

Wallingford Public Schools - HIGH SCHOOL COURSE OUTLINE

Course Title: Animal Science / Equine Science 2	Course Number: 8243
Department: Agricultural Education	Grade(s): 10
Level(s): Academic	Credit(s): 1.5
Course Description Sophomore course work introduces students to light horse production, equine anatomy and physiology, animal behavior, animal handling and restraint, & equine conformation and horse judging. Students will be introduced to and participate in the Lyman Hall Chapter of the National FFA organization. Students will continue to develop their portfolio and identify skills to prepare them 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.
- In order for humans to work efficiently with the equine species, certain safety precautions and handling skills must be implemented.
- The state of an organism is maintained by the dynamic interaction of the systems that comprise it.
- Different types of cells work together to form tissues that carry out specific functions.
- Living things can be described and classified based on their structure and function.
- All organizations, including the FFA, have standardized procedures for operation to help ensure smooth and efficient meetings.
- As leadership changes occur, the standardized operational procedures aid in smooth transitions and encourage participation by all members.
- Successful preparation for employment and the ability to present yourself professionally will set you apart from other applicants.
- Animal behavior plays an important role in their development and use as a domestic animal.
- Animal training is best completed with knowledge of known animal behaviors and intelligence, which will enable a trainer/handler to be proficient and compassionate with

animals.
<ul style="list-style-type: none">• In order to manage animals safely and efficiently a handler must become familiar with proper restraint and handling procedures.
<ul style="list-style-type: none">• Conformation or structure of a horse will help determine the best use of a horse for a particular function.

<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

participating in meetings, gaining confidence, and gaining self-awareness, etc.

- 1.10 Apply computer-based tools such as PowerPoint, Word, Excel, and Access, to organize and present information.
- 1.11 Demonstrate self expression and creativity through different projects.
- 1.12 Develop a positive attitude and become an independent learner in order to prepare for the future.
- 1.13 Organize and maintain a four year portfolio including a compilation of student products and reflections.
- 1.14 Document SAE (Supervised Agricultural Experience) monthly. This includes recording hours, expenses, income, tasks and applied skills.

LEARNING STRAND

2.0 Light Horse Production

- Approximately 4 weeks

ENDURING UNDERSTANDING(S)

- In order for humans to work efficiently with the equine species, safety precautions and handling skills must be implemented.
- Proper care and exercise will help ensure a healthy animal.

ESSENTIAL QUESTION(S)

- What safety measures are necessary when working with horses?
- How do you care for a horse?
- How does a horse communicate with horses? People? Other animals?
- How do you groom, lunge, halter, secure and lead a horse?
- What is a vice? What are the causes and the cures? How do you prevent a vice?
- How do you select bits for your horse?

LEARNING OBJECTIVES The students will:

- 2.1 Determine the age, height, and weight of a horse using a variety of techniques.
- 2.2 Identify common riding styles.
- 2.3 Identify common horse breeds.
- 2.4 Demonstrate and explain safety procedures around with horses.
- 2.5 Demonstrate how to properly tie a horse.
- 2.6 List the vocal and non vocal communications common to the equine species.
- 2.7 Demonstrate how to halter lunge and lead horses.
- 2.8 Identify 10 vices and explain how they are caused and prevented.
- 2.9 Identify grooming equipment and explain how they are used.
- 2.10 Identify five knots and when they should be used.
- 2.11 Determine how to select a bit and fit it to a horse.
- 2.12 Identify bits and explain their function
- 2.13 Identify common pieces of tack and how to use it appropriately.

INSTRUCTIONAL SUPPORT MATERIALS

- On line references
- 4-H manual handbook
- *Equine Science*, Parker, Delmar publisher.
- Equine videos by Miller, Farman, etc.
- *Horses and horsemanship*, Ensiggmmer, Interstate Publishers.
- Horse(s)
- Horse feed, bedding, grooming supplies, bull pen, and appropriate facilities
- Assorted saddles, tack, bits, halters and leads

SUGGESTED INSTRUCTIONAL STRATEGIES

- Model and practice how to halter, lunge, and groom
- Demonstrate a variety of knots and discuss when to use each knot
- Practice methods to properly tie horses
- Weigh and determine the height of a horse with a tape
- Determine the age for a variety of horses
- Work in groups to prepare and present a presentation on safety, grooming or communication
- Complete an annotation card from a reading about equine safety (article title, author, and summary or main points of article)
- Model how to tack a horse include fitting a bit

- Observe horses, record behaviors and keep a log book
- Demonstrate appropriate safety measures when working with horses
- Field trips to observe animals at different barns and fields

SUGGESTED ASSESSMENT METHODS

- Teacher observations of students handling horses safety
- Hands on evaluations
- Peer and teacher evaluation on projects
- Tests and quizzes
- Annotation cards
- Field trip participation
- Portfolio may include:
 - skill sheet
 - work samples in the form of photographs
 - Written field observations.

<u>LEARNING STRAND</u>	
<p>3.0 Equine Anatomy and Physiology</p> <ul style="list-style-type: none"> Approximately 8 weeks 	
<p><u>ENDURING UNDERSTANDING(S)</u></p> <ul style="list-style-type: none"> The state of an organism is maintained by the dynamic interaction of the systems that comprise it. Different types of cells work together to form tissues that carry out specific functions. Living organisms can be described and classified based on their structure and function. 	<p><u>ESSENTIAL QUESTION(S)</u></p> <ul style="list-style-type: none"> In what ways does anatomy relate to function? What are the components of the equine body? And how do these enable it to survive? How do the equine systems work together and independently?
<p><u>LEARNING OBJECTIVES</u> – The students will:</p> <p>3.1 Identify 45 bones of a horse.</p> <p>3.2 Identify the organs and their functions of the following systems in the horse:</p> <ul style="list-style-type: none"> Circulatory Respiratory Nervous Muscular (10 muscles) Skeletal (45 bones and 5 joints) Integument Lymphatic Urogenital Digestive <p>3.3 Identify 42 external features of the horse.</p> <p>3.4 Recognize how each system operates together to maintain homeostasis.</p> <p>3.5 Identify the ruminant, avian and equine digestive system parts and explain how they are similar and different.</p>	<p><u>INSTRUCTIONAL SUPPORT MATERIALS</u></p> <ul style="list-style-type: none"> <i>Equine Science</i>, Parker, Delmar publishing. <i>Horses and Horsemanship</i>, Ensminger Interstate Publishers. Assorted reference books related to the anatomy and physiology of the equine species <i>The Visible Horse</i> video The Science of Animal Science, Reiston <i>The Equine Body</i>, Beth Maloney, Way and Leigh Clinical Equine Anatomy and Disorders, Volume 1 and 2, Reigel ,Hakola, Equistar publishers. Internet research <p><u>SUGGESTED INSTRUCTIONAL STRATEGIES</u></p> <ul style="list-style-type: none"> Construct clay models of skin, muscle, and bones Construct a digestive system using hoses and tubes Research equine body systems and how they function. Identify, by drawing/painting, the systems in a horse Research using the Internet Compare and contrast ruminant, avian and monogastric digestive systems <p><u>SUGGESTED ASSESSMENT METHODS</u></p> <ul style="list-style-type: none"> Draw a 3D horse and put in all the bones and or body parts

	<ul style="list-style-type: none">• Present a PowerPoint program, on a system to the class• Teach a system to the class• Create quizzes, study games, and worksheets which pertain to the anatomy and physiology of horses• Quizzes and tests• Portfolio may include:<ul style="list-style-type: none">• skill sheet• work samples (photos of projects)• power point presentations• written reports• tests and quiz results
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<u>LEARNING STRAND</u>	
4.0 FFA Leadership Organization - Chapter Degree <ul style="list-style-type: none"> Approximately 2 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> All organizations, including the FFA, have standardized procedures for operation to help ensure smooth and efficient meetings. As leadership changes occur, the standardized operational procedures aid in smooth transitions and encourage participation by all members. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> What are the operational procedures that civic organizations utilize? How are official meetings conducted? What is the rationale for conducting parliamentary correct meetings? What are the qualities of an effective oral presentation?
<u>LEARNING OBJECTIVES</u> – The students will: <p>4.1 Meet the criteria for the FFA Chapter Degree. This includes:</p> <ul style="list-style-type: none"> Demonstrate basic parliamentary abilities Demonstrate five parliamentary procedures in a mock meeting format Deliver a 15 minute oral presentation on an agricultural topic Other SAE minimum requirements 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> FFA manual www.ffa.org Paraphernalia such as gavel, officer symbols, jacket, <i>Robert's Rules of Order</i>, etc. <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> Complete application for the Chapter Degree Discuss organizations such as the BOE, wetlands, parliament, and other commissions also use parliamentary procedures Create a PowerPoint presentation or design a tri-fold board as a visual aid for the oral presentation Create an informational hand-out to aid the oral presentation Conduct mock meetings and experience different roles (president, secretary, members, etc.) during these mock meetings Type a script to simulate the meeting Discuss effective oral presentation skills Discuss how to create an outline for an oral presentation <u>SUGGESTED ASSESSMENT METHODS</u> <ul style="list-style-type: none"> Score 80% or higher on FFA unit test Meet criteria for Chapter Degree and complete written application Rubric for oral presentation Portfolio products may include: <ul style="list-style-type: none"> Skill sheet Samples of visual aids from presentation (photo of tri-fold board or PowerPoint)

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| | <ul style="list-style-type: none">• Writing sample – script of meeting• Outline of oral presentation• Informational hand-out |
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LEARNING STRAND

5.0 School to Career Preparation – Applying for a Job

- Approximately 2 weeks

ENDURING UNDERSTANDING(S)

- Successful preparation for employment and the ability to present yourself professionally will set you apart from other applicants.

ESSENTIAL QUESTION(S)

- How should you prepare and apply for employment?
- What can non-verbal communication tell a future employer about you?

LEARNING OBJECTIVES – The students will:

5.1 Prepare to apply for an entry level position.

This may include:

- Compare and contrast the differences between a job and a career
- Compile personal information that will aid in accurately completing a job application
- Identify and locate potential employment opportunities
- Complete a mock job application accurately to emphasize your positive attributes
- Identify the procedures for securing working papers and explain why/when they are required
- Explain how to professionally request, secure, and thank a person for a letter of recommendation
- Demonstrate professional phone skills when seeking employment
- Explain how to impress a potential employer through non-verbal communication skills
- Identify employer expectations such as effective working habits and discuss how to emphasize these characteristics when preparing to secure employment

Note:

Employment and other related experiences outside of the classroom can be applied towards the SAE (Supervised Agricultural Experience) requirements.

INSTRUCTIONAL SUPPORT MATERIALS

- Videos on preparing for jobs by Creative Educational Videos
- Personal information form
- Mock job application
- Newspapers, trade journals and magazines
- www.monster.com
- www.ctcareerbuilder.com
- *Choices* software program
- Phones

SUGGESTED INSTRUCTIONAL STRATEGIES

- Guest speakers:
 - Human resources representative to discuss employer expectations
 - School employee who oversees the working papers procedures
 - Guidance counselor to discuss career, job and post secondary preparation
- Job shadowing and/or interning
- Utilize *Choices* program to complete interest surveys, etc.
- Role model professional phone skills
- Write a phone script for requesting an application
- Model and role play professional non-verbal communication skills
- Write a request asking for a letter of recommendation
- Write a business letter to thank someone for a letter of recommendation
- Discuss differences between job and career
- Use standardized form to collect personal information
- Use newspaper, trade magazines and Internet to locate sources that list potential

jobs

- Model how to accurately complete a job application and troubleshoot potential errors or omissions

SUGGESTED ASSESSMENT METHODS

- Portfolio products may include:
 - Skill sheet
 - Personal information form
 - Completed job application
 - Letter of recommendation
 - Letter asking for recommendation
 - Thank you letter for recommendation
 - Surveys collected from *Choices* program

<u>LEARNING STRAND</u>	
6.0 Animal Behavior <ul style="list-style-type: none"> • Approximately 4 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> • Animal behavior plays an important role in their development and use as a domestic animal. • Animal training is best completed with knowledge of known animal behaviors and intelligence, which will enable a trainer/handler to be proficient and compassionate with animals. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> • What constitutes animal behavior(s)? • What methods are traditionally used to observe animals? • How can knowledge of animal social behaviors and communication help humans? • Does animal intelligence play a role in their trainability? • What are traditional training methods and how are they implemented?
<u>LEARNING OBJECTIVES</u> – The students will: <ul style="list-style-type: none"> 6.1 Identify 15 common animal behaviors. 6.2 Observe and record animal behaviors using traditional approaches. 6.3 Create an experiment using classical conditioning or habituation methods. 6.4 Identify common equine behaviors. 6.5 Recommend corrective action for improper animal behavior. 6.6 Identify basic domestic behaviors. 6.7 Demonstrate training procedures utilizing behavioral traits. 6.8 Record and observe methods of animal communication. 6.9 Explain social behavioral patterns inter and intra species. 6.10 Identify methods of animal communication and determine how species inter and intra communicate. 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> • Videos <ul style="list-style-type: none"> ○ In Praise of Wolves ○ Monty Roberts ○ The Real Horse Whisperer ○ Shy Boy and Others ○ Amazing Animal Minds –PBS series ○ Other animal videos • <i>Equine Science</i>, Parker, Delmar Publishing. • Various animal behavior and communication books • On line references • Mice, gerbils, horses, and/or birds <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> • Go on field trips to observe and identify animal behaviors • Work in small groups use the Internet to research behavioral patterns • Compare and contrast domestic and wild animal behaviors. • Train animals using different methods • Identify behavior vocabulary • Write a lab report for experiment <u>SUGGESTED ASSESSMENT METHODS</u> <ul style="list-style-type: none"> • Lab report on the design and observations of an experiment training, conditioning, or habituating animal(s) • Oral presentation of lab report • Quizzes and daily assignments

- Daily evaluation of accomplishments while training animals
- Portfolio may include:
 - skill sheet
 - written field observations or lab report
 - daily log book
 - photographs of field work

LEARNING STRAND

7.0 Animal Handling and Restraint

- Approximately 4 weeks

ENDURING UNDERSTANDING(S)

- In order to manage animals safely and efficiently a handler must become familiar with proper restraint and handling procedures.

ESSENTIAL QUESTION(S)

- How are the proper methods of animal restraint implemented?
- What are traditionally accepted methods for handling animals?

LEARNING OBJECTIVES The students will:

- 7.1 Identify methods to restrain domestic animals properly and humanely.
- 7.2 Demonstrate how to carry and hold animals correctly.
- 7.3 Identify those situations when one should display proper handling techniques.
- 7.4 Demonstrate how to restrain a dog, cat, and ferret for a veterinarian.
- 7.5 Demonstrate how to restrain a bird for nail clipping, feather plucking, or wing clipping.
- 7.6 Demonstrate how to restrain a rabbit for grooming appropriately.
- 7.7 Demonstrate how to carry a rabbit properly.
- 7.8 Demonstrate how to set-up a rabbit up for show.
- 7.9 Explain how to show a horse in hand.
- 7.10 Explain how to show poultry.
- 7.11 Demonstrate how to grab and hold a snake properly.

INSTRUCTIONAL SUPPORT MATERIALS

- *Handling and Restraint Techniques for Pets and Laboratory Animals*, Gary P. Campbell & Elisabeth A Martinec

SUGGESTED INSTRUCTIONAL STRATEGIES

- Model and practice handling and restraining animals such as: horses, poultry, ferrets, rodents, rabbits, dogs, domestic birds, and cats, and snakes.
- Create a book for young children on the correct methods to handle pets.
- Practice restraint techniques
- Practice showmanship skills with poultry, horses and rabbits
- Remove and place animals into cages

SUGGESTED ASSESSMENT METHODS

- Hands on quizzes and tests on restraining animals
- Student collaborative teaching
- Portfolio may include:
 - skill sheet
 - pictures restraining animals
 - writing sample explaining how to restrain or show an animal

<u>LEARNING STRAND</u>	
8.0 Equine Conformation and Horses Judging <ul style="list-style-type: none"> • Approximately 4 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> • Conformation or structure of a horse will help determine the best use of a horse for a particular function. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> • How do you identify one horse from the other? • What is appropriate conformation for specific breeds? • What do judges look for in under saddle and in hand classes? • How do you defend your placement when judging? • How does form follow function?
<u>LEARNING OBJECTIVES</u> The students will: <ul style="list-style-type: none"> 8.1 Identify 10 colors of horses and 20 body markings that aid in horse identification. 8.2 Compare and contrast equine breeds. 8.3 Describe the ideal conformation of hunter, western and saddle type horses. 8.4 Explain the relationship between form and function in horses. 8.5 Recognize conformational faults and describe how they relate to a horse's performance. 8.6 Evaluate horses' characteristics and make recommendations for their use/riding style. 8.7 Compare and contrast horses gait for their class and/or type. 8.8 Evaluate a horse's conformation. 8.9 Orally defend your placing of a halter class and under saddle class. 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> • Horses selection videos by the FFA and Career Educational Videos (CEV) and other agricultural colleges • <i>Equine Science</i>, Parker, Delmar Publishing. • Horses and Horsemanship, Ensminger, Interstate Publishers. • CEV discs with examples of oral reasons explaining how show placements are made • Slide sets on equine conformation • University of Kentucky on-line resource http://www.uky.edu/ <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> • Use handouts with the ideals of each breed • Create judging guides • Flash cards with terms/ideal breeds • Practice judging horses at barns • Practice oral reasons on objects other than horses • Critique horses • Observe horseshows • Guest speakers such as experienced judges • Participate in mock horse judging competition. • Student discussion and justification of show groups • Determine from a group of horses which have the best conformation. <u>SUGGESTED ASSESSMENT METHODS</u>

	<ul style="list-style-type: none">• Written notes from horse judging• Judge horses and orally defend your placing• Portfolio may include:<ul style="list-style-type: none">• skill sheet• photographs of equine classes• written reasons, as writing samples• contest awards and paraphernalia.
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