

Ag in the Classroom

Alabama Ag in the Classroom



Equine Unit

A Horse of a Different Color



Skills: Science, Art

Objective: Students will explore the diversity of horse coat colors, reproduce an existing color and develop and name a new color.

Background

Horses, just like people, come in all different shapes, sizes and colors. Just like there are different ethnic groups of people, there are different breeds of horses.

Arabian horses originated in the Middle East, while the Trakehner had its origin in East Prussia. Size among different breeds of horses varies greatly. The American Miniature Horse does not grow taller than 34 inches at the withers, while the American Quarter Horse must be no less than 14 hands at the withers to be eligible for registration. (1 hand=4 inches)

Just like people have different hair colors, horses have different coat colors. We call a person with golden hair "blonde," but a horse that is golden yellow is called "palomino."

Visual Arts

1. Provide each student with a copy of Student Worksheet A. Have students follow along as you read the directions and the descriptions of the coat variations.
2. Provide copies of Student Worksheet B. Have students use crayons or tempera paint to develop new colors. Have students name their colors and explain the names.

Vocabulary

flank - the fleshy part of the side between the ribs and the hips

flaxen - of a pale yellow color

hand - unit of measure equal to four inches used especially for the height of horses

muzzle - the nose and lips area of an animal

withers - the ridge between the shoulder bones of a horse

Name _____

A Horse of a Different Color A

There are five basic horse coat colors listed below. Choose one to color the horse below. You may have to mix or blend more than one crayon to achieve the correct color.

bay

The horse's body color ranges from reddish tan to reddish brown. The mane and tail are both black. The tips of its ears, muzzle and lower legs are black.

black

The horse's body is true black without any light areas. The mane and tail are also black.

brown

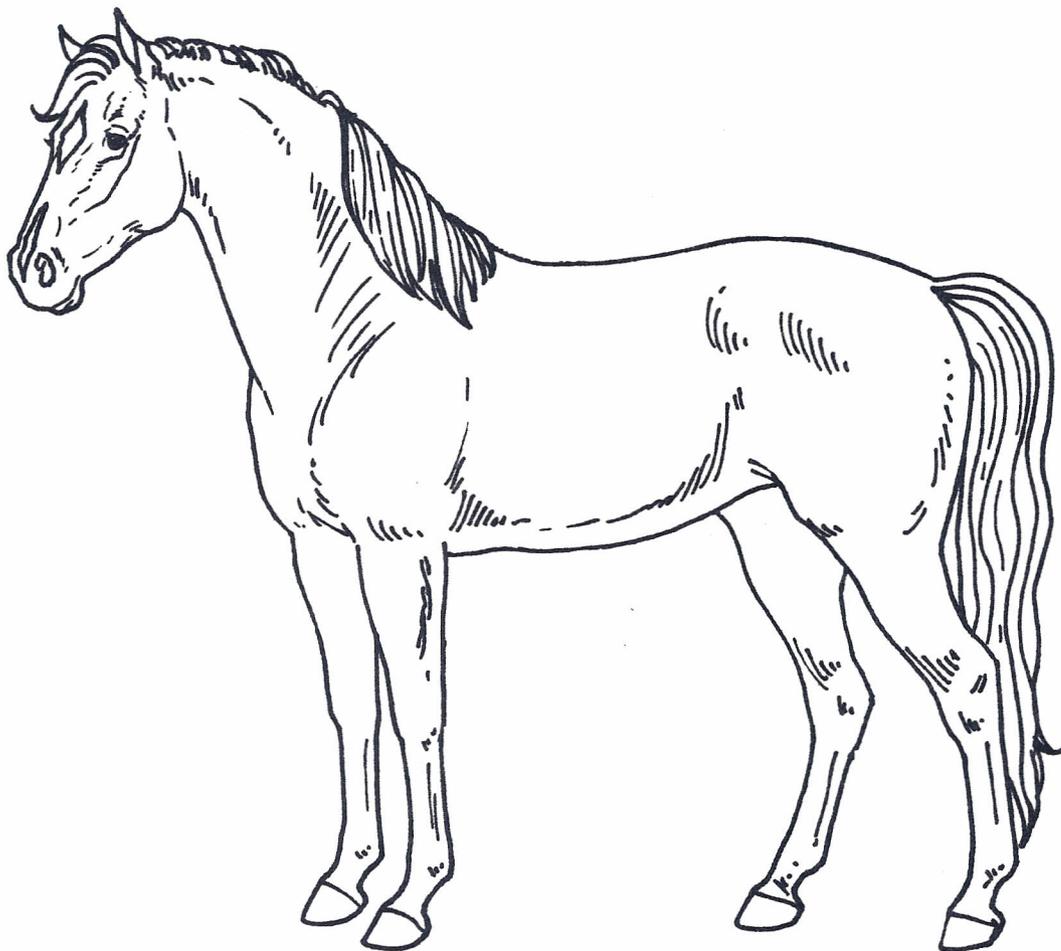
The horse's body color can be either brown or black, with lighter areas around the muzzle, eyes, flank and inside upper legs. The mane and tail are black.

chestnut

The body color ranges from dark red to brownish red, with a mane and tail the same color. Sometimes the mane and tail may be flaxen (pale yellow).

white

The white horse is born white and remains white its entire life. The mane and tail are also white. Eyes can be brown, hazel or blue.



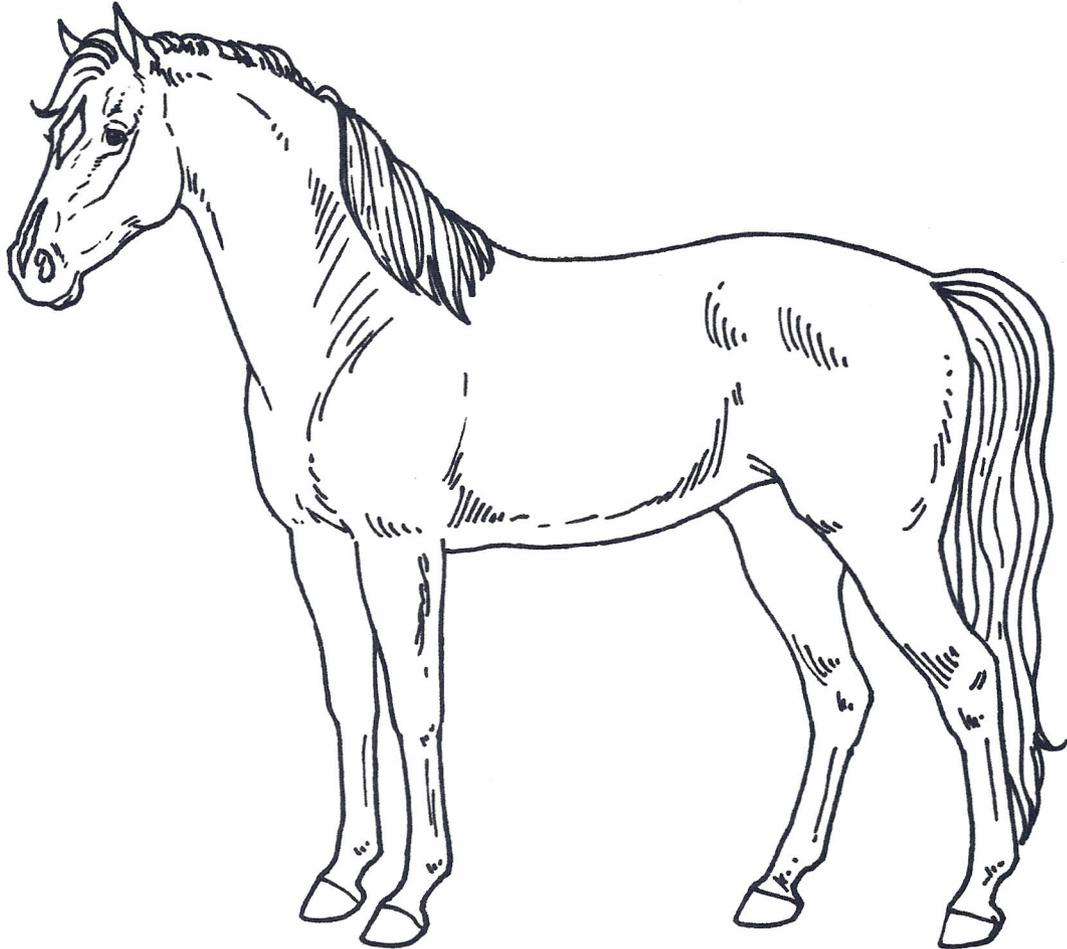
Produced by Oklahoma Cooperative Extension Service, Division of Agricultural Sciences and Natural Resources, OSU, in cooperation with the Oklahoma Department of Agriculture, Food and Forestry and the Oklahoma State Department of Education, 2006



Name _____

A Horse of a Different Color B

Create your very own horse coat color. Mix or blend colors and patterns to create a unique coat for the horse below.



The name of my new color is _____

I named it this because _____



Produced by Oklahoma Cooperative Extension Service, Division of Agricultural Sciences and Natural Resources, OSU, in cooperation with the Oklahoma Department of Agriculture, Food and Forestry and the Oklahoma State Department of Education, 2005.





What Kind of Horse Are You?

Objectives: Students will

- Learn about horses and their usefulness to farmers before tractors replaced them.
- Demonstrate an understanding of measurement by measuring classmates with a tape measure and recording their height.
- Know how to read a chart.

Materials Needed:

- Tape measure
- What Kind of Horse are you worksheet
- Horsepower: the Wonder of Draft Horses by Cris Peterson

Keywords: measurement, breeds, mare, foal, stallion, gelding, machinery, harness, pony, hands, labor, wither, height, equipment, training, recreation, pleasure

Brief Description:

Horses have been useful animals for thousands of years. Horses are great for working and running. They have strong teeth, sharp ears, keen eyes, and a good sense of smell. A horse has larger eyes than any other land animal except the ostrich and the two eyes can move independently. A horse can look forward with one eye and backward with the other eye. They have wide nostrils to help them breathe easily and also have long, muscular legs that give them strength to pull loads and run at fast speeds.

There are more than 150 breeds and types of horse and ponies. These various breeds are divided into three main groups: light horses, heavy horses, and ponies. Light horses have thin legs, small bones, and weigh less than 1300 pounds. Heavy horses have large bones, thick, sturdy legs, and weigh more than 2000 pounds. Ponies are small horses that stand less than 58 inches high when full grown and weigh less than 800 pounds.

Horses are measured in a unit called *hands*. One hand equals four inches. The horse is measured from the ground to the highest point of the withers. The withers are the ridge between the shoulder bones.

Foals are newborn horses. The foal is either a colt, which is a male less than four years old, or a filly, which is a female less than four years old. Foals are able to stand shortly after they are born and within a few hours they can run about. A mare is a female horse that is more than four years old. A pregnant mare will carry her foal for about 11 months. A stallion is a male horse that can be used for breeding and a gelding is a male horse that is not able to be used for breeding.

In the "good old days" a farmer would have to keep as many as six teams of horses for farm labor. That meant spending an hour each morning just to feed and harness the horses before going to work in the fields. It took another hour at the end of the day to put the horses away. Since these "machines" came without headlights, a farmer couldn't work after the sun went down, not to mention the fact that the machines would eat as much as one fifth of the crops for energy. You'd think with all that animal labor a farmer would have more than enough help. But during heavy harvest times, as many as 20 extra people might be needed to help do the work on a 440-acre farm.

It would be nice if that was the way things happened. But, like most revolutions, the change from horses to mechanical horsepower was slow to catch on. Tractors were first introduced in the Midwest around the 1900's. But those first machines were cumbersome, inefficient, steam-operated vehicles. It wasn't until the middle 1930's that tractors improved enough to really replace mules and horses as a labor source.

It was this second generation of tractors, along with other machines and farm equipment, which helped pull American agriculture through those grim days of the Depression, into the most efficient and productive industry the country had ever seen. Like other industries in this country, agriculture has benefited from many improvements in technology. It's not an accident that today's farmer can farm more land, and produce more food more efficiently, than ever before.

Horses are still important in agriculture; particularly in the western United States. Horses are still used on cattle ranches for roping and branding cattle and for carrying cowboys through rough country to help round up the herds. Horses are also used in non-agriculture settings. In larger cities, horses are used by police to patrol busy areas which are often clogged with traffic. Horses are also used for recreation and pleasure. Some people use horses which are bred and trained for specific purposes, horse racing, polo, cutting, reining, etc.

Lesson:

Day 1

1. Discuss general horse information and the transformation from "horse power" to tractor power.
2. Read the book Horsepower: the Wonder of Draft Horses by Cris Peterson.

Day 2

3. Explain to students how horses are measured.
4. Divide the students into groups of two.
5. Have the students take turns measuring one another in inches. The students should measure each other from the ground to the top of their shoulders, like horses are measured. The students should take this number and, with the teacher's help, divide it by four to find out how tall they are in hands.
6. Have the students locate their height in hands from the chart on the worksheet. The students will then discover what type of horses they are.
7. Once the students figure out what type of horse they are, have them research this horse. The students can find where the horse originates, the classification of their horse (light, heavy, pony), what their horse is known for (racing, pulling, roping, etc.), how much their horse weighs, and what color their horse is. The students should show a picture of their horse, if possible. The teacher should tailor the presentation to each grade level.
8. The older students can research farm machinery. Create a timeline of when each machine was invented and how it has improved.

Assessment:

Students should understand the importance of horse in agriculture through the centuries and the units to measure the height of the horse. Encourage students to read books about horses, Horses by Gail Gibbons, Leah's Pony by Elizabeth Friedrich.

BREEDS USED IN THIS LESSON

Shetland Pony

A traditional and popular mount for children in the USA, this hardy little (9.2 to 10.2 hands) dark-colored, thick-coated pony originating in the Shetland Islands of Scotland is a gentle and easy to train worker, capable of pulling twice its weight in driving harness.

Ponies of America—Pony of the Americas (Appaloosa)

These western-type ponies are smaller (14.1 and less) versions of the colorful Appaloosa breed of stock horse. Used mostly under western tack, they are popular for pleasure and show competition. Their color coat is the typical spots and blankets of the Appaloosa.

Hackney Pony

One of the most popular driving breeds in the world, the Hackney Pony (14.1 hands or less) and the Hackney Horse (15.1 hands) are known for their spirit, their refinement and their high stepping action. Both are dark-colored, with high tails and smallish heads also held high.

Quarter Horse

The classic horse of the American cowboy and still used by ranchers today, the short-coupled, heavily muscled and gentle Quarter Horse is a descendant of the Thoroughbred and a popular family horse. Versatile for both pleasure and competition.

Thoroughbred

Long selected only on the basis of soundness, speed and stamina, and one of the first to close its stud book, the Thoroughbred is the world's preeminent race horse. Originated in England around 1700, the breed has both tall distance runners and short-coupled sprinters.

Belgian

A draft breed originating in Belgium of great weight and traction power, usually chestnut and known for a good temperament, strong constitution and being a willing worker. The heaviest recorded horse (3,400 pounds) was a Belgian, who died in Iowa (USA) in 1948.

Name: _____

What Kind of Horse are You?

Use a tape measure to measure a classmate's height.

Inches	Hands	Horse
36-44.8	9-11.2	Shetland Pony
44.8-52.8	11.2-13.2	Pony of the Americas
48-56.8	12-14.2	Hackney Pony
56.8-61.2	14.2-15.3	Quarter Horse
60-68	15-17	Thoroughbred
64-76	16-19	Belgian

1. How tall are you?

Inches _____ Hands _____

2. What kind of horse are you?

3. How tall was the classmate you measured?

4. What kind of horse is he/she?

A Horse of Course!

Objectives: Students will

- Research a specific breed of horse.
- Learn different information about their horse and report it orally or by writing their report.
- Complete the horse breeds worksheet.

Keywords:

- Eocene, Eohippus, Dawn Horse, ancient, Pliohippus, livestock, research, breeds

Brief Description:

Horses belong to a group called equine or equus. Equine is the scientific name given to the horse. Equus comes from the ancient Greek word meaning "quickness". This group consists of horses, ponies, mules, burros, zebras, and donkeys.

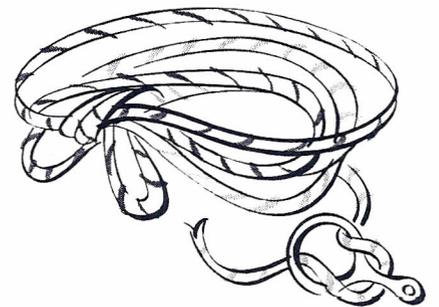
Horses can be traced to the Eocene period somewhere around 50 to 60 million years ago. Eohippus, or Dawn Horse, was about the size of a cocker spaniel-14 inches at the withers and weighed about 12 pounds. He had four toes on his front feet and three on the back. The first truly single-hoofed horse was Pliohippus, which evolved 7 million years ago.

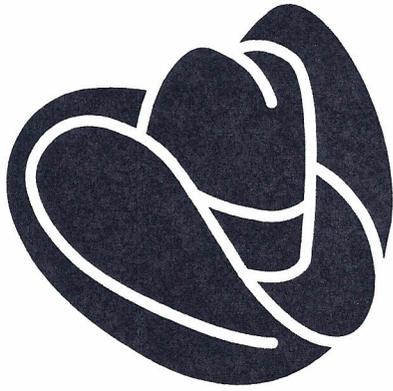
There are more than 350 different breeds of horses and ponies. The average life span for the horse is between 20-25 years. The oldest recorded horse was an English barge horse; his name was "Old Billy", who lived to be 62. Some of the most popular breeds of horses are Quarter Horse, Thoroughbred, Arabian, Appaloosa, Tennessee Walking Horse, and the Morgan. The breed of horse that a person decides to buy depends on how they are going to use the horse. Quarter Horses are preferred by people who work with cattle and have cow sense. Thoroughbreds are prized for their showing, racing, and jumping abilities. Draft horses such as the Belgian, Clydesdale, Shire, and Percheron are used for pulling equipment and heavy loads. These are known as the "heavy" breeds that can weigh up to 2000 pounds or more and are at least 16 hands high.

A lot of ranches still rely on horses to specific jobs. The Quarter Horse is used extensively on ranches to gather, move, and brand cattle.

Lesson:

1. Have students research about a specific horse breed, using library resources and the Internet. Have them orally present the information they found on their horse.
2. Have students complete the word search worksheet.





HORSE BREEDS

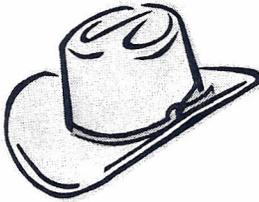
E	H	R	N	A	G	R	O	M	C
V	A	E	R	I	H	S	P	L	M
A	C	T	R	X	Y	I	Y	B	L
O	K	R	B	M	N	D	D	E	N
D	N	A	L	T	E	H	S	L	A
H	E	U	O	S	R	C	T	G	I
O	Y	Q	D	P	O	H	N	I	B
R	W	A	L	K	E	R	I	A	A
S	L	I	P	I	Z	Z	A	N	R
E	A	S	O	O	L	A	P	P	A

APPOLOOSA
CLYDESDALE
LIPIZZAN
PINTO
SHIRE

ARABIAN
HACKNEY
MORGAN
QUARTER
WALKER

BELGIAN
HORSE
PAINT
SHETLAND





Horse Cents

Objective: Students will mathematically explore the costs associated with owning a horse.

Background

Budgets are an essential part of everyday life. Your parents budget their money so they can pay the bills each month and pay for your hamburgers and shoes. Store owners budget their money so they can pay their employees and keep merchandise in the store. Farmers must budget to pay for seeds to plant, maintenance of equipment, feed for their animals and many other expenses.

Just keeping one animal can cost a great deal of money, especially if it is a large animal, like a horse. Planning and budgeting come first. The purchase price is only the beginning. Maintenance of the horse often costs more. Maintenance includes feed, hay, veterinary care, tack and grooming supplies, just to name a few.

For someone who loves horses but can't afford to own one, there are several other alternatives. Some people lease horses, which is similar to leasing a car or truck. Leasing is cheaper than purchasing, but the maintenance costs are still there.

Taking riding lessons at a stable is another alternative. With this option, all you have to pay for are the lessons. Most stables either charge per hour or per lesson.

Language Arts

1. Read and discuss background.
2. Lead a brainstorming sessions on the pros and cons of purchase, lease or taking lessons.

Math

1. Hand out worksheets.
As an example, calculate the cost of the equipment needed for horse ownership.

Social Studies

1. Lead a discussion in which you brainstorm ideas or cutting costs.
2. Have students develop budgets for their own maintenance. Make sure they include food, clothing, transportation and entertainment.

Thanks to Oklahoma AITC



Name _____

Horse Cents

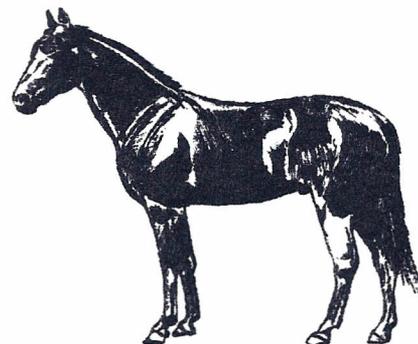
Before you decide to buy a horse, you should consider all the costs involved, not just the cost of buying the animal.

Calculate the following costs. Add each category together to determine the total cost of maintenance. (Hint: To calculate cost per year, multiply cost per day by the number of days in one year.)

Equipment Costs

saddle	\$600
bridle	60
saddle pad	30
winter blanket	80
halter	20
curry comb	4
hoof pick	1
brush	8
buckets	35

Extra: Research how each of these pieces of equipment is used and how long each might last.



Total \$ _____

Horse Care Costs

	Cost per day	Cost per year
feed	\$2.34	_____
foot care	.33	_____
veterinary service	.50	_____

Facility Costs

corral	\$1,000
shed	720
storage	640

Total \$ _____

Total Cost: _____ + _____ + _____ = _____
 equipment horse care facilities



The Feed Bag

Objectives: Students will

- Understand the importance of the nutrition that horses need.
- Make a treat for themselves

Materials Needed:

- Snack size zip-lock bags
- Blueberry jellybeans
- Candy corn
- Granola
- Shredded Wheat
- M&M's
- Cheerios



Keywords: Mustang, nutrition, forage, hay, acres, protein, carbohydrate, Recipe, graze, ingredients, vitamins, minerals, cecum

Brief Description:

Discuss with students the importance of nutrition and that it is the same with animals. Domestic horses require much more care than other livestock. Wild horses, or mustangs, are able to survive without human care. However, as man has tamed the horse, he must also take care of it. Horses eat grass, hay, grain, and pellets. Horses that are kept inside all the time eat mostly hay and grain. Horses kept outside eat grass during the spring, summer and fall, and are fed hay in the winter. They also require a lot of water. On the average day of 70 degrees, an adult horse will drink 11 gallons of water.

Horses are not able to digest food very well, so they must have high quality feed. Horses have a cecum which is attached to the small intestine where the food must go through to be processed. Although they are able to eat roughage like cattle and sheep, they do not have four stomachs to efficiently digest it. This is why horses eat all the time. They must eat only small amounts throughout the day in order to get the nutritional value from their feed.

If you would allow a horse to graze unrestricted and eat every bit of edible grass, your land could become a weed patch with miniature dust storms in the summer and muddy bogs in the winter. By being aware of grass facts and horse sense, you can prevent this problem. Here are some of the facts: One horse needs about 825 air dry pounds of hay or forage per month, or about 5 tons of hay per year. A horse needs supplemental feeding on grazing land to correct deficiencies in protein or other essential nutrients in native forage. A horse needs grain in his diet when he is worked regularly. Horses graze plants completely to the ground leaving little opportunity for regrowth.

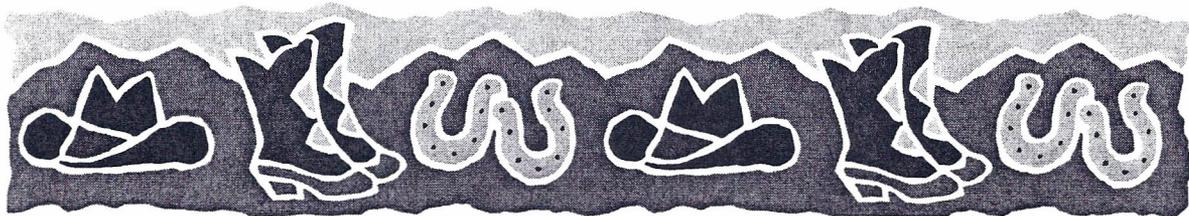
Horses are very mobile. They seldom lie down unless they are very young or very old. Consequently, in moving about they usually "tramp out" as much or more forage than they eat, particularly when confined in a small enclosure. The smaller the acreage, the greater the destruction of the vegetation if horses are allowed to graze continually. This can happen even when ample hay is supplied. Horses confined to small acreages are more susceptible to parasites, diseases and boredom. They should be examined by a veterinarian at least once a year.

Lesson:

1. Have the students make their own feed sack. Horses eat and drink water, corn, oats, hay, sugar beet pulp, and bran. These foods provide the horse with their nutritional needs. (Water, corn-protein/carbohydrates, oats-protein/vitamin B, hay-protein/minerals, vitamins, sugar beet pulp-carbohydrates, bran-protein/carbohydrates.) Take a zip-lock bag and add
water – blueberry jellybeans
corn – candy corn
oats- granola
hay – shredded wheat
sugar beet pulp – M&M's
bran – Cheerios

Assessment:

Students should understand the basic nutrition of a horse and connect with the nutrition of humans.



The Story of the Cowboy

Between 1865 and 1887, millions of longhorn cattle walked from Texas, through Oklahoma, to Kansas and Missouri. Twenty-five to thirty thousand cowboys went on the trail drives.

Most of the cowboys were teenagers. Usually the oldest people on any drive were the trail boss and the cook, and their average age was 30. The young cowboy worked an exhausting schedule. He spent 18 hours in the saddle every day for 3-4 months at a time. At night he rolled out his bedroll and slept on the bare ground.

The cowboy had to stop stampedes of nervous cattle. He had to round up strays. He had to outwit cattle rustlers. He had to watch out for poisonous snakes, cross wild rivers and keep riding even in hailstorms. Sometimes he went for two or three days without water.

The chuck wagon was the kitchen of the cattle drive. It was also the compass. Before going to sleep, the cook pointed the wagon's hitching pole toward the North Star. The next morning, it showed the cowhands which way to go.

Men chose to be cowboys because they thought it would be exciting. They wanted to prove to their families they could make it on their own. For many, working a trail drive brought in more money than they had ever seen in their lives, an average \$30 a month.

The Story of the Rodeo

Rodeo comes from the Spanish word "rodear" which means to "to encircle or to surround." To the Spanish in New Spain (now New Mexico) in the mid-16th century, a rodeo was simply a cattle roundup.

It's hard to say when rodeos began. Cowboys working on the ranches would compete against one another at roundups and during free time. Who could rope a calf the fastest? Who could stay on a bucking bronc the longest? Who could perform fancy tricks while riding a horse at full speed?

In the American West, cowboys were responsible for getting huge cattle herds across the open range from ranches in the west to stockyards in Missouri and Kansas, where the nearest trains were available. From there the cattle went by train to slaughter houses in Chicago.

Once the ranges were fenced, many cowboys were out of work. The Wild West Shows gave them a place to show their skills and pick up some pay. Soon rodeos or cowboy contests became part of Western county fairs. Contestants traveled from one competition to another. Some cowboys became rodeo stars and, later, movie stars. Today rodeo cowboys are professional athletes who compete for a living.

Oklahoma AITC



Horsing Around! Activities

Stick Horse

Using the horse head patterns have the students color and cut out the two horse heads. Have students cut brown fringe or black yarn for the horse's mane. Staple the two sides of the head together, with the mane, leaving the neck open. Stuff the horse head with tissue paper and insert a cardboard wrapping paper tube. Tape the head on the tube. Punch a hole under the mouth to add a string for the reins.

Western Vest

Cut a large brown paper bag up the middle, and make arm holes so students can slip it on like a coat. Have the students cut fringe on the bottom and decorate the vest.

Saddle Bags

Have students decorate brown lunch bags to serve as "saddle bags." Provide an assortment of ingredients for trail mix-mini-pretzels, raisins, peanuts, chocolate chips, chex cereal, etc. and let the students choose what they want in their trail mix.

Paper Plate Cowboys

Materials needed: cheap, white paper plates, red construction paper, brown construction paper, paints crayons, and glue

Copy a pattern for a cowboy hat onto the brown construction paper. Have each child color or paint their face on the paper plate, add facial features with crayons. Next cut out the brown hat and glue on top of the plate. Fold the red construction paper in half diagonally and cut on the fold to create bandanas, glue to the bottom of the paper plate and fold the ends around the back if necessary.

I Feel Like a Cowboy When . . . Class Book

Materials needed: camera, cowboy hat, stick pony, paper bag vest, bandanas, cardstock

Take a picture of each student dresses in hat, vest, and bandana "riding" their stick pony. Print or develop the film and glue each one to a piece of cardstock. At the bottom add the caption "I feel like a cowboy when _____." Ask each student when they feel like a cowboy and have them write their responses in the blank. Finally laminate and bind for a class book.



Cactus

Materials needed: green construction paper, toothpicks, glue, pink tissue paper

Give each student a printed copy of a cactus shape on the green construction paper or have the students draw their own shape. Cut out the cactus. Next break the toothpicks in half and have the students glue to the cactus shape. Give each student a few small squares of pink tissue paper to put on the end of a pencil, twist and glue onto the cactus shape to make "cactus flowers."

Other Resources:

Brett, Jan Armadillo Rodeo

Icenoggle, Jodi Till the Cows Come Home

Fowler, Allan Horses, Horses, Horses

Gibbons, Gail Horses

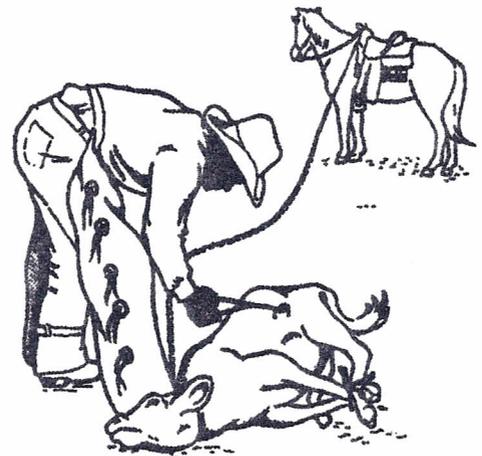
Gibbons, Gail Cowboys and Cowgirls! YippeeYay!

Peterson, Cris Horsepower: The Wonder of Draft Horses

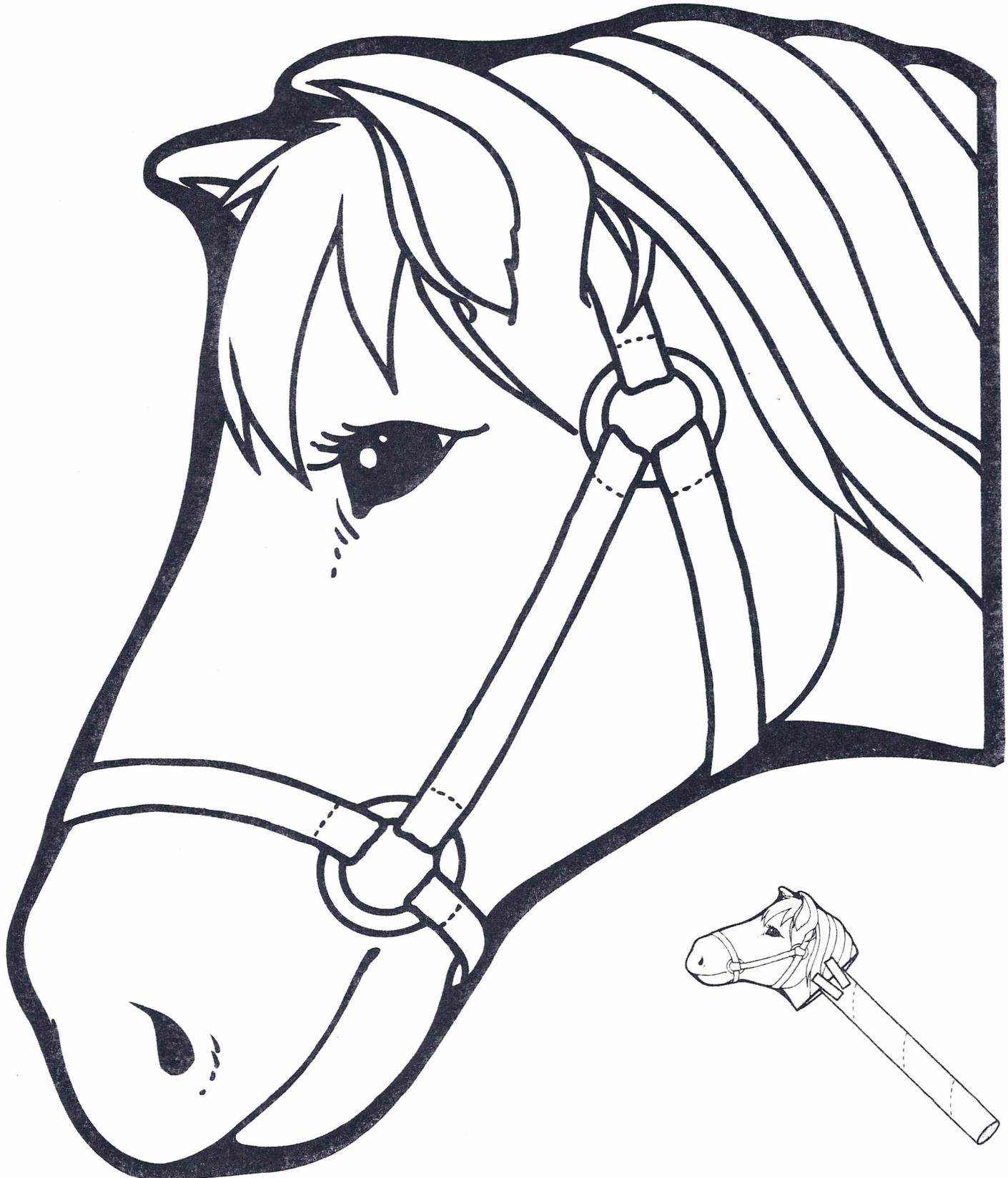
Friedrich, Elizabeth Leah's Pony

Alabama Course of Study Standards

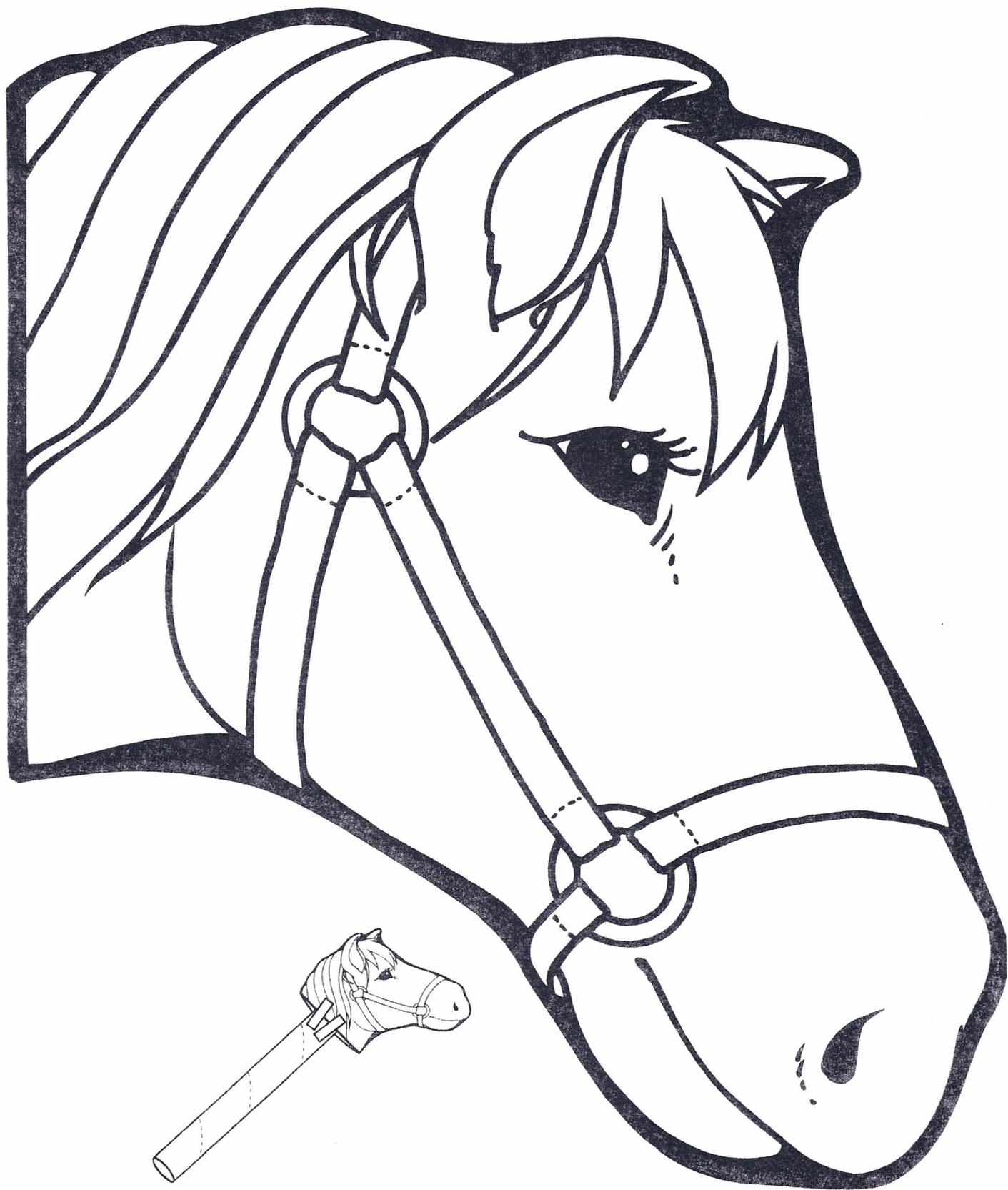
Math, Language Arts, Science, Health, Social Studies



Horse Head (left side)



Horse Head (right side)



HORSES

Male: stallion or gelding

Female: mare

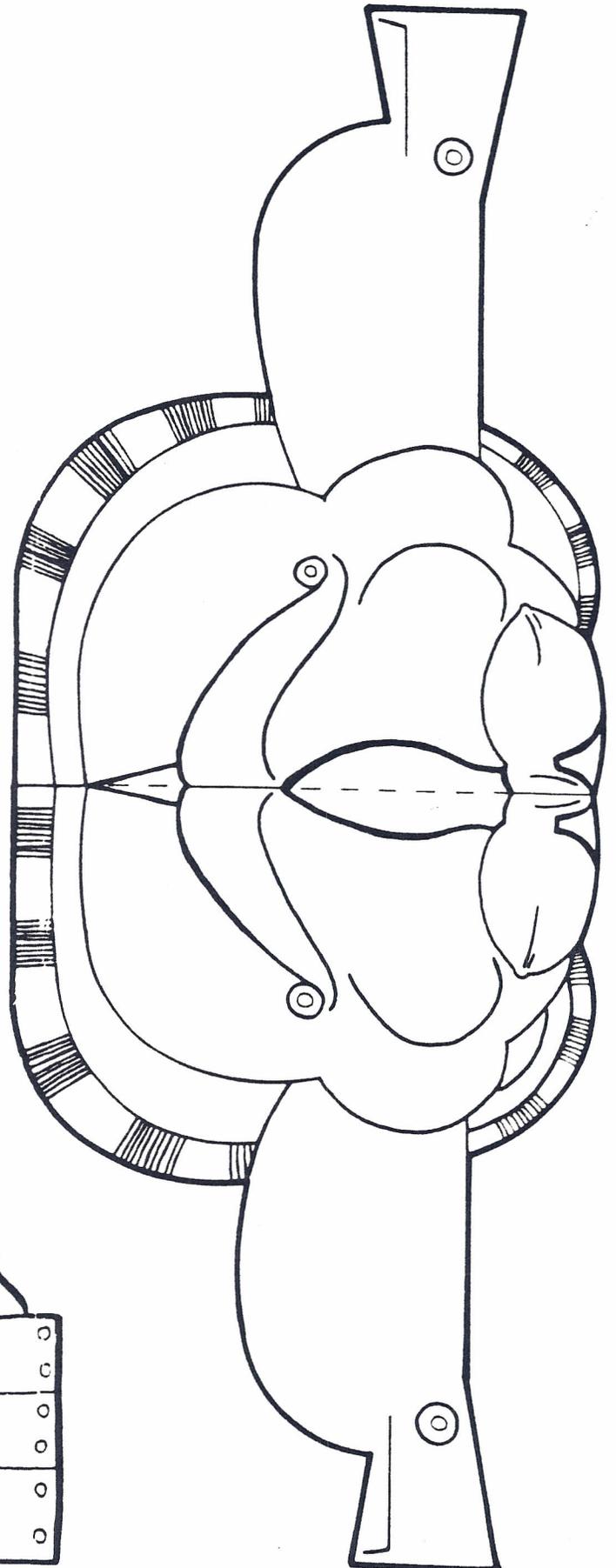
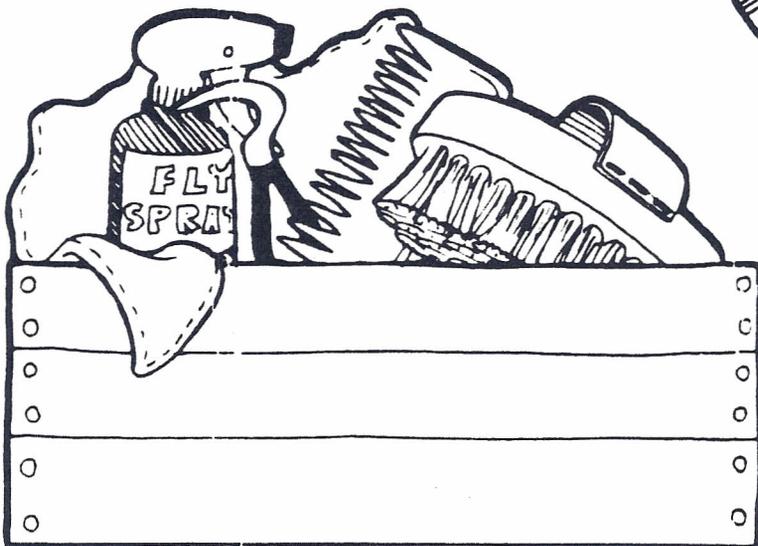
Young: colt (male) or filly (female)

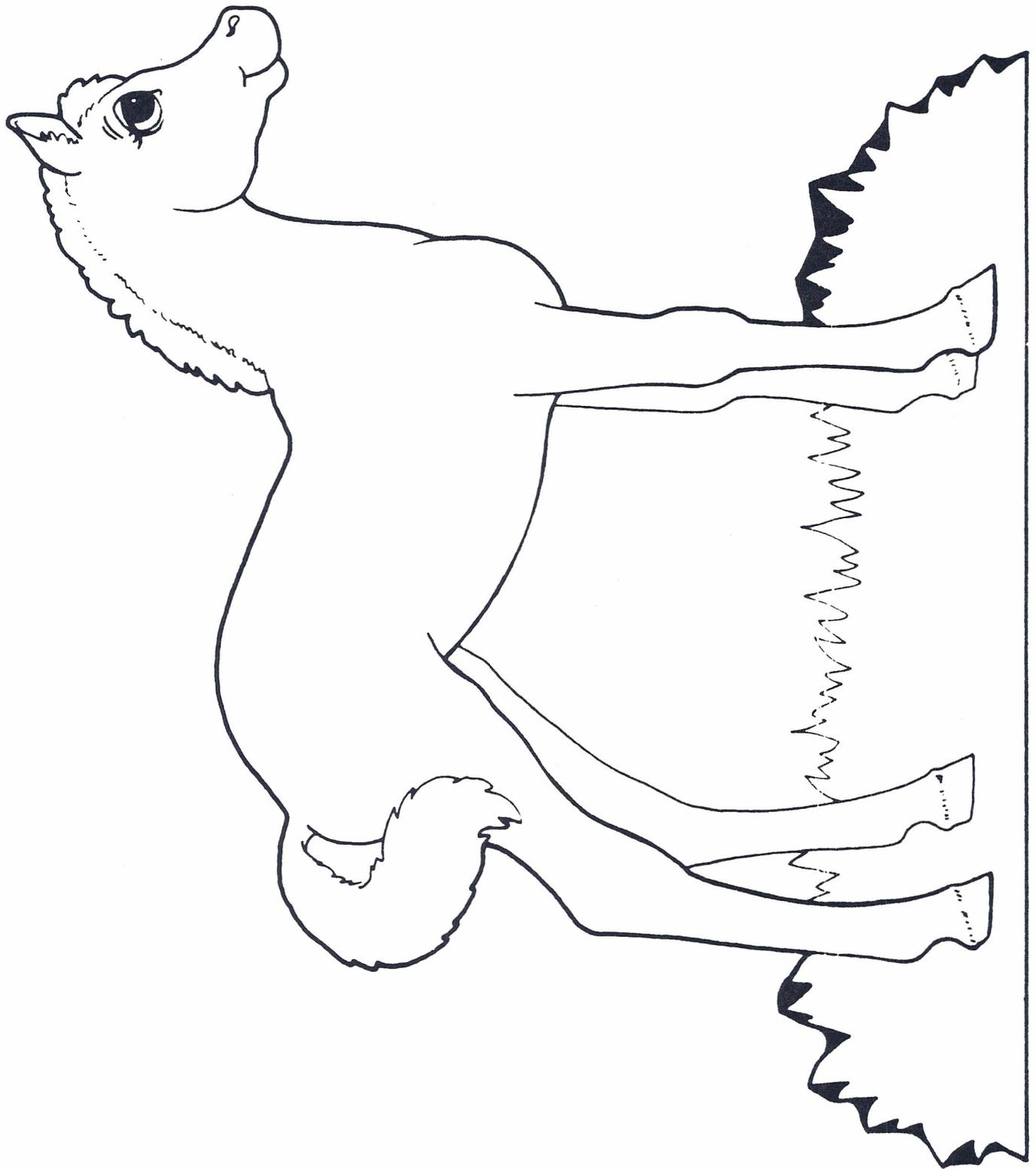
Before the industrial age, horses were the major source of locomotion. They could be ridden or they could pull a vehicle in which people could ride. Today horses are ridden mostly for pleasure. We ride them for fun, show, or money. There are many kinds of horses. Some are bred for pulling, some for speed, and some for their ability to walk or run a certain way. A pony is a special breed of small horse.

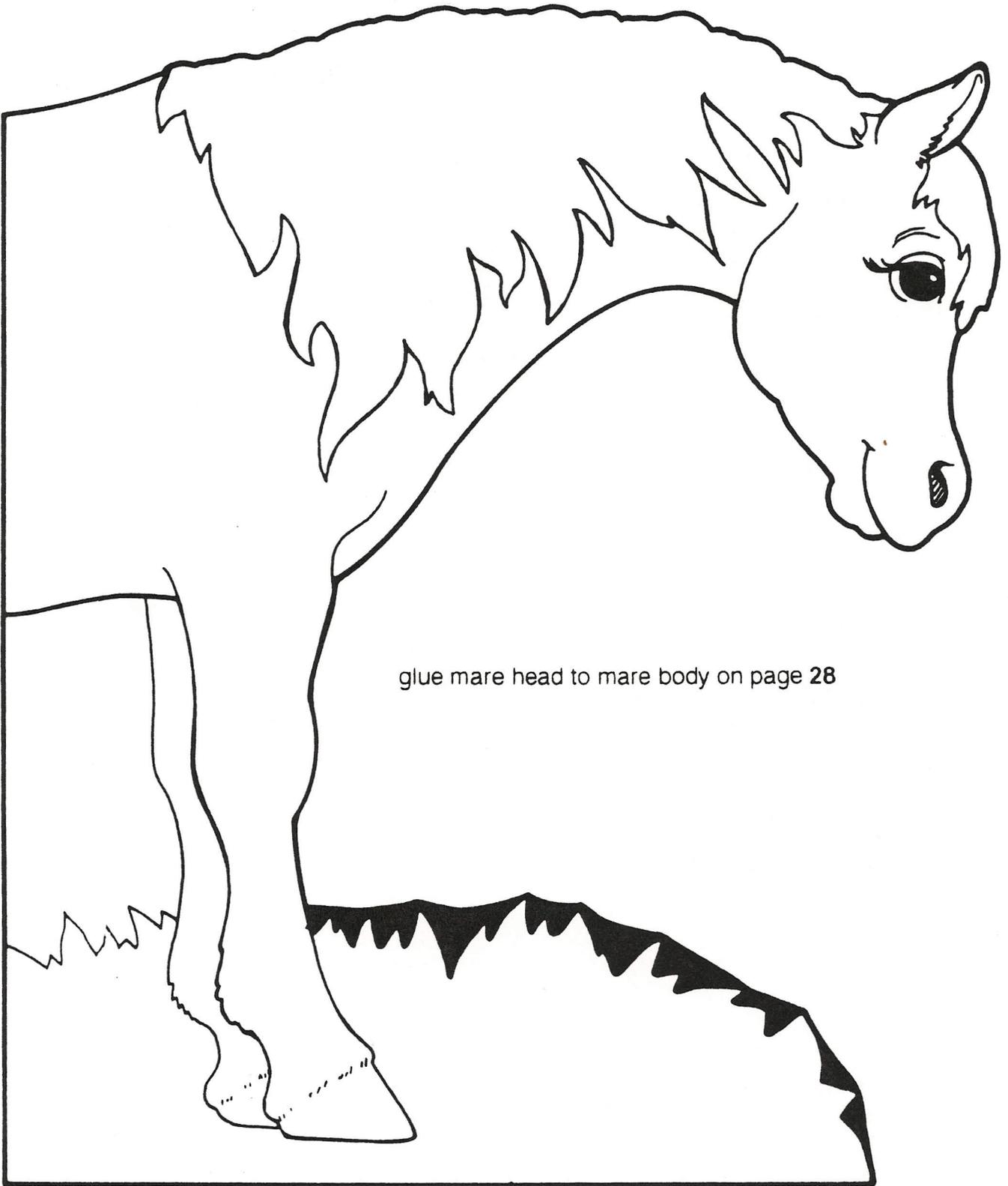
Horses need a lot of care. They need a pasture to run in and a warm barn or stall with straw on the floor to protect them in the winter months. They need to be brushed and have their manes and tails combed periodically. They also need to have their hooves cleaned and filed. In today's world, horses need metal horse shoes to protect their feet.

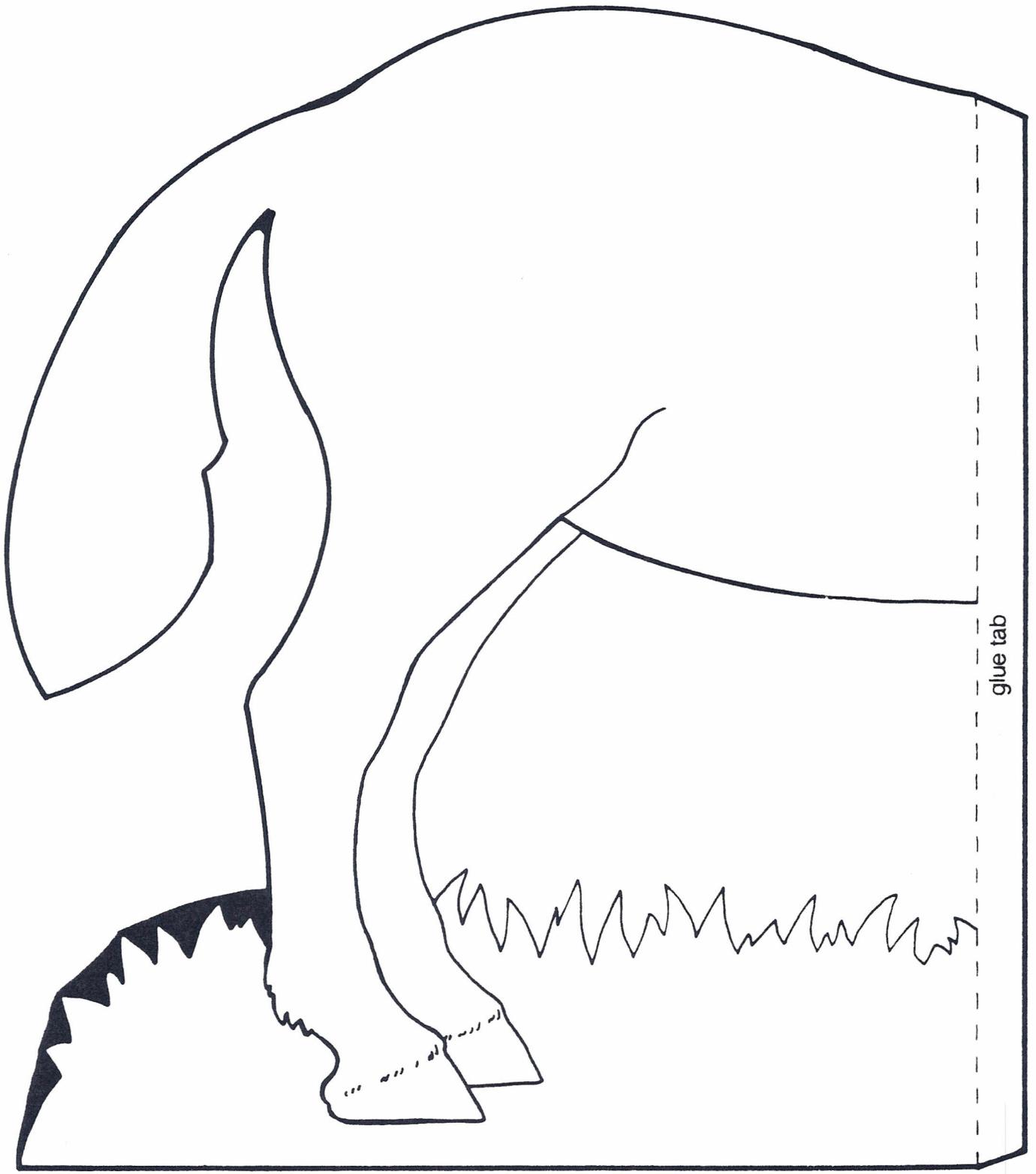
Horses eat hay and alfalfa. They also like fresh green grass and oats with a little molasses. For a special treat, they like apples and carrots. Horses also need a salt lick and plenty of fresh water.

fold saddle in half and place on horse

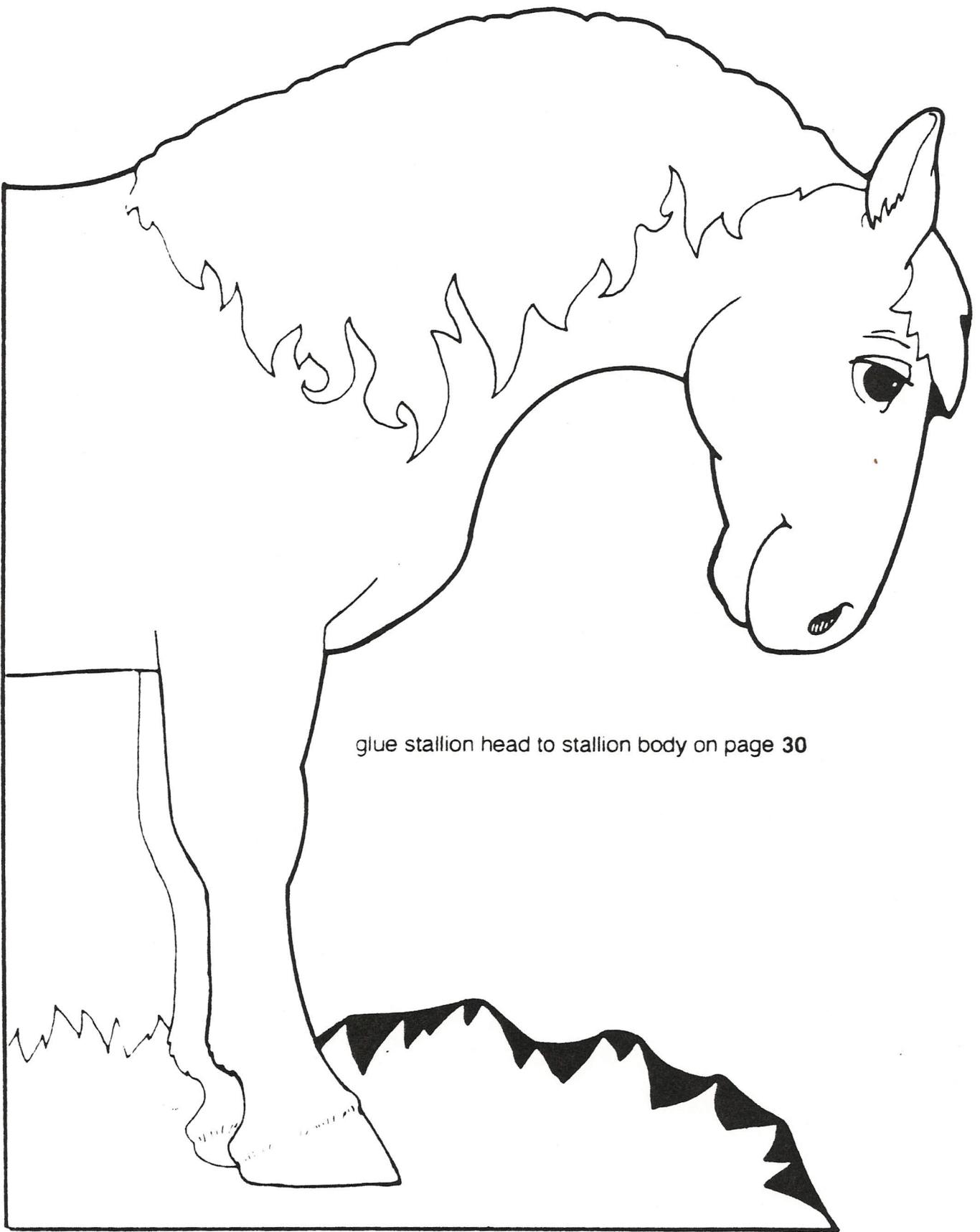




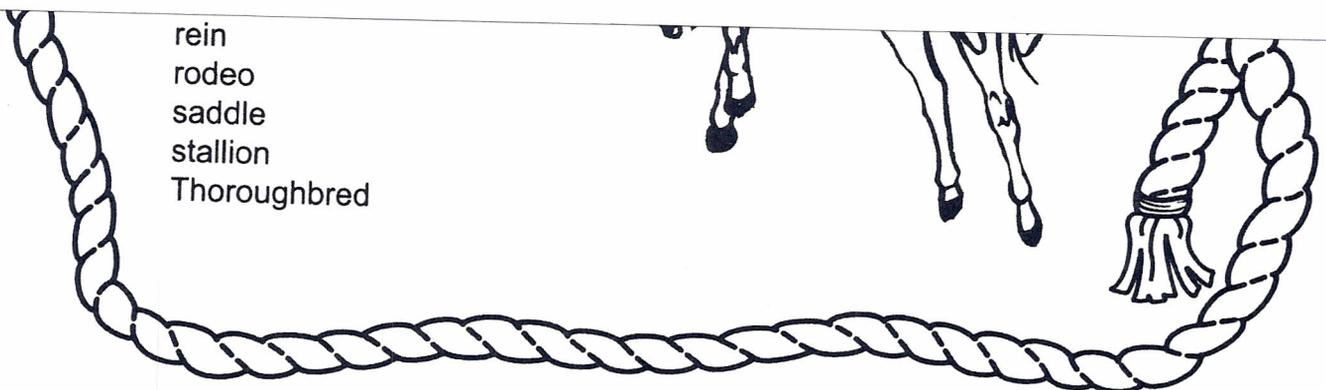
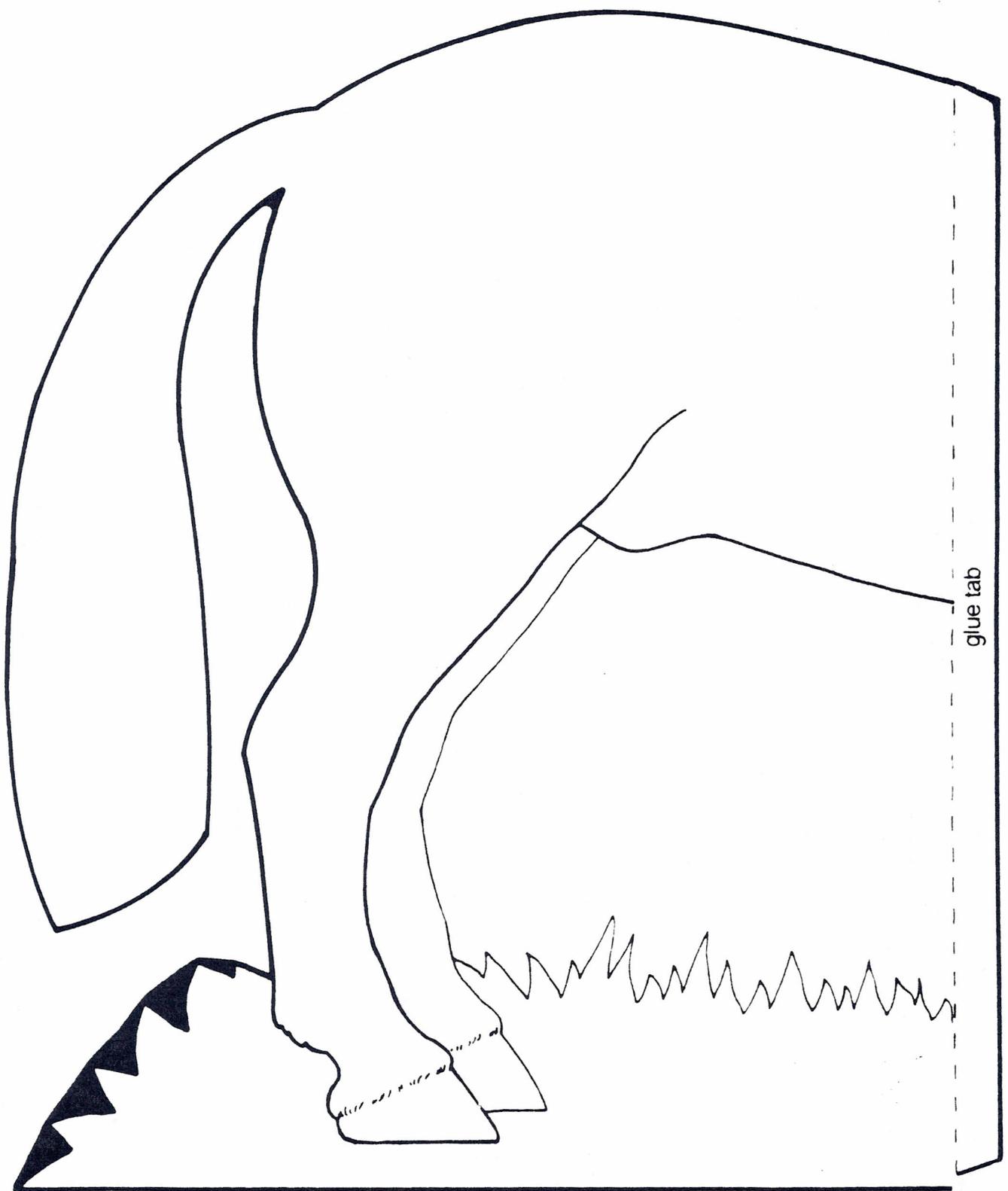




glue tab

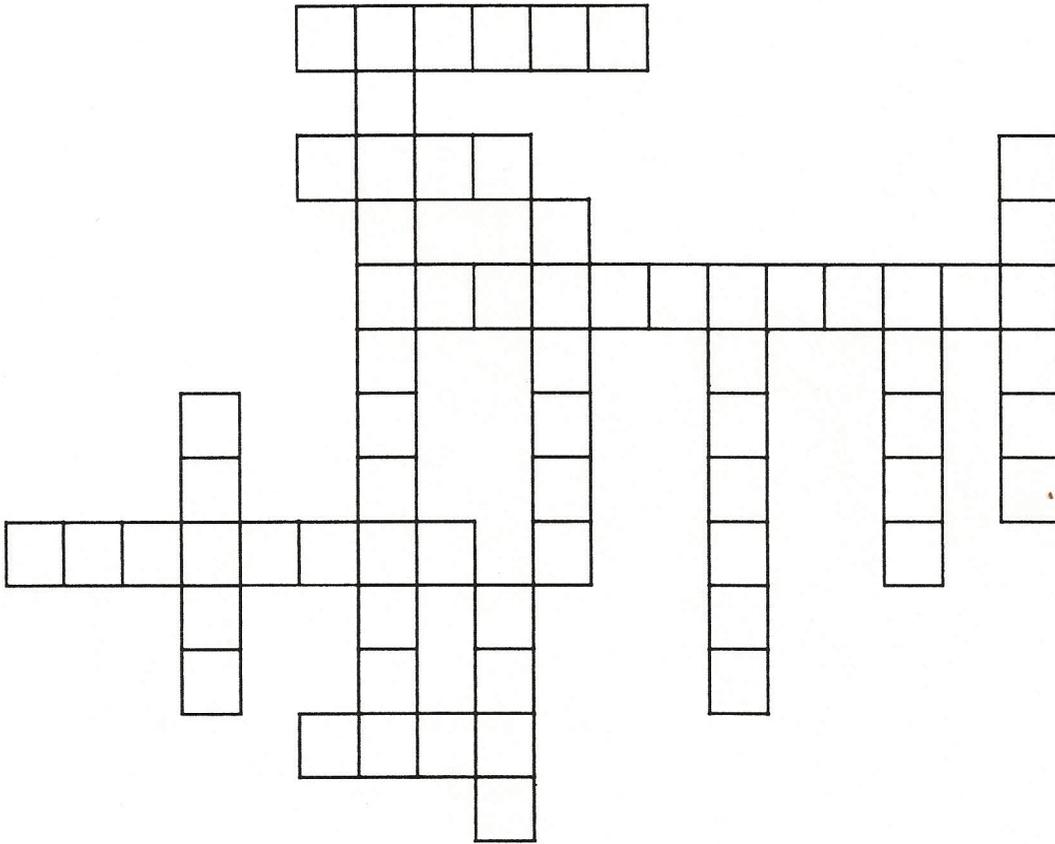


glue stallion head to stallion body on page 30



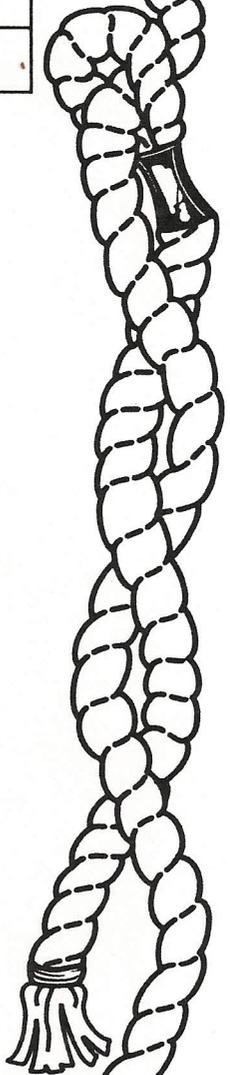
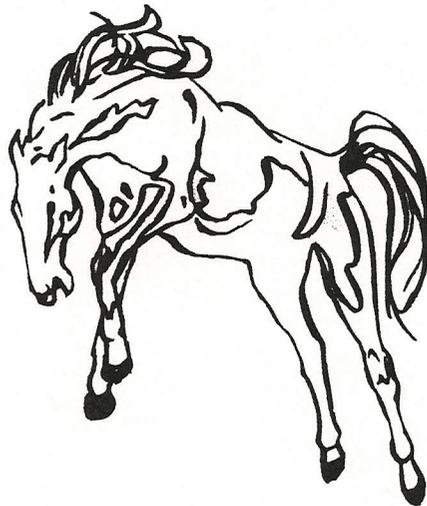
rein
rodeo
saddle
stallion
Thoroughbred

Horses



Fill in the crossword with these words:

- bridle
- equine
- filly
- gelding
- mane
- mare
- Quarter Horse
- rein
- rodeo
- saddle
- stallion
- Thoroughbred





Start

Finish

Amazing
Animals