Jefferson County High School
Course Syllabus

A. Course *Large Animal Science*

B. Department *CTE- Agriculture*

C. 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. Upon completion of this course, proficient students will be prepared for success in the level-four Veterinary Science course and further postsecondary training. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects, as well as Tennessee state standards in Approved April 10, 2015 Anatomy and Physiology and National Agriculture, Food, & Natural Resources Career Cluster Content Standards.

D. Grade Term *Semester*

E. Grading Scale

Range		Honors/ Regular	College-Level	A.P.
93-100	A	4.0	4.5	5.0
85-92	B	3.0	3.5	4.0
75-84	C	2.0	2.5	3.0
70-74	D	1.0	1.5	2.0

F. Term Dates

a. 1st 9 Weeks August 5, 2016 – October 7, 2016
b. 2nd 9 Weeks October 8, 2016 – December 16, 2016
c. 3rd 9 Weeks January 5, 2017 – March 15, 2017
d. 4th 9 Weeks March 16, 2017 – May 25, 2017

G. Textbook(s) *Modern Livestock and Poultry Production, 8th Edition*

H. Other Required Reading

None

I. Other Resources

a. Odysseyware

J. Major Assignments

K. Procedures for Parental Access to Instructional Materials

a. Aspen Parent Portal
b. Instructor's Website
c. Email Instructor
d. Parent Teacher Conference
    a. There are two designated conference dates during the school year. Parents who would like to request additional meetings may make appointments for conferences with the teachers (during their planning periods), counselors, or a principal by telephoning the school office.

L. Field Trips

a. Any schedule fieldtrip will have a definite educational purpose and will reflect careful planning. Signed permission forms will be obtained when an off campus trip is planned.

b. *Students will take field trips to local farms for hands on experience with animals as necessary to support classroom instruction.*

M. Standards & Objectives

a. I Can Statement Scope & Sequence

1st Nine Weeks:

Standard 1: History of Domestication

1.1) I can define industry specific terminology for classifying large animals.

1.2) I can research and prepare an essay on the history of large animal domestication, the historical uses and roles of domesticated animals, and compare historical processes of large animal domestication.

Economic, Occupational and Technological Implications

Standard 2:

2.1) I can determine the economic impact of the large animal industry by investigating recreational and business implications.

2.2) I can complete a project summarizing the impact of the large animal industry using graphical representations and descriptive text.

Standard 3:

3.1) I can explore and compare local and regional career opportunities in the large animal industry and predict the employment outlook.

3.2) I can present a report and cite evidence from local job postings and Tennessee Labor Data describing the knowledge, skills, and abilities necessary for a diverse range of careers in large animal science.

Standard 4:

4.1) I can accurately maintain an activity and financial recordkeeping system as it relates to a large animal science Supervised Agriculture Experience(SAE) Program.

4.2) I can demonstrate the ability to summarize records and reports by completing SAE and related applications.

Standard 5:

5.1) I can examine specific technologies that have evolved within the large animal industry and evaluate the economic and societal implications of each in a report.

Personal and Occupational Health and Safety

Standard 6:

6.1) I can identify, research, and determine the significance of zoonotic diseases associated with large animals.

6.2) I can Justify the use of different methods of infection control in the prevention or management of a zoonotic disease and evaluate the effectiveness of existing large animal biosecurity measures.

6.3) I can prepare a written report which compares and contrasts findings from multiple credible sources relating to a specific zoonotic disease.

Standard 7:

7.1) I can write a report, citing evidence from state and national legislation, which correctly identifies and summarizes laws and regulations that pertain to large animal health and safety.

7.2) I can describe health requirements and necessary documentation for large animal transportation and change of ownership.

Standard 8:

8.1) I can review common laboratory safety procedures for tool and equipment operation including accident prevention and control.

8.2) I can pass a safety test with 100 percent accuracy.

8.3) I can demonstrate the ability to follow safety and operational procedures in a lab setting.

Standard 9:

9.1) I can demonstrate the ability to follow procedure precisely in: Animal restraint and handling, techniques for transportation, appropriate use of chemicals.

9.2) I can differentiate between effective methods for handling large animals and methods proven to be less effective.

Animal Ethics

Standard 10:

10.1) I can identify fundamental philosophies related to animal rights and animal welfare.

10.2) I can compare the impact of specific persons, organizations, and legislation related to animal rights and welfare of large animals.

Standard 11:

11.1) I can investigate and debate issues related to animal rights and animal welfare including: abuse and neglect, environmental implications, consumer product implications, exhibiting and showing, and global issues in large animal ethics and their relation to local problems.

Nutrition and Digestive Systems

Standard 12:

12.1) I can create a visual representation comparing and contrasting ruminant and non-ruminant digestive systems.

12.2) I can explain the relationships of digestive system types to the ability of an animal to digest and absorb different classes of feed.

Standard 13:

13.1) I can research nutrient requirements of the diets of large animals and organize into various nutrient groups.

13.2) I can differentiate between roughages and concentrates and their nutritional values.

Standard 14:

14.1) I can interpret feed labels.

14.2) I can evaluate factors such as life stage and activity level to determine nutritional needs and recommend balanced rations for each large animal species.

Standard 15:

15.1) I can diagnose the symptoms of nutritional diseases relevant to large animals and cite evidence to recommend appropriate control procedures.

2nd Nine Weeks

Genetics and Reproduction

Standard 16:

16.1) I can research and develop an illustrative model of the major components of male and female reproductive systems in large animals.

16.2) I can prepare a short narrative to distinguish the function of reproductive organs, endocrine glands, and hormones.

16.3) I can 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.

Standard 17:

17.1) I can use graphical representations and descriptive text to explain how the roles of heritability, selection intensity, generation interval, and other advanced principles of genetics are used to predict gene and trait transfer in large animal species.

17.2) I can interpret and utilize animal Expected Progeny Differences (EPD's) and animal performance records.

Standard 18: **Fundamental Care and Health of Horses**

18.1) I can research the historical importance of horses, noting major economic, social, and medical advances impacting domestication.

18.2) I can produce an informational essay or model that compares different horse breeds and hybrids.

18.3) I can design appropriate facilities based on assessment of needs.

18.4) I can compare owner/handler responses to behaviors and instincts to ensure safety of both handler and animal in a variety of situations.

18.5) I can distinguish between clinical signs of proper health and poor health, justifying explanations with evidence.

18.6) I can use quantitative reasoning and appropriate units to calculate rations based on animal characteristics and nutritional needs.

18.7) I can illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies.

18.8) I can research common diseases and parasites and their effects on the health of horses and gather evidence to recommend the best prevention or control measures.

Standard 19: **Fundamental Care and Health of Cattle**

19.1) I can research the historical importance of cattle, noting major economic, social, and medical advances impacting domestication.

19.2) I can produce an informational essay or model that compares different cattle breeds.

19.3) I can design appropriate facilities based on assessment of needs.

19.4) I can compare owner/handler responses to behaviors and instincts to ensure safety of both handler and animal in a variety of situations.

19.5) I can distinguish between clinical signs of proper health and poor health, justifying explanations with evidence.

19.6) I can use quantitative reasoning and appropriate units to calculate rations based on animal characteristics and nutritional needs.

19.7) I can illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies.

19.8) I can research common diseases and parasites and their effects on the health of cattle and gather evidence to recommend the best prevention or control measures.

19.9) I can evaluate the economic implications of livestock management practices (such as dehorning)

Standard 20: **Fundamental Care and Health of Sheep and Goats**

20.1) I can research the historical importance of sheep and goats, noting major economic, social, and medical advances impacting domestication.

20.2) I can produce an informational essay or model that compares different sheep and goat breeds.

20.3) I can design appropriate facilities based on assessment of needs.

20.4) I can compare owner/handler responses to behaviors and instincts to ensure safety of both handler and animal in a variety of situations.

20.5) I can distinguish between clinical signs of proper health and poor health, justifying explanations with evidence.

20.6) I can use quantitative reasoning and appropriate units to calculate rations based on animal characteristics and nutritional needs.

20.7) I can illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies.

20.8) I can research common diseases and parasites and their effects on the health of sheep and goats and gather evidence to recommend the best prevention or control measures.

Standard 21: **Fundamental Care and Health of Swine**

21.1) I can research the historical importance of swine, noting major economic, social, and medical advances impacting domestication.

21.2) I can produce an informational essay or model that compares different swine breeds.

21.3) I can design appropriate facilities based on assessment of needs.

21.4) I can compare owner/handler responses to behaviors and instincts to ensure safety of both handler and animal in a variety of situations.

21.5) I can distinguish between clinical signs of proper health and poor health, justifying explanations with evidence.

21.6) I can use quantitative reasoning and appropriate units to calculate rations based on animal characteristics and nutritional needs.

21.7) I can illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies.

21.8) I can research common diseases and parasites and their effects on the health of swine and gather evidence to recommend the best prevention or control measures.

Standard 22: **Fundamental Care and Health of Poultry**

22.1) I can research the historical importance of poultry, noting major economic, social, and medical advances impacting domestication.

22.2) I can produce an informational essay or model that compares different poultry breeds.

22.3) I can design appropriate facilities based on assessment of needs.

22.4) I can compare owner/handler responses to behaviors and instincts to ensure safety of both handler and bird in a variety of situations.

22.5) I can distinguish between clinical signs of proper health and poor health, justifying explanations with evidence.

22.6) I can use quantitative reasoning and appropriate units to calculate rations based on animal characteristics and nutritional needs.

22.7) I can illustrate the reproductive cycle graphically, and summarize available breeding methods and current reproductive technologies.

22.8) I can research common diseases and parasites and their effects on the health of poultry and gather evidence to recommend the best prevention or control measures.