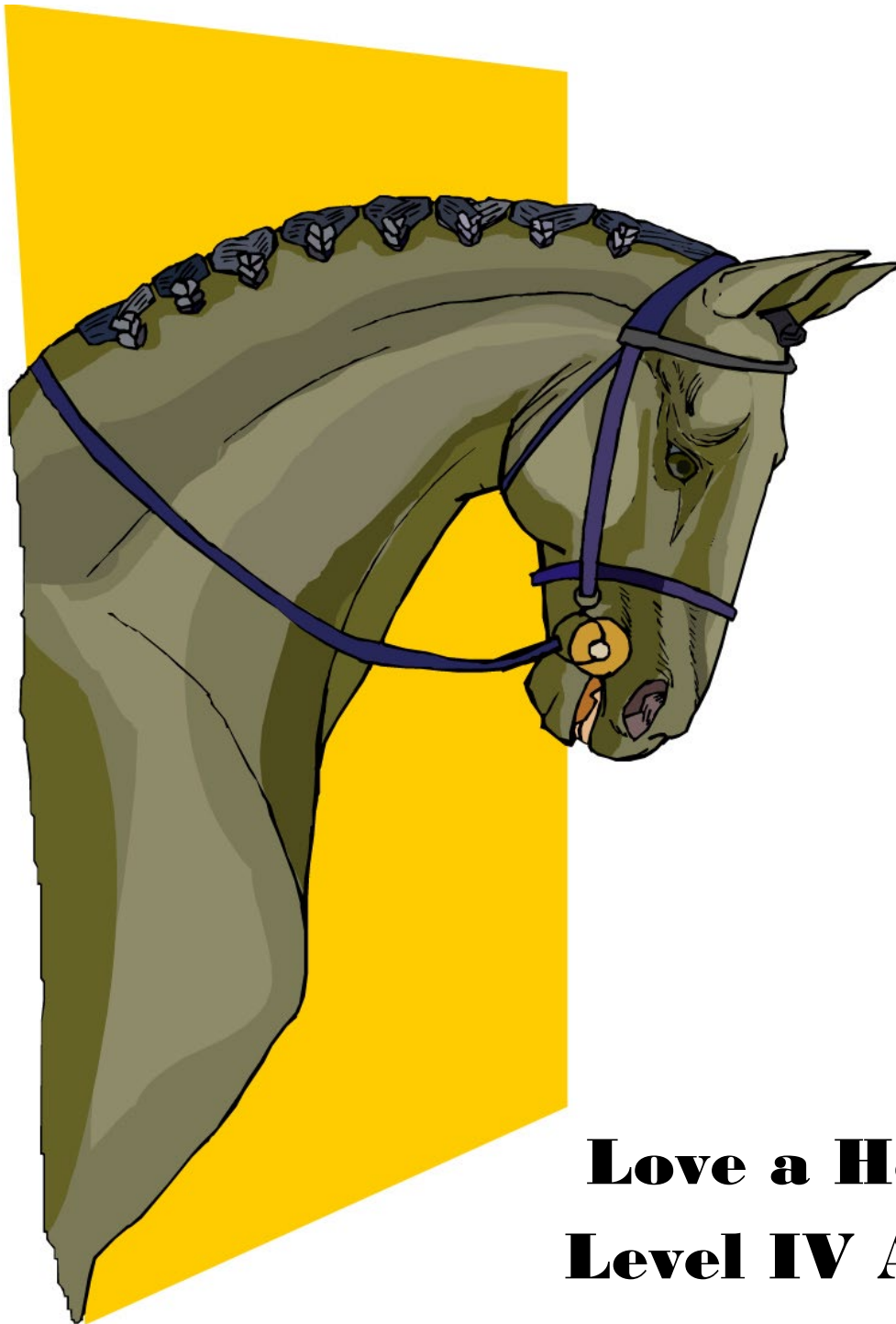




Brevard County



Love a Horse Project Level IV Achievement

Version 1.0

Name _____

Club Name _____ Club Leader _____

Date of Birth _____ 4-H Age _____ # of Years in 4-H _____

Welcome to the Brevard County 4-H Horse Program Love a Horse Level IV Achievement activity. This book is the fourth of four levels to assist Florida 4-H youth members who do not own or lease a horse to participate in the 4-H horse program education system. Each book is meant as a progression and builds off one another to give youth the ability to continue to learn and gain useful skills and knowledge on horses and horse husbandry.

These books serve as tools to document a 4-H'ers knowledge. They do not contain reference information.

The following references are cited to assist in finding answers to posed questions. Your County Extension Office should have access to some or all of these materials, so please ask your County Agent and Leader for assistance in locating these materials. As the number of horse related references is exhaustive, any further references materials may be used to assist in answering questions.

Colorado State University, Department of Animal Sciences (2008). 4-H Horse Project Manual. Retrieved January 20, 2011, from http://equineextension.colostate.edu/files/4h_horse_projects/Horse_Project_Manual.pdf

Coloring Atlas of Horse Anatomy, Kainer and McCracken. Alpine Publications, Inc., 38262 Linman Road, Crawford, CO 81415.

Equine Science: Basic Knowledge for Horse People of All Ages, Jean T. Griffiths. ISBN # 978-1-929164-42-4. www.HorseBooksEtc.com

Feeding and Care of the Horse, 2nd Ed., by Lon Lewis. ISBN# 0-6830-4967-4. Published by Blackwell Publishing Limited, Commerce Place, 350 Main St., Malden, MA 02148.

Florida State 4-H Horse Show [Official Rules](#), revised to current year.

Government of Alberta, Agricultural and Rural Development (2005). 4-H Horse Reference Manual. Retrieved January 20, 2011, from [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/4h7933](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/4h7933)

Horse Industry Handbook, American Youth Horse Council. 4093-A Iron Works Pike, Lexington, KY 40511-8434. www.ayhc.com.

Illustrated Dictionary of Equine Terms, New Horizons Education Center, Inc. Alpine Publications, Inc., 38262 Linman Road, Crawford, CO 81415. www.alpinepub.com.

Youth Leaders Manual, American Youth Horse Council. The Horse, 2nd Edition by Evans, Borton, Hintz, Vanvleck. ISBN# 0-7167-1811-1. Published by W.H. Freeman, New York.

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LEVEL IV GOALS

By enrolling in the Love a Horse Project, you have expressed an interest in learning about horses and equine husbandry. At the beginning of this activity, list your goals and what you need to do to achieve each goal. At the completion of this Level IV Achievement activity, define the progress you made toward meeting each goal.

Goal	What I need to do to reach my goal.	Progress toward reaching my goal.

UNIT 1. EQUINE ETHICS

4-H is a program dedicated to the development and education of youth. Many of the 4-H projects involve animals and therefore invoke the concept of ethical behaviour in animal husbandry. Ethics seeks to resolve questions dealing with morality—concepts such as good and bad, right and wrong, virtue and vice, justice and crime.

Ethical practices in the equine industry are guided by three general requirements:

1. Compliant with organization rules
2. Honest and truthful
3. Does not compromise the welfare of the animal

Classify the following actions as either ethical or unethical.

Painting the lower legs of a gray, black.	
Polishing the hooves.	
Administering a tranquilizer at a horse show.	
Tying a horse in his stall for 12 hours.	
Using draw reins when schooling at home.	

There is no question that any code of ethics we apply to our horse project must center around the welfare of the animal in all of its environments; living environment, exercise/training regiment, traveling, showing.

Identify five ethical responsibilities of a horse owner/rider in providing a healthy living environment.

1	
2	
3	
4	
5	

Identify two ethical responsibilities of a horse owner/rider in providing a positive exercise and training regiment.

1	
2	

Identify three ethical responsibilities of a horse hauler in providing a safe and comfortable hauling experience.

1	
2	
3	

Identify two ethical responsibilities of a horse owner/rider while showing the horse. Hint: One responsibility has been provided.

1	
2	

Identify three ethical responsibilities of a horse owner/rider when filing registration information and show entry information or even when creating a sale add.. Hint: One responsibility has been provided.

1	
2	
3	

UNIT 2. REPRODUCTION

Reproductive capability or success varies by species. Mice and rabbits, for example, are prolific producers of offspring. Horses, on the other hand, fall into a category where it is much more chancy. In a domestic environment, the chances of successfully producing equine offspring is greatly increased if one understands the process and the risks.

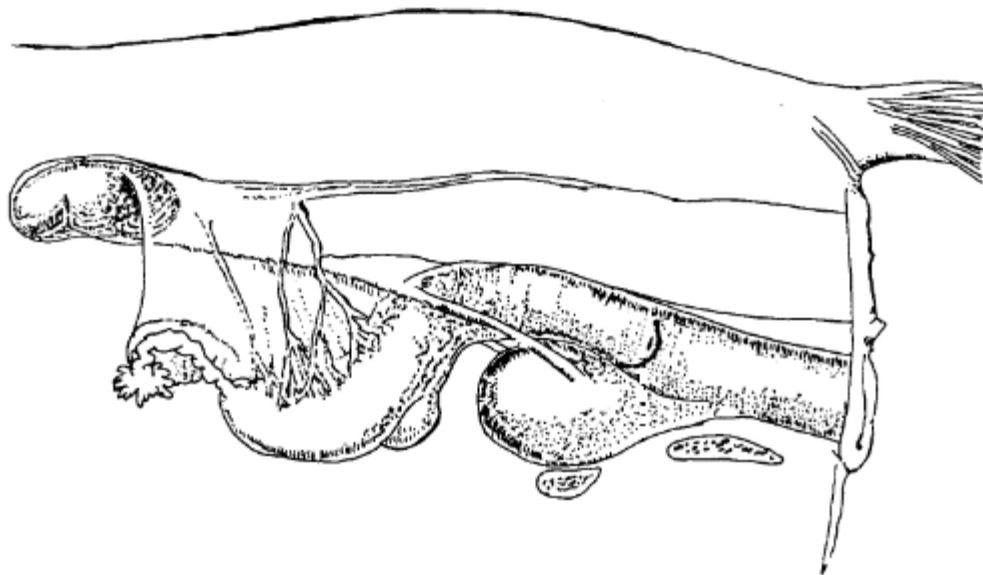
2.1 The Mares Role

The Mare serves four primary functions in the equine reproductive process:

1	
2	
3	
4	

The mare’s reproductive tract lies in a horizontal position within the abdominal and pelvic cavities.

The key elements are the **vulva, vagina, cervix, ovaries, oviducts,** and **uterus**. Identify these parts on the diagram below.



Credit: <http://www.uky.edu/Ag/AnimalSciences/pubs/asc116.pdf>

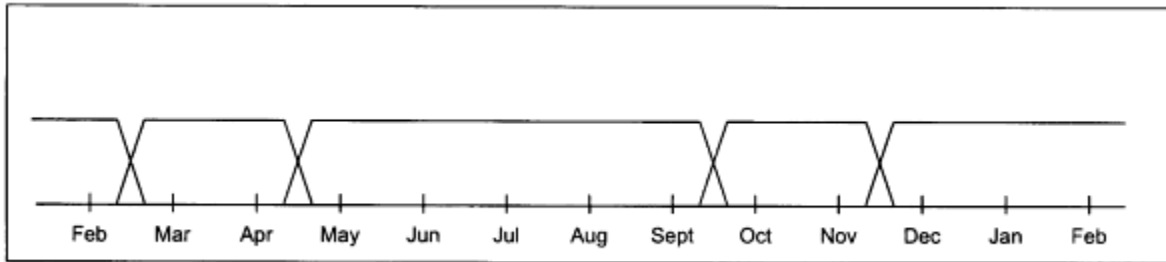
What does the term seasonally polyestrous mean?

Define the terms Anestrus, Estrous, Estrus, Diestrus.

What is the classical behaviour of a mare in Estrus?

What is the classical behaviour of a mare in Diestrus?

Within the year the mare goes through Estrous, Diestrus and two transitional periods. On the following diagram label these four periods.

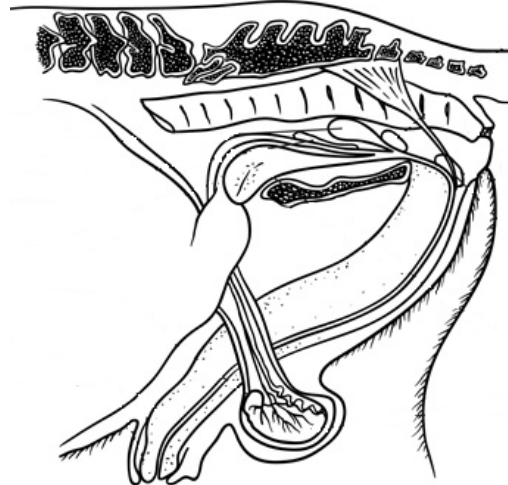


2.2 The Stallions Role

The Stallion serves two primary functions in the equine reproductive process:

1	
2	

The key elements of the stallions reproductive system are the **testis and penis**. Identify these parts on the diagram below.



There are three glands that contribute fluids and gel to the ejaculate but are not key to fertility. Label these glands on the diagram.

Credit: <http://www.omafra.gov.on.ca/english/livestock/horses/facts/11-003.htm>

Stallions are least fertile from _____ to _____ with fertility increasing in _____ and peaking in _____ and _____. Fertility is still high but declining in _____ and _____.

The minimum number of spermatozoa produced within a 24-hour time period is known as _____ . This will vary among stallions and is strongly influenced by _____ .

_____ refers to the number of spermatozoa that can be collected per 24-hour period from a stallion and is determined by collecting the stallion daily for seven days

2.3 Assisted Reproduction

2.3.1 Artificial Insemination

Artificial insemination (AI) of equines has been around a long time and, through the years, has had a profound impact on the horse industry.

Identify at least six positive benefits of AI:

1	
2	
3	
4	
5	
6	

Identify at least three disadvantages of AI:

1	
2	
3	

2.3.2 Cloning

Equine cloning has been discussed in the popular press since the birth of the first cloned equids (three mules and one horse) in 2003. In general, interest has been centered on whether or not the cloned offspring will be normal, how closely they will resemble the donor animal, and what cloning may be used for within the industry. Although equine cloning is still in its infancy, sufficient information is available from other species and from the few equine clones already produced to allow us to start answering these questions.

Identify at least three positive benefits of cloning:

1	
2	
3	

Clones do not infact exactly replicate the donor. Explain why.

2.3.3 Embryo Transfer

Embryo transfer refers to a step in the process of assisted reproduction in which embryos are collected from one mare and placed into the uterus of another mare with the intent to establish a pregnancy.

Define three reasons why embryo transfer might be a viable option for a breeder or owner.

1	
2	
3	

2.3.4 Is it Profitable

Joe has a 60 acre breeding farm. Based on the following information, determine the “Annual Costs” and “Annual Income” filling in the columns in the table provided.

Joe owns 20 mares which remain on the farm all year. He also owns 1 stallion, which is also housed on the farm. The stallion has a conception rate of 30%. He breeds 12 of his mares to his stallion, and the rest are bred to outside stallions at an average stud fee of \$5 00 per mare (guaranteed live foal). Seventy-five percent of these mares get pregnant. Joe owns a truck and trailer; thus has no outside transporting costs. However, for each trip, he spends \$0.18 per mile for an average of 56 miles one way. In addition, Joe has facilities to accommodate outside mares to be bred to his stallion. He charges \$2,000 per mare (guaranteed live foal), which includes care for the mare. He averages 3 outside mares per breeding season.

The fences on Joe's farm are beginning to deteriorate and need repairs. He spends \$5,000 per year on fence maintenance. He has 10 acres that are not used. Joe mows these 10 acres to keep them looking nice. Tractor and equipment maintenance cost \$1,500 per year.

Joe buys 2000 bales of alfalfa hay at \$4.00 per bale. He spends \$8.00 per 50 lb bag of grain and feeds approximately 250 lb grain per day (total) throughout the year. He gets sawdust for free from a local sawmill, but buys wheat straw for foaling at \$5.00 per bale. He uses an average of 20 bales of straw per mare per year.

He sells the foals on his farm as yearlings. He has 2 student laborers throughout the year. Each of these students works 20 hours per week at \$4.75 per hour. He hires 2 additional laborers for yearling sales-prepping and pays them \$5.00 per hour. These laborers each work 24 hours per week for 8 weeks. The yearlings sell for an average of \$800 per horse. He is considering selling some of his mares at a local breeding stock sale.

Annual Consts:

Outside stallion costs:	
Transporting costs:	
Fence maintenance:	
Tractor and equipment:	
Hay:	
Grain:	
Straw:	
Student laborers:	
Sales laborers:	
Total Costs:	

Annual Income:

Stallion fees:	
Yearling sales:	
Total Income:	

Is this farm a profitable business? If not, how would you improve the business/situation? If so, can the profits be improved?

--

UNIT 3. GENETICS

Genetic tests are widely used by breeders and horse enthusiasts alike. Genetic testing is extremely accurate and reliable.

Define three types of genetic testing that are commonly used today:

1	
2	
3	

Why should a breeder care about the genetics behind their stallion's coat color?

If a breeder wanted to produce a palomino, what coat colors should the mare and stallion be?

UNIT 4. LET'S TAKE A BREAK

You have been working really hard so let's take a break and go back and do something we did as a Cloverbud.

In 2000, LexArts brought "Horse Mania" to the streets of Lexington, KY. "Horse Mania" involved a citywide display of lifesize fiberglass horse statues extravagantly decorated by local artists. Area businesses and organizations sponsored the 79 fiberglass horses that were decorated by local artists and served as public art throughout the summer. At the end of the summer, the statues were auctioned off to the public.

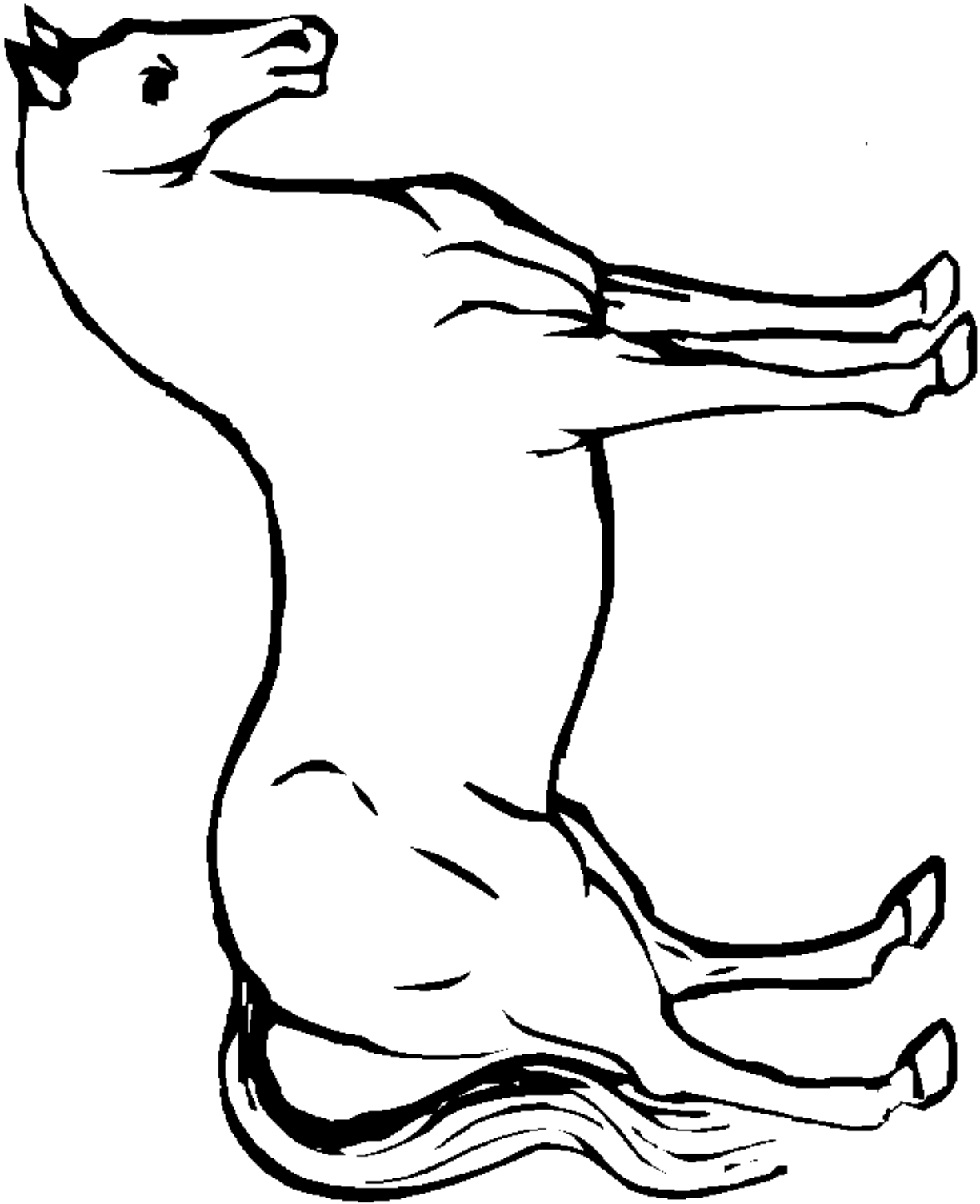
In 2010, this popular project returned to Lexington with 82 horses that were displayed around the city. That year, Horse Play, a companion project gave school children an opportunity to create foals that were displayed at Lexington public libraries. "Virtually all elementary, middle and high schools participated in Horse Play," said Tania Blanich, chief operating officer of LexArts. "It has allowed us to expand and involve non-professional artists."

These are pictures of just a few of the lifesize horses that were painted for the display in Lexington, KY in 2010.



Credit: <http://www.horsemania2010.com/horses.htm>

On the following page, try your hand at creating an artistically colored pony!



UNIT 5. HORSE SHOW MANAGEMENT 101

Managing a Horse Show event can be an extremely stressful ordeal or it can be a rewarding, fun, team building experience. A Horse Show should be an event where participants may exhibit in a safe, professionally run atmosphere with minimal stress and maximum enjoyment.

What do you think exhibitors expect of show management? List at least 5 expectations but feel free to identify more.

1	
2	
3	
4	
5	

What should show management expect of exhibitors? List at least 5 expectations but feel free to identify more.

1	
2	
3	
4	
5	

5.1 Show Management

Managing a horse show involves four major phases: Preliminary Planning, Preparation, Execution, Closure.

A local horse club has asked you to manage their “Fun in the Sun Pleasure Show”. They have set a show date, developed a show schedule that has 45 classes, and have secured a facility. They expect about 60 exhibitors based on past history. The facility includes two 300’ x 150’ arenas (not covered), a two story entry booth, a concession pavilion which includes men’s and women’s bathrooms, and 8 acres of flat ground all enclosed by a perimeter fence with two facility entry gates (see arial view). You can assume the facility structures are in good repair.



5.1.1 Preliminary Planning

The following table lists 5 tasks that should be done in the Preliminary Preparation Phase. Identify the duration of each task in hours, days or weeks, and also identify how many resources will be required to execute the task.

Task	Duration	Resources
Secure Qualified Judge		
Solicit and Acquire Patterns from Judge		
Invite Vendors		
Locate and Reserve Equipment (Office Supplies, PA system, cones for pattern classes)		
Plan and Produce Publicity		

5.1.2 Preparation

The preparation phase includes everything that needs to be done prior to the day of the show. Identify at least 6 preparation tasks identifying duration and number of resources.

	Task	Duration	Resources
1			
2			
3			
4			
5			
6			

One of the tasks you should have listed is “Develop a List of Show Staff Responsibilities.”

So given that the show schedule will utilize only one ring for the classes with the other ring being allocated as a warmup ring, develop a list of show staff responsibilities and define how many resources will be needed to fill each responsibility. Keep in mind that you don’t want to allocate a resource to work more than a 4 hour shift so most responsibilities need to show AM and PM resources. To get you started, I have identified one responsibility for you.

Responsibility	Resources
Announcer	1 AM 1 PM

How many resources will be needed to execute the show?

5.1.3 Execution

The major things that are going to be happening on show day will revolve around execution of the classes and will involve the show staff that you have put in place. However as a show manager there are some tasks that you need to execute directly or at least make sure they are done. Can you name at least 6 such tasks

	Task
1	
2	
3	
4	
5	
6	

5.1.4 Closure

There may be one or two things you need to do the week following the show to close out your show management responsibilities. Can you name at least two tasks?

	Task
1	
2	

5.2 Risk Management

When planning any event, there is always a probability of something going wrong. So planning for these negative possibilities is essential to a successful outcome of the event. Any uncertain event or condition that might adversely affect your event is called a risk. Risk management is a four step process that allows you to develop a plan for managing the risks.

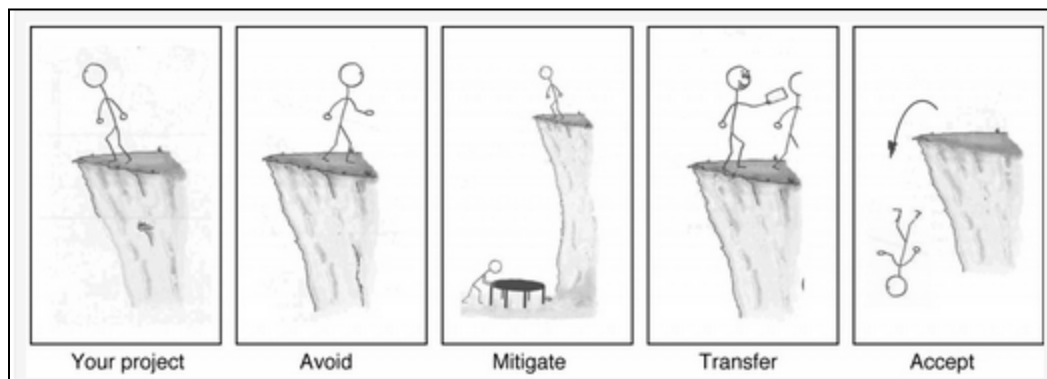


Risk identification is exactly what the name implies, identifying the negative things that might occur that will impact your event.

Risk analysis is looking at each risk and determining the probability that it will occur and the severity of the impact if it does occur.

Planning involves determining what you are going to do about each risk. The first step in this effort is to decide how you are going to handle the risk: avoid, mitigate (reduce the impact), transfer, or accept. Let's take a look at an example of each of these.

Suppose your event requires you to stand on a cliff. There is a risk that you might fall.



Credit: <http://bccampus.pressbooks.com/projectmanagement/>

- You can avoid the risk by changing the requirement that you stand on a cliff.
- You can mitigate the impact of the risk by placing a trampoline at the bottom of the cliff.

- You can transfer the risk to someone else by requiring them to stand on the cliff instead of you.
- You can accept the risk of falling and plan for the ramifications of that happening.

The second step in planning is to identify how you are going to either avoid, mitigate or transfer the risk. If you are going to accept the risk, then there is nothing to do but hope it does not happen but also plan for it to happen.

Monitoring is a real time activity that you employ during your event to make sure your risk management plan is working.

Given your horse show management assignment, lets see if you can now develop a Risk Management Plan. I have given you a head start by identifying two risks.

Risk	Probability¹	Severity²	Action³	How
Heavy rain is forecast for show day.	50%	High	Mitigate	Plan a rain date
Judge is late on show day.	10%	Medium	Accept	Start of first class will be delayed. Keep exhibitors informed.

¹ Probability is a percentage from 1% to 100%.

² Severity is Low, Medium or High and identifies how big an impact the risk will have on your event.

³ Action is Avoid, Mitigate, Transfer or Accept.

UNIT 6. COMPETITIVE TRAIL RIDING AND ENDURANCE RIDING

Competitive Trail Riding measures the fitness of a horse as they travel over a marked trail of 20 to 120 miles. Some rides are only one day long, others may run as long as three days with the horse and rider traveling up to 40 miles per day. Horses are examined thoroughly before, on trail and after finishing, by qualified judges and veterinarians. The events are strictly timed and penalties are given for finishing too early or too late.

Endurance riding is an equestrian sport based on controlled long-distance races. In an endurance ride, the winning horse is the first one to cross the finish line while stopping periodically to pass a veterinary check that deems the animal in good health and fit to continue. In the United States, most endurance rides are either 50 or 100 miles (160 km) long. Shorter rides, called Limited Distance Competition, are organized for new riders to the sport or young horses being trained. There are also a few longer, usually multi-day, rides run as well. Winning riders complete 100-mile (160 km) rides in 10–12 hours.

Either of these events require considerable horse and rider conditioning. They are not events that you decide to do one day and then go do it the next day.

Scenario 1

You are planning to ride a 30 mile competitive trail ride. The ride is planned for 1 day and you are allocated 5 hrs and 45 minutes to complete the 30 miles with one 30 minute mandatory vet check hold. You are going to condition your Arabian for this event.

Scenario 1 Conditioning Program

You have been riding this horse consistently 3 to 4 days a week at pleasure paces. Your conditioning program will take 6 weeks. Develop a conditioning schedule for each week. Hint: Your conditioning program should build up to riding 15 miles in 2 hrs 30 minutes the 5th week and then taper off the 6th week. The first two weeks have been layed out for you.

Week 1

Ride one hour 5 or 6 days - take it easy. Begin to explore different terrains. Concentrate on your tack. Does it fit you and the horse?

Week 2

Ride 1½ hours 6 days. Increase your pace each day until by the end of the week you are trotting almost half the time. Always walk the last half-mile home

Week 3

Week 4

Week 5

Week 6

Scenario 1 Ride Plan

You have completed your conditioning and it is the day before checkin. You need to plan your strategy for the ride itself. The trail will be marked every 5 miles with a "Miles To Go" marker. So lay out a time line for each marker and remember that there is a planned 30 minute hold at the "15 Miles To Go" marker which means your actual riding time is 5 hrs 15 minutes. Also you can complete the ride in + or – 10 minutes of the allotted 5 hr 45 minutes allowed without penalty.

Assume you are released to start promptly at 08:00:00 AM

Mile Marker	Elapsed Time	Clock Time
30 Miles to Go at Ride Start	0	08:00:00 AM
25 Miles to Go		
20 Miles to Go		
15 Miles to Go		
End of 30 Minute Hold		
10 Miles to Go		
5 Miles to Go		
0 Miles to Go at Ride End		

Scenario 2

You are planning to ride a 100 mile endurance ride on your Arabian.

Scenario 2 Conditioning Program

The best conditioning method for Endurance is called "L.S.D." -- long, slow distance. It is a method designed to bring a horse along to a peak fitness level without compromising soundness.

Conditioning for Endurance would take about three months if one had hills to work on; otherwise four months would be ideal. It is very important NOT to overtrain, or to drain the horse's resources so that it is too fatigued even before it is entered in the ride.

The average speed to ride an Endurance is 7 mph. This is about the speed of a medium trot for almost all breeds of horses. The following chart gives the approximate speed of the gaits of an average size horse.

Gait	Speed
Walk	3.7-4 mph
Slow Trot	5 mph
Medium Trot	6-8 mph
Fast Trot	9-11 mph
Canter	12-15 mph

For comparison, a human walks at about 3 mph, jogs at 4.5mph, and runs at 5-7 mph.

Given that your conditioning environment is flat, develop a 4 month conditioning Program. The first month has been laid out for you.

Month 1

Ride one hour 5 or 6 days - take it easy. Begin to explore different terrains. Concentrate on

your tack. Does it fit you and the horse?

Month 2

Ride 1½ hours 6 days. Increase your pace each day until by the end of the week you are trotting almost half the time. Always walk the last half-mile home

Month 3

Month 4

UNIT 7. SO YOU WANT TO BUY A HORSE!

So lets take a bit of a mental break and do a fun exercise. Assume that you have \$50,000 to spend on a new horse, and you have a place to put the horse.

Define your goals for you and this new horse (both short term and long term):

--

Define your requirements for this new horse (the requirements may be a range such as 5-6 for age), and categorize each requirement as Critical or Preferred. The critical's are deal breakers, that is the must haves. The preferred's are those things that would be nice but that you could forego given the right circumstances.

	Requirement	Category
Breed		
Height		
Color		
Age		
Gender		
Years of Training		
Training Discipline(s)		
Origin*		

* How far are you willing to go to find this horse (Southeastern US, Europe)?

How will you go about finding this horse?

--

Now after six months of searching, you found your horse. So let's see how much this horse really cost you.

Travel and Living Expenses to Try Prospects	
Price of Horse	
Pre-purchase Exam	
Transportation from Origin to Destination	
Total	

UNIT 8. HORSE TRANSPORTATION

Transporting horses is a risky business and requires some preparation and a lot of defensive driving skills.

What checks of the tow vehicle should be made?

What checks of the trailer should be made?

What items should be carried in the tow vehicle?

What items should be stored in the trailer?

An equine first aid kit is one of the things that should be stored in the trailer. List the items that should be included in this equine first aid kit:

Driving a trailer that has live animals on board requires a degree of defensive driving beyond normal driving situations. What particular safety precaution should these drivers take.

Being a passenger in a vehicle hauling live animals carries a responsibility. What are the passenger's responsibilities.

Record participation in any competitive events or fair exhibits.

Date	Activity	Level of Competition (County, Area, or State)	Placing or Award

Record your volunteer hours at 4-H sponsored events, including horse shows, fundraising, arena clean up, etc.

Date	4-H Activity	Hours

PROJECT PICTURES

PROJECT PICTURES

SIGNATURES

Periodic Review

Periodically your leader will check your progress in this. Please bring your book to every club meeting.

By signing below, I am stating that I have reviewed this book with the 4-H member for completeness to date.

Club Leader Signature	Date

Activity Completion Sign Off

By signing below, I am stating that I have completed this book myself.

4-H Member Signature	Date

By signing below, I am stating that I am familiar with this work and, to the best of my knowledge, the member completed this book.

Title	Signature	Date
Parent		
Club Leader		