

Wallingford Public Schools - HIGH SCHOOL COURSE OUTLINE

Course Title: Animal Science / Equine Science 3	Course Number: 8253
Department: Agricultural Education	Grade(s): 11
Level(s): Academic	Credit(s): 1.5
Course Description Junior course work continues to build a foundation for students interested in animal science /equine science. Topic studied include: equine and instruction, equine nutrition, equine breeding and genetics, equine health and disease, and horseshow preparation. Students will continue to participate in the Lyman Hall Chapter of the national organization, FFA. Students will continue the development of their portfolio and further develop skills to prepare for future careers in animal science/equine science.	
Required Instructional Materials Sufficient Hands-on Materials	Completion/Revision Date Approved by Board of Education October 15, 2007

Mission Statement of the Curriculum Management Team

The mission of the Career and Technical Education Curriculum Management Team is to ensure that students, as a result of their experiences in K-12, will demonstrate transferable skills, knowledge, and attributes for successful life management, employment, career development, post-secondary educational opportunities, and life long learning.

Enduring Understandings for the Course

- Self-reflection of learning experiences, in and out of school, fosters the development of a life long learner. Life long learners are able to apply and refine skills as they prepare for their post-high school endeavors.
- Varieties in riding and teaching methods exist and students should become familiar with as many varieties as possible in order to compete in the equine industry.
- Safety when riding should always be taken seriously and precautions should always be practiced.
- Appropriate equine nutrition is fundamental to species survival.
- Preparation, selection and knowledge of the proper feeds will prolong the life and use of the equine.
- Equine species should be bred purposefully to select for attributes that are desirable.
- A thorough understanding of the equine reproductive system(s) and genetics is essential in order to succeed as an equine breeder.
- Numerous obstacles can deter equine reproduction and knowledge of these is essential for success.
- Successful preparation for the interview process and the ability to present yourself professionally will set you apart from other applicants.
- In order to maintain a healthy herd of horses the horse owner must familiarize

himself/herself with equine illnesses, their diagnosis, treatment, symptoms, and prevention.
<ul style="list-style-type: none">• In order to determine the condition of a horse the owner must be able to assess its condition.
<ul style="list-style-type: none">• There are a variety of methods to exhibit horses and each one is steeped in history and is unique.

<u>LEARNING STRAND</u>	
1.0 Transferable Skills	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> • Self-reflection of learning experiences, in and out of school, fosters the development of a life long learner. Life long learners are able to apply and refine skills as they prepare for their post-high school endeavors. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> • What is the importance of maintaining a portfolio? • What are the qualities of an effective oral presentation? • What safety precautions do I have to follow? • What can I do differently next time? • What does a cooperative group require to function successfully? • How can I assess the situation and implement change? • What are the characteristics of an organized person? What do I need to do to be more organized? • How can I manage informational research, organize the information, and present it professionally? • What is a leader?
<u>LEARNING OBJECTIVES</u> The students will: <ul style="list-style-type: none"> 1.1 Demonstrate public speaking skills using appropriate visuals and tailoring the presentation to specific audiences. 1.2 Communicate in writing about a topic using different formats applying relevant vocabulary, supporting evidence and clear logic. 1.3 Self-assess transferable skills and reflect on areas of strengths and improvement. 1.4 Identify and use the appropriate tools and equipment safely. 1.5 Work cooperatively with fellow peers, teachers, and employers to complete a task. 1.6 Apply problem solving skills to critically approach a situation and work through the steps to solve the problem. 1.7 Develop organizational skills that assist with data collection, data analysis and synthesis. 1.8 Apply research skills to collect information, summarize the findings and to cite the sources used. 1.9 Recognize leadership skills such as: motivating others, negotiating, 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> • See other learning strands for integration <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> • See other learning strands for integration <u>SUGGESTED ASSESSMENT METHODS</u> <ul style="list-style-type: none"> • See other learning strands for integration

<p>participating in meetings, gaining confidence, and gaining self-awareness, etc.</p> <p>1.10 Apply computer-based tools such as PowerPoint, Word, Excel, and Access, to organize and present information.</p> <p>1.11 Demonstrate self expression and creativity through different projects.</p> <p>1.12 Develop a positive attitude and become an independent learner in order to prepare for the future.</p> <p>1.13 Organize and maintain a four year portfolio including a compilation of student products and reflections.</p> <p>1.14 Document SAE (Supervised Agricultural Experience) monthly. This includes recording hours, expenses, income, tasks and applied skills.</p>	
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<u>LEARNING STRAND</u>	
2.0 Equitation and Instruction <ul style="list-style-type: none"> Approximately 4 weeks 	
<u>ENDURING UNDERSTANDING(S)</u>	<u>ESSENTIAL QUESTION(S)</u>
<ul style="list-style-type: none"> Varieties in riding and teaching methods exist and students should become familiar with as many varieties as possible in order to compete in the equine industry. Safety when riding should always be taken seriously and precautions should always be practiced. 	<ul style="list-style-type: none"> How can riding be dangerous? How can riding be made safe? What is the art of riding? Why are there such varieties in riding and teaching techniques? What must be done to be effective riding instructor? What is tack used for?
<u>LEARNING OBJECTIVES</u> The students will:	<u>INSTRUCTIONAL SUPPORT MATERIALS</u>
2.1 Demonstrate how to ride and control a horse at the walk and trot/jog. 2.2 Critique your riding ability and that of your peers. 2.3 Identify training techniques to help riders improve. 2.4 Describe and demonstrate 10 basic vaulting moves. 2.5 Recognize and demonstrate the correct and incorrect leads and diagonals. 2.6 Identify lameness. 2.7 Identify safety factors to consider when riding. 2.8 Explain how to prevent and treat injuries which could occur from riding. 2.9 Recognize the difference between hunters, jumpers, and equitation courses. 2.10 Explain the difference between western riding events. 2.11 Explain the function and name of 75 pieces of tack and how to put it on the horse correctly.	<ul style="list-style-type: none"> Horse/pony for riding Riding arena Jumps, poles, obstacles Tack (saddles, bridles, lunge lines) Variety of equitation videos Vaulting barrel Vaulting surcingle Safety helmets <i>Basic Horsemanship English and Western</i>, Eleanor F. Prince and Gaydell M. Collier <i>Equine Science</i>, Parker, Dellmar Publishers video camcorder
	<u>SUGGESTED INSTRUCTIONAL STRATEGIES</u>
	<ul style="list-style-type: none"> Design and construct a jumping course Teach a riding lesson Practice riding Trail ride View a horseshow and critique riders Practice vaulting Attend a vaulting clinic Practice lunge lessons Video tape yourself teaching riding lessons Critique yourself or others from a video tape of a lesson Construct a vaulting barrel Read and present 3 annotation cards about equitation Prepare an exercise schedule for a horse and rider Practice riding form and if ready canter or and jump.

- Complete a series of riding exercises.
- Prepare and teach lessons which have students learn a variety of riding techniques.

SUGGESTED ASSESSMENT METHODS

- PowerPoint presentations
- Vaulting assessments
- Riding assessments
- Daily class participation
- Written report
- Oral presentation
- Teaching assessments
- Portfolio may include:
 - Portfolio skill sheet

<u>LEARNING STRAND</u>	
3.0 Equine Nutrition <ul style="list-style-type: none"> • Approximately 4 weeks 	
<u>ENDURING UNDERSTANDING(S)</u>	<u>ESSENTIAL QUESTION(S)</u>
<ul style="list-style-type: none"> • Appropriate equine nutrition is fundamental to species survival. • Preparation, selection and knowledge of the proper feeds will prolong the life and use of the equine. 	<ul style="list-style-type: none"> • What do horses eat? How is nutrition obtained? • What illnesses are associated with feeding horses? • How are equine feeds selected, prepared, and utilized by the equine body? • What expenses are associated with feeding the equine?
<u>LEARNING OBJECTIVES</u> – The students will:	<u>INSTRUCTIONAL SUPPORT MATERIALS</u>
3.1 Identify the nutrient needs for various groups of horses. 3.2 Select feeds specific for: energy fat, protein, and special needs. 3.3 Identify the sources of vitamins and minerals and determine those which are critical to the equine. 3.4 Identify the signs of vitamin and mineral feed deficiencies. 3.5 Describe the components of the equine digestive tract and their functions. 3.6 Interpret a feed tag. 3.7 Identify items which make feed palatable. 3.8 Analyze feed(s) for nutrition and cost. 3.9 Determine the cause, prevention, treatment and cure for popular equine metabolic disorders and equine colic. 3.10 Explain when it is necessary to use equine supplements. 3.11 Identify feeding rules from myths.	<ul style="list-style-type: none"> • <i>Equine Science</i>, Parker, Dellamar. • Videos on equine nutrition • Feeds, hay, grasses, and legumes • Equine magazines and periodicals • Plant press • Feeds • PowerPoint presentations • Internet access
	<u>SUGGESTED INSTRUCTIONAL STRATEGIES</u>
	<ul style="list-style-type: none"> • Visit a feed store/ have grain sponsor talk to class • Describe in writing and orally present what happens if an animal has a feed deficiency • Compare feeding programs at local barns and assess their programs • Identify grains by processing method and type • Identify hay, grasses, weeds and toxic plants in the field • Compare high and low quality hays • Make horse treats • Prepare a bran mash • Prepare a collection of grasses, legumes, weeds and toxic plants • Prepare and present annotation cards on feeding strategies • Determine the costs of feeding horse
	<u>SUGGESTED ASSESSMENT METHODS</u>
	<ul style="list-style-type: none"> • Present a report on a metabolic disorder • Complete a elementary level book on

	<p>feeding horses</p> <ul style="list-style-type: none">• Design flyers on equine nutrition• Tests and quizzes• Collection of equine feeds, grasses, or hays• Portfolio may include:<ul style="list-style-type: none">• Design a feeding plan for a barn and determine expenses• Portfolio skill sheet
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LEARNING STRAND

4.0 Equine Breeding and Genetics

- Approximately 4 weeks

ENDURING UNDERSTANDING(S)

- Equine species should be bred purposefully to select for those attributes that are desirable.
- A thorough understanding of the equine reproductive system(s) and genetics is essential in order to succeed as an equine breeder.
- Numerous obstacles can deter equine reproduction and knowledge of these is essential for success.

ESSENTIAL QUESTION(S)

- What are the steps involved in breeding equines?
- How does one breed for specific traits?
- What are the links between health care, nutrition and breeding?
- What steps are required for pre and post partum mare and foal care?

LEARNING OBJECTIVES – The students will:

- 4.1 Explain proper pre- and post-natal care for a foal and a mare.
- 4.2 Explain the role of female and male hormones in horses.
- 4.3 Identify the female and male horse reproductive organs and their functions.
- 4.4 Identify 5 abnormal foaling conditions in a mare and determine their cause.
- 4.5 Recognize dystocia.
- 4.6 Explain causes of equine abortions.
- 4.7 Explain how to care for an orphan foal.
- 4.8 Describe methods to wean a foal.
- 4.9 Explain 2 congenital defects.
- 4.10 Determine the proper vaccinations for breeding stock.
- 4.11 Indicate the possible genetic results of a simple genetic cross.
- 4.12 Describe the genetic transfer of traits from the parents to the offspring (genes).
- 4.13 Explain how to identify pregnant mares.
- 4.14 Identify six methods of breeding.
- 4.15 List the steps necessary to carry out artificial insemination.
- 4.16 Determine what contracts are necessary when breeding horses.
- 4.17 Determine the stages of parturition and the signs for each.

INSTRUCTIONAL SUPPORT MATERIALS

- *Equine Science*, Parker, Delmar publishers
- Assorted videos
- Internet access

SUGGESTED INSTRUCTIONAL STRATEGIES

- Use the Internet to design a breeding program. (Select horses; determine costs, methods health care, etc...)
- Design a promotional breeding farm/brochure, using Microsoft Publisher or similar programs
- Select stallions and mares based on conformation, type, and bloodlines
- Keep records on breeding stock
- Complete a typed paper on equine breeding
- Write breeding contracts for hypothetical situations
- Compare breeding farms

SUGGESTED ASSESSMENT METHODS

- Written quizzes and tests
- Comparison and contrast synopsis
- Written paper
- Breeding brochure(s)
- Breeding contracts, records, farm
- Breeding farm
- Portfolio may include:
 - Portfolio skill sheet

<u>LEARNING STRAND</u>	
5.0 School to Career Preparation – Interviewing <ul style="list-style-type: none"> • Approximately 4 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> • Successful preparation for the interview process and the ability to present yourself professionally will set you apart from other applicants. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> • Why should I prepare for the interview? • How can I prepare for an interview? • What do I need to consider to be successful during the interview? • What do I need to do after the interview?
<u>LEARNING OBJECTIVES</u> – The students will: <u>Getting Ready for the Job Interview</u> 5.1 Write a resume that highlights transferable skills and technical skills related to a specific job and document these skills with artifacts from their portfolio. 5.2 Write a business letter using the correct format which adheres to Standard English conventions. <ul style="list-style-type: none"> • Cover letter introducing student to a potential employer • Thank you letter for interview • Acceptance or rejection letter for position offered 5.3 Compile a list of three references and contact information. 5.4 Complete a mock job application accurately to emphasize your positive attributes. 5.5 Demonstrate preparation skills related to interviewing. Such as: <ul style="list-style-type: none"> • Predict what type of questions will be asked • Warm-up skills/small talk • Dress for success/grooming • How to handle illegal questions • Company research 5.6 Demonstrate appropriate skills during a mock interview. Such as: <ul style="list-style-type: none"> • Non-verbal communication skills <ul style="list-style-type: none"> ○ Eye contact ○ Positive attitude ○ Hand shake • Verbal skills <ul style="list-style-type: none"> ○ Voice, diction, grammar ○ Convincing skills presentation ○ Respond to criticism or questions • Explaining strengths and weaknesses 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> • Videos on writing a resume, cover letters, etc. • Videos on interviewing • Sample resumes, cover letters, references • Assorted job applications <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> • Discuss model resumes and how the different designs highlight different strengths of the applicant • Discuss the organization and visual presentation of resumes • Know my skills activity – brainstorm, list and categorize personal skills, technical skills and work experience – then find artifacts in their portfolios to “prove” these skills • Brainstorm and discuss characteristics of potential references • Encourage students to contact references prior to using their name on an application • Role play during practice mock interviews • Human resource representative from a local company can assist with mock interviews • Discuss employer expectations for a variety of jobs <u>SUGGESTED ASSESSMENT METHODS</u> <ul style="list-style-type: none"> • Mock interview rubric • Resume rubric • Business letter rubric • Group participation • Skills checklist • Portfolio products may include: <ul style="list-style-type: none"> • Resume and cover letter • Mock job application and references • Thank you letter to interviewer

<ul style="list-style-type: none"> ○ Provide concrete examples ○ Positive spin on weaknesses to improve • Ask appropriate and pertinent questions • Comes prepared with needed materials <ul style="list-style-type: none"> ○ Application ○ Resume ○ References ○ Pen, pad of paper and folder ○ Examples from portfolio • Closing statement and thank you <p>5.7 Evaluate the pros and cons of the position presented to you. Evaluate specifics of the employment such as:</p> <ul style="list-style-type: none"> • Salary • Benefits • Hours • Vacation • Working conditions • Opportunities for advancement • Lifestyle needs <p><u>Note:</u> Employment and other related experiences outside of the classroom can be applied towards the SAE (Supervised Agricultural Experience) requirements.</p>	<ul style="list-style-type: none"> • Acceptance or rejection letter for position offered • Photo of student dressed for interview
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LEARNING STRAND

6.0 Equine Health and Diseases.

- Approximately 4 weeks

ENDURING UNDERSTANDING(S)

- In order to maintain a healthy herd of horses the horse owner must familiarize himself/herself with equine illnesses, their diagnosis, treatment, symptoms, and prevention.
- In order to determine the condition of a horse the owner must be able to assess its condition.

ESSENTIAL QUESTION(S)

- What are the equine vital symptoms and how are they determined?
- What are the most common illnesses associated with the equine species and how are they recognized, prevented and treated?
- How does a horse owner ensure the health and well being of the equine?

LEARNING OBJECTIVES – The students will:

- 6.1 Describe the signs of a healthy and unhealthy animal
- 6.2 Identify the causes, prevention, treatment, and symptoms of at least ten viral, bacterial, nutritional, and miscellaneous illnesses.
- 6.3 Identify common parasites, symptoms, causes, and treatments.
- 6.4 Describe practices to maintain a healthy herd.
- 6.5 Identify diseases which dogs' cats and horse owners need to annually vaccinate against.
- 6.6 Explain how to determine the vital signs for equines.
- 6.7 Identify and practice a variety of methods for giving medications.
- 6.8 Correlate the relationship between sanitation and disease
- 6.9 Identify the different drugs, pharmaceuticals and their uses available in common practice (over the counter and prescribed).
- 6.10 List diagnostic methods used in evaluating equine soundness.

INSTRUCTIONAL SUPPORT MATERIALS

- Computers and Internet access
- Access to equines
- Thermometers, stethoscopes, saline, rubbing alcohol, cotton pads, hypodermic needles, syringes, bolus gun, twitches, stop watch
- *Equine Science* , Parker, Delmar Publishers
- Videos on equine health care

SUGGESTED INSTRUCTIONAL STRATEGIES

- Model how to determine the vital signs of an equine
- Model how to give medications to a horse
- Model restraint procedures for a horse
- Present a oral report on a disease or disorder
- Prepare a power point slide presentation on a disease
- Take the vital signs on a variety of horses - pre and post workout
- Write daily questions pertaining to the topics discussed in class
- Display restraint procedures for animals
- Create a informative flyer on the importance of vaccinations
- Display methods to keep animals healthy through safe projects and animal room care
- Obtain, record, and assess vital signs, on a animal for a week

SUGGESTED ASSESSMENT METHODS

- Power point presentations on diseases
- Hands on assessment of vital signs and

	<p>animal care</p> <ul style="list-style-type: none">• Informative pamphlets(flyers)• Oral report(s)• Tests and quizzes• Restraint procedures• Animal records• Portfolio may include:<ul style="list-style-type: none">• Portfolio skill sheet
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<u>LEARNING STRAND</u>	
7.0 Horseshow Preparation <ul style="list-style-type: none"> • Approximately 4 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> • There are a variety of methods to exhibit horses and each one is steeped in history and is unique. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> • How are horses prepared for exhibit? • How are horses braided and why? • How is a horseshow operated? • How does one participate in a horseshow? • What career opportunities are associated with equine shows?
<u>LEARNING OBJECTIVES</u> – The students will: <ul style="list-style-type: none"> 7.1 Identify 5 methods to braid a horse’s mane and 3 methods to braid a horse’s tail and determine when to use each type of braid. 7.2 Describe and demonstrate show ring etiquette. 7.3 Identify 5 horse show organizations. 7.4 Describe the components of a horseshow program. 7.5 Explain the duties of all involved in operating a horseshow. 7.6 Determine the costs to run a horse show. 7.7 Design courses for a horseshow. 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> • Horses • Computers and Internet access • Grooming materials • Braiding and clipping videos • Cardboard manes/tails • Yarn, scissors, braiding elastics • Needle & thread, seam ripper • Braiding kits • Banding kits • Equine clippers • Equine shampoo sponges and sweat scraper • Equine polishes and sprays <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> • Demonstrate how to show horses in a variety of styles, in hand • Demonstrate how to bathe a horse • Demonstrate how to braid manes and tails in variety of methods • Demonstrate how to prepare tack for a show • Construct a horse show program • Run a horse show • Preview horse show programs • Observe a live horse show • Create horseshow courses • Demonstrate how to band manes and shorten manes • Critique show ring etiquette on video or at a horse show <u>SUGGESTED ASSESSMENT METHODS</u> <ul style="list-style-type: none"> • Show horses in a variety of styles, both in hand and under saddle

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| | <ul style="list-style-type: none">• Bathe a horse• Braid manes and tails in variety of methods• Prepare tack for a show• Body clip and trim a horse• Portfolio may include:<ul style="list-style-type: none">• Horse show program• Portfolio skill sheet |
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