Nebraska CTE

Introduction to AFNR (Plant Science)

Apply leadership skills and knowledge through the study of the FFA Career and Technical Student Organization (CTSO). AFNR.HS.20.1	**a** Summarize the three-component model of a comprehensive Agricultural Education Program. AFNR.HS.20.1.A
	b Recognize the mission, purpose, and key historical moments in the National FFA Organization. AFNR.HS.20.1.B
	c Investigate opportunities available for a member of FFA. AFNR.HS.20.1.C
	d Examine and practice public speaking. AFNR.HS.20.1.D
	e Apply the basics of Parliamentary Procedure. AFNR.HS.20.1.E
Apply career readiness principles in an authentic workplace environment. AFNR.HS.20.2	**a** Summarize the five components of a Foundational Supervised Agricultural Experience (SAE). AFNR.HS.20.2.A
	b Investigate the five options for an Immersion SAE. AFNR.HS.20.2.B
	c Articulate elements of career plans (e.g., academic, AFNR/CTE coursework, FFA/CTSO participation, immersion SAE) required in an AFNR workplace setting. AFNR.HS.20.2.C
Examine career options within agriculture, food, and natural resource systems and perform research based on personal interests. AFNR.HS.20.3	**a** Inventory personal work preferences and interests related to the AFNR Career Field. AFNR.HS.20.3.A
	b Identify careers available in multiple AFNR Career Pathways. AFNR.HS.20.3.B
	c Determine common qualities of a specific career area (e.g., educational requirements, work environment). AFNR.HS.20.3.C
	d Identify necessary steps to prepare for a specific AFNR careers (coursework, post-secondary, needed skills). AFNR.HS.20.3.D
	e Identify opportunities for work placed learning within your community. AFNR.HS.20.3.E
Ev[illegible] wa[illegible] ha[illegible]	**[illegible]ummarize and classify the different natural resources (e.g., water, soil, [illegible]enewable, non-renewable).** AFNR.HS.20.4.A

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management of natural resource systems. AFNR.HS.20.4	**b** Summarize the components that comprise all ecosystems. AFNR.HS.20.4.B
	c Compare and categorize biotic and abiotic factors in various habitats. AFNR.HS.20.4.C
	d Identify the importance of water and air quality. AFNR.HS.20.4.D
	e Identify the physical qualities of the soil that determine use for the environmental service system. AFNR.HS.20.4.E
	f Describe the importance of water conservation. AFNR.HS.20.4.F
Differentiate key terms, components, and uses for animals in animal systems. AFNR.HS.20.5	**a** Identify and summarize key terminology used in animal systems (e.g., heifer vs. cow, bull vs. steer, calving, farrowing, bovine, equine). AFNR.HS.20.5.A
	b Define the function of basic external and internal organs of animals. AFNR.HS.20.5.B
	c Differentiate production animals from companion animals. AFNR.HS.20.5.C
	d Classify the major components of production animal systems (e.g.,feedlots, cow-calf operations, farrow, finish) and regional distribution. AFNR.HS.20.5.D
	e Categorize uses for and products generated from production animals. AFNR.HS.20.5.E
	f Classify and determine uses for companion animals. AFNR.HS.20.5.F
Summarize knowledge of plant anatomy and the functions of plant structures and processes to activities associated with plant systems. AFNR.HS.20.6	**a** Classify major components of the plant industry. AFNR.HS.20.6.A
	b Classify plants according to life cycles. AFNR.HS.20.6.B
	c Identify the function of plant parts. AFNR.HS.20.6.C
	d Identify basic processes and role of photosynthesis, respiration, and transpiration. AFNR.HS.20.6.D
	e Differentiate between sexual and asexual propagation techniques. AFNR.HS.20.6.E
Synthesize the historical, social, cultural, and potential applications of biotechnology. AFNR.HS.20.7	**a** Summarize biotechnology and the historical impact it has had on agriculture. AFNR.HS.20.7.A
	b Identify current and future applications of biotechnology in agriculture, food, and natural resources. AFNR.HS.20.7.B
	c Identify common methodologies used in biotechnology. AFNR.HS.20.7.C
	d Identify basic cellular structures and genetic terminology. AFNR.HS.20.7.D

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	e Summarize the scientific and social implications of modern genetically modified organisms. AFNR.HS.20.7.E
Summarize knowledge of the food products & processing industry. AFNR.HS.20.8	a Evaluate how different foods affect the human body and its physical and cellular processes. AFNR.HS.20.8.A
	b Identify food safety and sanitation procedures for handling and processing to as sure food quality. AFNR.HS.20.8.B
	c Summarize food safety procedures when storing and distributing products to consumption. AFNR.HS.20.8.C
	d Explain the producer-to-consumer processes in the food industry. AFNR.HS.20.8.D
Summarize management principles, skills, and practices in agribusiness. AFNR.HS.20.9	a Define major sectors within the agribusiness industry. AFNR.HS.20.9.A
	b Identify standard production and agribusiness records and plans. AFNR.HS.20.9.B
	c Identify common agribusiness terminology and tools to track and analyze business decisions and transactions. AFNR.HS.20.9.C
	d Articulate the role of markets, trade, competition, and price in relation to business sales and market planning. AFNR.HS.20.9.D
	e Identify aspects needed to develop and implement an effective record keeping strategy for financial and human resources. AFNR.HS.20.9.E
Synthesize the historical, social, cultural, and potential applications of biotechnology. AFNR.HS.20.10	a Identify and practice safe laboratory practices and procedures. AFNR.HS.20.10.A
	b Select and operate proper tools and equipment related to agricultural processes observing all safety precautions. AFNR.HS.20.10.B
	c Develop an agricultural project plan with the required project plan components (e.g. purpose, materials, budget, skills required, timeframe). AFNR.HS.20.10.C
	d Assess a project plan to completion. AFNR.HS.20.10.D