



## Horseless Horse Project Unit 4 Horse Science

### Horseless Horse Projects

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I don't own a horse, but . . .

#### Directions:

The horseless horse projects are available for all 4-H youth. Animal ownership, care, and riding are not requirements. Members with horses may, however, enroll in this series. All participants should be active in a club or project group supervised by a volunteer project leader.

Four units are available and should be completed in order. Unit I - Introduction To The Horse (9-10 years of age); Unit II - Horses Are Fun (10-12 years of age); Unit III - Horses and Horsemanship (12-14 years of age); and Unit IV - Horse Science (14 years of age and older).

Members may progress through the series at their own speed; there are no definite time or age requirements. All new members should start with Unit I. Clubs or groups may add to and vary the series according to need and interest. Members may repeat units with new and added events and activities. Members completing Unit IV may elect to enroll in the 4-H Horse Self-determined Project. Horseless horse project members are eligible to participate in all 4-H horse events except any that require the use of a project horse. Four-H members may also consider additional supporting projects such as veterinary science, safety, and leadership. Members may include riding time and lessons as options under experience. They may also include such work as grooming, cleaning tack, helping with horse events, etc. Tests and inspectors or leaders must be arranged for at the local level.

Name _____	Age _____
_____ Club Year _____	
Address _____ _____	
County Or City _____ _____	
Name Of Club _____	

\* 18 U.S.C. 707

# Project Requirements

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To complete this project, you must:

- Participate in the 4-H club program.
- Complete the topics covered in this book.

## Section I - Experience

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(Minimum of 200 hours in this unit)

### A. Work and Study Record

Month	Describe type of meeting, study, riding, and work related to the horse.	Hours
September		
October		
November		
December		
January		
February		
March		
April		
May		
June		
July		
August		

### B. List events you participated in or assisted with (at any level).

This must include at least six of the following: trail ride, handicapped riding, horse show, horse judging contest, horse bowl contest, junior horseman or junior stock contest, horse school or seminar, driving event, dressage event, polo contest, rodeo, steeplechase meet, fox hunt, reining contest, horse race, cutting contest, 4-H Camp, Club Congress, combined training event, roping contest, barrel race, horse sale, demonstration contest, or public speaking contest.

Date	Event	Location

C. Do you regularly read at least two horse magazines? Name them.

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D. Read a horse science book. List title and author and write a brief book report.

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E. View at least two horse films or video tapes. Name them.

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F. Give at least two visual presentations or speeches about horses.

Date \_\_\_\_\_ Topic \_\_\_\_\_ Audience \_\_\_\_\_

Date \_\_\_\_\_ Topic \_\_\_\_\_ Audience \_\_\_\_\_

G. Outline at least one community service project for which you provided the major leadership.

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H. Submit an Accumulated 4-H Achievement Record For State Competition (any area). Date submitted \_\_\_\_\_

I. List at least three additional 4-H projects you have completed in areas other than horse. (You must complete at least one veterinary science project).

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J. Serve as an apprentice for at least one day for one of the following: farm manager, trainer, feed store, farrier, tack shop, horse show manager, veterinarian. Work for or with this person and outline the work or daily activities.

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K. Name and outline at least five career occupations in the horse field.

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L. You must serve as a junior leader and teach younger 4-H members. Describe your work.

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## Section 2 - Knowledge

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A. Measure a horse and record the height in hands. \_\_\_\_\_

B. Using a special tape measure, measure a horse for body weight. Record the estimated weight.

\_\_\_\_\_ pounds.

C. Draw or trace a picture of the teeth of a two-year-old, a three-year-old and a five-year-old horse.

D. Briefly discuss the origin of the horse.

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E. Draw or trace and label the skeleton of the horse.

F. Draw or trace the outline of the horse, designate and label at least ten unsoundnesses.

G. Draw or trace and label the reproductive tract of the mare.

H. Observe at a farm the breeding of a mare (movie may be substituted).

Date \_\_\_\_\_

I. Observe at a farm the foaling of a foal (movie may be substituted).

Date \_\_\_\_\_

J. Observe the shoeing of a horse (movie may be substituted).

Date \_\_\_\_\_

K. Read a book (article or chapter) about inheritance in horses.

Date completed \_\_\_\_\_

Title and author

\_\_\_\_\_

L. Record the following averages for the normal mature horse.

Pulse rate \_\_\_\_\_ Temperature \_\_\_\_\_

Respiration rate \_\_\_\_\_

M. Record the following for the average mare.

Length of gestation \_\_\_\_\_

Length of estrous cycle \_\_\_\_\_

Length of estrus (heat period) \_\_\_\_\_

N. Consult with a veterinarian or professional about a basic preventative medicine program. Outline the details.

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

O. Work with a computer instructor in your school. Develop one of the following: inventory for five horses, health record for one or more horses, budget for keeping a horse, balancing a ration, breeding and foaling record. Do a print-out and attach it below or outline the results.

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

P. With the help of your Extension Agent, prepare and have analyzed a hay sample for forage test. List the kind of hay and test results below.

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Q. With the help of your Extension Agent, prepare and have analyzed a soil sample for a horse pasture. Record below the test results and fertilization recommendations.

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R. Briefly discuss pasture management.

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S. Observe or assist with a hay-making operation (movie may be used).

Date \_\_\_\_\_

T. Identify, study, and record the following for feedstuffs.

	Protein	Percent T D N
<b>Forages</b>		
Timothy hay	_____	_____
Alfalfa hay	_____	_____
Pasture (kind _____)	_____	_____
<b>Protein Supplement</b>		
Soybean meal	_____	_____
<b>Energy</b>		
Corn	_____	_____
Oats	_____	_____
Barley	_____	_____
Molasses	_____	_____



U. Study and record the daily nutrient requirements for the following horses.

Vitamin A	Daily Feed Digestible					
	Per Horse	Protein	TDN	Calcium	Phosphorus	
	lbs.	lbs	.lbs.	Grams	Grams	I.U.
400 lb. weanling	_____	_____	_____	_____	_____	_____
700 lb. yearling	_____	_____	_____	_____	_____	_____
1000 lb. mature horse (idle)	_____	_____	_____	_____	_____	_____
1000 lb. mature horse.(hard work)	_____	_____	_____	_____	_____	_____
1000 lb. lactating mare	_____	_____	_____	_____	_____	_____

V. Draw or trace and label the digestive system of the horse.

W. Using the square system, compute a 15% protein ration from shelled corn and soybean oil meal. Diagram the results.

X. List and discuss a daily ration for a hard-working horse. Include feeding management, cooling-out, watering, feeding, etc.

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Y. Discuss a training and conditioning program for a hard-working horse. Include new sports medicine techniques.

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Z. Briefly discuss the cause, prevention, and treatment of the following diseases, parasites, and vices.

Diseases

1. Equine encephalitis

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2. Strangles

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3. Tetanus

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4. Azoturia

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5. Laminitis

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6. Potomac Fever

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7. Fescue problems with mares

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8. Heaves

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9. Colic

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10. Aflatoxins

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11. Equine Infectious Anemia

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12. Equine encephalomalacia

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13. Navicular

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Parasites

1. Flies

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2. Ticks

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3. Mites

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4. Bots

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5. Ascarids

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6. Strongyles

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**Vices**

1. Woodchewing

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2. Cribbing

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3. Bolting feed

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4. Shying

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5. Halter pulling

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6. Weaving in the stall

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7. Kicking

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8. Biting

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Give the date on which you properly demonstrated the following to a designated leader or inspector.\* (Must do at least ten of the following). Leader may add to the list.

	Date	Signature of Leader
1. Identify good quality and poor quality grain.	_____	_____
2. Identify good quality and poor quality hay.	_____	_____
3. Identify good quality and poor quality pasture.	_____	_____
4. Discuss in detail all safety precautions for working with horses.	_____	_____
5. Discuss safe fencing and unsafe fencing for horses.	_____	_____
6. Develop a stable management record and budget for keeping a horse.	_____	_____
7. Observe artificial insemination of a mare.	_____	_____
8. Discuss fire prevention for the barn and stable.	_____	_____
9. Observe the evaluation of semen collected from a stallion.	_____	_____
10. Observe freeze branding.	_____	_____
11. Observe a veterinarian giving shots.	_____	_____
12. Observe a veterinarian treating a sick horse.	_____	_____
13. Discuss what to do for various emergency conditions until a veterinarian arrives	_____	_____
14. Feed and water a horse.	_____	_____
15. Twitch a horse.	_____	_____
16. Load and unload a horse.	_____	_____
17. Diagram a gymkhana course.	_____	_____
18. Diagram a hunter course.	_____	_____
19. Diagram a trail class course.	_____	_____
20. Care for a horse after a demanding ride	_____	_____
21. Harness and drive a horse or a team.	_____	_____
22. Trim a hoof.	_____	_____
23. Administer a deworming agent (advised by a veterinarian).	_____	_____
24. Take the temperature, pulse rate, and respiration rate of a horse.	_____	_____
25. Clean tack.	_____	_____
26. Longe a horse.	_____	_____
27. _____	_____	_____
28. _____	_____	_____
29. _____	_____	_____
30. _____	_____	_____

## Section 4 - Mounted Abilities

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Give the date on which you properly demonstrated the following to a designated inspector or leader. **This entire section is optional.** You must have received riding instructions before attempting this section.

1. Review safety precautions for riding. \_\_\_\_\_
2. Ride in a ring - walk, trot, and canter both ways. \_\_\_\_\_
3. Complete a trail ride. \_\_\_\_\_
4. Special tests (to be added and devised by the leader). \_\_\_\_\_

## Project Reports

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Photos - News Articles

# First Aid For People

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You must complete a first aid and/or CPR course taught by an approved instructor.

Date \_\_\_\_\_ Signature of Instructor \_\_\_\_\_

# Project Story

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This is to certify that \_\_\_\_\_ has by quiz or practical demonstration, successfully completed all of the requirements of this record book to qualify as a **Horse Scientist**. This member must be at least 14 years of age and must have completed the three previous books before this book is forwarded to state.

Dates Completed

**Unit I**-Introduction To The Horse \_\_\_\_\_

**Unit II**-Horses Are Fun \_\_\_\_\_

**Unit III**-Horses and Horsemanship \_\_\_\_\_

4-H Leader \_\_\_\_\_ Date \_\_\_\_\_

Extension Agent \_\_\_\_\_

Approved as a Horse Scientist:

(Extension Agent to forward to State Horse Specialist). All 4-H members completing will receive a state certificate.

State Horse Extension Specialist \_\_\_\_\_ Date \_\_\_\_\_