speed, docile temperament, athletic and versatile.

Color Pattern:

- Recognized colors include: bay, brown, black, sorrel, chestnut, dun, red dun, grulla, buckskin, palomino, gray, red roan, blue roan, bay roan, cremello, and perlino. The most common color is sorrel. American Quarter Horse promotes solid colored horses, but occasionally they can produce offspring with overo paint characteristics. These markings are undesirable traits.



APPALOOSA

Origin: Spain

Size: 14.2- 16 Hands

Important Traits:

- Striped hooves, bold coat-color patterns, intelligence, speed and disposition

Uses:

- Western competitions, show, ranch work, dressage, rodeos

Color Pattern:

- Recognized Appaloosa color patterns include snowflake, marble, frost, spotted blanket, white blanket, and leopard. The horse may also be a solid color. Horses must show white sclera (white around the eyes), mottled skin (specking of pigmented and non-pigmented skin), and have black and white striped hooves.



BREED & COLOR IDENTIFICATION LIST

DONKEYS, MULES AND WILD HORSES

DONKEY

Origin: Africa

Size: Mini to 16 Hands

Important Traits:

- Strong and hardy, highly intelligent

Uses:

- Packing and pulling

Color Pattern:

- Gray to brown is normal but they can be any basic horse color with dorsal stripes and shoulder crosses.



MULE

Origin: Middle East

Size: Varies

Important Traits:

- Nearly always sterile, good night vision, extremely strong

Uses:

- Riding, pack, or draft animal, showing

Color Pattern:

- Any color, based on the traits from either parent



WILD HORSE

Origin: Great Plains, North America

Size: 13.2 to 15 Hands

Important Traits:

- Tough, Adaptability

Uses:

-

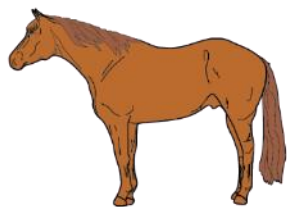
Color Pattern:

- Any variety

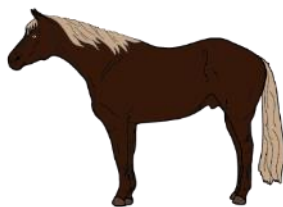


COLOR IDENTIFICATION LIST

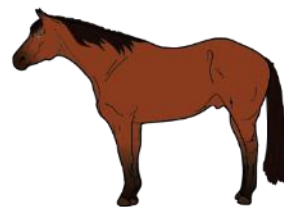
BASIC COLORS



chestnut



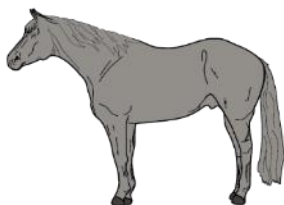
flaxen chestnut



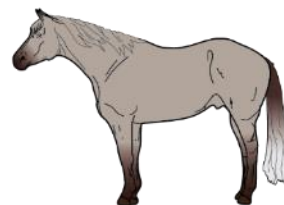
bay



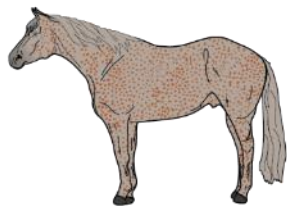
seal-brown bay



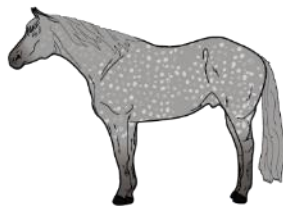
gray



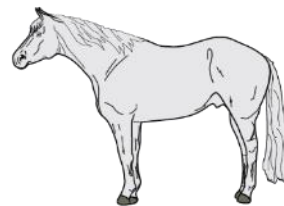
rose gray



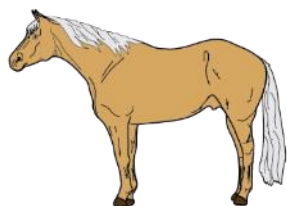
flea-bitten gray



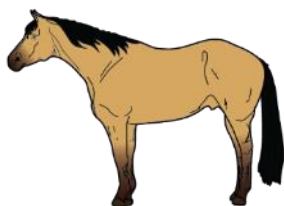
dapple gray



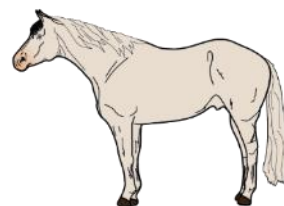
white



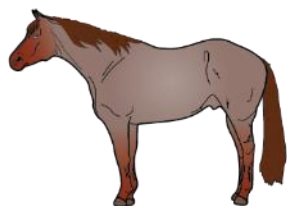
palomino



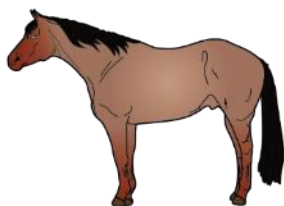
buckskin



cremello



strawberry roan



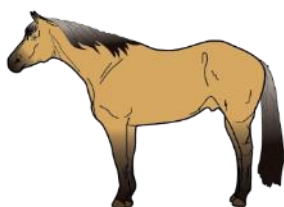
bay roan



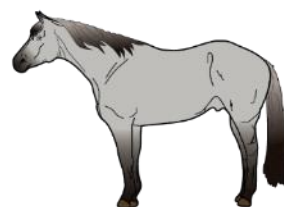
blue roan



black



dun



grulla/blue dun

BREED & COLOR IDENTIFICATION LIST

FACE MARKINGS

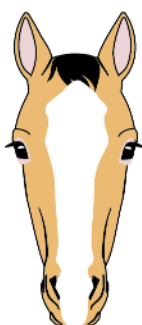
star



stripe



blaze



snip



**interrupted
stripe**



white face



LEG MARKINGS

**A.K.A: bald face,
piebald**



nill



white heel



coronet



half pastern



pastern



**ankle
fetlock**



half sock



**half cannon
with ermine**



**full sock
cannon**



**fetlock front
half cannon back**



high sock

EQUIPMENT IDENTIFICATION LIST

Athletic Splint Boots

Used to protect a horse's legs during exercise, protecting the lower leg from injury that may occur if one leg or hoof strikes the opposite leg.



Australian checker

Used to prevent the horse from putting his tongue over the bit. It also keeps the bit high in the horse's mouth.



Balling gun

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



Bell boots

Protect the heel and lower pastern of the horse. Velcro closures allow the horse to break free if they become entangled.



Bit guards

Used on bits to keep from pinching a horse's lips or cheeks. They are placed on the bit between the bridle rings and the skin.



Blanket – Stable Blanket

Most frequently used to cover your horse while he or she is out of the elements inside the stable, barn, or stall.



Blanket – Turnout Blanket

Typically made with tough, waterproof materials that offer protection from the elements and hold up during rough and vigorous activities in turnout.



Body Brush

A soft-bristled horse grooming brush used to remove particles and grease from the coat, as well as to provide a soothing sensation to the horse.



Bot knife

Used to remove bots from a horse by scrapping the serrated end along the leg to remove them.



Chain End Twitch

The twitch is placed on the horse's nose to restrain the horse as required



Clinch Cutter

Used by farriers to raise the head of a nail from the creases of a shoe sufficiently to enable the pull offs to grasp the nail head for removal.



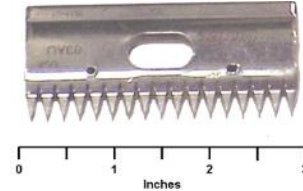
Clipper Comb

The part of clippers that guides the hair towards the clipper cutter.



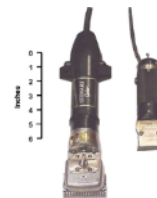
Clipper Cutter

The part of the clippers that rapidly slides back and forth across the clipper comb to cut the hair.



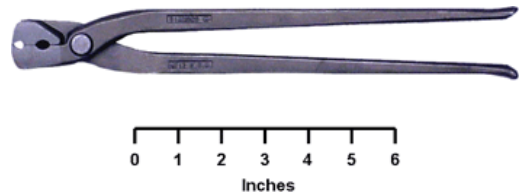
Clippers

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



Crease Nail Puller

Used by farriers to remove nails from hoof one at a time. It reduces damage to the hoof wall.



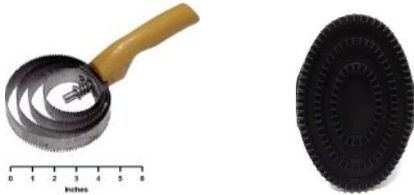
Cribbing Collar

Anatomically correct fit for the horse and only applies pressure when the horse attempts to crib.



Currycomb

Used to remove dirt and loose hair when grooming.



Disposable Syringes

Used to measure precise amounts and inject medicine



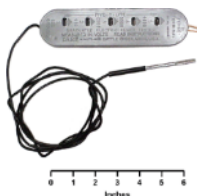
Electric Branding Iron

Used to brand. The branding iron can be designed to brand numbers, letters, or a unique farm brand.



Electric Fence Tester

A device used to test the strength of the electrical current running through an electric fence.



Electric Fence Wire Roller

Used to quickly roll up electric fence wire for storage, or to quickly let out electric fence wire when putting up an electric fence.



Emasculator

An instrument used for castrating young horses. It both crushes and cuts at the same time to minimize blood loss.



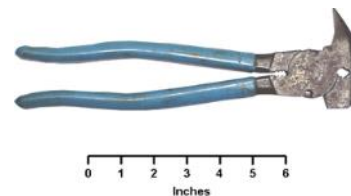
Equine Artificial Vagina

Used to collect semen from stallions. This particular style (Colorado Artificial Vagina) is heavier than other styles, but is preferred in colder climates to prevent cold shock to the semen.



Fencing Pliers

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



Fly mask

Used to protect the horses face, including eyes, nose and ears, from flies.



Hock Boots

Hock boots can help to reduce the risk of injury by providing support and shock absorption.



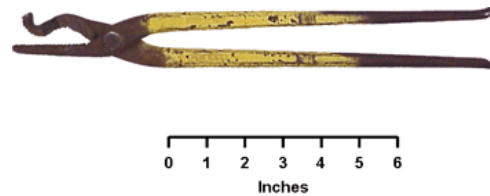
Freeze Branding Iron

Used to freeze brand horses to provide a form of identification.



Hoof Clincher

Used by farriers to clinch nails to the hoof wall during shoeing.



Halter

Used to lead or tie up an animal it fits behind the ears, and around the muzzle.



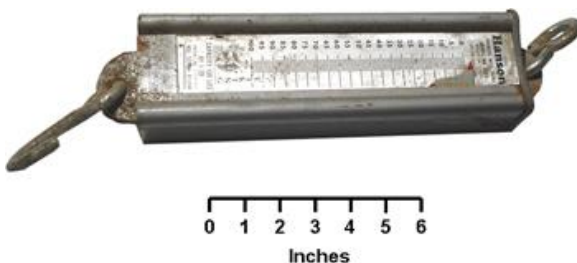
Hoof gauge

Also called a horse angle. It is used to provide the farrier with an easy way to trim matching pairs of hooves with identical angles.



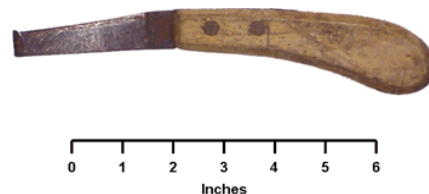
Hanging Scale

Used to weigh young animals or feed/ feed ingredients



Hoof Knife

Used by farriers to trim the excess sole and frog from the hoof.



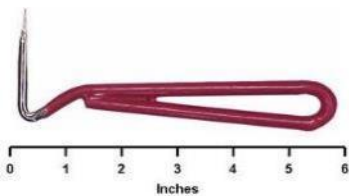
Hoof nails

Horse shoe nails are, as seen in this picture, made so that one side of the shank is flat and the other is concave.



Hoof Pick

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



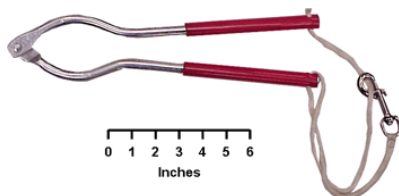
Hoof tester

Used to find a horse's source of lameness by putting pressure on the hoof.



Humane Twitch

Also called a one-person twitch, the twitch is placed on the horse's nose to restrain the horse as required.



Lariat Rope

A rope 60 to 100 feet in length with a slip noose at one end, used for catching wild horses and cattle.



Lead Rope

Attached to a halter and used to lead and tie up a horse



Loop knife

Used to carve a hole in the sole of the horse's hoof to allow for drainages of infective areas, such as abscesses.



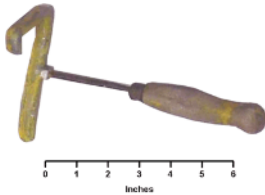
Lunge Line

Attached to a halter and generally measure from 25 to 35 feet long (to enable the handler to ask the horse to travel on a comfortably-sized circle).



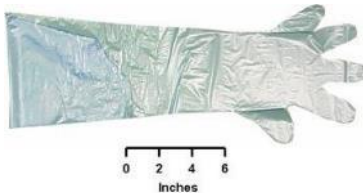
Paint Branding Iron

Used to paint (stencil) a number on livestock to provide a form of identification.



Plastic Sleeve

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



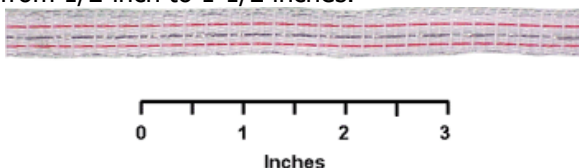
Polo Wraps

Bandage materials, usually made of fleece, for a horse's legs. They can be quite stretchy and are used mainly for protection.



Poly Tape Electric Fence

A non-rusting, electric fencing tape made of some type of plastic material (such as polyvinyl or polyester) with 5 to 10 very thin metal wire strands running the entire length of the tape for electrical conductivity. Widths of the tape range from 1/2-inch to 1-1/2 inches.



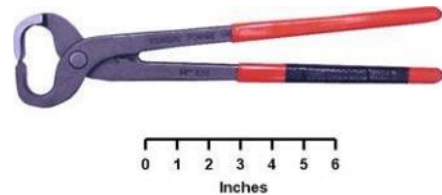
Poly Wire Electric Fence

A non-rusting, electric fencing wire made of some type of plastic material (such as polyvinyl or polyester) with 3 to 10 very thin metal wire strands running the entire length of the poly wire for electrical conductivity. Typical width is about 1/8-inch.



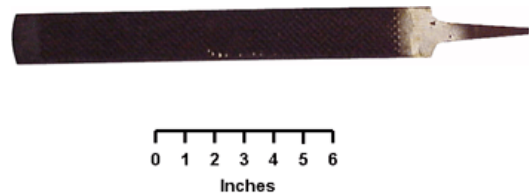
Pull Off

Used by farriers to remove horse shoes when a nail puller is not available. Note the beveled end which is different from a hoof nipper.



Rasp

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



Rope End Twitch

The twitch is placed on the horse's nose to restrain the horse as required.



Round Porcelain Electric Fence Insulator

A non-rusting, electric fence insulator made from porcelain. Used to make corner turns.



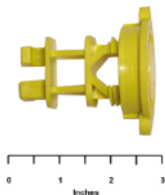
Scalpels

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



Screw Tight Electric Fence Insulator

A non-rusting, round post electric fence insulator. Will work on round posts up to about 1/2-inch diameter.



Shoeing Hammer

Used by farriers for driving nails when shoeing a horse.



Soaking boot

Used to soak the horse's foot when the horse has conditions such as abscesses, puncture wounds, thrush, or other foot conditions.



Surcingle

A belt that passes over the saddle and girth. It is typically made of leather or nylon with buckles and metal rings in a variety of locations. These rings allow driving lines to be run from a bit and side reins to be attached. An overcheck and crupper can be attached to the rings on the top of the surcingle.



Sweat scraper

Used to remove excess water from the coat to help dry the horse.



Syringe Needles

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



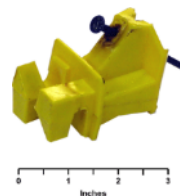
T-Post Electric Fence Insulators

A non-rusting, electric fence insulator that fits snugly around the web and flange of T-posts.



Wood Post Electric Fence Insulator

A non-rusting, electric fence insulator that can be nailed to wooden posts.



FEED IDENTIFICATION LIST

CEREAL GRAINS AND PROCESSED CEREAL GRAINS



WHOLE MILLET

- Not widely grown in U.S.
- Compared to corn, it contains less energy and more protein.
- Except when fed to poultry, it is typically ground or rolled prior to feeding.
- Bulk density = 50 lbs/bushel

Average Nutrient Content

- Ruminant TDN = 90%
- Monogastric ME = 1300 Kcal/lb
- Crude Protein = 12.5%

Physical Description - brown color, small and round or slightly oblong shape, and a smooth texture.



WHOLE MILO (GRAIN SORGHUM)

- Grown primarily in dry regions of U.S., where there is not enough rain for corn production.
- Compared to corn in feeding value.
- Due to very hard seed coat, it is usually processed prior to feeding (coarsely ground, rolled, crimped, etc.).
- Bulk density = 55 lbs/bush

Average Nutrient Content

- Ruminant TDN = 82%
- Monogastric ME = 1520 Kcal/lb
- Crude Protein = 10%

Physical Description - reddish-brown color, round and bead-like shape, and a smooth texture.



WHOLE RYE

- Not a very important feed grain in the U.S.
- Lower palatability than most other cereal grains.
- Compared to corn, it is slightly lower in energy and higher in protein.
- Except when fed to sheep, it should be processed prior to feeding (ground, cracked, etc.).
- Bulk density = 56 lbs/bushel

Average Nutrient Content

- Ruminant TDN = 88%
- Monogastric ME = 1375 Kcal/lb
- Crude Protein = 12.5%

Physical Description - brownish-gray color, long and full shape, round edges, and a smooth texture.

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WHOLE TRITICALE

- Not widely grown in the U.S.
- A synthetic cereal grain, derived by crossing wheat with rye.
- Compared to corn, it is slightly lower in energy and higher in protein.
- Usually processed in some way prior to feeding (coarsely ground, cracked, etc.).
- Bulk density = 56 lbs/bushel

Average Nutrient Content

- Ruminant TDN = 90%
- Monogastric ME = 1425 Kcal/lb
- Crude Protein = 14%

Physical Description - brown color, short and oblong shape (plumper than wheat), round edges, crease down middle of one side, and a smooth texture.



WHOLE WHEAT

- Widely grown in the U.S.
- Primarily used in human food, but can be fed to livestock.
- Compared to corn, it is slightly lower in energy and higher in protein.
- Usually processed in some way prior to feeding (coarsely ground, rolled, cracked, etc.).
- Bulk density = 60 lbs/bushel

Average Nutrient Content

- Ruminant TDN = 88%
- Monogastric ME = 1450 Kcal/lb
- Crude Protein = 13.5%

Physical Description - brown color, short and oblong shape, round edges, crease down middle of one side, and smooth texture



SHELLED CORN

- Most extensively produced feed grain in U.S.
- Typically the energy standard to which other grains are compared.
- High energy content, but low in protein.
- Low fiber content.
- Usually processed in some way prior to feeding (ground, cracked, steam-flaked, etc.).
- Bulk density = 56 lbs/bushel

Average Nutrient Content

- Ruminant TDN = 90%
- Monogastric ME = 1550 Kcal/lb
- Crude Protein = 8.5%

Physical Description - yellow color, somewhat tear-shaped, and a smooth texture.

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GROUND SHELLED CORN

- Shelled corn that has been mechanically processed through a hammer mill.
- Reduces the particle size, increases surface area, and improves energy utilization.
- Actual particle size of ground corn will depend on screen size and power of the hammer mill.
- Coarser grinds are preferred for ruminants, and finer grinds are generally preferred for monogastrics.

Average Nutrient Content

- Ruminant TDN = 90%
- Monogastric ME = 1550 Kcal/lb
- Crude Protein = 8.5%

Physical Description - yellow and white color, fine to coarse particle size, and a granular to powdery texture.



CRACKED SHELLED CORN

- Shelled corn that has been mechanically processed through a hammer mill.
- Reduces the particle size, increases surface area, and improves energy utilization.
- Actual particle size of ground corn will depend on screen size and power of the hammer mill.
- Coarser grinds are preferred for ruminants, and finer grinds are generally preferred for monogastrics.

Average Nutrient Content

- Ruminant TDN = 90%
- Monogastric ME = 1550 Kcal/lb
- Crude Protein = 8.5%

Physical Description - yellow and white color, coarse particle size, and a granular to powdery texture.



GROUND EAR CORN

- The entire ear of corn (grain and cob) that has been ground through a hammer mill or burr mill.
- Reduces particle size, increases the surface area, and improves starch digestibility.
- Due to high fiber content, it is fed primarily to ruminant animals

Average Nutrient Content

- Ruminant TDN = 78%
- Monogastric ME = 1400 Kcal/lb
- Crude Protein = 8.0%

Physical Description - white and yellow color, various particle sizes, and a rough texture

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STEAM FLAKED CORN

- Shelled corn that is subject to high-moisture steam for a long period of time (15-30 minutes) and then rolled to produce a flat flake.
- Increases the surface area and gelatinizes some of the starch making it more digestible.
- Primarily fed to cattle and horses

Average Nutrient Content

- Ruminant TDN = 90%
- Monogastric ME = 1550 Kcal/lb
- Crude Protein = 8.5%

Physical Description - yellow and white color, flat shape, and a flaky texture.



WHOLE BARLEY

- Not as widely available in west U.S. as corn, wheat, and oats.
- Compared to corn, it contains less energy but has more protein, lysine, and fiber.
- Usually processed in some way prior to feeding (coarsely ground, steam-rolled, crimped, etc.).
- Bulk density = 48 lbs/bushel

Average Nutrient Content

- Ruminant TDN = 88%
- Monogastric ME = 1320 Kcal/lb
- Crude Protein = 12.5%

Physical Description - brown color, oblong shape, irregular edges, and a slightly rough texture.



STEAM ROLLED BARLEY

- Whole barley that is subjected to high-moisture steam for a short period of time (1-8 minutes) and then rolled to produce a flat flake.
- Increases the surface area and improves energy utilization.
- Used primarily in horse diets and feedlot diets.

Average Nutrient Content

- Ruminant TDN = 88%
- Monogastric ME = 1320 Kcal/lb
- Crude Protein = 12.5%

Physical Description - brown color, flat shape, and a flaky texture.

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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.).
- Bulk density = 32 lbs/bushel

Average Nutrient Content

- Ruminant TDN = 77%
- Monogastric ME = 1200 Kcal/lb
- Crude Protein = 12%

Physical Description - light brown color, long and thin shape, and a slightly rough texture with irregular edges.



CRIMPED OATS

- Whole oats that have been passed between a set of closely fitted, corrugated rollers to produce a flake.
- Increases the surface area and improves energy utilization.
- Used primarily in horse diets or diets for young animals.

Average Nutrient Content

- Ruminant TDN = 77%
- Monogastric ME = 1200 Kcal/lb
- Crude Protein = 12%

Physical Description - light brown color, long flat shape, and a flaky texture.



STEAM ROLLED OATS

- Whole oats that are subjected to high-moisture steam for a short period of time (1-8 minutes) and then rolled to produce a flat flake.
- Increases the surface area and improves energy utilization.
- Used primarily in horse diets or diets of young animals.

Average Nutrient Content

- Ruminant TDN = 77%
- Monogastric ME = 1200 Kcal/lb
- Crude Protein = 12%

Physical Description - light color, flat shape, and a flaky texture

FEED IDENTIFICATION LIST

PROTEIN SOURCES OF PLANT ORIGIN



DEHYDRATED ALFALFA MEAL

- 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 pre-farrowing sow diets).
- Often pelleted prior to feeding.

Average Nutrient Content

- Crude Protein = 17-20%
- Lysine = 0.7-0.9%
- Ruminant TDN = 57%
- Monogastric ME = 1000 Kcal/lb

Physical Description - varies from light to dark green, small particle size, and a granularly to powdery texture.



DEHYDR. 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 pre-farrowing sow diets).

Average Nutrient Content

- Crude Protein = 17-20%
- Lysine = 0.7-0.9%
- Ruminant TDN = 57%
- Monogastric ME = 1000 Kcal/lb

Physical Description - varies from light to dark green and is in a pelleted form.



WHOLE SOYBEANS

- Widely grown in the U.S.
- Rarely fed in the whole, full-fat form, but can be if first heated to destroy anti-nutritional factors (trypsin inhibitor).
- Can be a valuable source of protein and energy.
- Usually processed (oil removed and ground) into soybean meal for livestock feeding.

Average Nutrient Content

- Crude Protein = 35-38%
- Lysine = 2.2-2.4%
- Ruminant TDN = 85%
- Monogastric ME = 1600 Kcal/lb

Physical Description - light brown color with a black "eye", fairly round shape, and a smooth texture.

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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.

Average Nutrient Content

- Crude Protein = 44-48%
- Lysine = 2.8-3.0%
- Ruminant TDN = 78%
- Monogastric ME = 1400 Kcal/lb

Physical Description - light brown color, irregular shape, and a granular to flaky texture.



COTTONSEED MEAL

- Widely grown in the southern U.S.
- Produced by grinding the flakes that remain after oil is extracted from whole cottonseeds.
- Excellent protein source for ruminants, but only limited use in monogastrics (gossypol toxicity).
- Low in lysine and tryptophan.

Average Nutrient Content

- Crude Protein = 38-41%
- Lysine = 1.5-1.7%
- Ruminant TDN = 71%
- Monogastric ME = 1200

Physical Description - brown color with black flecks, and a granular to powdery texture.



CANOLA MEAL

- Grown primarily in cooler climates where other oil seeds cannot be grown.
- Produced by grinding the flakes that remain after oil is extracted from whole canola seeds.
- Canola is a crop derived from rapeseed, but unlike traditional rapeseed is low in both erucic acid and glucosinolates.
- Lower in digestible energy than soybean meal.

Average Nutrient Content

- Crude Protein = 35-38%
- Lysine = 2.0-2.3%
- Ruminant TDN = 64%
- Monogastric ME = 1100 Kcal/lb

Physical Description - yellowish brown to brown color, small particle size, and a granular to powdery texture.

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LINSEED MEAL

- Grown primarily in north-central U.S.
- Produced by grinding the flakes that remain after oil is extracted from whole flaxseed.
- Used primarily in diets for ruminants and horses, with limited use in monogastric diets due to poor amino acid distribution.
- Has a laxative effect.

Average Nutrient Content

- Crude Protein = 32-35%
- Lysine = 1.0-1.2%
- Ruminant TDN = 73%
- Monogastric ME = 900 Kcal/lb

Physical Description - varies from light to dark brown color, small particle size, and a granular texture.



PEANUT MEAL

- Produced by grinding the oil extracted peanut kernels.
- Highly palatable and high in protein.
- Protein is somewhat low in digestibility due to tannins found in the skin, and has poor amino acid balance.
- Somewhat susceptible to aflatoxin contamination.

Average Nutrient Content

- Crude Protein = 45-48%
- Lysine = 1.5-1.8%
- Ruminant TDN = 73%
- Monogastric ME = 1250 Kcal/lb

Physical Description - light brown to brown color, and a granular to powdery texture.



SUNFLOWER MEAL

- Produced by grinding the oil extracted sunflower seeds.
- High in protein, but low in the amino acid lysine.
- High fiber content (11-13%) limits its use in monogastric diets.

Average Nutrient Content

- Crude Protein = 34-41%
- Lysine = 1.4-2.0%
- Ruminant TDN = 61%
- Monogastric ME = 1125 Kcal/lb

Physical Description - brown to brownish-black color with light gray flecks, small particle size, and granular to powdery texture.

FEED IDENTIFICATION LIST

PROTEIN SOURCE OF ANIMAL ORIGIN



DRIED SKIM MILK

- Produced by drying milk after fat is removed.
- Good source of digestible protein, but usually deficient in fat soluble vitamins and some minerals.
- High cost limits widespread use.
- Primarily used in milk replacers and starter diets for young animals.

Average Nutrient Content

- Crude Protein = 33%
- Lysine = 2.6%
- Ruminant TDN = 80%
- Monogastric ME = 1500 Kcal/lb

Physical Description - creamy to light tan color and a powdery texture.



SPRAY-DRIED WHEY

- By-product from making cheese that is produced by spray-drying the liquid that remains after the casein and most of the fat has been removed.
- Good source of digestible protein and energy (high in lactose).
- High cost limits its widespread use.
- Primarily used in diets for newly weaned pigs to increase feed intake.

Average Nutrient Content

- Crude Protein = 12%
- Lysine = 1.1%
- Ruminant TDN = 79%
- Monogastric ME = 1450 Kcal/lb

Physical Description - creamy to light brown color and a powdery texture.



ROLLER-DRIED WHEY

- By-product from making cheese that is produced by roller-drying the liquid that remains after the casein and most of the fat has been removed.
- Good source of digestible protein and energy (high in lactose).
- High cost limits its widespread use.
- Primarily used in diets for newly weaned pigs to increase feed intake.

Average Nutrient Content

- Crude Protein = 12%
- Lysine = 1.1%
- Ruminant TDN = 79%
- Monogastric ME = 1450 Kcal/lb

Physical Description - tan to light brown color, and a granular to powdery texture.

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FEATHER MEAL (HYDROLYZED)

- By-product from poultry slaughtering industry that is produced by grinding the cleaned, dried, and hydrolyzed feathers.
- Very high in protein, but very low in most other nutrients.
- Palatability can be a problem.
- Primarily used in diets for mature ruminants, and will rarely exceed more than 5% of the diets for monogastrics.

Average Nutrient Content

- Crude Protein = 85%
- Lysine = 1.0%
- Ruminant TDN = 63%
- Monogastric ME = 1050 Kcal/lb

Physical Description - brown color with flecks of white and a granular to powdery texture.



MEAT AND BONE MEAL

- Rendering industry by-product, produced by grinding the dried mammalian tissue (excludes blood, hair, hoof, horn, hide trimmings, stomach, and rumen).
- Good source of protein, energy, calcium, and phosphorus.
- Primarily used as a partial source of supplemental protein for monogastrics (limited use in ruminant and horse diets).
- Low palatability (hard to handle).

Average Nutrient Content

- Crude Protein = 45-50%
- Lysine = 2.2-2.6%
- Ruminant TDN = 67%
- Monogastric ME = 1150 Kcal/lb

Physical Description - light brown color with tiny white bone chips and a powdery texture.



SPRAY-DRIED ANIMAL PLASMA

- Meat packing industry by-product, produced by adding anticoagulant to freshly collected blood, separating the plasma from the red blood cells by centrifugation, and spray-drying the plasma
- High in protein, and contains active immunoglobulins.
- Primarily used as a protein source for early weaned pigs.
- High cost limits its use.

Average Nutrient Content

- Crude Protein = 78%
- Lysine = 6.8%
- Ruminant TDN = N/A
- Monogastric ME = N/A

Physical Description - off white to tan color and a fine powdery texture.

FEED IDENTIFICATION LIST

CEREAL GRAIN BY-PRODUCTS



BREWERS DRIED GRAIN

- By-product of the beer making industry.
- Consists of the dried extracted residue of barley malt (alone or in mixtures with other grains) that have been used to provide maltose and dextrins for fermenting.
- Primarily used as a ruminant feed, but may be fed in limited amounts to monogastrics.

Average Nutrient Content

- Ruminant TDN = 73%
- Monogastric ME = 900 Kcal/lb
- Crude Fiber = 12%
- Crude Protein = 27%

Physical Description - brown color, oblong particles, and a flaky texture.



OAT HULLS

- Consists of the outer covering of oat grain after it has been processed to separate the groat (kernel) from the hull.
- A source of fiber that is low in energy and protein.
- Primarily used as a ruminant roughage extender during times when forages are in short supply.

Average Nutrient Content

- Ruminant TDN = 37%
- Monogastric ME = 300 Kcal/lb
- Crude Fiber = 30%
- Crude Protein = 3.5%

Physical Description - light brown color and smooth, stem-like to flaky texture.



WHEAT BRAN

- By-product of the wheat flour milling industry.
- Consists of the coarse outer covering of the wheat kernel.
- Rich in niacin, vitamin B1, phosphorus, and iron.
- Used to provide bulk to diets and as a mild laxative.
- Used primarily in diets for horses and in diets for gestating cows, sheep, and swine.

Average Nutrient Content

- Ruminant TDN = 62%
- Monogastric ME = 1055 Kcal/lb
- Crude Fiber = 10%
- Crude Protein = 16%

Physical Description - light brown color with spots of white, fairly large particle size, and a flaky texture.

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WHEAT MIDDLING'S

- By-product of the wheat flour milling industry.
- Consists of the fine particles of wheat bran, wheat shorts, wheat germ, wheat flour, and some of the offal from the "tail of the mill".
- Rich in niacin, vitamin B1, phosphorus, and iron.
- A palatable feedstuff commonly added to cattle diets.
- Has a mild laxative effect

Average Nutrient Content

- Ruminant TDN = 81%
- Monogastric ME = 1000 Kcal/lb
- Crude Fiber = 8.5%
- Crude Protein = 15%

Physical Description - light brownish color, small particle size, and a lightly flaky to finely ground texture.



CORN DISTILLERS DRIED GRAIN

- By-product of the distiller's industry.
- Consists of the dried, screened coarse grain fraction that remains after the removal of the alcohol from a yeast fermented mash.
- Primarily used as a protein and energy source in ruminant and horse feeds, but may be fed in limited amounts to monogastrics.

Average Nutrient Content

- Ruminant TDN = 79%
- Monogastric ME = 1450 Kcal/lb
- Crude Fiber = 13%
- Crude Protein = 27%

Physical Description - light to dark brown color, coarse particle size, and a flaky to powdery texture.



**CORN DISTILLERS DRIED GRAIN
WITH SOLUBLE**

- By-product of the distiller's industry.
- Obtained by drying and blending together both the screened, coarse grain fraction and the condensed screened stillage remaining after the removal of the alcohol from a yeast fermented mash.
- Primarily used as a protein and energy source in ruminant and horse feeds, but may be fed in limited amounts to monogastrics.

Average Nutrient Content

- Ruminant TDN = 82%
- Monogastric ME = 1500 Kcal/lb
- Crude Fiber = 8.5%
- Crude Protein = 27%

Physical Description - light to dark brown color, varying particle size, and a flaky to powdery texture.

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CORN GLUTEN FEED

- By-product of the wet corn milling industry.
- Consists of the dried residue remaining after the removal of most of the starch, gluten, and germ from corn.
- Contains corn bran and soluble protein.
- Primarily fed to ruminants as a source of protein and energy (high fiber content limits its use in monogastrics).

Average Nutrient Content

- Ruminant TDN = 75%
- Monogastric ME = 1050 Kcal/lb
- Crude Fiber = 10%
- Crude Protein = 21%

Physical Description - brown color with a flaky to powdery texture.



CORN GLUTEN MEAL

- By-product of the wet corn milling industry.
- Consists of the dried residue remaining after the removal of most of the starch, germ, and bran from corn.
- Marketed as a 41 or 60% crude protein feed ingredient.
- Primarily fed to poultry and dairy as a protein source, and is a good rumen bypass feed.

Average Nutrient Content

- Ruminant TDN = 76-86%
- Monogastric ME = 1400 Kcal/lb
- Crude Fiber = 2.5-4.0%
- Crude Protein = 41 or 60%

Physical Description - yellowish brown color with a granular to powdery texture.

FEED IDENTIFICATION LIST

MISCELLANEOUS BY-PRODUCTS



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.

Average Nutrient Content

- Ruminant TDN = 68%
- Monogastric ME = 1050 Kcal/lb
- Crude Fiber = 21%
- Crude Protein = 8%

Physical Description - grayish-brown color, irregular particle size, and a rough texture.



ALMOND HULLS

- Almond hulls are classified as a feedstuff with a moderate neutral detergent fiber (NDF) level, low crude protein (CP) level and high soluble carbohydrate level – thereby leading to a moderate net energy for lactation (NEI) level

Average Nutrient Content

- Ruminant TDN = 68.56%
- Monogastric ME = N/A
- Crude Fiber = 15.3%
- Crude Protein = 5.7%

Physical Description - The fleshy pericarp and mesocarp form the fibrous green-gray hull, and the mature stony endocarp forms the light brown shell. Inside the shell, the kernel is surrounded by a light-brown colored and thin tegument called testa or skin.



COTTONSEED HULLS

- By-product of the cottonseed oil manufacturing industry.
- Consists of the outer covering of the cottonseed that is removed prior to oil extraction.
- A high fiber, palatable feedstuff used as a roughage for cattle, especially in areas where good quality forages are scarce.
- Occasionally added in grain mixes to increase the bulk density and crude fiber content.

Average Nutrient Content

- Ruminant TDN = 47%
- Monogastric ME = N/A
- Crude Fiber = 43%
- Crude Protein = 4%

Physical Description - white colored cotton fibers and brown to brownish-black colored hulls, and a mixed rough and fuzzy texture.

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SOYBEAN HULLS

- By-product of the soybean oil and meal manufacturing industry.
- Consists of the outer covering of the soybean that is removed prior to oil extraction.
- A palatable source of digestible fiber for ruminants and horses.

Average Nutrient Content

- Ruminant TDN = 71%
- Monogastric ME = N/A
- Crude Fiber = 36%
- Crude Protein = 10%

Physical Description - light brown color with dark specks, and a flaky texture.

FEED IDENTIFICATION LIST

MINERAL AND VITAMIN SOURCES



**DE FLUORINATED ROCK
PHOSPHATE**

- A natural source of calcium and phosphorus.
- Derived from rock phosphates that have been heated to drive off fluorine.
- Must have less than 1 part fluorine to 100 parts phosphorus

Average Nutrient Content

- Calcium = 33%
- Phosphorus = 18%

Physical Description - dark gray color, small gravel shape, and a granular to powdery texture.



DICALCIUM PHOSPHATE

- A synthetic source of calcium and phosphorus.
- Obtained by processing rock phosphates into phosphoric acid, which is then reacted with calcium carbonate (limestone).
- Commonly used source of calcium and phosphorus in livestock, horse, and poultry feeds.

Average Nutrient Content

- Calcium = 22%
- Phosphorus = 18.5%

Physical Description - gray color, small rock-like shape of varying size, and a granular texture.



GROUND LIMESTONE

- A natural source of calcium.
- Obtained by grinding mined, calcitic limestone's.
- Also called calcium carbonate.
- A relatively inexpensive source of calcium used in livestock, horse, and poultry diets.

Average Nutrient Content

- Calcium = 38%

Physical Description - light gray color and a granular to floury texture.

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STEAMED BONE MEAL

- A by-product source of calcium and phosphorus.
- Prepared from bones by cooking with steam under pressure, grinding, and drying.
- An excellent source of calcium and phosphorus in livestock, horse, and poultry feeds.
- More expensive than other calcium and phosphorus sources.

Average Nutrient Content

- Calcium = 24%
- Phosphorus = 12%

Physical Description - off-white to light gray color and a powdery texture.



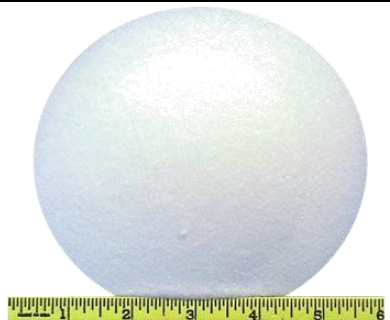
OYSTER SHELLS

- Produced by coarsely grinding oyster shells (sometimes finely ground to produce oyster flour).
- Consists of approximately 94% calcium carbonate.
- An excellent source of calcium used primarily in poultry feeds.

Average Nutrient Content

- Calcium = 38%

Physical Description - off-white to gray color, rock-like shape, and a coarse texture.



WHITE SALT

- Comprised of almost pure sodium chloride.
- Most common mineral supplement added to livestock, horse, and poultry feeds.
- May be provided in block, granulated, or rock form.

Average Nutrient Content

- Sodium = 39.5%
- Chloride = 59%

Physical Description - white color, a tiny uniform crystal shape, and a granular to grainy texture.

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TRACE-MINERALIZED SALT

- Consists of salt and one or more trace minerals (such as cobalt, copper, iodine, iron, manganese, sulfur, selenium and zinc).
- Commonly fed free-choice to grazing animals in either loose or block form.

Average Nutrient Content

- Varies depending on added trace minerals.

Physical Description - bronze to reddish color, a tiny uniform crystal shape, and a granular to grainy texture.



TRACE MINERAL PREMIX

- May contain the trace minerals cobalt, copper, iodine, iron, manganese, magnesium, potassium, sulfur, selenium, and (or) zinc.
- Various inert products or feedstuffs (such as calcium carbonate, soy flour, protein meals, or rice hulls) are used as carriers in trace mineral premixes.

Average Nutrient Content

- Varies depending on added trace minerals.

Physical Description - light brown color and a flaky to very fine, powdery texture.



VITAMIN PREMIX

- May contain both fat soluble and water soluble vitamins.
- Fat soluble vitamins are vitamin A, vitamin D, vitamin E, and vitamin K.
- Water soluble vitamins are biotin, choline, folic acid, niacin, pyridoxine (vitamin B6), pantothenic acid, riboflavin (vitamin B2), thiamine (vitamin B1), vitamin B12 and vitamin C.
- Various feedstuffs (such as rice hulls, soybean meal, corn gluten meal, and wheat middling's) are used as carriers in vitamin premixes.

Average Nutrient Content

- Varies depending on added vitamins

Physical Description - light brown to yellowish brown color, small particle size, and a flaky to powdery texture.

FEED IDENTIFICATION LIST

MISCELLANEOUS FEEDSTUFFS



UREA

- A source of nitrogen (not a protein supplement) also referred to as non-protein nitrogen.
- Should only be fed to ruminants.
- Can be toxic if fed at excessive levels (should provide no more than 1/3 of the total nitrogen in the diet).
- Diets with added urea should also contain a readily available source of carbon (energy).

Average Nutrient Content

- Nitrogen = 42-45%

Physical Description - white color, small beadlike particles, and a granular texture.



VEGETABLE OIL

- A very potent energy 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.

Average Nutrient Content

- Ruminant TDN = 175%
- Monogastric ME = 3300 Kcal/lb

Physical Description - a somewhat viscous liquid with a light yellow to yellowish-brown color.



L-LYSINE HCl (FEED GRADE)

- Synthetic source of the amino acid lysine.
- Produced by bacterial fermentation.
- Used primarily in monogastric diets (especially swine diets) to lower total crude protein and meet the lysine requirements.

Average Nutrient Content

- Lysine = 78%

Physical Description - off-white to cream color and a granular to powdery texture.

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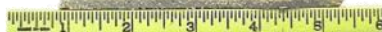
DL-METHIONINE (FEED GRADE)

- Synthetic source of the amino acid methionine.
- Produced by bacterial fermentation.
- Used primarily in monogastric diets (especially poultry diets) to lower total crude protein and meet the methionine requirements.

Average Nutrient Content

- Methionine = 99%

Physical Description - white color and a crystalline to powdery texture.



L-THREONINE (FEED GRADE)

- Synthetic source of the amino acid threonine.
- Produced by bacterial fermentation.
- Used primarily in monogastric diets to lower total crude protein and meet the threonine requirement.

Average Nutrient Content

- Threonine = 98%

Physical Description - tan to light brown color and a granular to powdery texture.



L-TRYPTOPHAN (FEED GRADE)

- Synthetic source of the amino acid tryptophan.
- Produced by bacterial fermentation.
- Used primarily in monogastric diets to lower total crude protein and meet the tryptophan requirements.

Average Nutrient Content

- Tryptophan = 98%

Physical Description - white to creamy color and a powdery texture.

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TRYPTOSINE (FEED GRADE)

- Synthetic source of the amino acid tryptophan and lysine.
- Produced by bacterial fermentation.
- Used primarily in monogastric diets to lower total crude protein and meet the tryptophan and lysine requirement

Average Nutrient Content

- Tryptophan = 16.1%
- Lysine = 56.3%

Physical Description - light brown color and a granular to powdery texture.



SANTOQUIN

- An antioxidant (feed preservative).
- Included in diets with added fat (or diets with high fat ingredients) to retard the oxidative destruction of nutrients.

Average Nutrient Content

- No nutritive value

Physical Description - black color, small bead-like shape, and a granular texture.



DRIED MOLASSES

- Dried 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.

Average Nutrient Content

- Ruminant TDN = 80%
- Crude Protein = 7%

Physical Description - dark brown color and a flaky and (or) granular texture.

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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.

Average Nutrient Content

- Ruminant TDN = 80%
- Crude Protein = 7%

Physical Description - A viscous (thick) liquid with a dark brown to black color

FEED IDENTIFICATION LIST

PASTURE AND HAY FORAGES



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.
- Annual yields = 3-6 tons DM/acre

Average Nutrient Content

- Ruminant TDN = 55-60%
- Crude Protein = 15-25%

Physical Description - erect growing with many leafy stems arising from large crowns at solid surface; compound leaves with three long, narrow leaflets, no prominent watermark or V-shaped pattern, and serrated only at tip; can have purple or yellow flowers.



KENTUCKY BLUEGRASS

- High quality, highly palatable, cool season perennial grass with rhizomes that produce a dense sod.
- Can grow to heights of 1 to 3 feet in seed head stage.
- Can withstand close, heavy grazing better than most other grasses.
- Very sensitive to heat and summer drought (becomes dormant and brown during hot, dry summers).
- Not widely used as a hay grass because of its low yield, and if mixed with other grasses and legumes it matures before other plants are ready to cut.
- Annual yield = 1-3 tons DM/acre

Average Nutrient Content

- Ruminant TDN = 60-75%
- Crude Protein = 12-17%

Physical Description - leaves are dark green color, narrow and fine bladed with tips shaped like a boats bow; no auricles and low ligule; seed heads smaller than those for fall fescue.



TALL FESCUE

- Deeply rooted, strongly tufted, cool season perennial bunchgrass with short rhizomes.
- Can grow to heights of 2 to 4 feet in seed head stage.
- Tolerant of soil acidity, low fertility, and poor drainage, and relatively tolerant of drought and overgrazing.
- Susceptible to endophyte fungus infection which aids in plant survival, but reduces animal performance.
- Most widely used for pasture especially winter grazing.
- Annual yields = 2-4 tons DM/acre

Average Nutrient Content

- Ruminant TDN - 45-60%
- Crude Protein = 10-15%

Physical Description - leaves are shiny, dark green, thick, wide, and ribbed with prominent veins and no obvious ligule; emerging leaves are rolled in the bud.

HORSE SKILL-A-THON CONTEST RESOURCE GUIDE

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ORCHARD GRASS

- Long-lived perennial bunchgrass that forms dense circular bunches.
- Can grow to heights of 2 to 4 feet in seed head stage.
- High quality, high yielding, palatable forage that is well-suited for use in mixtures with Alfalfa and Red Clover.
- Shade tolerant, moderately heat and cold resistant, but not tolerant of close cutting or continuous grazing.
- Annual yields = 2-4 tons DM/acre

Average Nutrient Content

- Ruminant TDN = 55-70%
- Crude Protein = 8-12%

Physical Description - bluish color leaves with veins less prominent than those for tall fescue; stems are flattened at base; leaves emerge along the midrib of the leaf folded in half.



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.
- Annual yields = 2 - 4 tons DM/acre

Average Nutrient Content

- Ruminant TDN = 55-65%
- Crude Protein = 8-12%

Physical Description - leaves have a bluish green color; swollen, bulb-like structure at base of stem; cylindrical seed head.



WHITE (LADINO) CLOVER

- Long-lived perennial cool season legume that spreads by stolons.
- Can grow to heights of 8 to 12 inches.
- Ladino is a taller growing type of white clover.
- Highly palatable and nutritious, it is used primarily as a pasture forage in mixtures with Kentucky Bluegrass or Tall Fescue.
- Disadvantage is the potential for bloat, especially in the spring and with thick, lush strands.
- Annual yields = 1-3 tons DM/acre

Average Nutrient Content

- Ruminant TDN = 60-70%
- Crude Protein = 15-28%

Physical Description - leafy plant with leaves that are shiny underneath and sometimes watermarked with a V-shaped pattern; stems often grooved; unlike red clover, no hairs on leaves and stems; white flowers.

HORSE SKILL-A-THON CONTEST RESOURCE GUIDE

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RED CLOVER

- Widely adapted, high yielding, cool season perennial legume.
- Can grow to heights of 2 to 3 feet.
- Used as both a hay and pasture forage, usually in mixtures with Tall Fescue, Kentucky Bluegrass, Timothy, or other cool season grasses.
- Best suited to regions with abundant rainfall.
- Has a shorter stand life than Alfalfa or White Clover.
- Disadvantages are the hay is dusty, and over-mature cuttings contain a fungus that causes animals to slobber.
- Annual yields = 2-5 tons DM/acre

Average Nutrient Content

- Ruminant TDN = 55-70%
- Crude Protein = 12-22%

Physical Description - erect, leafy plant with large leaves that almost always have a prominent V-shaped pattern or watermark on leaflets; very hairy, fleshy stems; pink flowers



BERMUDA HAY

- Long-lived perennial warm-season grass that spreads by stolons and rhizomes.
- Can grow to heights of 1 to 3 feet when mature.
- Highly palatable and high-quality forage, well-suited for grazing and hay production in warmer climates.
- Drought tolerant, heat resistant, and responds well to frequent cutting or grazing, but less tolerant of cold.
- Annual yields = 3-7 tons DM/acre

Average Nutrient Content

- Ruminant TDN = 55-65%
- Crude Protein = 8-14%

Physical Description - fine-textured, bright green leaves with short internodes; forms dense mats; produces slender seed heads with 3 to 5 spikes arranged in a star pattern at the tip.

TACK IDENTIFICATION LIST

WESTERN

Reining Saddle



Show Saddle



Work Saddle



Double Loop Show Bridle



Bosal and Mecate



Work Bridle



Cavesson



Western Stirrup



Western Breast Collar



Western Saddle Pad



Western Saddle Blanket



Western Cinch



TACK IDENTIFICATION LIST

ENGLISH

Jumping Saddle



English Bridle



Half Pad



Dressage Saddle



Dressage Bridle



Dressage/Square/All Purpose Pad



Cutback Saddle



Double Show Bridle



Shaped Saddle Pad



English Stirrups



English Girth



TACK IDENTIFICATION LIST

BITS

Loose Ring Snaffle



Twisted Snaffle



D Ring Snaffle



D Ring Sweet Iron Snaffle



Eggbutt Snaffle



French Link Snaffle



Ported Snaffle



Full Cheek Snaffle



Half Cheek Snaffle



Tom Thumb Snaffle



Tom Thumb Sweet Iron Snaffle



Correction Curb



Grazing Curb



Roller Port Curb



S Shank Curb



Spade Curb



English Hackamore



Mechanical Hackamore



S Shank Hackamore



TACK IDENTIFICATION LIST

WESTER REINS

Western Split Reins



Western Roman Reins **Western Barrel Reins**



ENGLISH REINS

Rubber Reins



Braided Leather Reins



MARTINGALES

Running Martingale



Training Fork



German Martingale and Reins



Multi Ring Martingale



TEST QUESTIONS

1. The _____ structure refers to the upper surface of the animal.
 - a. Anterior
 - b. Dorsal**
 - c. Posterior
 - d. Ventral
2. The entire digestive tract of a horse is about _____ feet long.
 - a. 50
 - b. 75
 - c. 100**
 - d. 150
3. A stallion does not reach full reproductive capacity until _____ years of age.
 - a. 2
 - b. 3
 - c. 4**
 - d. 5
4. A _____ mare is one that has never been bred.
 - a. Maiden**
 - b. New
 - c. Virgin
 - d. Young
5. _____ is a term in horses that occurs when feed becomes lodged in the esophagus.
 - a. Choke**
 - b. Colic
 - c. Influenza
 - d. Laminitis
6. Which of the following terms describes a mane that is cut off so part is left standing upright?
 - a. Pulled mane
 - b. Roached mane**
 - c. Thinned mane
 - d. Trimmed mane
7. Which of the following is not a part of a horse's foot?
 - a. Beam**
 - b. Frog
 - c. Sole
 - d. White line
8. Which of the following is a part of a hackamore that fits over and around the nose?
 - a. Bosal**
 - b. Corona
 - c. Fenders
 - d. Fiadore
9. Which of the following will not affect a horse's nutrient requirements?
 - a. Activity level
 - b. Age
 - c. Coat color**
 - d. Environment
10. Which of the following is not a face marking?
 - a. Blaze
 - b. Coronet**
 - c. Star
 - d. Stripe
11. If wood shavings are used as bedding, what type of shavings should be avoided?
 - a. Ash
 - b. Balsa
 - c. Black walnut**
 - d. Pine
12. Which area is NOT considered part of the horse's topline?
 - a. Back
 - b. Crest**
 - c. Croup
 - d. Withers

13. What term is used to describe when the lower jaw is shorted than the upper jaw?
 - a. Canary mouth
 - b. Monkey mouth
 - c. Parrot mouth**
 - d. Undershot jaw
14. What does the horse's olfactory sense refer to?
 - a. Hearing
 - b. Smell**
 - c. Taste
 - d. Touch
15. How tall is a 14.2 hand equine?
 - a. 48 inches
 - b. 52 inches
 - c. 56 inches
 - d. 58 inches**
16. What is the approximate capacity of a horse's stomach?
 - a. 3 gallons**
 - b. 5 gallons
 - c. 12 gallons
 - d. 3 quarts
17. Contact on the inside of the diagonal fore and hind feet is known as _____.
 - a. Cross-firing**
 - b. Overreaching
 - c. Rolling
 - d. Scalping
18. Psyllium which comes from the husk of the fleawort seed, is generally used to treat:
 - _____.
 - a. Diarrhea
 - b. Sand colic**
 - c. Thrush
 - d. Wobbles
19. Where on the horse is the pastern bone located?
 - a. Head
 - b. Leg**
 - c. Neck
 - d. Tail
20. Which is NOT a factor of conformation?
 - a. Balance
 - b. Color**
 - c. Muscling
 - d. Type
21. What part of the body supports the weight of the saddle and rider?
 - a. Back**
 - b. Neck
 - c. Rump
 - d. Withers
22. What material is preferred for jumping and reining shoes?
 - a. Aluminum**
 - b. Copper
 - c. Iron
 - d. Steel
23. The _____ is a rope attached to the halter for leading.
 - a. Cinch
 - b. Lead rope**
 - c. Tree
 - d. War bridle
24. The back of the saddle is the _____.
 - a. Bosal
 - b. Cantle**
 - c. Cinch
 - d. Honda

25. What breed could be characterized by the terms tobiano, overo, and tovero?
- Appaloosa
 - Arabian
 - Paint**
 - Paso Fino
26. What is the most important winter feed for horses?
- Beet pulp
 - Corn
 - Hay**
 - Oats
27. What is a cross between a donkey and a mare called?
- Donkey
 - Foal
 - Hinny
 - Mule**
28. A fast, four-beat gait is the _____.
- Canter
 - Gallop**
 - Pace
 - Trot
29. What features of the horse can be used to determine age?
- Eyes
 - Hair coat
 - Legs
 - Teeth**
30. A _____ is a person who works on horses' feet.
- Farrier**
 - Float
 - Manger
 - Shodder
31. A disease caused by a virus that enters the body from the bite of an infected dog or wild animal is _____.
- Lockjaw
 - Pneumonia
 - Rabies**
 - Tetanus
32. _____ is the reverse of mounting.
- Dismounting**
 - Driving
 - Leading
 - Lunging
33. The list of a breed's ideal characteristics, as outlined by a breed registry or organization is known as the _____.
- Breed average
 - Breed official
 - Breed standard**
 - Breed stock
34. The mother of a horse is called a _____.
- Dam**
 - Dame
 - Damsel
 - Lady
35. An equine standing less than 14.2 hands high is known as a _____.
- Foal
 - Gelding
 - Pony**
 - Yearling

36. The father of a horse is called a _____.
a. Lord
b. Mare
c. Pater
d. Sire
37. Which grain is considered to be the best for horse rations?
a. Barley
b. Corn
c. Oats
d. Wheat
38. _____ is a behavior in which a horse bites on small part of the feed manger or stall.
a. Chewing
b. Cribbing
c. Parrot mouth
d. Thrush
39. What fits the description of a breast collar?
a. Equipment used to prevent the saddle from slipping back
b. Rope/straps used to prevent a horse from roaming or kicking
c. The front part of the saddle
d. Tool used to clean out a horse's hoof
40. Destruction of the frog is caused by anaerobic called _____.
a. An abscess
b. Navicular disease
c. Thrush
d. While line disease
41. A horse that has a body color of yellowish gold; mane and tail may be black, brown, red, or yellow, or white mixed, usually has a dorsal stripe, zebra stripes on legs, and transverse stripe over withers is what color?
a. Bay
b. Dun
c. Gray
d. Roan
42. What is a medium-stiff bristled brush used for removing dust and hair?
a. Body brush
b. Curry comb
c. Dandy brush
d. Face brush
43. Which is the most sensitive part of the hoof?
a. Frog
b. Heel
c. Sole
d. Toe
44. What breed originated in the Shetland Isles of Scotland?
a. Dutch Warmblood
b. Icelandic Ponies
c. Shetland Pony
d. Welsh
45. What does a farrier do?
a. Gives your horse shots
b. Makes saddles
c. Sells horses
d. Trims and balances horse's hooves
46. Clostridium botulinum falls into which classification of microorganisms?
a. Bacteria
b. Fungus
c. Myxovirus
d. Protozoan

47. What is the name of the vertebrae in the croup region?
 - a. Cervical
 - b. Lumbar
 - c. Sacral**
 - d. Thoracic
48. At what degree angle should the neck join the shoulder?
 - a. 45**
 - b. 55
 - c. 65
 - d. 75
49. The number-one spectator sport in the United States is _____.
 - a. Horse Racing**
 - b. Horse Shows
 - c. Riding
 - d. Rodeos
50. Which of the following horses exhibits the most signs of internal parasite infestation?
 - a. Hyperactive, glossy coat, Sweeney
 - b. Potbellied, rough coat, cough**
 - c. Roaring, cribbing, tying up
 - d. Wasp waisted, rubbed tail, blind staggers
51. Horses drink _____ to _____ gallons of water a day.
 - a. 1 to 2
 - b. 4 to 6
 - c. 10 to 12**
 - d. 8 to 10
52. The leather flap on the side of an English saddle covering the area where the stirrup attaches to the saddle is called the _____.
 - a. Cantle
 - b. Girth
 - c. Panels
 - d. Skirt**
53. Which roughage can be described as having jointed stems and a seed-like fruit?
 - a. Alfalfa
 - b. Lespensa
 - c. Red Clover
 - d. Timothy**
54. The wooden frame of a saddle is the _____.
 - a. Cinch
 - b. Honda
 - c. Port
 - d. Tree**
55. Which of the following best, sequentially identifies parts of the horse's digestive tract?
 - a. Cervix, Liver, Duodenum, Anus
 - b. Esophagus, Rumen, Cecum, Colon
 - c. Lips, Larynx, Lungs, Large Intestine
 - d. Mouth, Esophagus, Stomach, Cecum**
56. 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**
57. Urine that is a brownish-green color may indicate that your horse has _____.
 - a. Fever
 - b. Influenza
 - c. Jaundice**
 - d. Low Blood Sugar
58. Which term is NOT associated with swelling or inflammation?
 - a. Edema
 - b. Encephalitis
 - c. Enterolith**
 - d. Scratches

59. The ancient Andalusian is a _____ breed, and its roots are very evident in the Andalusian's muscular build, convex head, and action.
- French
 - Scottish
 - Spanish**
 - Swedish
60. Which of the following body parts is not part of the digestive system?
- Cecum
 - Esophagus
 - Small Intestine
 - Uterus**
61. This type of saddle is very light; generally made of synthetic material; designed for comfort of horse and rider.
- All-purpose Saddle
 - Dressage Saddle
 - Endurance Saddle**
 - Roping Saddle
62. What term refers to paired genes that are identical?
- Heterozygous
 - Homozygous**
 - Meiosis
 - Mitosis
63. _____ are large and complex molecules of DNA that occur in every body cell.
- Chromosomes**
 - DNA
 - Genes
 - Karyotype
64. The majority of horses have _____ eyes.
- Amber
 - Blue
 - Dark Brown**
 - None of the above
65. An eye that exhibits a lighter, almost white appearance is called a _____.
- Pale-eye
 - Wall-eye**
 - White-eye
 - None of the above
66. What joint is commonly referred to as the "yes-no" joint?
- Atlas-axis**
 - Hock
 - Knee
 - Stifle
67. In the horse, what organ secretes bile into the small intestine?
- Gall bladder
 - Liver**
 - Pancreas
 - Spleen
68. What is the average gestation length of the mare?
- 252-283 days
 - 335-342 days**
 - 383-401 days
 - 415-460 days
69. Fillies should be bred to foal at _____ years of age.
- 1 to 2
 - 2 to 3
 - 3 to 4**
 - 4 to 5
70. The _____ are attached to the bit and used by the rider to communicate with the horse.
- Dams
 - Ears
 - Foals
 - Reins**

71. What percentage of a plant's protein is concentrated in the leaves?
- 30%
 - 50%
 - 70%**
 - 98%
72. About _____ percent of the horses in the United States are used for personal pleasure riding.
- 50
 - 60
 - 75**
 - 90
73. What kind of pasture is considered the best all-round for horses?
- Crested Wheatgrass
 - Kentucky Bluegrass**
 - Tall Fescue
 - Timothy
74. _____ are used primarily for riding, driving, showing, racing, or utility on a farm or ranch.
- Cold blood Horses
 - Draft Horses
 - Light Horses**
 - Ponies
75. Which is NOT a factor of conformation?
- Balance
 - Color**
 - Muscling
 - Type
76. A ring of rope on a lasso through which the loop slides is known as the _____.
- Honda**
 - Lead Strap
 - Port
 - Tree
77. Which of the following is the most important factor affecting the nutrient composition of grasses and legumes?
- Climate
 - Soil Type
 - Stage of Maturity**
 - Weather
78. Light horses are noted for their riding quality, and light horse breeds rank as some of the most popular in _____.
- France
 - Germany
 - Mexico
 - United States**
79. A moderately fast two-beat lateral gait is known as the _____.
- Canter
 - Gallop
 - Trot**
 - Walk
80. _____ are used for tying and leading horses.
- Bridles and Bits
 - Halters**
 - Martingales
 - Saddles
81. What are the basic parts of the bridle?
- Headstall, bit, reins**
 - Headstall, Bow band, reins
 - Noseband, Brow band, headstall
 - Noseband, Headstall, Reins

82. Hoof color is generally related to leg color, meaning that a leg with a white sock or stocking usually is accompanied by a white hoof. Legs are devoid of white markings are usually accompanied by a _____ hoof.
- Black**
 - Blue
 - Chestnut
 - None of the above
83. What is the name of the bone in the hoof?
- Coffin Bone**
 - Crest
 - Hock
 - Pastern
84. White strip covering coronary band is known as a _____ leg marking.
- Ankle
 - Coronet**
 - Full Stocking
 - Pastern
85. The average heart rate of a resting horse ranges from _____ beats per minute.
- 15-35
 - 25-45**
 - 35-55
 - 45-65
86. A coat pattern that is characterized by blazes that are "bottom-heavy" (wider at the muzzle than on the forehead) and extensive leg markings that lack the "speckling" seen in the sabino pattern is _____.
- Overo
 - Splash**
 - Tobiano
 - Tovero
87. A leg marking characterized by white color that extends almost to the knee is?
- Ankle
 - Leg
 - Sock
 - Stocking**
88. Which of the following gaits is four beats?
- Jog
 - Lope
 - Trot
 - Walk**
89. The large pouch between the small and large intestines is the ____.
- Cecum**
 - Gall Bladder
 - Pancreas
 - Stomach
90. A wide cord girth used on a western saddle is a _____.
- Cinch**
 - Crest
 - Honda
 - Lead Strap
91. Which of the following causes tail rubbing?
- Colic
 - Gymkhana
 - Lockjaw
 - Pinworms**
92. Which of the following is not a strategy to prevent colic?
- Avoid sudden changes in the feeding program
 - Feeding your horse grain on bare ground**
 - Frequent feeding instead of once a day
 - Having ample drinking water available at all times

93. Which of the following protozoa is the cause of Equine Protozoal Myoencephalitis?
- a. Myxovirus equi
 - b. Rickettsia Ehrlichii
 - c. Sarcocystis Neurona**
 - d. Streptococcus equi
94. By the age of _____, a horse is considered to be fully mature and in its prime.
- a. Eight
 - b. Five
 - c. Seven**
 - d. Six
95. The _____ is a storage room where bridles, saddles and harnesses are kept.
- a. Aid
 - b. Bot
 - c. Breech
 - d. Tack Room**
96. A young horse, usually less than six months old is called a _____.
- a. Colt
 - b. Filly
 - c. Foal**
 - d. Yearling
97. Blockage of intestinal tract with normal ingesta is known as _____ colic.
- a. Displacement
 - b. Impactions**
 - c. Incarceration
 - d. Spasmodic
98. Which bone of the horse's foot serves as a pulley for the deep flexor tendon?
- a. Coffin bone
 - b. Distal sesamoid bone**
 - c. Long pastern bone
 - d. Proximal sesamoid
99. What are the vessels that bring blood away from the heart called?
- a. Arteries**
 - b. Capillaries
 - c. Nerves
 - d. Veins

POTENTIAL TEAM PRACTICUMS

The following are potential practicums that could be used in the Team Activity portion of the contest. For each practicum the contestants will be given the "Scenario" however the full "Criteria" will only be provided to the judges when applicable.

List of Current Practicums

- Bandaging
- Bit of a Dilemma
- Choice of Breed
- Electric Fence Building
- Halter Tying
- Medication Injection
- Parts of the Horse Identification
- Horse Aging

POTENTIAL TEAM PRACTICUM

BANDAGING PRACTICUM (50 POINTS TOTAL)

Scenario

You and your team work in a small community vet clinic and you have been called out on a farm check. Once you arrive, the ranch hand tells you that he has an injured horse that needs attention. It is a 3-year-old filly that cut both of her front legs on some barbed wire fencing. The large animal veterinarian from your clinic has already been out to suture and treat this filly when she was injured and now the bandages need to be removed and then reapplied.

As a team determine the role each contestant will play which include one contestant to catch and restrain the animal, two individuals to bandage (one for each leg) and one contestant to help organize supplies and complete the animal record.

Criteria	Points Possible	Points Earned
Team works together (with equal effort) to determine what each team member does and all participate in the scenario.	5	
Gently cut the bandages away from the leg and remove old bandages and gauze.	10	
Gently swipe the area clean with fresh gauze soaked in a chlorhexidine solution (clean the wound up and down, then side to side, then in circles) before patting dry with dry gauze.	5	
Unroll the Vet-Wrap in a loose roll around hand and cut to appropriate length. Apply fresh gauze to the wound and gently wrap over the wound and gauze with unrolled Vet-Wrap. Should be able to fit two fingers comfortably between the animal's leg and bandaging tape.	10	
Keep the bandage scissors' blade flush against the leg and keep the tip raised upward in contact with the bandage.	5	
Note the treatment that was performed in the "Animal Record".	10	
Cleans up work area.	5	
Total	50	

POTENTIAL TEAM PRACTICUM

BIT OF A DILEMMA (50 POINTS TOTAL)

Scenario

You are tasked with tacking up 4 different horses when you ran into a bit of a problem... the bridles hanging in the tack room all have different bits and aren't labeled! Using your knowledge base, the pictures of the bits, and the provided chart with information about each of the horses, complete the following tasks for the horses listed below:

Horses Available

Horse #1

Age: 10

Level: Advanced

Discipline: Ranch Riding

Horse #2

Age: 7

Level: Intermediate

Discipline: Dressage

Horse #3

Age: 5

Level: Intermediate

Discipline: Reining

Horse #4

Age: 3

Level: Beginner

Discipline: Western Pleasure

Bits Available

Bit A



Bit B



Bit C



Bit D



Criteria

Part 1 – Match Bit to Horse				Part 2 – Name and Identify Each Bit			
Horse	Bit Pictured	Points Possible	Points Earned		Bit Name	Points Possible	Points Earned
Horse #1	<i>Bit B</i>	3		Bit A	<i>Loose Ring Snaffle Bit</i>	3	
Horse #2	<i>Bit D</i>	3		Bit B	<i>Correction Curb Bit</i>	3	
Horse #3	<i>Bit C</i>	3		Bit C	<i>Roller Port Curb Bit</i>	3	
Horse #4	<i>Bit A</i>	3		Bit D	<i>S Shank Curb Bit</i>	3	
Part 3 – Describe why each bit is an appropriate and effective choice for the horse it is used on.							
Horse	Description					Points Possible	Points Earned
Horse #1	The Correction Curb bit is used for horses that need very little disciplinary correction, well trained horses, seen in reining and ranch riding horses					4	
Horse #2	The Shank bit is commonly seen with gaited horses, allows for extra leverage, keeps the head up,					4	
Horse #3	The Roller bit provides more space in the mouth for the horse's tongue, touches roof of mouth to exert pressure, seen in western pleasure, barrel racing, and reining.					4	
Horse #4	The Loose Ring Snaffle bit only exerts pressure on tongue and lower jaw, very gentle, allows horse more "play", used in training young horses, seen in lower level dressage and pleasure.					4	

	Equal Participation		Part 1		Part 2		Part 3		Total
Score		+		+		+		+	
Out Of	10		12		12		16		50

POTENTIAL TEAM PRACTICUM

CHOICE OF BREED (50 POINTS TOTAL)

Scenario

Four of your friends are trying to decide which breed of horse is best for them to buy. Each of your friends have pictures of the breed they want with different desired traits and uses for their horse breed. Since they know that your team has done thorough research into horse breeds, they ask you to help with their decision.

What each friend is looking for

	Desired Use/ Discipline
Friend #1	Wants an elegant horse that is still athletic and can withstand the harsh climates of where they live. Plans to use horse for long distance trail.
Friend #2	Wants a reliable horse that has no problem walking on rough terrain and is easy training. Plans to use horse in reining events.
Friend #3	Wants an all-purpose horse that is cooperative and easy to keep. Plans to use horse in dressage and jumping events.
Friend #4	Wants an extremely powerful, but kind-tempered horse that is easy to handle. Plans to use horse to plow fields.

Horse Options

	Horse A		Horse B		Horse C		Horse D
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Criteria

Part 1 – Match correct horse to friend’s desired use				Part 2 – Identify correct breed of each horse			
Horse	Horse	Points Possible	Points Earned		Breed Name	Points Possible	Points Earned
Friend #1	<i>Horse C</i>	3		Horse A	<i>Quarter Horse</i>	3	
Friend #2	<i>Horse A</i>	3		Horse B	<i>Belgian</i>	3	
Friend #3	<i>Horse D</i>	3		Horse C	<i>Arabian</i>	3	
Friend #4	<i>Horse B</i>	3		Horse D	<i>Morgan</i>	3	
Part 3 – Explain why each Horse fits for the Desired Use/Discipline							
Horse	Description					Points Possible	Points Earned
Friend #1	The Arabian was bred for endurance and athleticism in harsh climates. Seen most in long distance trail and elegant dressage.					4	
Friend #2	The Quarter Horse is an agile, sure-footed horse. They are versatile and seen most often in rodeo and reining events.					4	
Friend #3	The Morgan is the ultimate all-purpose horse and is seen most in side saddle classes, trotting, driving, dressage, and jumping.					4	
Friend #4	The Belgian is known for its kind temperament and ease of handling. Used most for draft work and logging.					4	

	Equal Participation		Part 1		Part 2		Part 3		Total
Score		+		+		+		+	
Out Of	10		12		12		16		50

POTENTIAL TEAM PRACTICUM

ELECTRIC FENCE BUILDING PRACTICUM (50 POINTS TOTAL)

Scenario

You work weekends for a local rancher who is in the process of building an electric fence. The equipment has all been purchased and the fence posts and grounding post have already been set. The rancher must run to town to pick up more equipment and your job is to finish building this 3 wire electric fence to completion. Once the rancher returns he will plug in the fence and will ask you to test to make sure it is functioning and grounded properly.

Criteria	Points Possible	Points Earned
Team works together (with equal effort) to determine what each team member does and all participate in the scenario.	5	
Place unit on fence post	5	
Connect 3 grounding rods in the ground	5	
Attach Grounding wire to unit using clamps	5	
Run 3 lines of electrical fencing the length of the posts	5	
Stretch and attach lines	5	
Connect the 3 wires with 10 -14 ga wire	5	
Run insulated wire from the top wire to the control panel	5	
Check fence line then ask the rancher to turn on the charger	5	
Use volt meter to check the line	5	
Total	50	

POTENTIAL TEAM PRACTICUM

HALTER TYING PRACTICUM (50 POINTS TOTAL)

Scenario

You and your team are getting ready to wash and groom your horse at the Arizona National Horse Show. You have decided that the best course of action to prepare your horse to be washed is to tie it up at the wash rack. It was decided that a quick release knot would work best. (To ensure that there is not a loose horse running around the grounds use the extra steps)

Each member of the team will need to tie a horse up at an appropriate height and distance away from the fence. After the horse has been tied, each team member will also untie the halter.

Criteria	Points Possible	Points Earned
The correct knot was used	20 (5/ea)	
The horse is tied at an acceptable height and distance from the fence	20 (5/ea)	
Was able to be released quickly	5	
The animals were tied in a timely manner	5	
Total	50	

Additional sources:

- <https://www.youtube.com/watch?v=fG6LiX10hIU>

POTENTIAL TEAM PRACTICUM

MEDICATION INJECTION PRACTICUM (50 POINTS TOTAL)

Scenario

You are a ranch hand on a small horse ranch in Arizona. You have had an outbreak of strangles and your veterinarian has left you with a bottle of reconstituted Ceftiflex for the horses to be treated at 24-hour intervals for 10 days. Today is day 2 and you must each read the label to correctly dose each horse.

Horse 1	Morgan Western Pleasure mare – weighs 950 lbs
Horse 2	Quarter Horse gelding – weighs 1,010 lbs
Horse 3	Pregnant Appaloosa mare – weighs 1,250
Horse 4	American Paint stallion – weighs 1,200

Read the given label and determine a treatment for your affected animal. Using the label, calculate the correct dosage for each animal's weight and if the medication should be given subcutaneous, intramuscular, or intravenous. Write out your treatment plan in the "Animal Record". Once you have determined a treatment plan, draw out the appropriate dosage of medication to give to each animal. Each member of your team will dose one animal.

Criteria	Points Possible	Points Earned
Team works together (with equal effort) to determine treatment plan.	10	
Determines an appropriate treatment plan for each animal, including calculating the appropriate amount of medication. Note this treatment plan in the "Animal Record".	10	
Clean top of bottle with an alcohol wipe. Insert the appropriate air into the bottle of medication before drawing out the correct amount into the syringe. Remove air from syringe and inject orange intramuscularly (at a 90-degree angle).	20	
Correctly recap and remove needle from syringe, then place in sharps container after use.	10	
Total	50	

POTENTIAL TEAM PRACTICUM

PARTS OF THE HORSE PRACTICUM (50 POINTS TOTAL)

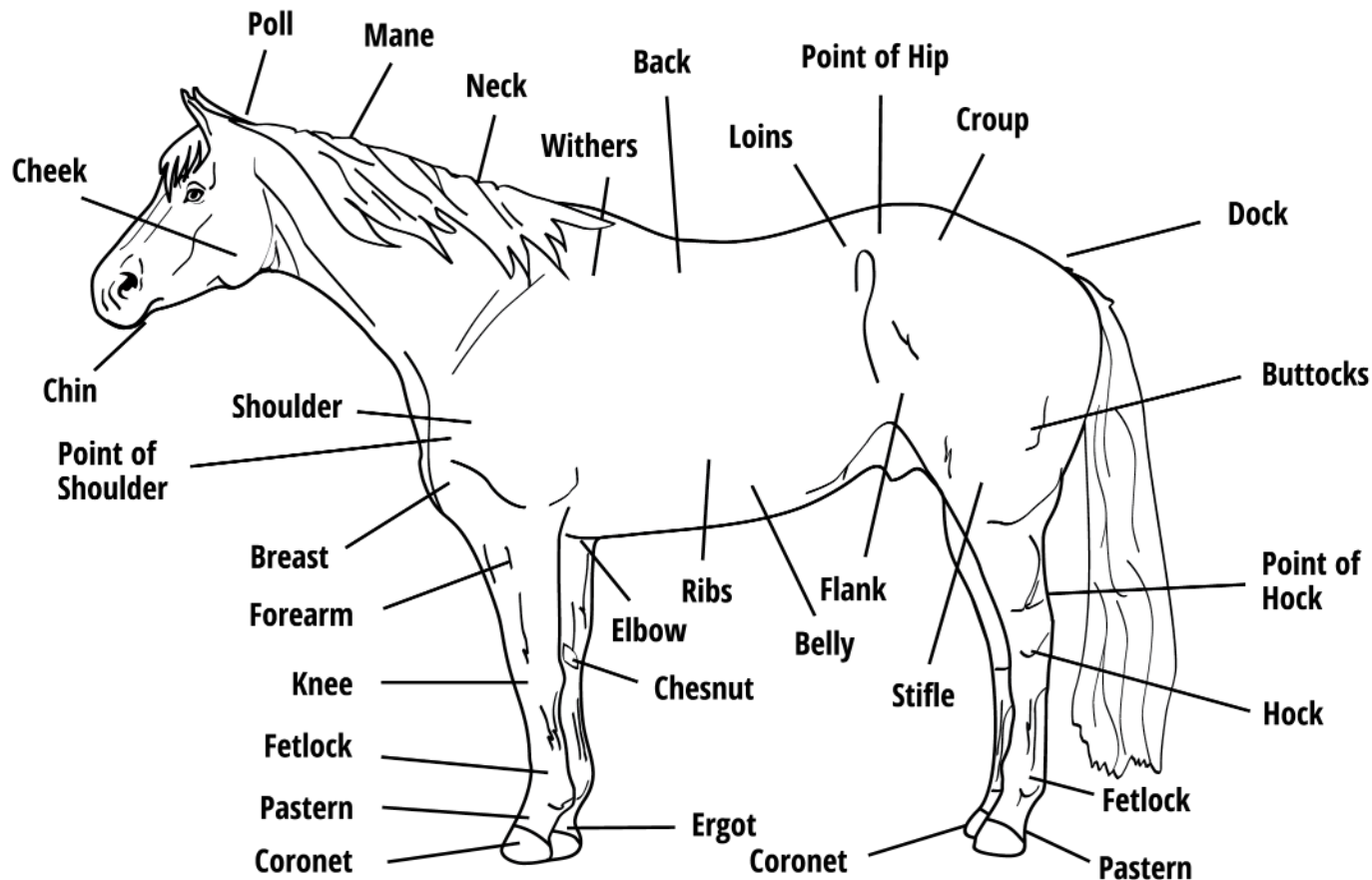
Scenario

Together with your team you will correctly identify the following parts of the Horse

Criteria

Requirements	Points Available	Points Received
Equal Participation	4	
Back	2	
Belly	2	
Breast	2	
Cheek	2	
Chesnut	2	
Coronet	2	
Croup	2	
Dock	2	
Elbow	2	
Ergot	2	
Fetlock	2	

Requirements	Points Available	Points Received
Flank	2	
Forearm	2	
Hock	2	
Knee	2	
Mane	2	
Neck	2	
Pastern	2	
Point of Shoulder	2	
Ribs	2	
Shoulder	2	
Stifle	2	
Withers	2	
Total		



POTENTIAL TEAM PRACTICUM

PARTS OF THE HOOF PRACTICUM (50 POINTS TOTAL)

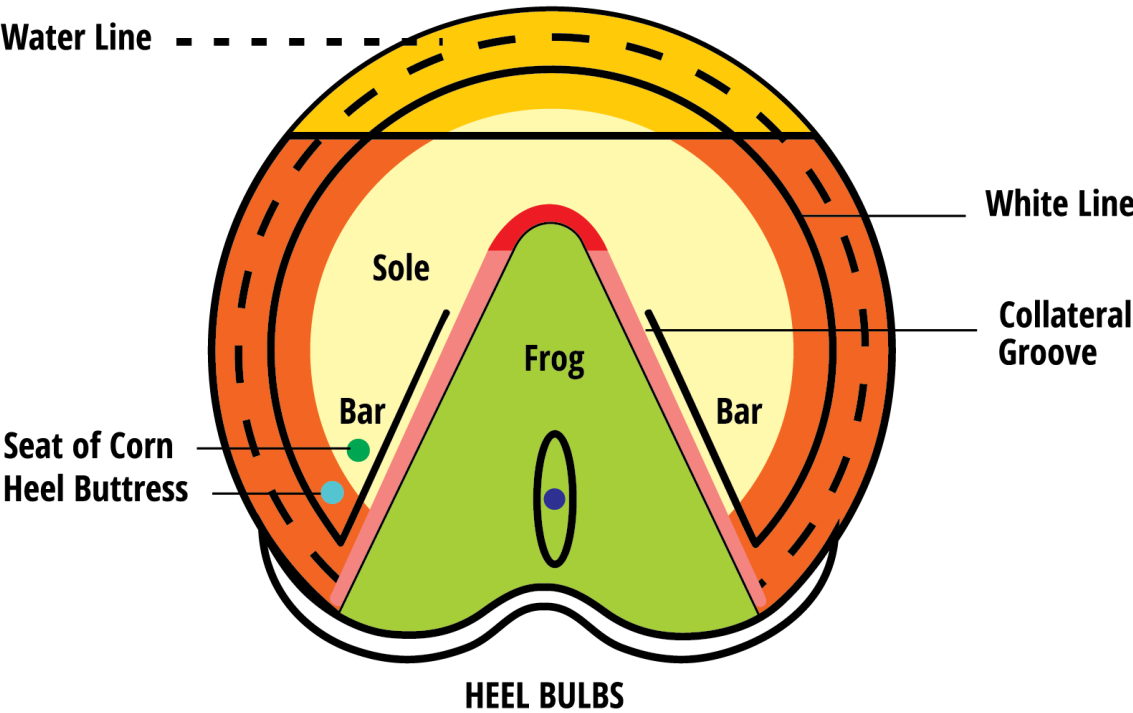
Scenario
Together with your team, you will correctly identify the following parts of the hoof

Criteria

Requirements	Points Available	Points Received
Equal Participation	4	
Apex	2	
Bar	2	
Central Sulcus	2	
Collateral Groove	2	
Frog	2	
Heel Bulbs	2	

Requirements	Points Available	Points Received
Heel of Buttress	2	
Seat of corn	2	
Sole	2	
Sole Callus	2	
Toe	2	
Toe Callus	2	
Water Line	2	
Total		

TOE



- | | | | |
|---|--|---|--|
| Toe Callus | Apex | Collateral Groove | Heel Buttress |
| Sole Callus | Sole | Central Sulcus | Seat of Corn |

POTENTIAL TEAM PRACTICUM

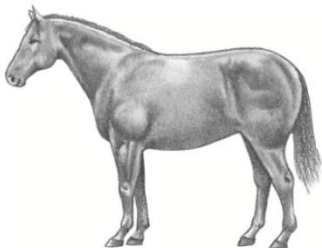
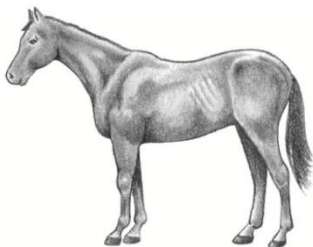
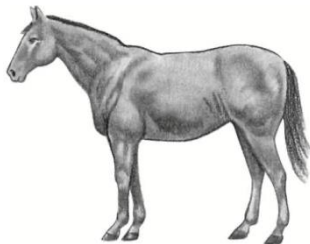
MAINTAINING WEIGHT PRACTICUM (50 POINTS TOTAL)

Scenario:

You were hired at a barn where there are a diverse range of horses that are kept from pasture horses to performance horses. Your job is to take create a meal plan for three horses. Using your knowledge and the provided chart information provided about each of the horses, create a meal plan for them. Complete the following tasks for each of the horses below:

	Equal Participation		Question #1		Question #2		Question #3		Question #4	Total
Score		+		+		+		+		
Out Of	6		9		15		15		5	50

- 1) Identify the horse weight categories:

Horse #1	Horse #2	Horse #3
		

Horse	Weight:	Description:	Points Possible	Points earned
Horse #1	Overweight	An overweight horse will have crease down its back, have a difficulty feeling its ribs. The tailhead, withers, behind the shoulders, and inner thighs will be filled with fat. They will also have a thick neck.	3	
Horse #2	Underweight	An underweight horse, has Fat buildup about halfway on spine; The spine and ribs are easily discernable; The tailhead prominent. The withers, shoulders, and neck are accentuated.	3	
Horse #3	Moderate	On a moderate horse, he back is flat (no crease or ridge); The ribs are not visually distinguishable, but are easily felt; There is fat around the tailhead beginning to feel spongy; The withers appear rounded over spine; The shoulders and neck blend smoothly into body.	3	

HORSE SKILL-A-THON CONTEST RESOURCE GUIDE

[Full Rules in Premium Book](#)

- 2) You do not have a scale at the barn to weigh each of the horses. But you know the length and girth of the horses the formula to estimate the weight of the horses. Calculate the weight of horse's #1-3 below. Round to the nearest whole number. **(15 Points)**

*Formula: (heart girth (in.) * heart girth (in.) * body length (in.) / 300 = estimated body weight*

Horse #1:	Horse #2:	Horse #3:
Heart Girth: 72 in.	Heart Girth: 55 in.	Heart Girth: 63 in.
Body Length: 76 in.	Body Length: 96 in.	Body Length: 86 in.

Estimated body weight of Horse #1: (72 in. heart girth * 72 in. heart girth * 76 in. body length / 300 = **1313 lbs. body weight**

Estimated body weight of Horse #2: (55 in. heart girth * 55 in. heart girth * 96 in. body length / 300 = **968 lbs. body weight**

Estimated body weight of Horse #3: (63 in. heart girth * 63 in. heart girth * 86 in. body length / 300 = **1138 lbs. body weight**

- 3) Knowing the body weight of the horses will help you calculate how much hay each horse needs to eat daily. Calculate a diet for horse's #1-3 below using calculations above. (A normal weight and underweight horse eats 2% of its body weight in lbs./day, an overweight should consume 1.65% its body weight in lbs./day) One of the horses requires beet pulp as supplement. Make note of which horse requires it. Round to the nearest whole number. **(15 Points)**

Overweight horse: 1313 lbs. * **1.65%** = **22 lbs. hay**

Underweight horse: 968 lbs. * **2%** = **19 lbs. hay + beet pulp**

Moderate horse: 1138 lbs. * **2%** = **23 lbs. hay**

- 4) Calculate how much it is going to cost you to feed these three horses weekly when a 35 lbs. bale of hay costs \$18.50. Round to the nearest pound. **(5 Points)**

Total hay lbs. for all three horses: (20 lbs. + 19 lbs. + 23 lbs.) = 62 lbs./ day

1 week = 62 lbs./ day * 7 days = 434 lbs./ day

434 lbs./week / 35 lbs. bales = 13 bales

13 bales * \$18.50 = **\$240.50/ week**

SENIOR TEAM PRACTICUM #2 KEY

HORSE AGING PRACTICUM (50 POINTS TOTAL)

Scenario

Your local trainer has invited your team to a horse auction to find potential new mounts for clients. As part of the selection criteria your trainer has asked each of you to age a potential mount.

Each team member will use proper gloving technique and check the age of each of the horses. Once the age has been determined, record the results in your table.

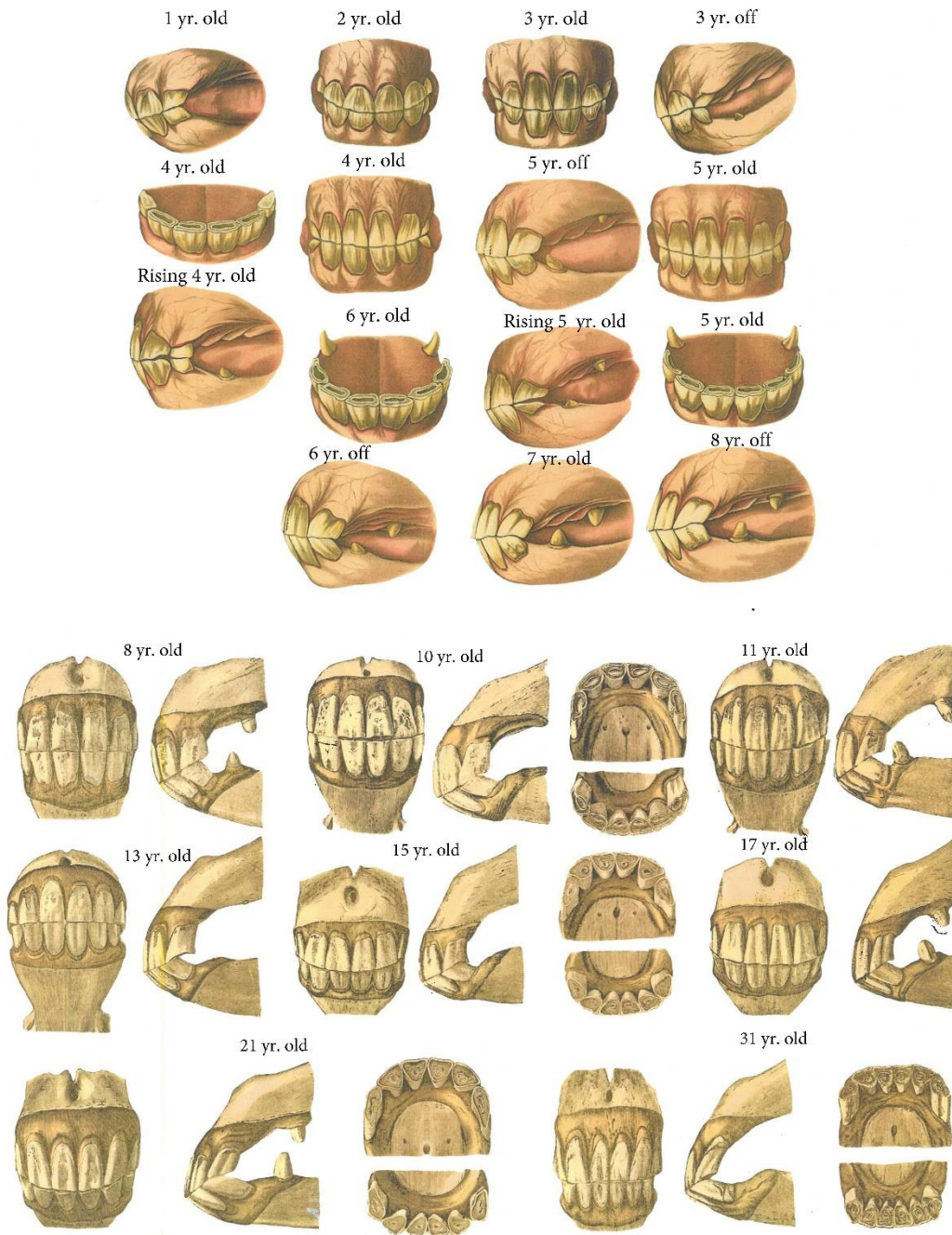
Criteria	Points Possible	Points Earned
Team works together (with equal effort) to age each horse.	10	
Each team member ages 1 horse with accuracy	40 (10/each)	
Total	50	

	Horse #1	Horse #2	Horse #3	Horse #4	Total Points
	A. 8	A. 2	A. 14	A. 29	
	B. 15	B. 21	B. 3	B. 17	
	C. 11	C. 7	C. 9	C. 4	
	D. 4	D. 13	D. 23	D. 12	
Actual Points:					
Potential Points:	10	10	10	10	50

Additional Resources:

https://youtu.be/3A2-ndxZIxI?si=eCpId_B0PNVIC8RE

Additional Resources:



JUNIOR TEAM PRACTICUM # 1 KEY

FARRIER FEE PRACTICUM (50 POINTS TOTAL)

Scenario

You have a farrier coming out to your property to shoe your horses tomorrow and you need to calculate the cost to have the payment ready. You have 3 horses that need full sets of new shoes, and 4 other horses that threw shoes and need repairs.

Criteria	Points Possible	Points Earned
Question #1	20	
Question #2	20	
Equal Team Participation	10	
Total	50	

Scenario:

You have a farrier coming out to your property to shoe your horses tomorrow and you need to calculate the cost to have the payment ready. You have 3 horses that need full sets of new shoes, and 4 other horses that threw shoes and need repairs.

You know the following information:

Cost of a Full Set of Horse Shoes (4 Shoes):	Farrier Fee per horse for a full set of Horse Shoes (4 Shoes):
\$110	\$10

1. You have a total of 3 horses that need new sets of shoes. How much is it going to cost you in total for getting 3 horses full sets of new shoes? **(20 points)**

(Cost for shoes + Farrier Fee) * 3 = Answer

(\$110 + \$10) * 3 = **\$360**

2. Four of your horses lost individual shoes. You have a list of those horses below. How much is it going to cost for these 4 horses? **Round to the nearest whole number. Note: You do not have to pay the farrier fee for these horses. (20 Points)**

Horse that Threw Shoe(s):	Amount of Shoe(s) Thrown:
Benny the Quarter Horse	2 Shoes
Shawn the Hackney	1 Shoe
Joey the Thoroughbred	4 Shoes
June the Haflinger	3 Shoes

\$110 (cost for full set) / 4 = \$28 per shoe

Each team members calculates one horse cost individually:

1. Benny (2 shoes) = 2 x \$28 = \$56
2. Shawn (1 shoe) = 1 x \$28 = \$28
3. Joey (4 shoes) = 4 x \$28 = \$112
4. June (3 shoes) = 3 x \$28 = \$84

Total cost for shoe replacements:

\$56 + \$28 + \$112 + \$84 = **\$280**

JUNIOR TEAM PRACTICUM # 2 KEY

PARTS OF THE SADDLE PRACTICUM (50 POINTS TOTAL)

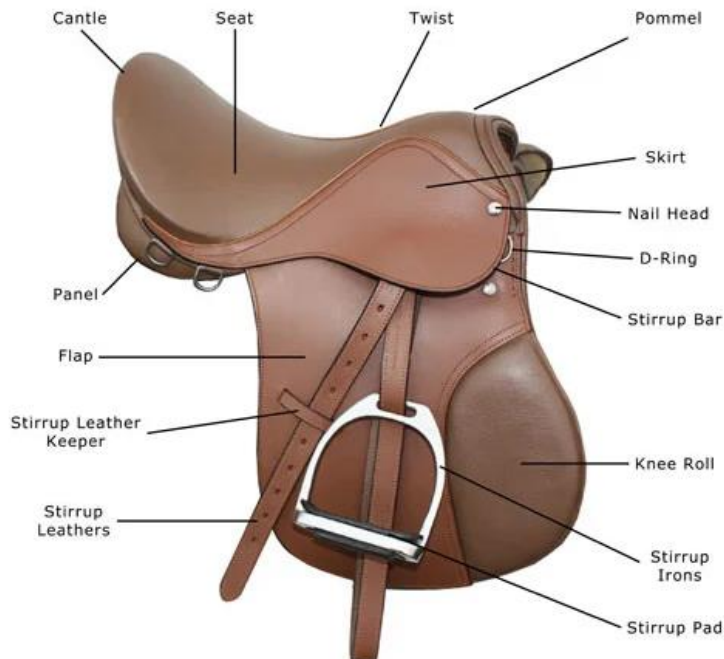
Scenario

Together with your team you will correctly identify the following parts of the saddle by sticking the Velcro tags on the poster board (saddle).

Criteria

Requirements	Points Available	Points Received
Equal Participation	5	
Cantle	3	
Twist	3	
Panels	3	
Stirrup Leather	3	
Knee Roll	3	
Pommel	3	
Flap	3	
Nail Head	3	

Requirements	Points Available	Points Received
Stirrup Pad	3	
Stirrup Irons	3	
Seat	3	
Skirt	3	
Stirrup Bar	3	
Billets	3	
Stirrup Leather Keeper	3	
D-Ring	3	
Total	50	



**ARIZONA
NATIONAL**
Livestock Show