Sparta Area School District

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Course Outcome Summary

Course Information: Large Animal Science

Description: Planning to be a vet or work with animals on a daily basis? This class is for you! Come with us as we take an actual look into the digestive system of a cow, or the udder of a cow through classroom dissections. We will study the anatomy, digestion, reproduction, health, diseases, and management of Beef, Dairy, Swine, Sheep, and Horses. This hands-on class suits anyone with an appreciation for animals or pursuing a career with animals. This upper level course designed to build on the topics discussed in Animal Health.

Instruction Level: Juniors and up

Total Credits: 1

Prerequisites: None

Textbooks: None

Course Standards:

Common Career and Technical Core:

- Communicate and collaborate with others to accomplish tasks and develop solutions to problems and opportunities.
- Identify and apply employability skills.
- Assess benefits and challenges of working in diverse settings and on diverse teams.
- Apply leadership skills in real-world, family, community and business and industry applications.

ACT Reading and Writing Standards:

- Show a basic understanding of the persuasive purpose of the task by taking a position on the issue in the prompt.
- Generate reasons for a position
- Maintain a focus on the general topic in the prompt throughout the essay
- Provide a simple organizational structure by logically grouping some ideas
- Present an introduction and conclusion
- Show a basic control of language
- Locate and interpret minor or subtly stated details in somewhat challenging passages
- Locate important details in more challenging passages
- Draw subtle logical conclusions in somewhat challenging passages
- Draw logical conclusions in more challenging passages
- Paraphrase virtually any statement as it is used in somewhat challenging passages

- Paraphrase some statements as they are used in more challenging passages
- Order simple sequences of events in somewhat challenging literary narratives
- Understand point of view in somewhat challenging passages

Unit

1. **Animal Nutrition**
2. **Animal Reproduction**

Unit Outlines

1. Animal Nutrition

Standards:

- Formulate feed rations to provide for nutritional needs of animals.
- Apply principle of comparative anatomy & physiology to uses within various animal systems.

Essential Question:

- How does animal nutrition impact animal health?

Essential Learning:

- Students will be able to evaluate feedstuffs for nutritional content.
- Students will identify the parts and functions of the ruminant digestive system.
- Students will identify the parts and functions of the monogastric digestive system.
- Students will identify the parts and functions of the avian digestive system.
- Students will identify the parts and functions of the modified monogastric digestive system.
- Students will be able to use a Person Square to balance a ration for various livestock species.

2. Animal Reproduction

Standards:

- Evaluate and select animals to maximize performance based on anatomical and physiological characteristics that affect health, growth and reproduction.
- Apply principle of comparative anatomy & physiology to uses within various animal systems.
- Evaluate preventative measures for controlling and limiting the spread of diseases, parasites, and disorders among animals.
- Evaluate the male and female reproductive systems in selecting animals.
- Evaluate animals for breeding readiness and soundness.
- Apply scientific principles in selection and breeding of animals.

- Compare and contrast scientific methods associated with animal reproduction.

Essential Question:

- How is animal reproduction key to overall animal performance?

Essential Knowledge:

- Students will be able to identify the parts and functions of the reproductive system for both males and females.
- Students will be able to identify the hormones associated with animal reproduction and estrus synchronization, and their function.
- Students will be able to explain the stages of pregnancy and parturition.
- Students will be able to explain recessive and dominant genes and their roles.
- Students will be able to compare and contrast advantages and disadvantages of natural breeding and artificial insemination.
- Students will be able to read an EPD and select a sire based on his genetic integrity.