



**VIRGINIA 4-H HORSE PROJECT:
HORSELESS HORSE PROJECT UNIT 4
Horse Science**



NAME _____ AGE _____ CLUB YEAR _____

ADDRESS _____

COUNTY OR CITY _____

NAME OF CLUB _____

NAME OF LEADER _____ YEARS IN 4-H _____

DATE PROJECT BEGAN _____ ENDED _____

Virginia Cooperative Extension



VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

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VIRGINIA STATE UNIVERSITY

Horseless Horse Projects

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.

PROJECT REQUIREMENTS

To complete this project, you must:

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

Section 1 - Experience (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		

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

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

Date _____ Topic _____ Audience _____

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

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).

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.

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

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

Section 2 - Knowledge

- 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.

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.

- 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.

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.

R. Briefly discuss pasture management.

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

Date _____

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

	Percent	
	Protein	TDN
<u>Forages</u>		
Timothy hay	_____	_____
Alfalfa hay	_____	_____
Pasture (kind _____)	_____	_____
<u>Protein Supplement</u>		
Soybean meal	_____	_____
<u>Energy</u>		
Corn	_____	_____
Oats	_____	_____
Barley	_____	_____
Molasses	_____	_____

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

	Daily Feed	Digest-			
	Per Horse	ible	TDN	Calcium	Phosphorus
	lbs	Protein	lbs	Grams	Grams
		lbs			
					Vitamin A
					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.

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

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

Diseases

1. Equine encephalitis _____

2. Strangles _____

3. Tetanus _____

4. Azoturia _____

5. Laminitis _____

6. Potomac Fever _____

7. Fescue problems with mares _____

8. Heaves _____

9. Colic _____

10. Aflatoxins _____

11. Equine Infectious Anemia _____

12. Equine encephalomalacia _____

13. Navicular _____

Parasites

1. Flies _____

2. Ticks _____

4. Mites _____

5. Bots _____

6. Ascarids _____

7. Strongyles _____

Vices

1. Woodchewing _____

2. Cribbing _____

3. Bolting feed _____

4. Shying _____

5. Halter pulling _____

6. Weaving in the stall _____

7. Kicking _____

8. Biting _____

Section 3 - Dismounted Abilities

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.

	<u>Date</u>	<u>Signature of Leader</u>
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. Lounge a horse. _____
- 27. _____
- 28. _____
- 29. _____
- 30. _____

Section 4 - Mounted Abilities

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
Photos - News Articles

FIRST AID FOR PEOPLE

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

Date _____

Signature of Instructor

PROJECT STORY

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