



CROCKETT COUNTY HIGH SCHOOL SYLLABUS

COURSE NAME: Large Animal Science

YOUR NAME: Haley Williams

Room 402

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COURSE DESCRIPTION: Large Animal Science is an applied course in veterinary and animal science for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. This course covers anatomy and physiological systems of different groups of large animals, as well as careers, leadership, and history of the industry. Standards in this course are aligned with Tennessee Common Core State Standards for English Language Arts & Literacy in Technical Subjects, as well as Tennessee state standards in Anatomy and Physiology and National Agriculture, Food and Natural Resources Career Cluster Content Standards.

SUPPLIES: 3-Ring Notebook, Paper, & Pen or Pencil

CLASSROOM EXPECTATIONS:

1. All School Rules and Policies will be followed in my class. NO EXCEPTIONS!!!!
2. Always be respectful to everyone in class.
3. Always be on time.
4. Always be prepared for class. *****Bring supplies*****
5. Only talk at appropriate times. Students are expected to raise their hand and be recognized by the teacher before speaking. Talking without permission or when the teacher is talking **will not** be tolerated!!!!
6. Do not sleep, throw objects, or write on desks or anything else that does not belong to you.
7. All work turned in must be legible. If I cannot read the work, you cannot be given a grade!
8. The use of profanity will **not** be tolerated.
9. Students are to remain in their seats until the bell rings.
10. **NO** Cell Phones during class time.

CCHS OFFICIAL GRADING SCALE

93-100 = A
85-92 = B
75-84 = C
70-74 = D
69-0 = F

GRADING CATEGORIES:

25% - DAILY CLASS WORK
50% - TEST GRADES
25% - EXAM GRADE

**** Extra Credit will be earned by participation in FFA activities, or by other projects first approved by the teacher.**

We have a FFA website (www.crockettcounty.ffa.org) make sure to check it frequently for our calendar, news & events, upcoming activities, contest results, or pictures.

Make-up Assignment Procedure: It is YOUR responsibility to make up all work missed due to an absence from class. This work must be made up and turned in by the second day after the student returns to school.

MAJOR UNITS AND PROJECTS

History of Domestication

1) Synthesize research on the history of large animal domestication to produce an informative essay, including defining and applying industry-specific terminology to classify animals in the correct taxonomy. Justify the historical uses and roles of domesticated animals, and compare historical processes of large animal domestication. (TN CCSS Reading 1, 4, 9; TN CCSS Writing 2, 4, 9)

Economic, Occupational and Technological Implications

2) Determine the general economic impact of the large animal industry by investigating both recreational and business implications of large animal domestication through governmental and news publications. Develop a summary including both graphical representations and descriptive text to summarize findings. (TN CCSS Reading 1; TN CCSS Writing 7)

3) Explore and compare local and regional career opportunities in the large animal industry and evaluate labor data to predict the employment outlook. Describe in a written or visual representation the knowledge, skills, and abilities necessary for a diverse range of careers in large animal sciences citing specific textual evidence from local job postings and Tennessee labor data. (TN CCSS Reading 1, 2; TN CCSS Writing 2, 9)

4) Accurately maintain an activity recordkeeping system and apply proper financial recordkeeping skills as they relate to a large animal science supervised agricultural experience (SAE) program. Demonstrate the ability to summarize records and reports by completing SAE and related applications. (TN CCSS Reading 9; TN CCSS Writing 2, 9)

5) Examine specific technologies that have evolved within the large animal industry (such as, but not limited to equipment, housing, procedures, and healthcare) and evaluate the economic and societal implications of each. (TN CCSS Reading 1, 2, 4)

Personal and Occupational Health and Safety

6) Identify, research, and determine the significance of zoonotic diseases associated with large animals. Compare and contrast findings from multiple credible sources relating to a specific disease (including student's own experience or laboratory experiment, case studies, and scholarly journals). Justify the use of different methods of infection control in the prevention or management of a zoonotic disease and evaluate the efficacy of existing large animal biosecurity measures. (TN CCSS Reading 1, 5, 9)

7) Correctly identify and summarize laws and regulations that pertain to large animal health and safety in an explanatory text, citing specific textual evidence from state and national legislation. Describe health requirements and necessary documentation for large animal transportation and change of ownership. (TN CCSS Reading 1, 9; TN CCSS Writing 2, 4)

8) Review common laboratory safety procedures for tool and equipment operation in the large animal laboratories, including but not limited to accident prevention and control procedures. Demonstrate the ability to follow safety and operational procedures in a lab setting and complete a safety test with 100 percent accuracy. (TN CCSS Reading 3)

9) Demonstrate in a live setting or in a presentation the ability to follow procedures precisely, attending to special cases or exceptions noted in appropriate materials, and apply them to the following areas:

- a. Animal restraint and handling
- b. Techniques for transportation
- c. Appropriate use of chemicals (such as pesticide, fungicide, disinfectants)

Differentiate between effective methods for handling large animals and methods proven to be less effective. (TN CCSS Reading 3)

Animal Ethics

10) Identify the fundamental philosophies related to animal rights and animal welfare. Compare the impact of specific persons, organizations, and legislation related to animal rights and welfare of large animals. (TN CCSS Reading 1, 9; TN CCSS Writing 9)

11) Investigate current large animal issues by analyzing an author's purpose and assessing the extent to which the reasoning and evidence in a specific text support the author's claim. Debate specific issues by forming and supporting claims and counterclaims with specific data and evidence. Issues related to animal rights and animal welfare may include, but are not limited to:

- a. Abuse and/or neglect
- b. Environmental implications
- c. Consumer product implications
- d. Exhibiting and showing
- e. Global issues in large animal ethics and their relation to local problems

(TN CCSS Reading 6, 8, 9; TN CCSS Writing 1)

Nutrition and Digestive Systems

12) Create a visual representation to differentiate between ruminant and non-ruminant animals and monogastric and polygastric animals, comparing and contrasting their anatomical and physiological differences. Explain the relationships of digestive system types to the ability of an animal to digest and absorb different classes of feed. (TN CCSS Reading 7, TN A&P 5)

13) Using information from scholarly journals or Tennessee Extension Service, research nutrient requirements of the diets of large animals and organize these into various nutrient groups. Differentiate between roughages and concentrates and their nutritional values. (TN CCSS Reading 7; TN CCSS Writing 9)

14) Interpret feed labeling and evaluate factors such as life stage and activity level to determine the nutritional needs and then recommend balance rations for each large animal species, justifying recommendations with evidence from the text. (TN CCSS Reading 1, 3, 7; TN CCSS Writing 1, 4, 9)

15) Diagnose the symptoms of nutritional diseases relevant to large animals and recommend the appropriate control procedures, citing specific evidence to support recommendations. (TN CCSS Reading 7; TN CCSS Writing 1, 7, 8, 9)

Genetics and Reproduction

16) Research and develop illustrative models of the major components of male and female reproductive systems in large animals and prepare a short narrative to distinguish the function of reproductive organs, endocrine glands, and hormones. Produce an explanatory essay comparing the physiological changes that occur across different species during reproductive phases, including the estrus cycle, fertilization, gestation, parturition and lactation. (TN CCSS Reading 7, 9; TN CCSS Writing 2, 4; TN A&P 6)

17) Using graphical representations and descriptive text, explain how the roles of heritability, selection intensity, generation interval, and other advanced principles of genetics (such as DNA testing for disorders) apply to predict gene and trait transfer in large animal species. Principles include but are not limited to:

- a. Economically important traits in production animals (i.e. artificial reproduction methods)
- b. Interpretation and utilization of animal performance records (i.e. Expected Progeny Difference [EPD])
- c. Hybrid vigor

(TN CCSS Reading 1, 4, 7, 9; TN CCSS Writing 2, 4, 7, 9; TN Biology I 4; TN Biology II 4)

Fundamental Care and Health of Horses

18) Synthesize research on the historical importance of horses, noting major economic, social, and medical advances impacting domestication. Produce an informational essay or model (such as a timeline, graphical illustration, or presentation) that formulates comparisons among different horse breeds and hybrids. Demonstrate conceptual understanding and technical skill in current practices of comprehensive health care and management for the following:

- a. Design appropriate facilities based on assessment of needs and present plans in a visual format
- b. Compare appropriate owner/handler responses to behaviors and instincts to ensure safety of both handler and animal in a variety of situations
- c. Distinguish between clinical signs of proper health and poor health, justifying explanations with data and evidence (TN CCSS Reading 1)
- d. Using quantitative reasoning and appropriate units, calculate appropriate rations based on animal characteristics (age, weight, breed, activity level) and nutritional needs by creating systems of equations that describe numerical relationships
- e. Illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies (TN CCSS Reading 2, 7)

f. Research common diseases and parasites and their effects on the health of horses, and draw evidence from the most recent medical literature to recommend the best prevention or control measures.

(TN CCSS Reading 1, 2, 3, 7, 8, 9; TN CCSS Writing 2, 7, 8, 9; TN CCSS Math N-Q, A-CED)

Fundamental Care and Health of Cattle

19) Synthesize research on the historical importance of cattle, noting major economic, social, and medical advances impacting domestication. Produce an informational essay or model (such as a timeline, graphical illustration, or presentation) that formulates comparisons among different cattle breeds. Demonstrate conceptual understanding and technical skill in current practices of comprehensive health care and management for the following:

- a. Design appropriate facilities based on assessment of needs and present plans in a visual format
- b. Compare appropriate owner/handler responses to behaviors and instincts to ensure safety of both handler and animal in a variety of situations
- c. Distinguish between clinical signs of proper health and poor health, justifying explanations with data and evidence
- d. Using quantitative reasoning and appropriate units, calculate rations based on animal characteristics (age, weight, breed, activity level) and nutritional needs by creating systems of equations that describe numerical relationships
- e. Illustrate the reproductive cycle graphically, summarize available breeding method, and current reproductive technologies
- f. Research common diseases and parasites and their effects on the health of cattle, and draw evidence from the most recent medical literature to recommend the best prevention or control measures
- g. Evaluate the economic implications of livestock management practices (such as dehorning)

(TN CCSS Reading 1, 2, 3, 7, 8, 9; TN CCSS Writing 2, 7, 8, 9; TN CCSS Math N-Q, A-CED)

Fundamental Care and Health of Sheep and Goats

20) Synthesize research on the historical importance of sheep and goats, noting major economic, social, and medical advances impacting domestication. Produce an informational essay or model (such as a timeline, graphical illustration, or presentation) that formulates comparisons among different sheep and goat breeds. Demonstrate conceptual understanding and technical skill in current practices of comprehensive health care and management for the following:

- a. Design appropriate facilities based on assessment of needs and present plans in a visual format
- b. Compare appropriate owner/handler responses to behaviors and instincts to ensure safety of both handler and animal in a variety of situations
- c. Distinguish between clinical signs of proper health and poor health, justifying explanations with data and evidence
- d. Using quantitative reasoning and appropriate units, calculate appropriate rations based on animal characteristics (age, weight, breed, activity level) and nutritional needs by creating systems of equations that describe numerical relationships
- e. Illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies

f. Research common diseases and parasites and their effects on the health of sheep and goats, and draw evidence from the most recent medical literature to recommend the best prevention or control measures

(TN CCSS Reading 1, 2, 3, 7, 8, 9; TN CCSS Writing 2, 7, 8, 9; TN CCSS Math N-Q, A-CED)

Fundamental Care and Health of Swine

21) Synthesize research on the historical importance of swine, noting major economic, social, and medical advances impacting domestication. Produce an informational essay or model (such as a timeline, graphical illustration, or presentation) that formulates comparisons among different swine breeds. Demonstrate conceptual understanding and technical skill in current practices of comprehensive health care and management for the following:

- a. Design appropriate facilities based on assessment of needs and present plans in a visual format
- b. Compare appropriate owner/handler responses to behaviors and instincts to ensure safety of both handler and animal in a variety of situations
- c. Distinguish between clinical signs of proper health and poor health, justifying explanations with data and evidence
- d. Using quantitative reasoning and appropriate units, calculate appropriate rations based on animal characteristics (age, weight, breed, activity level) and nutritional needs by creating systems of equations that describe numerical relationships
- e. Illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies
- f. Research common diseases and parasites and their effects on the health of swine, and draw evidence from the most recent medical literature to recommend the best prevention or control measures

(TN CCSS Reading 1, 2, 3, 7, 8, 9; TN CCSS Writing 2, 7, 8, 9; TN CCSS Math N-Q, A-CED)

Fundamental Care and Health of Poultry

22) Synthesize research on the historical importance of poultry, noting major economic, social, and medical advances impacting domestication. Produce an informational essay or model (such as a timeline, graphical illustration, or presentation) that formulates comparisons among different poultry breeds. Demonstrate conceptual understanding and technical skill in current practices of comprehensive health care and management for the following:

- a. Design appropriate facilities based on assessment of needs and present plans in a visual format
- b. Compare appropriate owner/handler responses to behaviors and instincts to ensure safety of both handler and bird in a variety of situations
- c. Distinguish between clinical signs of proper health and poor health, justifying explanations with data and evidence
- d. Using quantitative reasoning and appropriate units, calculate appropriate rations based on bird characteristics (age, weight, breed, activity level) and nutritional needs by creating systems of equations that describe numerical relationships
- e. Illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies

f. Research common diseases and parasites and their effects on the health of poultry, and draw evidence from the most recent medical literature to recommend the best prevention or control measures

(TN CCSS Reading 1, 2, 3, 7, 8, 9; TN CCSS Writing 2, 7, 8, 9; TN CCSS Math N-Q, A-CED)

TESTING DATES: Tests will be given at the conclusion of each unit. Tests are usually every one to two weeks.

PROJECT DUE DATES: Projects will be given periodically throughout each unit.

PARENT RESOURES:

<http://crocketthigh.ccschools.net/> CCHS FFA- www.crockettcounty.ffa.org

I have read over the syllabus and I have noted that classroom behavior and student responsibility are significant factors in determining the final grade. I also have read and understand the class policies. I also understand that I can contact the teacher at haley.williams@crockettschools.net or call CCHS at 731-696-4525 to set-up a meeting with the teacher.

Student name: _____

Student signature: _____

Parent name: _____

Parent signature: _____