

Wallingford Public Schools - HIGH SCHOOL COURSE OUTLINE

Course Title: Animal Science / Equine Science I	Course Number: 8233
Department: Agricultural Education	Grade(s): 9
Level(s): Academic	Credit: 1
Course Description: Freshmen course work introduces students to equine science, small animal science, tractor driving, and an introduction to livestock. The students will be introduced and participate in the LHHS chapter of a national organization, FFA. Students will start to develop a portfolio and the skills necessary to prepare for future careers in the animal science and equine industries.	
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.
- Leadership organizations, such as FFA, offer numerous opportunities for members such as; a sense of community, leadership activities, travel, scholarships, social activities, service, etc.
- Knowledge of equine science principles is necessary to safely and competently handle horses.
- Career planning and preparation requires self assessment and involves informed responsible decision making during high school and beyond.
- Humans have always had a desire to maintain pets and livestock. In order to maintain a healthy environment for man and beast essential care is required.
- Safe operation of tractor and equipment is essential to enhance driving skills and ensure safety.
- Learned skills and safety procedures will transfer to allow students to confidently operate many different types of equipment.
- An understanding of the livestock production industry prepares consumers to make informed decisions.

<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.

<u>LEARNING STRAND</u>	
2.0 FFA Leadership Organization - Greenhand Degree <ul style="list-style-type: none"> Approximately 5 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> Leadership organizations, such as FFA, offer numerous opportunities for members such as; a sense of community, leadership activities, travel, scholarships, social activities, service, etc. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> What are the member benefits of FFA? How are official meetings conducted? What is the rationale for conducting parliamentary correct meetings? What is required to achieve a Greenhand degree? What is the importance of maintaining a portfolio?
<u>LEARNING OBJECTIVES</u> – The students will: <p>2.1 Meet the criteria for the FFA Greenhand Degree. This includes:</p> <ul style="list-style-type: none"> Recall important historical and current facts regarding the FFA State the aims and purposes of the FFA Write the FFA Motto and explain the meaning Write the FFA Creed and explain the meaning State the official FFA colors Describe the FFA Emblem and explain the meaning of each part Describe FFA official dress Describe the 4 types of active membership Describe the benefits of paying dues Describe local, state, national and international activities available to FFA members Describe the degrees of active FFA membership List the chapter officers, their symbols, and explain their duties Demonstrate basic parliamentary abilities Describe the contests and awards programs a member can participate in on the local, state and national levels <p>2.2 Recognize the importance and organization of the four year portfolio.</p> <ul style="list-style-type: none"> Dividers Title page 	<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 Greenhand Degree Construct a time-line of historical FFA events Recite the FFA Motto, Creed, membership response and salute Participate in a mock meeting Write a letter to the National FFA recommending a change in the official FFA dress Internet research on FFA organization and activities Illustrate and color a personal emblem Write about the FFA Code of Ethics and identify those codes that seem to be “old fashioned behavior” and those that seem to be “current” Attend first FFA monthly meeting <u>SUGGESTED ASSESSMENT METHODS</u> <ul style="list-style-type: none"> Score 80% or higher on FFA unit test Meet criteria for Greenhand Degree and complete written application Portfolio products may include: <ul style="list-style-type: none"> Skill sheet A time line of FFA history Create a personal FFA emblem

- Table of contents
- Summer summary
- SAE hours
- SAE planning forms
- Agricultural inventory

- Write a letter to the National FFA recommending a change in the official FFA dress
- Writing sample about the FFA Code of Ethics

<u>LEARNING STRAND</u>	
3.0 Introduction to Equine Science <ul style="list-style-type: none"> Approximately 12 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> Knowledge of equine science principles is necessary to safely and competently handle horses. Humans have always had a desire to maintain pets and livestock. In order to maintain a healthy environment for man and beast essential care is required. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> What constitutes the equine species? What are the identifying features of the equine species? How do you select the horse appropriate for you? What is involved with basic horse care? How do I properly take care of a horse? What safety precautions should be implemented when working around horse?
<u>LEARNING OBJECTIVES</u> – The students will: <ul style="list-style-type: none"> 3.1 Describe common groups, breeds, markings and gaits of a horse. 3.2 Locate equine body parts using appropriate terminology. 3.3 Explore past and present uses for the equine. 3.4 Classify different equine species by their taxonomy and genetic heritage. 3.5 Evaluate equine conformation (body size and shape) and determine that which is preferred. 3.6 Describe equine evolution. 3.7 Demonstrate appropriate equine safety practices. 3.8 Demonstrate how to properly: <ul style="list-style-type: none"> Groom a horse Secure a horse Clean a stall 3.10 Demonstrate the use of equine tack and equipment including <ul style="list-style-type: none"> Haltering Grooming tools Bridles Blankets Lunge line 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> <i>Equine Science</i>, Delmar publishing, <i>Equine Science</i>, Parker 4-H manual Assorted videos from the AQHA Videos on the history, evolution, and uses of the equine Eyewitness video, <i>The Horse</i> Plastic horse models School horse and associated facilities Assorted tack and grooming supplies <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> Create a PowerPoint on equine colors Research a breed, write a paper and do an oral report Handle the school horse and related equipment Create breed and tack vocabulary flash cards Create an equine historical time line Games(pin the part on the horse, jeopardy, 4-H parts game) Model techniques such as: <ul style="list-style-type: none"> Grooming Handling Feeding and cleaning Proper use of tack and equipment Cooperative learning Barn visits Vocabulary reinforcement activities such as games

- Explore equine careers

SUGGESTED ASSESSMENT METHODS

- Projects(PowerPoints, dioramas, breed quest cards)
- Writing and oral presentations
- Hands-on skill assessment with horses
- Creative writing assignments using related vocabulary
- Annotation cards on current equine trends, careers, points of interest
- Portfolio may include:
 - Skill sheet
 - Work and writing samples
 - Photos with written description

<u>LEARNING STRAND</u>	
4.0 Career Exploration <ul style="list-style-type: none"> Approximately 2 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> Career planning and preparation requires self assessment and involves informed responsible decision making during high school and beyond. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> What job / career are best for me? What is needed for a job / career? How can I prepare for a job / career? How I become a life long learner?
<u>LEARNING OBJECTIVES</u> The students will: <ol style="list-style-type: none"> Identify the differences between a career and a job. Compare and contrast various career clusters. Interpret results from self assessment to choose a career. Develop a career plan (road map). Research a career. Present career information in a career fair format. Explore agriculture careers during career fair presentations in a format where all agricultural careers clusters are represented. 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> <i>Career Exploration Inventory</i> published by JIST Works, John J. Liptak Choices program Career planning notebook Poster board, computer Research materials <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> Complete Career Exploration Inventory (CEI) Including the following 16 career clusters: Agriculture and Natural Resources; Architecture and Construction; Arts and Communication; Business and Administration; Education and Training; Finance and Insurance; Government and Public Administration; Health Science; Hospitality, Tourism, and Recreation; Human Service; Information Technology; Law and Public Safety; Manufacturing; Retail and Wholesale Sales and Service; Scientific Research, Engineering and Mathematics; Transportation and Distribution and Logistics Define vocabulary related to careers Facilitate students with developing a personal roadmap Guest speakers related to career clusters Integrate LHHS guidance / use roadmap as component to LHHS scheduling Create a web of self List career characteristics – Such as: <ul style="list-style-type: none"> What does the job entail (specific tasks) Salary / Benefits Hours / time requirement Education, training, apprenticeships, etc.

- Travel
- Level of difficulty (How hard is the work)
- Working conditions
- Professionalism – advancements, certificates, licenses, organizations
- Life style
- Career Fair – freshman research and prepare visual to share at career fair
- Complete self reflection of career choices
- Conduct an informational interview

SUGGESTED ASSESSMENT METHODS

- Career exploration portfolio
- Display board for career fair
- Road map
- Interview summary
- Self reflection

<u>LEARNING STRAND</u>	
5.0 Small Animal Care <ul style="list-style-type: none"> Approximately 4 weeks 	
<u>ENDURING UNDERSTANDING(S)</u> <ul style="list-style-type: none"> Humans have always had a desire to maintain pets and livestock. In order to maintain a healthy environment for man and beast essential care is required. 	<u>ESSENTIAL QUESTION(S)</u> <ul style="list-style-type: none"> How do I handle and care for birds? Livestock? Reptiles? Amphibians? Rodents? Mammals? Poultry? Why is proper maintenance important for the health and well being of an animal?
<u>LEARNING OBJECTIVES</u> – The students will: <ul style="list-style-type: none"> 5.1 Identify a variety of species including: birds, livestock, mammals, reptiles, amphibians, rodents, and poultry. 5.2 Explain how to maintain healthy animals and clean environments. Including: <ul style="list-style-type: none"> Cleaning techniques Selecting proper feeds and bedding Feeding techniques Health aids Feed and bedding inventory 5.3 Demonstrate how to properly handle and restrain assorted small animals. 5.4 Demonstrate small animal care such as: <ul style="list-style-type: none"> Clipping wings Catching loose animals Trimming nails Trimming hooves Grooming 5.5 Explain indicators of unhealthy animals and environmental conditions. 5.6 Analyze breeding records for small animals. 5.7 Create pedigrees. 	<u>INSTRUCTIONAL SUPPORT MATERIALS</u> <ul style="list-style-type: none"> <i>Small Animal Care</i>, Delmar Publishing Assorted books on small animal care, feeding, handling, identification Web sites on small animals Small animals and facilities <u>SUGGESTED INSTRUCTIONAL STRATEGIES</u> <ul style="list-style-type: none"> Use and update database program for breeding records Discuss the relationship between proper/improper care for a species and its health. Discuss breeding decisions and techniques Create poster boards or PowerPoint on how to care for an animal species Model and discuss daily and weekly care skills and tasks Attend and participate in shows and talk to local breeders, judges, and vendors Oral presentations <u>SUGGESTED ASSESSMENT METHODS</u> <ul style="list-style-type: none"> Teacher observations Quizzes Oral presentations Hands-on performance assessments Portfolio may include: <ul style="list-style-type: none"> Skill sheet Inventory sheet and record of time Photos and written explanation Awards won at competitions

LEARNING STRAND

6.0 Tractor Driving

- Approximately 4 weeks

ENDURING UNDERSTANDING(S)

- Safe operation of tractor and equipment is essential to enhance driving skills and ensure safety.
- Learned skills and safety procedures will transfer to allow students to confidently operate many different types of equipment.

ESSENTIAL QUESTION(S)

- What is safe tractor operation?
- What precautions are necessary when driving a tractor?
- How does attaching an implement change driving a tractor?
- How does backing up a tractor differ from driving forward?

LEARNING OBJECTIVES – The students will:

- 6.1 Evaluate surroundings and determine acceptable speeds for conditions and skill level required.
- 6.2 Demonstrate proper procedure for starting a tractor.
- 6.3 Select proper gear range for attached load.
- 6.4 Identify parts and function of the tractor important for safe operation.
- 6.5 Demonstrate backing up a tractor into a designated space with and without an implement.
- 6.6 Demonstrate hitching up equipment safely to a tractor.
- 6.7 Demonstrate driving through an obstacle course with an attached implement.
- 6.8 Operate a backhoe safely and efficiently.

INSTRUCTIONAL SUPPORT MATERIALS

- Tractors
- Two wheel wagon
- Four wheel wagon
- Various three point hitch mounted implements
- Owner’s manuals
- Tools and supplies
- Obstacle course location and materials

SUGGESTED INSTRUCTIONAL STRATEGIES

- Review and model safety procedures and rules
- Set up driving course for students to practice driving forward and backing up tractor
- Demonstrate pre-trip checkup
- Peer- instruct others on the safe operation of a tractor
- Writing assignments:
 - Personal letter
 - Procedural writing
 - Safety precautions

SUGGESTED ASSESSMENT METHODS

- Teacher checklist:
 - Start up tractor
 - Back up a tractor into a parking spot
 - Back up tractor and implement into a parking space
 - Drive tractor and implement through an obstacle course
 - Back up tractor and hook up to an implement

- Peer-assessments using checklist
- Portfolio products may include:
 - Driving Rubric
 - Tractor safety assessment
 - Work sample picture and caption
 - Writing assignment

<p><u>LEARNING STRAND</u></p> <p>7.0 Introduction Livestock</p> <ul style="list-style-type: none"> Approximately 8 weeks 	
<p><u>ENDURING UNDERSTANDING(S)</u></p> <ul style="list-style-type: none"> An understanding of the livestock production industry prepares consumers to make informed decisions. 	<p><u>ESSENTIAL QUESTION(S)</u></p> <ul style="list-style-type: none"> What is production agriculture? What are identifying features of livestock? Where does our food come from and how is it processed? What is appropriate care and handling of livestock? What are past, present, and future agriculture trends in Connecticut?
<p><u>LEARNING OBJECTIVES</u> – The students will:</p> <p>7.1 Identify at least ten breeds of cattle and rabbits and five breeds of poultry, sheep, goats and swine.</p> <p>7.2 Compare and contrast animal breeds in regards to their use and confirmation.</p> <p>7.3 Demonstrate appropriate handling of different livestock animals.</p> <p>7.4 Explain the basic care requirements for livestock.</p> <p>7.5 Identify the use of animal products that are used daily such as: leather, wool, rawhide, animal treats, medicines, etc.</p> <p>7.6 Explore the processes used to make cattle products such as cheese, ice cream, butter, and beef jerky.</p> <p>7.7 Identify the differences between companion animals and livestock.</p> <p>7.8 Discuss the relationship between animal care and the quality and quantity of food production.</p> <p>7.9 Describe how milk is produced in dairy cattle.</p> <p>7.10 Describe the FDA requirements for the meat industry.</p> <p>7.11 Define agriculture and describe the current state of the agriculture industry in Connecticut and in different areas of the country.</p> <p>7.12 Debate and support your views concerning production animals.</p>	<p><u>INSTRUCTIONAL SUPPORT MATERIALS</u></p> <ul style="list-style-type: none"> Assorted videos on livestock care and breeds Plastic models of different livestock Live animals and facilities <p><u>SUGGESTED INSTRUCTIONAL STRATEGIES</u></p> <ul style="list-style-type: none"> Create a tri-fold board for display at the Vo-Ag Fair Demonstrate care and handling of livestock Games to reinforce vocabulary and breed identification Cooperative learning Make cheese, yogurt, ice cream, butter, beef jerky Barn visits Oral debate on topics related to animal production followed with written support Use plastic models and/or pictures to identify the breeds Create a poster board and display informing the public about a species, its production uses, interesting facts and care of the animal. Make cheese, ice cream and other cattle products Read an excerpt from Upton Sinclair's <u>The Jungle</u> then discuss the meat industry Create a list of current farm facts both nationally and for the state Explore related careers

SUGGESTED ASSESSMENT METHODS

- Quizzes and tests
- PowerPoint presentations on breeds and/or animal products
- Create a book or pamphlet for elementary students on livestock topics
- Use plastic models and/or pictures to identify the breeds
- Performance assessment – evaluate and show livestock on confirmation and use
- Portfolio may include:
 - Skill sheet
 - Photos with written descriptions
 - Work samples
 - Personal show awards