Florida CTE

Agriculture, Food, and Natural Resources: Fundamentals of Agriculture, Food, and Natural Resource Systems (8021300)

Summarize the evolution of production agriculture. The student will be able to: 01.0

1. **Describe the importance of agriculture on a world, national, state and community scale.** 01.01
2. **Distinguish the major agricultural production areas of the United States.** 01.02
3. **Distinguish agriculture products produced in Florida.** 01.03
4. **Interpret how changes in production practices, population, and land use have influenced the agriculture economy.** 01.04
5. **Demonstrate how development of new technology has affected agriculture production.** 01.05
6. **Examine the changes in agriculture careers that reflect the changes in production methods.** 01.06

Differentiate between animal welfare and ethical treatment of animals. The student will be able to: 02.0

1. **Describe the proper handling of production animals.** 02.01
2. **Compare animal welfare and animal rights.** 02.02
3. **Explain how animal welfare and animal rights advocate groups impact production agriculture.** 02.03
4. **Summarize animal cruelty and the consequences of cruel treatment of animals.** 02.04

Explain skills and principles used in dairy production. The student will be able to: 03.0

1. **Explain the difference between breeds of dairy cattle.** 03.01
2. **Demonstrate knowledge of proper health and nutrition for dairy animals.** 03.02
3. **Explain the safety procedures used for dairy products.** 03.03
4. **Compare different styles of dairies and milking parlors.** 03.04

	5 Identify the varieties of dairy products and the methods of processing. 03.05
	6 Create a dairy product. 03.06
Explain skills and principles used in livestock production. The student will be able to: 04.0	1 Compare the different breeds of livestock. 04.01
	2 Differentiate the different cuts and grading of meat. 04.02
	3 Evaluate proper health and nutrition for livestock animals. 04.03
	4 Demonstrate knowledge of terminology for animals based on species and condition (eg. age, sex, bred, etc...) 04.04
	5 Determine different reproduction methods, and the process of selective breeding. 04.05
	6 Explain how the use of biotechnology has impacted the livestock industry. 04.06
Explain skills and principles used in poultry production. The student will be able to: 05.0	1 Compare different types of poultry and their uses in production agriculture. 05.01
	2 Differentiate proper techniques for classification and grading of poultry and poultry products. 05.02
	3 Describe proper safe handling techniques for poultry products. 05.03
	4 Evaluate knowledge of health and nutrition for poultry. 05.04
	5 Explain how the use of biotechnology has impacted the poultry industry. 05.05
Explain skills and principles used in aquaculture production. The student will be able to: 06.0	1 Compare the different breeds of aquatic species. 06.01
	2 Evaluate proper health and nutrition for aquatic species. 06.02
	3 Demonstrate knowledge of terminology for aquatic species. 06.03
	4 Determine different reproduction methods. 06.04
	5 Explain how the use of biotechnology has impacted the aquatic species industry. 06.05
Explain skills and principles used in vegetable production. The student will be able to: 07.0	1 Produce a vegetable crop. 07.01
	2 Compare the components of soil. 07.02
	3 Perform a soil test. 07.03
	4 Describe how climate can affect crop production. 07.04
	5 Compile knowledge of growing seasons for a geographic region. 07.05

	6 Explain the use of Best Management Practices in crop production. 07.06
	7 Investigate the impact of pests on crop yields. 07.07
	8 Model the safety precautions on a pesticide and fertilizer label. 07.07
	9 Assess proper irrigation methods for crops. 07.09
	10 Analyze knowledge of harvesting techniques and equipment 07.10
	11 Compare types of storage facilities. 07.11
	12 Explain how the use of biotechnology has impacted vegetable crop production. 07.12
Explain skills and principles used in nursery production. The student will be able to: 08.0	1 Perform plant propagation. 08.01
	2 Develop a growing schedule for nursery plants. 08.02
	3 Model methods for Integrated Pest Management. 08.03
	4 Compare types of growing media. 08.04
	5 Identify nutrients necessary for plant growth from the periodic table and their functions. 08.05
	6 Identify plants based on common and scientific names. 08.06
	7 Describe principles for plant growth. 08.07
	8 Explain different methods of irrigation. 08.08
	9 Explain how the use of biotechnology has impacted plant production. 08.09
Apply scientific and technical skills in production agriculture. The student will be able to: 09.0	1 Formulate scientifically investigable questions, construct investigations, collect and evaluate data, and develop scientific recommendations based on findings. 09.01
	2 Employ technological tools to expedite workflow including word processing, databases, reports, spreadsheets, multimedia presentations, electronic calendar, contacts, email, and internet applications 09.02
Manage leadership and communication skills. The student will be able to: 10.0	1 Discuss the establishment and history of the FFA organization. 10.01
	2 Compare the characteristics and responsibilities of organizational leaders. 10.02
	3 Demonstrate parliamentary procedure skills during a meeting. 10.03

	4 Participate on a committee which has an assigned task and report to the class. 10.04
	5 Demonstrate effective communication skills through delivery of a speech or conducting a demonstration. 10.05
	6 Use a computer to assist in the completion of an agricultural project. 10.06
Demonstrate good work habits, and career planning in agriculture production. The student will be able to: 11.0	1 Identify attitudes and habits necessary to achieve career success. 11.01
	2 Describe personality aspects to consider when choosing a career. 11.02
	3 Identify the basic steps in career planning. 11.03
	4 Identify and research career opportunities in agriculture and its related fields through a Foundational SAE. 11.04
Integrate the use of science, mathematics, reading, geography, history, writing, and communication in production agriculture. The student will be able to: 12.0	1 Apply basic mathematics operations to solve agricultural problems. 12.01
	2 Correctly use measuring devices and utilize measurements to solve agricultural problems. 12.02
	3 Prepare written and/or oral materials using correct English grammar. 12.03
	4 Identify the main idea in oral presentations and/or written materials. 12.04
	5 Locates, organizes, and interprets information from a variety of agricultural sources. 12.05
	6 Describe the historical evolution of agriculture. 12.06
	7 Select and study a problem that can be tested under controlled conditions to establish a hypothesis or to illustrate a known law. 12.07
Identify components of network systems. The student will be able to: 13.0	1 Identify structure to access internet, including hardware and software components. 13.01
	2 Identify and configure user customization features in web browsers, including preferences, caching, and cookies. 13.02
	3 Recognize essential database concepts. 13.03
	4 Define and use additional networking and internet services. 13.04
Describe and use communication features of information technology. The student will be able to: 14.0	1 Define important internet communications protocols and their roles in delivering basic Internet services. 14.01
	2 Identify basic principles of the Domain Name System (DNS). 14.02

3 **Identify security issues related to Internet clients.** 14.03