Florida CTE

Agriscience Foundations 1 (2026)

Examine the history of AFNR production at the local, national, and global level. The student will be able to: 1.0	1 **Analyze and describe the impact of AFNR industries on local, state, national, and global economies.** 1.1
	2 **Investigate and summarize historical developments, inventions, or events that have impacted AFNR production systems.** 1.2
	3 **Examine and analyze historical and current economic or production data and trends and determine their impact on local, state, national, and global AFNR systems.** 1.3
Employ scientific reasoning to make informed decisions in AFNR systems. The student will be able to: 2.0	1 **Design and complete an experiment using the scientific method.** 2.1
	2 **Employ scientific measuring skills.** 2.2
	3 **Demonstrate safe and effective use of common laboratory equipment.** 2.3
	4 **Analyze, interpret, and report data from research.** 2.4
	5 **Utilize data to make an informed choice concerning AFNR systems.** 2.5
Apply scientific skills and principles in natural resources. The student will be able to: 3.0	1 **Describe the environmental resources (soil, water, air) necessary for agricultural production.** 3.1
	2 **Classify resources used in AFNR systems as renewable or nonrenewable.** 3.2
	3 **Discuss the management of renewable vs. non-renewable natural resources.** 3.3
	4 **Describe various Florida ecosystems as they relate to the agricultural industry.** 3.4
	5 **Examine the effects of environmental regulations on ANFR industries.** 3.5
	6 **Research Best Management Practices that sustain the natural environment.** 3.6
	7 **Examine how land use decisions (development, conservation, agricultural production, etc.) impact the environment.** 3.7

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	8 Explore employment and entrepreneurship opportunities and identify potential paths to careers in natural resources. 3.8
Apply scientific skills and principles in plant science. The student will be able to: 4.0	1 Describe and differentiate between plant industry sectors (floriculture, nursery, forestry, etc.). 4.1
	2 Examine products and by-products produced commercially in plant industries. 4.2
	3 Distinguish cellular processes in plant science including photosynthesis, respiration, transpiration. 4.3
	4 Categorize plants based on specific characteristics according to industry and scientific standards. 4.4
	5 Investigate and compare methods of plant reproduction. 4.5
	6 Identify nutrient requirements for optimal plant growth, their functions within plants and nutrient sources. 4.6
	7 Manage plant production facilities, equipment and supplies with a safety mindset. 4.7
	8 Evaluate advances in plant related biotechnology that impact consumers and production. 4.8
	9 Explore employment and entrepreneurship opportunities and identify potential paths to careers in plant science. 4.9
Apply scientific skills and principles in animal science. The student will be able to: 5.0	1 Distinguish correct terminologies for livestock species and conditions (e.g., age, sex, and use) within those species. 5.1
	2 Recognize commercially important livestock variations distinguishable in breed characteristics (e.g., cattle, swine, sheep, goats and poultry). 5.2
	3 Examine production and consumption trends of commercially important livestock species. 5.3
	4 Model safe animal handling practices using proper safety procedures. 5.4
	5 Examine products and by-products produced by commercially important livestock species. 5.5
	6 Identify methods of proper disposal of animal waste materials and biohazards. 5.6
	7 Evaluate advances in animal biotechnology that impact consumer and production decisions (e.g., cloning, selective breeding and pharmaceuticals). 5.7

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	8 Apply genetic principles to improve animal husbandry practices. 5.8
	9 Compare and contrast animal welfare issues. 5.9
	10 Manage animal facilities, equipment and supplies with a safety mindset. 5.10
	11 Explore employment and entrepreneurship opportunities and identify potential paths to careers in animal science. 5.11
Apply scientific skills and principles in food science. The student will be able to: 6.0	1 Evaluate the relationship between food markets and consumer trends. 6.1
	2 Examine the impact of consumer demands on food production, processing and storage. 6.2
	3 Evaluate advances in biotechnology that impact agriculture. 6.3
	4 Analyze the impact of marketing and labeling of food products on consumer behavior. 6.4
	5 Perform safe handling practices in the preparation of food. 6.5
	6 Explore employment and entrepreneurship opportunities and identify potential paths to careers in food science. 6.6
Apply scientific skills and principles in power, structure, and technical systems. The student will be able to: 7.0	1 Analyze trends and emerging technological advances in power, structure and technical systems. 7.1
	2 Select the appropriate tool for construction, repair, and maintenance of power, structure and technical systems. 7.2
	3 Demonstrate safe use of common tools used for construction, repair, and maintenance of power, structure and technical systems. 7.3
	4 Utilize commonly used technologies in AFNR systems to solve problems in AFNR systems. 7.4
	5 Manage power, structure, and technical systems facilities, equipment and supplies with a safety mindset. 7.5
	6 Explore employment and entrepreneurship opportunities in power, structure and technical systems. 7.6
Explore AFNR professional development organizations. The stu to:	1 Identify the opportunities for leadership development available through the National FFA Organization and other agricultural groups. 8.1
	2 Explore the history of the National FFA Organization. 8.2
	articipate in a business meeting using Robert's Rules of Order. 8.3

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4 **Model leadership characteristics.** 8.4

5 **Develop a plan for personal and professional growth in an agricultural organization by reviewing their mission statement, constitution and by-laws and program of activities.** 8.5