

# Kentucky 4-H Horse Program

# Horse Academy

## Level 3



University of Kentucky  
College of Agriculture,  
Food and Environment  
*Cooperative Extension Service*

**For more information on the  
Kentucky 4-H Horse Program go to :**  
<https://afs.ca.uky.edu/4h-youth/horse>

**The resources referred to in this workbook can be found in your  
County Horse Kit or online. The primary resources are listed in the  
back of this workbook.**

**For additional resources check out the Kentucky 4-H Horse  
Program Horse Discovery Web site at:**  
<http://www2.ca.uky.edu/horsediscovery/>

## HorseDiscovery

KY 4-H Horse Program

[Home](#) [Breeds](#) [Forages](#) [Bits](#) [Equipment](#) [Parasites](#) [Horseshoes](#) [Horse Selection](#) [Materials](#) [Certificate](#)

### Welcome to Horse Discovery



The Horse Discovery site has the resources you need to complete this short course about horses. There are eight sections in the course: Breeds, Forages, Bits, Equipment, Parasites, Horseshoes, Horse Selection, Materials.

Select a section to begin, and end your session with a short quiz. Before you start

### Test Your Knowledge

There are seven sections in this course. Each section ends with a quiz.

[Read more](#)

### Resources

- [Kentucky 4H Horse Program](#)
- [HorseQuest Instructional Videos](#)
- [eXtension Horses Resource Area](#)

## Level 3

The purpose of the Kentucky 4-H Horse Program Horse Academy is to provide a road map for you to learn key lessons about horse science, horse behavior, and the horse industry.

These are all important components to becoming a well rounded horseman or horsewoman. As you go through this book, complete the assignments and tasks with your certified 4-H Horse Leader and track your progress with your county 4-H Agent. Once you have completed all lessons, activities, and have demonstrated proficiency in the skills, you will be qualified to take the Level Completion Exam. This exam is to be administered by your County Agent. A 70% must be attained for completion of a level. When you complete a level, your agent will notify the State 4-H Horse Program Office for documentation.





## Level 3

### Lessons

1. Horse Nutrition
2. Parasites
3. Helmet fit & riding safety
4. Dental aging
5. Hay ID
6. Vaccinations

### Activities

1. Breeds
2. Careers with Horses
3. Injection sites
4. Axial Skeleton
5. Disciplines
6. Bit Action

### Skills

1. Mounting and Dismounting
2. Riding; Stop, turn
3. Trot posting and sitting
4. Giving Oral Medications
5. Execute a simple  
Showmanship pattern

# Lesson 1 Horse Nutrition

The nitty gritty of vitamins and minerals.

**KEY POINTS:**

Vitamins & Minerals

-What they do

-Where they come from

-What happens if there are not enough or too much

Discuss what you know



**Resource Material:** The Horse pp. 175-180

**Topic of discussion:** We could go on for years about horse nutrition, in fact some people do. Many careers in the equine industry are based around horse nutrition, from research to production and even sales. In Level 3 you are asked to, once again, expand your knowledge of nutrition and begin to get into the minute details.

Each person or group of people answer the following questions about a vitamin you pick and report back to the club.

Vitamin \_\_\_\_\_

Function \_\_\_\_\_

Source \_\_\_\_\_

Deficiency \_\_\_\_\_

Toxicity \_\_\_\_\_

Now pick a mineral and answer the following questions.

Mineral \_\_\_\_\_

Function \_\_\_\_\_

Source \_\_\_\_\_

Deficiency \_\_\_\_\_

Toxicity \_\_\_\_\_

# Lesson 2 Parasites

The ultimate hanger-on'ers!

## KEY POINTS:

2 types: Internal & external

Transmission & Life Cycle

Characteristics of different parasites

Treatment

Discuss what you know



**Resource Material:** Alberta Horse Manual pp. 130-126, Horse Discovery Parasites

**Topic of discussion:** Since parasites are complex organisms, they have begun to adapt and become resistant to many of the dewormers we commonly use. Therefore, traditional deworming methods have become obsolete. It is now recommended that fecal egg counts be performed regularly on your horses to determine which horses are shedding high amounts of parasite eggs in their fecal balls and what types of parasites they are. Then the animals that are problematic may be treated with dewormers that are specific for the type of parasite present, with the hope that we do not over expose the parasites to dewormer, which can cause increased resistance.

**Watch a video or ask an expert to show the group how to perform fecal egg counts.**

**In groups or individually, research a specific parasite that is common in your area and report back to the club about its life cycle, what problems it causes, and how to prevent or treat an infestation.**

**Why are parasites a problem? What complications can they cause?**

# Lesson 3 Helmet fit & Riding safety

Safety first, last, and the whole middle part!

**KEY POINTS:**

How to fit a helmet correctly

The importance of helmets

General safety tips

Being aware of potential hazards

Discuss what you know



**Resource Material:** Saddle Up Safely- Horseback Riding Safety

**Topic of discussion:** The majority of the time spent around horses is safe, fun, and rewarding. But, we must never forget that we are dealing with large animals that have a mind of their own. Accidents can happen quickly and unexpectedly. This is why it is important to always be aware of the situation and your surroundings. Always wear proper safety gear and attire, and understand the temperament of horses and what can make them react.

**Bring your helmet to the meeting and try it on. Everyone should check to make sure their helmet is fitting properly, the chin strap is adjusted correctly, and that there is no damage to the helmet.**

**Discus a time when you or someone you knew were injured around horses. What did you learn from the story? Could the accident have been prevented? What do you do now to stay safe around horses?**

## Lesson 4 Dental Aging

Getting a little long in the tooth!

### KEY POINTS:

- Continuous eruption
- Changes at different ages
- Changes in profile
- Implications
- Discuss what you know



**Resource Material:** Alberta Horse Manual pp. 59-64

**Topic of discussion:** Horses' teeth continue to grow throughout most of their life. Since the surface of their teeth are used to grind their food, the teeth are constantly being worn down. Over the years this everyday grinding and wearing down causes the surface of the teeth to change in appearance. A person educated in how the teeth look as they wear down can use this as a way to gauge the age of the horse.

Draw what the surface of the teeth look like at 5 years, 9 years, 15 years, and 20 years.

Define Galvayne's groove and when it appears.

At one time it was illegal to float a horse's incisors, why do you think this was against the law?



# Lesson 5 Hay Identification

## Understanding hay quality and type

### KEY POINTS:

- Types of hay
- 5 points of quality
- When to feed hay
- Discuss what you know



**Resource Material:** Alberta Horse Manual p. 155, & CES Choosing Hay for Horses ID-146

**Topic of discussion:** Understanding how to feed hay to horses is extremely important. Knowing what type of hay to feed, how to tell if it is good quality or even safe are all key components to keeping your horse healthy. Not all hay is created equal. Learn how to choose hay for horses and what to look for that could potentially cause problems.

**Explain the 5 points of hay quality: Palatable, Cleanliness, Leaf:Stem ratio, Purity, Color.**

**Bring in types of hay or pictures of hay to practice identification.**

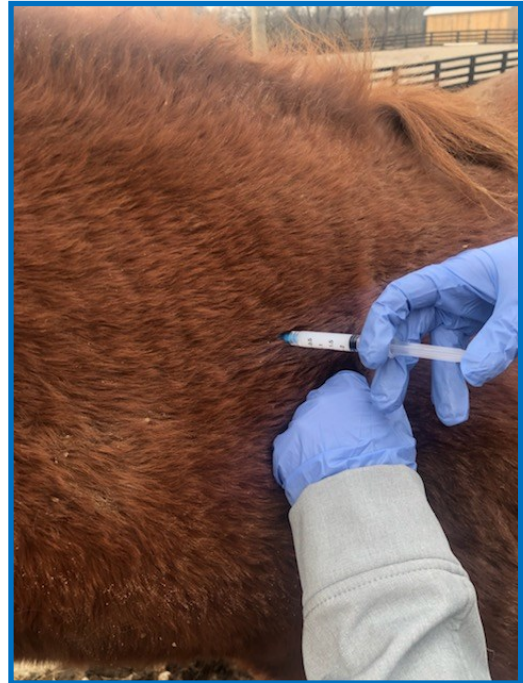
**What are some problems to be careful of when feeding hay (mold, dust, tall fescue) and why?**

# Lesson 6 Vaccinations

## Preventative medicine

### KEY POINTS:

- AAEP Core Vaccines
- Risk Based Vaccines
- Booster Vaccines
- Create a schedule
- Discuss what you know



**Resource Material:** CES Core Vaccination Fact Sheet ASC-176

**Topic of discussion:** Understanding how to keep your horse safe and disease free is key to good horse management. Horses are subjected to different diseases based on their age, their use, and their location. A vaccination plan would be different for an aged gelding that never leaves his home farm vs. an 8 year old horse that travels to shows every weekend vs a broodmare. Vaccinations are an important and relatively easy task that can prevent your horse from painful and costly diseases.

**Why do you think the AAEP chose the 5 vaccines they did to be considered "core" vaccines that all horses should have?**

**What risk based vaccines are needed in your area?**

**With a group, pick a type of horse and an activity for it. Write out a vaccination plan and share it with your club.**

# Activity 1 Breeds

In Levels 1 & 2 you were asked to pick a breed of horse and report back to the group about its characteristics and use. Now you need to familiarize yourself with current issues. Pick a breed, do research on the breed registry, read articles about the breed and its disciplines. What are problems that this type of horse is prone to? Is there anything controversial about this horse or the discipline it is used for? Has there been any major changes in rules regarding this breed in recent years? Are numbers increasing or decreasing and why? Give a report to your club on the current industry status of your selected breed.

Breed Name \_\_\_\_\_

Breed Registry \_\_\_\_\_

Current Issues

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Major Changes

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Future Outlook

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## Activity 2 Equine Careers

It can seem as though making money in the horse industry is hard to do, however, many people have been able to work and thrive while working at a job they love. Try to figure out if you could make a living while working with horses. Pick a career, do some research and answer the questions below.

Career \_\_\_\_\_

Annual Salary \_\_\_\_\_

Job expenses (School, equipment, supplies, vehicles)

\_\_\_\_\_

Living expenses (House, farm, apartment, food, utilities, car, etc.)

\_\_\_\_\_

Would you own horses in addition to your job? Cost of keeping personal horses \_\_\_\_\_

\_\_\_\_\_

Income	\$
Expenses	\$
Profit/Loss	\$

## Activity 3 Intramuscular Injection Site

At some point in time the odds are that you will have to give an injection to a horse. Whether it be a vaccine or medication, it is important to know where to give the shot. If the injection is intramuscular (IM), the most common place to give the shot is on the neck. The landmarks to look for create a triangle, it is best to aim for the inside of the triangle for the safest spot to give the injection. The landmarks that create the sides of the triangle are the: Cervical Spine, Nuchal Ligament, and the Scapula. Draw the triangle on the picture below and mark the injection site with an X.

Reference: eXtension.org "How to Give Your Horse an Intramuscular Injection" & Alberta p. 128-129



## Activity 4 Axial Skeleton

We all know how important the brain and spinal chord is, but what protects this delicate tissue? The axial skeleton. This comprises the skull, the spine, and the rib cage. The pictures below show the different types of vertebrae that comprise the spine. Identify each type of vertebrae below and indicate how many of each type are in a horse.

Resource material: Alberta p. 56



- Cervical
- Thoracic
- Lumbar
- Sacral
- Coccygeal



## Activity 5 Disciplines

One of the greatest things about horses are all of the fun exciting things you can do with them. Unfortunately, we generally only become familiar with one or two styles of riding. In this exercise, research a horse discipline that you don't know a lot about. Answer the questions and report back to your club.

Sport or Discipline \_\_\_\_\_

What breed typically competes in this activity?

\_\_\_\_\_

What is the history and purpose of the discipline?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What are the general rules? How is it judged/scored?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Is there any controversy surrounding this discipline?

\_\_\_\_\_

\_\_\_\_\_

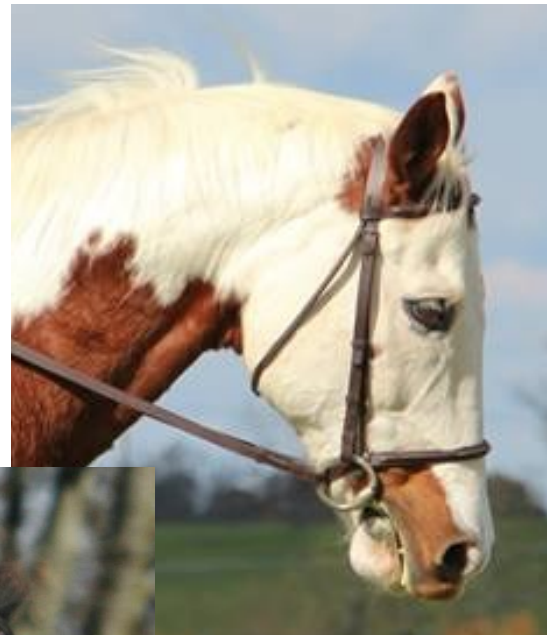
What is the general cost to participate?

\_\_\_\_\_

## Activity 6 Bit Action

The reason why there are so many kinds of bits in the world is because they all serve a different purpose and have different actions in the horse's mouth. In order to effectively use a bit and know what its intention is, you must first understand where different bits put pressure on the horse's mouth and head.

Start simple, discuss with your club the different actions and pressure points of a snaffle bit and a curb bit. Draw on the diagram below where pressure will be felt from the horse with each bit.





## Skills Sheet

This list of skills must be performed for your Certified 4-H Leader. You must complete the skill in a safe and proficient manner to the satisfaction of your leader. Once accomplished, have the leader sign and date the appropriate skill.

◇ **Mount and dismount a horse**

**4-H Leader Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

◇ **While riding: Execute a stop, and a turn to the left and right**

**4-H Leader Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

◇ **While riding: Post a trot, and sit a trot**

**4-H Leader Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

◇ **Practice giving oral medication (use water)**

**4-H Leader Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

◇ **Perform a simple showmanship pattern**

**4-H Leader Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

# Kentucky 4-H Horse Program

## Horse Academy Level 3

This certifies that \_\_\_\_\_, has completed all requirements for the Horse Academy Level 3. This includes but is not limited to; lessons, activities, skills, and received a score of \_\_\_\_\_ on the Level 3 Completion Exam.

These accomplishments are verified by:

\_\_\_\_\_ Date \_\_\_\_\_

4-H Certified Volunteer Leader

\_\_\_\_\_ Date \_\_\_\_\_

County 4-H Agent



18 USC 707

## References

### **Alberta Horse Manual**

Alberta Horse Manual. 4-H Branch Alberta Agriculture and Forestry, 2015.

### **The Horse**

Evans J.W., Hoffman, R.M., Petersen, J.L., Van Vleck, L.D. The Horse. 3rd Edition. Waveland Press Inc, 2021.

### **Saddle Up Safely**

Saddleupsafely.org

### **Cooperative Extension Service (CES) Fact Sheets University of Kentucky**

<http://www2.ca.uky.edu/agcomm/pubs.asp>

### **Horse Discovery Webpage**

<https://afs.ca.uky.edu/horse-discovery>

### **eXtension.org**











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