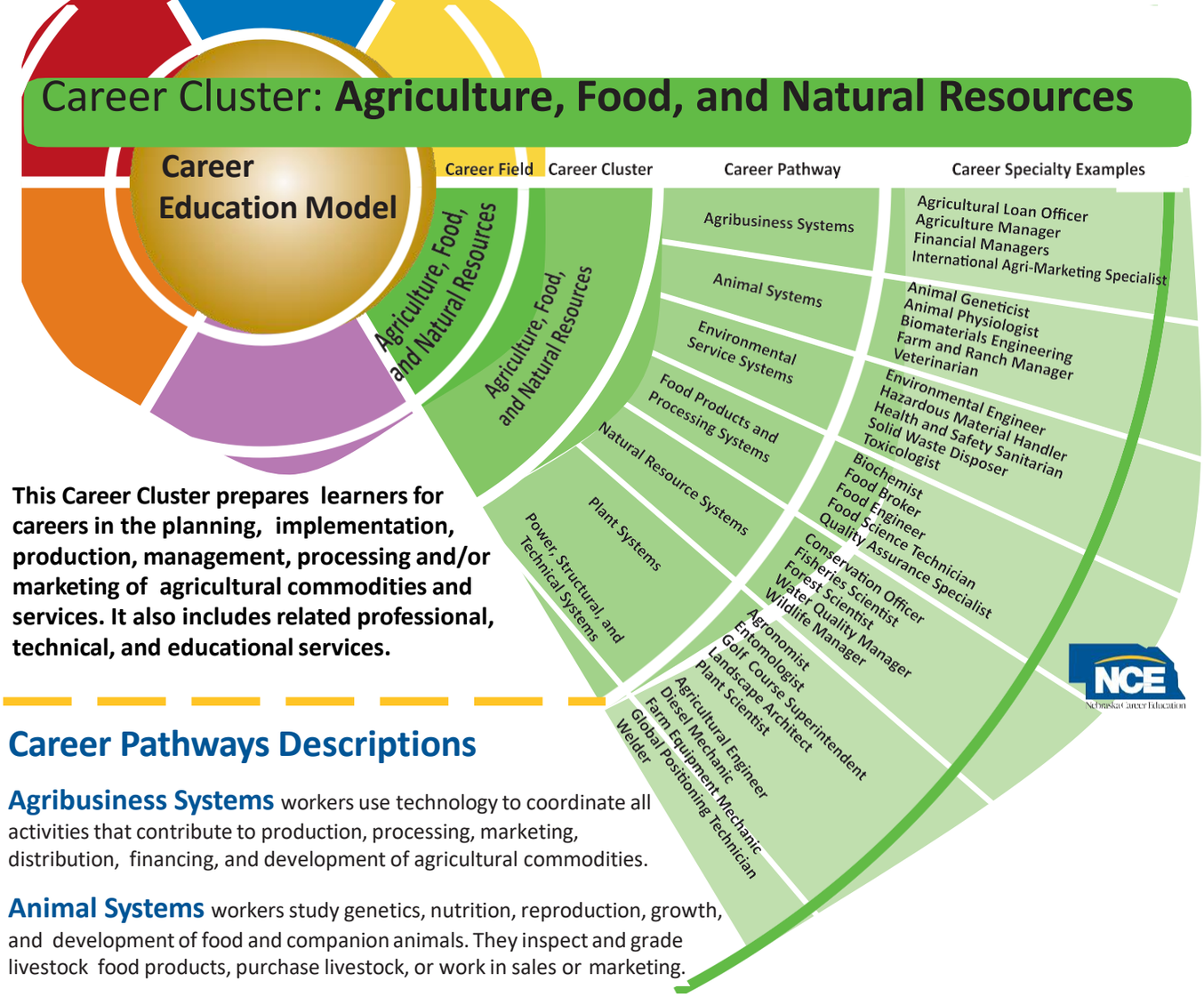
Career Cluster: **Agriculture, Food, and Natural Resources**



This Career Cluster prepares learners for careers in the planning, implementation, production, management, processing and/or marketing of agricultural commodities and services. It also includes related professional, technical, and educational services.

Career Pathways Descriptions

Agribusiness Systems workers use technology to coordinate all activities that contribute to production, processing, marketing, distribution, financing, and development of agricultural commodities.

Animal Systems workers study genetics, nutrition, reproduction, growth, and development of food and companion animals. They inspect and grade livestock food products, purchase livestock, or work in sales or marketing.

Environmental Service Systems workers are involved in pollution control, recycling, waste disposal, and public health. They conduct hazardous-waste manage- ment studies, analysis, and research environmental projects.

Food Products and Processing Systems workers discover new food sources, analyze and develop ways to process, preserve, package or store food. They cre- ate new food products and inspect food-processing to ensure sanitation, safety, quality, and waste management standards are met.

Natural Resources Systems workers help to develop, maintain, and manage the forest and natural environment. Conservation scientists and foresters manage, develop, and help protect these natural resources.

Plant Systems workers develop ways to improve the nutritional value and aes- thetic of plants and quality of seeds. They use genetic engineering to develop pest and drought resistant plants helping producers while conserving natural re- sources and maintaining the environment.

Power, Structural, and Technical Systems workers apply knowledge of engineer- ing, hydraulics, pneumatics, electronics, power, structures, and controls to the field of agriculture. They develop conservation of soil and water to improve the processing of agricultural products.

Do you enjoy working with animals?
Do you have a green thumb?
Do you collect rocks?
Are you interested in protecting the environment?
Do you enjoy working outdoors?
Are science classes your favorite?

https://azcis.intocareers.org/VideoSelect.aspx?VideoFileNum=00-000001

3:33 minutes video on this career cluster
(you must be logged into AZCIS to see video)

Occupations Examples
Levels of Education and Earnings*

	National Annual Median Wage	Arizona Annual Median Wage
Long-Term, On-the-Job Training (Over One Year)		
Bakers	$24,170	$23,410
Farm Equipment Mechanics	$37,050	$35,490
Meat Cutters	$23,870 - $29,130	$26,200 - $29,910
Water Treatment Plant Operators	$44,790	$45,630
Work Experience in a Related Occupation		
Agricultural Worker Supervisors	$45,340	$43,690
Farmers and Farm Managers	$64,170	$58,510
Associate Degree		
Environmental Engineering Technicians	$48,650	$47,950
Forestry Technicians	$35,430	$31,950
Bachelor's Degree		
Agricultural Engineers	$75,090	not available
Agricultural Scientists	$60,050	$64,200
Animal Scientists	$60,390	not available
Environmental Engineers	$84,560	$76,360
Food Scientists	$65,840	$73,040
Foresters	$58,230	$53,550
Zoologists	$59,680	$59,890
Work Experience Plus a Bachelor's or Higher Degree		
Natural Sciences Managers	$120,160	$100,610

Career Plan of Study

Learner Name _____ **Date** _____

Learner Signature _____ **Advisor Signature** _____

Parent/Guardian Signature (if required)_____

This plan of study should serve as a guide, along with other career planning materials, as you continue your career path*. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. All plans should meet high school graduation requirements as well as college entrance requirements.*

High School

9th Grade	10th Grade	11th Grade	12th Grade
English I	English II	English III	English IV
Algebra I or Geometry	Geometry or Algebra II	Algebra II, Trig or Pre-Calculus	Trig, Pre-Calculus, or Calculus
Physical Science or Biology I	Biology I or Chemistry I	Chemistry I or Physics	Physics, AP Biology or Environmental Science
Geography/State History	World History	American History	Economics/Government
Required Courses/Electives PE, Health, Art, Foreign Language, or Computer Technology	***Required Courses/Electives*** PE, Health, Art, Foreign Language, or Computer Technology	***Additional High School Electives*** Animal Science, Agricultural Power & Tech, Plant & Soil Science, Horticulture, Forestry, Agricultural Economics, Agricultural Comm., Aquaculture, Natural Resources, Food Science Technology or Employment in Agribusiness	***Technology Center Electives*** Horticulture, Horse Production/Management, Meat Processing, Farm Equipment Repair, Welding, Veterinary Assisting
Career Electives Agriscience I	***Career Electives*** Agriscience II		

Post-Secondary

Career/Technical College	Community College	College/University
Horticulture	Agriculture Communications	Agriculture Communications
Farm Equipment Repair	Agriculture Economics	Agriculture Economics
Horse Production/Management	Agriculture Sciences & Natural Resources	Agriculture Sciences & Natural Resources
Meat Processing	Agronomy	Agronomy
Welding	Animal Science	Animal Science
	Equine Science	Biochemistry
	Horticulture	Equine Science
		Horticulture

Career Enhancement Options

Work-based Learning Options	Short-Term Training Options
Job-Shadowing:	Farm Business Management
Internship/Mentorship:	Welding
On-The-Job Training:	Conversational Spanish

https://azcis.intocareers.org/portfolio/activities/cc_plans_study.html