



# CASE PRINCIPLES OF AGRICULTURAL SCIENCE - ANIMAL

#01081

## Description

Principles of Agricultural Science - Animal is a foundation-level course designed to engage students in hands-on laboratories and activities to explore the world of animal agriculture. Student experiences will involve the student of animal anatomy, physiology, behavior, nutrition, reproduction, health, selection and marketing.

THIS COURSE CAN ONLY BE TAUGHT BY AN INSTRUCTOR WITH CASE CERTIFICATION.

Grade 9-12

1 credit

Max Credit = 1

## Principles of Agricultural Science - Animal National AFNR Career Cluster Content Standards Alignment

Key: o = Denotes a correlation in ideas and concepts in both standard and lessons but validation is required to infer direct instruction of standard.		Unit 1: Animal Planet	Unit 2: History and Use of Animals	Unit 3: Animal Handling and Safety	Unit 4: Cells and Tissue	Unit 5: Animal Nutrition	Unit 6: Animal Reproduction	Unit 7: Genetics	Unit 8: Animal Health	Unit 9: Animal Products, Marketing, and Selection
<b>AFNR: LifeKnowledge® and Cluster Skills Content Standards</b>										
CS.01.	Premier Leadership: Acquire the skills necessary to positively influence others.			X		X				
CS.02.	Personal Growth: Develop a skill set to enhance the positive evolution of the whole person.									X
CS.03.	Career Success: Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society.									X
CS.04.	Systems: Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment.		X		X	X			X	X
CS.05.	Systems: Identify how key organizational structures and processes affect organizational performance and the quality of products and services.								X	X
CS.06.	Examine the importance of health, safety, and environmental management systems in organizations and their importance to performance and regulatory compliance.			X					X	X
CS.07.	Safety, Health, and Environmental: Demonstrate appropriate health and safety procedures for AFNR occupations.			X	X	X			X	X
CS.08.	Technical Skills: Use tools, equipment, machinery and technology appropriate to work within areas related to AFNR.			X	X	X	X	X	X	X
CS.09.	Technical Skills: Compare and contrast issues affecting the AFNR industry.			X			X			
CS.10.	Technical Skills: Envision emerging technology and globalization to project its influence on widespread markets.						X	X		
CS.11.	Scientific Inquiry: Utilize scientific inquiry as an investigative method.			X	X	X	X	X	X	X

<b>AFNR: Agribusiness Systems Career Pathway Content Standards</b>										
<b>ABS.01.</b>	Utilize economic principles to establish and manage an AFNR enterprise.									
<b>ABS.02.</b>	Utilize appropriate management planning principles in AFNR business enterprises.									X
<b>ABS.03.</b>	Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations.	X				X				
<b>ABS.04.</b>	Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.									
<b>ABS.05.</b>	Assess accomplishments of goals and objectives by an AFNR business.									
<b>ABS.06.</b>	Use industry-accepted marketing principles to accomplish AFNR business objectives.									X
<b>ABS.07.</b>	Create a production system plan.									

<b>AFNR: Animal Systems Career Pathway Content Standards</b>										
<b>AS.01.</b>	Examine the components, historical development, global implications, and future trends of the animal systems industry.	X	X	X			X			X
<b>AS.02.</b>	Classify, evaluate, select, and manage animals based on anatomical and physiological characteristics.		X	X	X	X	X	X		X
<b>AS.03.</b>	Provide for the proper health care of animals.			X					X	
<b>AS.04.</b>	Apply principles of animal nutrition to ensure the proper growth, development, reproduction, and economic production of animals.					X				
<b>AS.05.</b>	Evaluate and select animals based on scientific principles of animal production.						X	X		X
<b>AS.06.</b>	Prepare and implement animal handling procedures for the safety of animals, producers, and consumers of animal products.			X						
<b>AS.07.</b>	Select animal facilities and equipment that provide for the safe and efficient production, housing, and handling of animals.			X						
<b>AS.08.</b>	Analyze environmental factors associated with animal production.			X			X		X	

<b>AFNR: Biotechnology Systems Career Pathway Content Standards</b>										
<b>BS.01.</b>	Recognize the historical, social, cultural and potential applications of biotechnology.									
<b>BS.02.</b>	Demonstrate laboratory skills as applied to biotechnology.									
<b>BS.03.</b>	Demonstrate the application of biotechnology to Agriculture, Food, and Natural Resources (AFNR)..									

<b>AFNR: Environmental Service Systems Career Pathway Content Standards</b>										
<b>ESS.01.</b>	Use analytical procedures to plan and evaluate environmental service systems.									
<b>ESS.02.</b>	Assess the impact of policies and regulations on environmental service systems.									
<b>ESS.03.</b>	Apply scientific principles to environmental service systems.									
<b>ESS.04.</b>	Operate environmental service systems to manage a facility environment.									
<b>ESS.05.</b>	Examine the relationships between energy sources and environmental service systems.									
<b>ESS.06.</b>	Use tools, equipment, machinery and technology to accomplish tasks in environmental service systems.									

<b>AFNR: Food Products and Processing Systems Career Pathway Content Standards</b>										
<b>FPP.01.</b>	Examine components of the food industry and historical development of food products and processing.									
<b>FPP.02.</b>	Apply safety principles, recommended equipment and facility management techniques to the food products and processing industry.									
<b>FPP.03.</b>	Apply principles of science to the food products and processing industry.									
<b>FPP.04.</b>	Select and process food products for storage, distribution and consumption.									

<b>AFNR: Natural Resources Systems Career Pathway Content Standards</b>										
<b>NRS.01.</b>	Explain interrelationships between natural resources and humans necessary to conduct management activities in natural environments.									
<b>NRS.02.</b>	Apply scientific principles to natural resource management activities.									
<b>NRS.03.</b>	Apply knowledge of natural resources to production and processing industries.									
<b>NRS.04.</b>	Demonstrate techniques used to protect natural resources.									
<b>NRS.05.</b>	Use effective methods and venues to communicate natural resource processes to the public.									

AFNR: Plant Systems Career Pathway Content Standards										
PS.01.	Apply knowledge of plant classification, plant anatomy and plant physiology to the production and management of plants.									
PS.02.	Prepare and implement a plant management plan that addresses the influence of environmental factors, nutrients, and soil on plant growth.									
PS.03.	Propagate, culture, and harvest plants.									
PS.04.	Employ elements of design to enhance an environment.			X						

AFNR: Power, Structural and Technical Systems Career Pathway Content Standards										
PST.01.	Use physical science principles and engineering applications with power, structural and technical systems to solve problems and improve performance.									
PST.02.	Design, operate and maintain mechanical equipment, structures, biological systems, land treatment, power and technology.									
PST.03.	Service and repair mechanical equipment and power systems.									
PST.04.	Plan, build and maintain agricultural structures.									
PST.05.	Apply technology principles in the use of agricultural technical systems.									

**Table 1. Comparison of National Agriculture, Food, and Natural Resources: Career Cluster Content Standards and Principles of Agricultural Science – Animal™.**

Source: National Council for Agricultural Education, *National AFNR Career Cluster Content Standards*  
[http://www.teamaged.org/council/images/stories/pdf/finalafnrstandardsv324609withisbn\\_000.pdf](http://www.teamaged.org/council/images/stories/pdf/finalafnrstandardsv324609withisbn_000.pdf).

# Career Ready Practices (CRP)

## FFA & SUPERVISED AGRICULTURAL EXPERIENCE

CRP 1	Act as a responsible and contributing citizen and employee.
CRP 2	Apply appropriate academic and technical skills.
CRP 3	Attend to personal health and financial well-being.
CRP 4	Communicate clearly, effectively, and with reason.
CRP 5	Consider the environmental, social, and economic impacts of decisions.
CRP 6	Demonstrate creativity and innovation.
CRP 7	Employ valid and reliable research strategies.
CRP 8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP 9	Model integrity, ethical leadership, and effective management.
CRP 10	Plan education and career path aligned to personal goals.
CRP 11	Use technology to enhance productivity.
CRP 12	Work productively in teams while using cultural/global competence.