Veterinary Science

Veterinary Science is a one-credit course designed to prepare students for entry-level employment or for advanced training in the veterinary-assisting industry. Topics include career opportunities, safety, reproduction and genetics, hormones and growth disorders, animal anesthesiology and basic surgery procedures, health and management, business management practices, and applications of technology.

Content standards for this course are not intended to serve as the entire curriculum. Teachers are encouraged to expand the curriculum beyond these minimum required content standards to accommodate specific community interests and utilize local resources. This course encourages critical thinking, use of the scientific method, integration of technology, development of student leadership skills, and application of knowledge and skills related to practical questions and problems. Safety concepts are integrated into instruction to the maximum extent possible.

Career and technical student organizations are integral, cocurricular components of each career and technical education course. These organizations serve as a means to enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and broaden opportunities for personal and professional growth.

Career Opportunities

Students will:

1. Describe career opportunities available in veterinary science.

Safety

2. Identify hazards in the veterinary workplace.
   - Explaining safety guidelines for handling veterinary drugs

Reproduction and Genetics

3. Identify the structure and function of female and male reproductive systems.
   - Evaluating the use of biotechnology in veterinary science
   - Identifying factors affecting an animal breeding program
     Examples: heat cycle, gestation, artificial insemination, fertility
   - Evaluating functions of deoxyribonucleic acid (DNA)
   - Explaining how genotype and phenotype differ
   - Describing inherited traits
Hormones and Growth Disorders

4. Compare growth abnormalities in mammals.
   Example: dwarfism
   - Identifying treatments for correcting growth disorders
     Example: hormone treatments

Animal Anesthesiology and Basic Surgery Procedures

5. Explain uses of anesthesiology for surgery and grooming.

6. Differentiate among basic surgery procedures for selected animals.
   Examples: cesarean, castration, spaying, nail and claw removal

Health and Management

7. Describe common viral and bacterial diseases in animals.
   - Identifying internal and external parasites
   - Categorizing housing needs for animals

8. Evaluate nutritional requirements for selected animals.
   - Describing structures and functions of the digestive system
   - Analyzing feed ingredients to determine nutritional value

9. Evaluate the importance of balanced diets for animals.
   - Distinguishing nutritional requirements at various stages of animal development

10. Differentiate restraint from control techniques for animals.

Business Management Practices

11. Identify steps for maintaining accurate animal health records in the veterinary workplace.

12. Identify techniques for enhancing customer relations in the veterinary workplace.

13. Identify accepted practices in financial management in the veterinary workplace.

Applications of Technology

   Examples: genetic engineering, tracking devices, wireless fencing, ultrasound