



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 a diverse spectrum of 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.

Secondary Courses for High School Credit



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| Level 1 | <ul style="list-style-type: none"> Principles of Agriculture, Food, and Natural Resources |
| Level 2 | <ul style="list-style-type: none"> Small Animal Management Equine Science Entrepreneurship I |
| Level 3 | <ul style="list-style-type: none"> Livestock Production |
| Level 4 | <ul style="list-style-type: none"> Veterinary Medical Applications Scientific Research and Design Advanced Animal Science |

Aligned Advanced Academic Courses

AP or IB	<ul style="list-style-type: none"> AP Biology IB Biology SL IB Biology HL
Dual Credit	Dual credit offerings will vary by Local Education Agency.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards Concentrator/Completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Participate in FFA - Future Farmers of America. Texas FFA is a dynamic youth organization that makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education. Students compete at the local, regional, and state levels in various program events, engage in community and leadership; service activities, and meet business students across the region and the state level through participation in our FFA programs.

Aligned Industry-Based Certifications

- Elanco Fundamentals of Animal Science Certification
- Elanco Veterinary Medical Applications Certification



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

- Animal Sciences
- Biotechnology

Additional Stackable IBCs/Licensures

- 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>



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Statewide Program of Study: *Animal Science*

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Agriculture, Food, and Natural Resources* 13000200 (1 credit)	Prerequisites: None Corequisites: None	

Level 2

Course	Prerequisites Corequisites	Career Clusters
Small Animal Management 13000400 (0.5 credit)	Prerequisites: None Corequisites: None	
Entrepreneurship I 13011101 (1 credit)	Prerequisites: None Corequisites: None	
Equine Science 13000500 (0.5 credit)	Prerequisites: None Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Livestock Production 13000300 (1 credit)	Prerequisites: None Corequisites: None	

Level 4

Course	Prerequisites Corequisites	Career Clusters
Veterinary Medical Applications 13000600 (1 credit)	Prerequisites: Equine Science, Small Animal Management, or Livestock Production Corequisites: None	
Scientific Research and Design* 13037200 (1 credit)	Prerequisites: Biology, Chemistry, Integrated Physics, Chemistry (IPC), or Physics Corequisites: None	
Advanced Animal Science 13000700 (1 credit)	Prerequisites: Biology and Chemistry or Integrated Physics and Chemistry (IPC); Algebra I and Geometry; and either Small Animal Management, Equine Science, or Livestock Production Corequisites: None	

* Indicates course is included in more than one program of study.

San Benito CISD does not discriminate on the basis of race, color, national origin, sex, or disability in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Title IX Coordinator: Erika Echarte, Executive Director of Administrative Services, at eechartea@sbcisd.net or 956-361-6100 or ADA/Section 504 Coordinator, Janette Bristow, Health Services Coordinator, at jmbristow@sbcisd.net or 956-361-6100; Title IX Coordinator: Nancy Casas, College, Career, Military Readiness Director, at ncasas@sbcisd.net or 956-361-6100; or ADA/Section 504 Coordinator: Ernesto Manriquez, Director of Special Services, at emanriquez@sbcisd.net or 956-361-6100, San Benito CISD, 240 N. Crockett St., San Benito, TX 78586.

