



# 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: *Floral Design*

The *Floral Design* program of study emphasizes occupational and educational opportunities within the science, research, and business of plants and floral artistry. This program integrates biology and life science with real-world applications, focusing on the processes and aesthetics of plants and vegetation in both laboratory and field settings. Students will explore the principles of floral design while gaining a deeper understanding of plant science and its role in the floral industry.

### Secondary Courses for High School Credit



Grade Level	Courses
9 <sup>th</sup>	Principles of Agriculture, Food, and Natural Resources
10 <sup>th</sup>	Floral Design
11 <sup>th</sup>	Horticultural Science
12 <sup>th</sup>	Advanced Floral Design

### Aligned Advanced Academic Courses

<b>AP or IB</b>	AP Biology AP Environmental Science IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
<b>Dual Credit</b>	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

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Work in a part-time job at a landscaping company to learn about production and management of plants.</li> <li>Intern at an agricultural research company, working alongside a biological technician to learn about application of biology to plant production</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in an FFA career, leadership, and speaking contest like an agriscience fair</li> <li>Participate in an industry-related competition like an agriscience fair</li> </ul>

### Aligned Industry-Based Certifications

#### IBC's Offered

- Texas State Florists' Association Level I Floral Certification
- Benz School of Floral Design Principles



### Example Postsecondary Opportunities

#### Apprenticeships

- Horticulturist

#### Associate Degrees

- Biology/Biological Sciences
- Biological and Physical Sciences

#### Bachelor's Degrees

- Horticulture
- Plant Pathology/Phytopathology

#### Master's, Doctoral, and Professional Degrees

- Plant Breeding
- Botany/Plant Biology

#### Additional Stackable IBCs/License

- Nursery Floral License
- Horticulturist Certification



### Example Aligned Occupations

#### *Pesticide Handlers, Sprayers, and Applicators, Vegetation*

Median Wage: \$46,153  
Annual Openings: 205  
10-Year Growth: 17%

#### *Biological Technicians*

Median Wage: \$45,787  
Annual Openings: 879  
10-Year Growth: 14%

#### *Farmers, Ranchers, and Other Agricultural Managers*

Median Wage: \$65,490  
Annual Openings: 28,020  
10-Year Growth: 4%

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>