

**Florida Department of Education
CURRICULUM FRAMEWORK**

Program Title: Exploration of Agriscience, Technology and Environmental Sciences

Occupational Area: Agriscience and Natural Resources

Secondary

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| Program Numbers | 8100210 |
| CIP Number | 0101.9920EX |
| Grade Level | 6-9, 30, 31 |
| Length | 0.5 credits |
| Certification | AGRI @4 AGRICULTUR 1 @2 EXP AG @4 VOC AGRI @4 |

- I. **MAJOR CONCEPTS/CONTENT:** The purpose of this course is to give students initial exposure to the skills and attitudes associated with a broad range of career opportunities relating to agribusiness and natural resources, including job requirements and tasks performed, to assist students in making informed decisions regarding their future academic and occupational goals.

The content includes, but is not limited to, instruction that explores the tasks, training, education and physical requirements of a broad range of agribusiness and natural resources careers.

- II. **LABORATORY ACTIVITIES:** Hands-on laboratory experiences are an integral part of this course including the safe use of field hand tools, basic mechanics' hand tools and basic carpentry tools.

- III. **SPECIAL NOTE:** None

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

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| 01.0 | Apply knowledge and skills in the area of agricultural research and related professions. |
| 02.0 | Apply knowledge and skills in agricultural production. |
| 03.0 | Apply knowledge and skills in agricultural supplies, sales and services. |
| 04.0 | Apply knowledge and skills in agricultural mechanization and engineering. |
| 05.0 | Apply knowledge and skills in agricultural processing and marketing (distribution and marketing). |
| 06.0 | Apply knowledge and skills in environmental horticulture. |
| 07.0 | Apply knowledge and skills in forestry. |
| 08.0 | Apply knowledge and skills in environmental resources. |
| 09.0 | Apply knowledge and skills in agricultural education and communication. |
| 10.0 | Apply concepts of free enterprise and consumer economics. |

- 11.0 Apply knowledge of basic computer literacy.
- 12.0 Demonstrate the value of responsibility, good work habits, and planning for career opportunities in agriculture.
- 13.0 Apply leadership and communication skills.

**Florida Department of Education
STUDENT PERFORMANCE STANDARDS**

Program Title: Exploration of Agriscience, Technology and
Environmental Sciences

Secondary Number: 8100210

Postsecondary Number:

01.0 APPLY KNOWLEDGE AND SKILLS IN THE AREA OF AGRICULTURAL RESEARCH AND RELATED PROFESSIONS--The student will be able to:

- 01.01 Identify agricultural research systems/networks (USDA, Cooperative Extension Service, IFAS, private industry).
LA.A.3.2.6; LA.B.2.3.4
- 01.02 Select and study a problem that can be tested under controlled conditions to establish a hypothesis or to illustrate a known law.
SC.H.1.3.1; 1.3.2; 1.3.3; 1.3.4; 1.3.5; 1.3.6; 1.3.7; 3.3.1; 3.3.2; 3.3.3; 3.3.4; 3.3.5; 3.3.6; 3.3.7; MA.A.3.3.1; MA.E.3.3.1; 2.3.1; 2.3.2; VA.A.1.3.1; 1.3.2; 1.3.3; LA.A.2.3.5; 2.3.6; 2.3.7; 2.3.8; MA.B.1.3; 4.3
- 01.03 Identify areas and types of research in agriculture.
LA.A.2.3.5

02.0 APPLY KNOWLEDGE AND SKILLS IN AGRICULTURAL PRODUCTION--The student will be able to:

- 02.01 Produce an agricultural crop.
SC.F.1.3.1; 1.3.7; 2.3.1; 2.3.2; SC.D.1.3.4; HE.A.1.3.5; 1.3.7; HE.B.1.3.1; 1.3.2
- 02.02 Raise and care for an animal (livestock, aquaculture, specialty animal).
SC.F.1.3.1; 1.3.7; 2.3.1; 2.3.2; SC.D.1.3.4; HE.A.1.3.5; 1.3.7; HE.B.1.3.1; 1.3.2
- 02.03 Discuss the technology involved in the development of new crops and animal improvements.

03.0 APPLY KNOWLEDGE AND SKILLS IN AGRICULTURAL SUPPLIES, SALES AND SERVICES--The student will be able to:

- 03.01 Identify agribusinesses that provide supplies and services in the local area.
SC.H.3.3.4; 3.3.5; 3.3.6; 3.3.7; LA.C.3.3.1; 3.3.3; SA.A.2.3.6
- 03.02 Identify the recommended uses and safety precautions from a pesticide label.
LA.A.2.3.1
- 03.03 Participate in activities designed to demonstrate knowledge and skills in agricultural supplies, sales and services.
HE.A.1.3.2; 1.3.7; 1.3.8; LA.A.1.3.2; HE.B.1.3.1; 1.3.2; 1.3.5; 1.3.6; 2.3.1

04.0 APPLY KNOWLEDGE AND SKILLS IN AGRICULTURAL MECHANIZATION AND ENGINEERING--The student will be able to:

- 04.01 Use machines and tools safely.
HE.A.1.3.2; 1.3.7; 1.3.8; HE.B.1.3.1; 1.3.2; 1.3.5; 1.3.6;
2.3.1
- 04.02 Design a machine or tool to meet a need in agriculture.
VA.A.1.3.1; 1.3.3; 1.3.4
- 05.0 APPLY KNOWLEDGE AND SKILLS IN AGRICULTURAL PROCESSING AND MARKETING
(DISTRIBUTION AND MARKETING)--The student will be able to:
- 05.01 Identify processing and packaging techniques used on
agricultural products (irradiation, dehydration, vacuum
packing).
- 05.02 Prepare and process an agricultural product.
LA.A.2.3.5
- 05.03 Determine how processing affects the consumer cost of an
agricultural product.
LA.A.2.3.5; HE.B.1.3.1
- 05.04 Trace the storage, packaging and distribution of agricultural
products.
MA.B.1.3.1; 3.3.1; 3.3.2; 2.3.1; MA.A.2.3.2; SS.D.2.3.1; 2.3.2;
2.3.3
- 05.05 Discuss the difference in marketing strategies between
perishable and nonperishable commodities.
LA.B.2.3.1; SS.D.2.3.1
- 05.06 Develop a merchandising plan for an agricultural product.
LA.B.1.3.1; 1.3.2; 1.3.3; 2.3.3; LA.A.2.3.8; SS.D.1.3.3; 2.3.1;
MA.B.3.3.1; MA.E.3.3.1; VA.A.1.3.1; 1.3.3; 1.3.4
- 06.0 APPLY KNOWLEDGE AND SKILLS IN ENVIRONMENTAL HORTICULTURE--The student
will be able to:
- 06.01 Identify foliage and landscape plants.
SC.G.1.3.3
- 06.02 Propagate foliage and landscape plants (tissue culture,
cuttings, seeds).
SC.F.2.3.1
- 06.03 Compare landscaping methods (conventional vs. enviroscaping).
LA.A.2.3.8
- 06.04 Develop a landscape design.
VA.A.1.3.1; 1.3.2; 1.3.3; 1.3.4; MA.A.3.3.2; 3.3.3; MA.B.1.3.1;
MA.B.1.3.4; 2.3.1; 2.3.2
- 06.05 Maintain landscape plants.
SC.G.1.3.4; 1.3.5; SC.F.2.3.1; 2.3.2; 2.3.3
- 07.0 APPLY KNOWLEDGE AND SKILLS IN FORESTRY--The student will be able to:
- 07.01 Identify the major forest regions of the United States and
Florida.
LA.A.2.3.6; SS.A.6.3.2; SS.B.1.3.1
- 07.02 Describe the importance of forests and forest products.
LA.A.2.3.6
- 07.03 Identify trees of economic importance.

- LA.A.2.3.6
- 07.04 Describe how trees grow and reproduce.
SC.F.2.3.1; 2.3.2; 2.3.3; LA.A.2.3.6
- 07.05 Identify requirements necessary for establishing and maintaining forest trees.
LA.B.2.3.1; SC.G.1.3.2; 1.3.3; 2.3.1; 2.3.2; 2.3.3; 2.3.4;
MA.B.1.3.1; 1.3.4; SS.B.1.3.1
- 07.06 Use tools and techniques common to the forest industry.
HE.B.1.3.1; 1.3.2; 1.3.5; 1.3.6
- 08.0 APPLY KNOWLEDGE AND SKILLS IN ENVIRONMENTAL RESOURCES--The student will be able to:
- 08.01 Define terms relating to natural resources and environmental education (conservation, environment, ecosystem, ecotone, food chain, food web, flora, fauna, etc).
LA.A.1.3.3; LA.B..2.3.1; SC.G.2.3.1; 2.3.2; 2.3.3; 2.3.4
- 08.02 Identify methods or practices of conserving natural resources.
LA.B.2.3.1; SC.G.1.3.2; 1.3.3; 2.3.1; 2.3.2;.2.3.3; 2.3.4;
SC.D.1.3.1; 1.3.2
- 08.03 Demonstrate a method or practice of conservation (water conservation, composting, recycling, soil erosion control).
SC.D.2.3.2; SC.G.2.3.1; 2.3.2; 2.3.3; 2.3.4; LA.C.3.3.2; 3.3.3
- 08.04 Identify major ecosystems in Florida (wetlands, high hammock, mangrove, etc.).
SS.B.1.3.1; SC.G.2.3.2; 2.3.3; 2.3.4
- 08.05 Discuss the importance of the ecosystems to agriculture, society, and each other.
SC.G.2.3.1; 2.3.2; 2.3.3; 2.3.4; SC.H. 2.3.1; LA.C.3.3.2;
SS.B..2.3.9
- 09.0 APPLY KNOWLEDGE AND SKILLS IN AGRICULTURAL EDUCATION AND COMMUNICATION--
The student will be able to:
- 09.01 Discuss why people representing agriculture must be good educators and communicators (ex: to inform the general public about agricultural issues).
LA.C.3.3.2; FL.B.1.3.1; 1.3.4; SC.H.3.3.6
- 09.02 Identify methods by which the agricultural industry communicates with others (television, radio, magazines and journals, lobbyists).
LA.D.1.3.2; 2.3.4
- 09.03 Use effective teaching and/or communication skills to present a lesson, deliver a speech, or conduct a demonstration.
VA.A.1.3.1; 1.3.2; 1.3.3; 1.3.4; VA.B.1.3.2; 1.3.4; LLA.C.3.3.3
- 10.0 APPLY CONCEPTS OF FREE ENTERPRISE AND CONSUMER ECONOMICS--The student will be able to:
- 10.01 Describe how the free enterprise system is beneficial to agricultural producers and consumers.
LA.B.2.3.1; SS.D.1.3.1; 1.3.2; 1.3.3; 2.3.1; 2.3.2; 2.3.3.3
- 10.02 Define the law of supply and demand.
SS.D.1.3.1; 1.3.2; 1.3.3; 2.3.1; 2.3.2; 2.3.3

- 10.03 Describe how competition benefits the consumer.
SS.D.1.3.1; 1.3.2; 1.3.3; 2.3.1; 2.3.2; 2.3.3
- 10.04 Observe the market price of an agricultural commodity over a period of time.
LA.A.2.3.5; 2.3.6; 2.3.8; SC.H.3.3.7; MA.A.1.3.3; 4.3;
MA.B.3.3.1
- 11.0 APPLY KNOWLEDGE OF BASIC COMPUTER LITERACY--The student will be able to:
- 11.01 Describe how computers are used in agriculture.
SC.H.3.3.7
- 11.02 Identify types of computer programs and how they are used in agriculture (word processing, spreadsheets, graphics).
LA.A.2.3.6
- 11.03 Use a computer to assist in the completion of an agricultural project.
SC.H.3.3.7; LA.A.2.3.6; LA.B.2.3.4
- 12.0 DEMONSTRATE THE VALUE OF RESPONSIBILITY, GOOD WORK HABITS, AND PLANNING FOR CAREER OPPORTUNITIES IN AGRICULTURE--The student will be able to:
- 12.01 Identify attitudes and habits that help people achieve career success.
FL.B.1.3.1; LA.D.1.3.3
- 12.02 Discuss how poor attitudes and habits can be changed.
LA.D.1.3.3
- 12.03 Describe personality aspects to consider when choosing a career.
HE.C.1.3.7
- 12.04 Identify the basic steps in career planning.
LA.A.2.3.6
- 12.05 Assess present state of career plans.
LA.A.2.3.7
- 12.06 Develop basic career plan.
LA.A.2.3.7
- 13.0 APPLY LEADERSHIP AND COMMUNICATION SKILLS--The student will be able to:
- 13.01 Discuss the establishment and evolution of the FFA organization.
LA.C.3.3.3; SS.A.1.3.1
- 13.02 Identify the responsibilities of organizational officers.
LA.A.1.3.4
- 13.03 Demonstrate parliamentary procedure skills during a meeting.
LA.C.3.3.2; 3.3.3; LA.D.1.3.3
- 13.04 Participate on a committee which has an assigned task and report to the class.
LA.C.3.3.3; LA.D.1.3.3
- 13.05 Demonstrate effective communication skills.
LA.B.2.3.1; 2.3.2; LA.B.2.3.3; 2.3.4; LA.C.1.3.1; 1.3.2;
1.3.3; 1.3.4; 2.3.1; 2.3.2; 3.3.1; 3.3.2; 3.3.3; LA.D.1.3.3