

**Florida Department of Education
CURRICULUM FRAMEWORK**

Program Title: Orientation to Agriscience
Occupational Area: Agriscience and Natural Resources

Secondary

Program Numbers 8100110
CIP Number 0101.99100R
Grade Level 6-9, 30, 31

Course Length: One Semester or the equivalent of one-half a school year

Certification AGRI @4
AGRICULTUR 1 @2
EXP AG @4
VOC AGRI @4

- I. **MAJOR CONCEPTS/CONTENT:** The purpose of this course is to acquaint students with basic agriscience concepts and develop a general understanding of the broad field of agriculture and natural and environmental sciences.

The content includes, but is not limited to, a focus on understanding the agricultural food system, environmental resources, strategies used to produce and market agricultural products, and an exploration of research through the use of the scientific method. Reinforcement of academic skills occurs through the classroom instruction and applied laboratory procedures.

- II. **LABORATORY ACTIVITIES:** Hands-on laboratory experiences are an integral part of this course, including the safe use of laboratory and hand tools specific to agriscience and natural resources occupations.

- III. **SPECIAL NOTE:** The FFA is the appropriate Career Student Organization for providing leadership training and for reinforcing specific vocational skills. Career Student Organizations, when provided, shall be an integral part of the vocational instructional program, and the activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065(8), FAC.

The career and exploration planning course required by Section 1003.4156, Florida Statutes, may be integrated into this course. This course must include career exploration using CHOICES or a comparable cost-effective program and educational planning using the online student advising system known as Florida Academic Counseling and Tracking for Students at the Internet website FACTS.org; and shall result in the completion of a personalized academic and career plan.

*The information highlighted in blue is new to this course and allows districts to integrate the middle school Career Exploration and Decision Making course as required by Section 1003.4156, Florida Statutes.

IV. **INTENDED OUTCOMES:** After successfully completing this course, the student will be able to:

- 01.0 Demonstrate knowledge and skills in agriscience research.
- 02.0 Demonstrate knowledge and skills plant sciences.
- 03.0 Demonstrate knowledge and skills in animal sciences.
- 04.0 Demonstrate knowledge and skills in food science.
- 05.0 Demonstrate knowledge and skills in agriscience laboratories.
- 06.0 Demonstrate product knowledge and skills in agricultural processing and marketing.
- 07.0 Demonstrate knowledge and skills in environmental resources.
- 08.0 Demonstrate leadership and communication skills.
- 09.0 Integrate the use of science, mathematics, reading, geography, history, writing, and communication in agriscience and technology.

**Florida Department of Education
STUDENT PERFORMANCE STANDARDS**

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Secondary Number: 8100110

- 01.0 DEMONSTRATE KNOWLEDGE AND SKILLS IN AGRISCIENCE RESEARCH--The student will be able to:
- 01.01 Define agriscience. LAB 2.3.1
 - 01.02 Describe products of agriscience. LAC 3.3.3
 - 01.03 Define the scope of research in agriscience. LAB 2.3.1
 - 01.04 Discuss the impact of research on agriculture and on consumers of agricultural products. LAB 2.3.1; SSA 2.3.6
 - 01.05 Identify the process by which agricultural research is conducted including the scientific method. LAA 2.3.6; SCH 1.3.4
 - 01.06 Apply the scientific method to solve an agricultural problem. MAE 2.3.1, 3.3.1; SCH 1.3.4, 1.3.5, 1.3.6, 1.3.7
- 02.0 DEMONSTRATE KNOWLEDGE AND SKILLS IN PLANT SCIENCES--The student will be able to:
- 02.01 Distinguish between horticultural, forestry, and agronomic crops. LAA 2.3.6; LAB 2.3.1; SCG 1.3.3
 - 02.02 Identify horticultural, forestry, and agronomic plants. LAA 2.3.6; LAB 2.3.1; SCG 1.3.3
 - 02.03 Propagate and grow an agricultural plant. MAA 3.3.3; MAB 3.3.1; SCD 1.3.4; SCF 1.3.1, 1.3.7, 2.3.1, 2.3.2; HEA 1.3.5, 1.3.7; HEB 1.3.1, 1.3.2; SCF 2.3.1, 2.3.2, 2.3.3; SCG 1.3.4, 1.3.5
 - 02.04 Identify supplies and services industries related to plant science. LAB 2.3.1; SSD 2.3.1, 2.3.2
 - 02.05 Develop a specimen collection of local plant materials. LAA 2.3.6; VAA 1.3.1, 1.3.4
 - 02.06 Demonstrate proper planting techniques. LAC 1.3.1; HEA 1.3.5
- 03.0 DEMONSTRATE KNOWLEDGE AND SKILLS IN ANIMAL SCIENCES--The student will be able to:
- 03.01 Distinguish between food, service, and companion animals. LAA 2.3.6; LAB 2.3.1; SCG 1.3.3
 - 03.02 Identify breeds of food, service, and companion animals. LAA 2.3.6; LAB 2.3.1; SCG 1.3.3
 - 03.04 Identify supplies and services industries related to animal science. LAB 2.3.1; SSD 2.3.1, 2.3.2
 - 03.05 Demonstrate the proper care of an animal. MAA 3.3.3; MAB 3.3.1; SCD 1.3.4; SCF 1.3.1, 1.3.7, 2.3.1, 2.3.2; HEA 1.3.5, 1.3.7; HEB 1.3.1, 1.3.2
- 04.0 DEMONSTRATE KNOWLEDGE AND SKILLS IN FOOD SCIENCE--The student will be able to:
- 4.01 Describe the proper handling and storage of food products. LAA 1.3.3; SCA 1.3.1, 2.3.3
 - 4.02 List and explain methods of food preservation. LAA 1.3.3; SCA 1.3.1, 1.3.5, 2.3.3
 - 4.03 Conduct a food taste test. HEA 1.3.4; SCA 1.3.1
 - 4.04 Develop a production and marketing plan for a food product. HEC 2.3.4, 2.3.5; MFA 3.3.1; SSD 2.3.2; VAB 1.3.2, 1.3.3, 1.3.4
 - 4.05 Read and interpret a food label. HEA 2.3.1; LAA 1.3.2, 2.3.4

- 05.0 DEMONSTRATE KNOWLEDGE AND SKILLS IN AGRISCIENCE LABORATORIES--The student will be able to:
- 05.01 Demonstrates proper laboratory safety techniques. PEB 2.3.1
 - 05.02 Complete a project demonstrating the safe use of agricultural tools, machinery, or equipment. LAC 3.3.3; MAB 3.3.1, 4.3.1, 4.3.2; VAA 1.3.1, 1.3.2, 1.3.3, 1.3.4
 - 05.03 Define the scope of agricultural mechanization and engineering. LAB 2.3.1
 - 05.04 Discuss the impact of agricultural mechanization and engineering on society. SSA 2.3.3, 2.3.6
 - 05.05 Identify tools, machines, and equipment used in agriculture. LAA 2.3.7
- 06.0 DEMONSTRATE PRODUCT KNOWLEDGE AND SKILLS IN AGRICULTURAL PROCESSING AND MARKETING --The student will be able to:
- 06.01 Define agricultural product, processing, and marketing. LAA 2.3.6; SCH 3.3.4; LAB 2.3.1; SSB 2.3.2; SSD 2.3.3
 - 06.02 Describe the processing and marketing of an agricultural product from farm to consumer. LAA 2.3.6; SCH 3.3.4; LAB 2.3.1; SSB 2.3.2; SSD 2.3.3
 - 06.03 Prepare, process, and/or market an agricultural product. HEB 1.3.1; LAA 2.3.5, 2.3.8; LAB 1.3.1, 1.3.2, 1.3.3, 2.3.3; MAA 3.3.1, 3.3.3; MAB 3.3.1; MAE 3.3.1; SSD 1.3.3, 2.3.1; VAA 1.3.1, 1.3.3; VAB 1.3.4
- 07.0 DEMONSTRATE KNOWLEDGE AND SKILLS IN ENVIRONMENTAL RESOURCES--The student will be able to:
- 07.01 Define and identify renewable and nonrenewable natural resources. LAB 2.3.1; SCG 2.3.1, 2.3.2, 2.3.3, 2.3.4
 - 07.02 Describe agricultural management practices that conserve natural resources. LAB 2.3.1; SCD 1.3.1, 1.3.2; SCG 1.3.2, 1.3.3, 2.3.1, 2.3.2, 2.3.3, 2.3.4
 - 07.03 Describe effects of pollution on the environment. SCD 1.3.3; 2.3.1, 2.3.2
 - 07.04 Recycle or conserve a natural resource. SCD 2.3.2; SCG 2.3.1, 2.3.2, 2.3.3, 2.3.4
- 8.0 DEMONSTRATE LEADERSHIP AND COMMUNICATION SKILLS--The student will be able to:
- 8.01 Describe the aims and purposes of the FFA organization. LAC 3.3.3
 - 8.02 Identify opportunities available to FFA members. LAA 2.3.6
 - 8.03 Identify characteristics of a good leader. HEB 1.3.3, 2.3.4, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.8
 - 8.04 Participate in a cooperative leadership development activity or FFA Career Development Event. LAC 1.3.1, 3.3.1; HEC 2.3.5
 - 8.05 Identify the importance of effective communication skills. LAC 3.3.1, 3.3.2, 3.3.3; LAD 1.3.3; 2.3.1, 2.3.6
- 09.0 INTEGRATE THE USE OF SCIENCE, MATHEMATICS, READING, GEOGRAPHY, HISTORY, WRITING, AND COMMUNICATION IN AGRISCIENCE AND TECHNOLOGY--The student will be able to:
- 09.01 Apply basic mathematics operations to solve agricultural problems. MAA 1.3.4, 3.3.2, 3.3.3; MAB 3.3.1

- 09.02 Correctly use measuring devices and utilize measurements to solve agricultural problems. MAB 1.3.1, 1.3.3, 1.3.4, 4.3.1, 4.3.2; SCA 1.3.1, 1.3.2
- 09.03 Apply the scientific method to solve an agricultural problem. MAE 2.3.1, 3.3.1; SCH 1.3.4, 1.3.5, 1.3.6, 1.3.7
- 09.04 Prepare written and/or oral materials using correct English grammar. LAB 1.3.1, 1.3.2, 1.3.3; LAC 3.3.1, 3.3.2, 3.3.3
- 09.05 Identify the main idea in oral presentations and/or written materials. LAA 2.3.1; LAB 1.3.1, 1.3.2; LAC 1.3.1, 1.3.4; LAC 3.3.1, 3.3.2, 3.3.3
- 09.06 Locates, organizes, and interprets information from a variety of agricultural sources. LAA 1.3.4, 2.3.5, 2.3.6, 2.3.7
- 09.07 Describe the historical evolution of agriculture. MAE 1.3.1; SSA 1.3.1, 2.3.3, 2.3.6, 3.3.2, 3.3.3, 3.3.4, 4.3.1, 4.3.2, 4.3.3, 5.3.1, 5.3.2, 5.3.3, 6.3.1, 6.3.2, 6.3.3, 6.3.5

Listed below are the course outcomes that must be met to satisfy the requirements of Section 1003.4156, Florida Statutes.

Understanding the Workplace

- 01.0 Describe how work relates to the needs and functions of the economy, society, and personal fulfillment.
- 02.0 Describe the influences that societal, economic, and technological changes have on employment trends and future training.
- 03.0 Describe the need for career planning, changing careers, and the concept of lifelong learning and how they relate to personal fulfillment.
- 04.0 Describe how legislation such as the Americans with Disabilities Act and Child Labor Laws regulates employee rights.

Self- Awareness

- 05.0 Use results of an interest assessment to describe their top interest areas and relate to careers/career clusters.
- 06.0 Identify five values that they consider important in making a career choice.
- 07.0 Identify skills needed for career choices and match to personal abilities.
- 08.0 Demonstrate the ability to apply skills of self-advocacy and self-determination throughout the career planning process.
- 09.0 Identify strengths and areas in which assistance is needed at school.
- 10.0 Apply results of all assessments to personal abilities in order to make realistic career choices.

Exploring Careers

- 11.0 Demonstrate the ability to locate, understand, and use career information.
- 12.0 Use the Internet to access career and education planning information.
- 13.0 Identify skills that are transferable from one occupation to another.
- 14.0 Demonstrate use of career resources to identify occupational clusters, career

- opportunities within each cluster, employment outlook, and education/ training requirements.
- 15.0 Explain the relationship between educational achievement and career success.

Goal Setting and Decision-Making

- 16.0 Identify and demonstrate use of steps to make career decisions.
- 17.0 Identify and demonstrate processes for making short and long term goals.

Workplace Skills

- 18.0 Demonstrate personal qualities (e.g. dependability, punctuality, responsibility, integrity, getting along with others) that are needed to be successful in the workplace.
- 19.0 Demonstrate skills to interact positively with others.
- 20.0 Demonstrate employability skills such as working on a team, problem-solving and organizational skills.

Career and Education Planning

- 21.0 Identify secondary and postsecondary school courses and major area of interests that meet tentative career plans.
- 22.0 Identify advantages and disadvantages of entering various secondary and postsecondary programs for the attainment of career goals.
- 23.0 Demonstrate knowledge of varied types and sources of financial aid to obtain assistance for postsecondary education.
- 24.0 Identify inappropriate discriminatory behaviors that may limit opportunities in the workplace.
- 25.0 Develop a career and education plan that includes short and long-term goals, high school program of study, and postsecondary/work goals.
- 26.0 Describe how extracurricular programs can be incorporated in career and education planning.
- 27.0 Demonstrate knowledge of high school exit options (e.g., standard diploma, certificate of completion, special diploma, GED, etc.) and impact on post-school opportunities.
- 28.0 Describe high school credits and explain how GPAs are calculated.

Job Search

- 29.0 Demonstrate skills to complete a job application.
- 30.0 Demonstrate skills essential for a job interview.

