Revised–May 2024

Agriculture, Food, and Natural Resources Career Cluster

The Agriculture, Food, and Natural Resources (AFNR) career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes occupations ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist.

Statewide Program of Study: Animal Science

The Animal Science program of study focuses on occupational and educational opportunities associated with the science, research, and business of animals and other living organisms. This program of study includes applying biology and life science to real-world life processes of animals and wildlife, either in laboratories or in the field, which could include a veterinary office, a farm or ranch, or any outdoor area harboring animal life. Students will research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.

THS Courses Offerings for Animal Science

Level 1 Freshman	• Principles of Agriculture, Food, and Natural Resources This class will help students expand their leadership and communication skills while furthering knowledge of the effects of agriculture on our world. The class will focus on the elements of the FFA and a basic study of soils, plants, and various livestock species.
Level 2 Sophomore	• Small Animal Management (.5) Students will attain knowledge and skills related to animal identification, animal behavior, anatomy, and the care and management of animals ranging from small mammals such as dogs and cats to amphibians and reptiles. • Equine Science (.5) Students will study selection, nutrition, reproduction, handling, and management to prepare for a career in the horse industry.
Level 3 Junior	• Livestock Production Students will have the opportunity to learn about careers in the livestock industry, livestock management, nutrition, genetics, reproduction, and common diseases and pests of cattle, swine, lambs, goats, and poultry
Level 4 Senior	• Advanced Animal Science Students will learn about careers in the field of animal science, classes and grades of livestock, animal genetics and heredity, animal anatomy and physiology, animal nutrition for

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Shadow an animal scientist in a biology lab to learn about applying science to understand animals and wildlife • Intern in a veterinary clinic, caring for animals and wildlife being treated in the clinic
Expanded Learning Opportunities	• Participate in an FFA career, leadership, and speaking contest like an agriscience fair • Attend an agricultural industry seminar

Aligned Industry-Based Certifications

- Small Animal Science and Technology



Example Postsecondary Opportunities

Apprenticeships
- Reproduction Technician

Associate Degrees
- Biological and Physical Sciences
- Entomology

Bachelor's Degrees
- Animal Science
- Zoology/Animal Biology

Master's, Doctoral, and Professional Degrees
- Marine Sciences
- Biotechnology

Additional Stackable IBCs/License
- Veterinarian
- Certified Veterinary Technician

Example Aligned Occupations

Veterinary Assistants and Laboratory Animal Caretakers

Median Wage: $29,906
Annual Openings: 1,348
10-Year Growth: 24%

Veterinary Technologists and Technicians

Median Wage: $33,679
Annual Openings: 1,217
10-Year Growth: 24%

Veterinarian

Median Wage: $103,160
Annual Openings: 347
10-Year Growth: 26%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024

For more information visit:
https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources

Successful completion of the Animal Science program of study will fulfill requirements of a Business and Industry endorsement.

Texas Education Agency

Animal Science