



CASE PRINCIPLES OF AGRICULTURAL SCIENCE - PLANT

#01082

Description

Principles of Agricultural Science - Plant is a foundation-level course that will teach students about the form and function of plant systems. Students are immersed in inquiry-based exercises filled with activities, projects and problems to teach them plant concepts through laboratory and practical experiences. Student experiences will include soils, hydroponics, plant anatomy and physiology, taxonomy, growing environments, sexual reproduction, asexual reproduction, insects and diseases, and production and marketing. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA programs and activities.

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

Grade 9-12

1 credit

Max Credit = 1

Principles of Agricultural Science – Plant National AFNR Career Cluster Content Standards Alignment

		Unit 1 Worlds of Opportunity	Unit 2 Mineral Soils	Unit 3 Soilless Systems	Unit 4 Anatomy and Physiology	Unit 5 Taxonomy	Unit 6 The Growing Environment	Unit 7 Plant Reproduction	Unit 8 Surviving a Harsh Environment	Unit 9 Crop Production and Marketing
AFNR: LifeKnowledge® and Cluster Skills Content Standards										
CS.01.	Premier Leadership: Acquire the skills necessary to positively influence others.									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	X	X		X	X	X		X
CS.04.	Systems: Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment.						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	X		X	X	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
CS.07.	Safety, Health, and Environmental: Demonstrate appropriate health and safety procedures for AFNR occupations.							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
CS.09.	Technical Skills: Compare and contrast issues affecting the AFNR industry.			X				X	X	X
CS.10.	Technical Skills: Envision emerging technology and globalization to project its influence on widespread markets.									X
CS.11.	Scientific Inquiry: Utilize scientific inquiry as an investigative method.		X		X	X	X	X	X	X

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AFNR: Agribusiness Systems Career Pathway Content Standards										
ABS.01.	Utilize economic principles to establish and manage an AFNR enterprise.									X
ABS.02.	Utilize appropriate management planning principles in AFNR business enterprises.									X
ABS.03.	Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations.									
ABS.04.	Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.									
ABS.05.	Assess accomplishments of goals and objectives by an AFNR business.									
ABS.06.	Use industry-accepted marketing principles to accomplish AFNR business objectives.									
ABS.07.	Create a production system plan.									X
AFNR: Natural Resources Systems Career Pathway Content Standards										
NRS.01.	Explain interrelationships between natural resources and humans necessary to conduct management activities in natural environments.							X		
NRS.02.	Apply scientific principles to natural resource management activities.									
NRS.03.	Apply knowledge of natural resources to production and processing industries.									
NRS.04.	Demonstrate techniques used to protect natural resources.									
NRS.05.	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.	X			X	X	X	X		X
PS.02.	Prepare and implement a plant management plan that addresses the influence of environmental factors, nutrients, and soil on plant growth.		X	X	X		X	X	X	X
PS.03.	Propagate, culture, and harvest plants.			X			X	X		X
PS.04.	Employ elements of design to enhance an environment.									X

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.