Career Clusters Exploration through Agriscience

Clusters Exploration through Agriscience is a 140-hour course that provides students with an understanding of the sixteen national career clusters. Students are involved in classroom and/or laboratory activities in each of the sixteen clusters. Students should be allowed ample time to apply content in real world applications. The purpose of the course is to expose students to a variety of career opportunities to help them make an informed career decision.

Content standards for this course are not intended to serve as the entire curriculum. Teachers are encouraged to expand the curriculum beyond the limits of these content standards to accommodate specific community interests and utilize local resources. This course encourages critical thinking, use of the scientific method, integration of technology, development of student leadership skills, and application of knowledge and skills related to practical questions and problems. Safety concepts are integrated into instruction to the maximum extent possible.

Career and technical student organizations are integral, co-curricular components of each career and technical education course. These organizations serve as a means to enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and broaden opportunities for personal and professional growth.

Students will:

**Agriculture, Food and Natural Resources**

1. Describe career opportunities in the agriculture, food and natural resources cluster.

2. Distinguish between types of Supervised Agricultural Experiences (SAE), including exploratory, research, placement and entrepreneurship.
   * Describing advantages for selecting an appropriate SAE

**Architecture and Construction**

3. Describe the basics of mechanical drawing as they relate to the agricultural industry.

4. Interpret safety rules and regulations that apply to construction projects in the agriculture, food and natural resources cluster.
   * Demonstrating safe use of hand tools

**Arts, A/V Technology and Communications**

5. Discuss the importance and use of promoting agricultural products and services.
   * Identifying activities that may be used to promote agricultural products and services, including advertising, magazines, articles, and Web sites.

**Business, Management and Administration**

6. Describe agribusiness management techniques.
   Examples: planning, organizing, leading, coordinating
• Comparing agribusiness partnerships and corporations
• Examining the law of supply and demand as related to the agricultural industry
• Relating FFA leadership practices that can be utilized in a business setting

**Education and Training**

7. Contrast the benefits and challenges to choosing a career as an educator.
   • Evaluating instructional resources and materials based on rigor, relevance of content, grade level, reading level and needs of students for an agriscience education course.
   • Creating learning activities designed to meet instructional goals and objectives.
   • Creating a classroom budget utilizing allocated funds.
   • Explaining governmental and legal aspects of teaching
     Examples: teacher certification, tenure, accountability, liability

**Finance**

8. Identify sources for obtaining agricultural loans.

9. Examine opportunities and challenges associated with E-commerce related to the sale of agricultural products and services.

**Government and Public Administration**

10. Explain the impact of governmental policies and regulations on agribusiness management decisions.
    • Examining benefits of participating in government programs that supplement agricultural production

**Health Science**

11. Differentiate among veterinary services for various animals.
    • Identifying methods of disease prevention in animals
    • Discussing procedures for administering vaccinations, including topical, subcutaneous and intramuscular

**Hospitality and Tourism**

12. Contrast the economic value of purchasing a hunting lease, purchasing hunting land, and purchasing paid hunts.
    • Analyzing the skills necessary to be an outdoor guide.

**Human Services**

13. Identify job opportunities in rural sociology.

**Information Technology**

    • Explaining the environmental impact of precision farming practices.
Law, Public Safety, Corrections and Security

15. Discuss the impact of the Alabama Agriculture and Rural Crime Unit on farm theft and vandalism.
16. Demonstrate how to write a legal description for a tract of land.
   - Comparing the metes and bounds system, the US Public Land Survey system, and the lot and block survey system.

Manufacturing

17. Compare types of manufacturing facilities related to the forestry and timber industries.
   - Explaining thermal, mechanical, and chemical changes in manufactured materials

Marketing

18. Discuss the need for accurate market research needed to start an agricultural business.
19. Explaining the marketing of agricultural products and services.
   - Discussing the impact of the internet and social networking on marketing.

Science, Technology, Engineering and Mathematics

20. Discuss the impact of biotechnology on plant and animal genetics.
21. Discuss yield management data and the impact of variable rate irrigation.
22. Explain the impact of resource conservation practices on soil erosion.
   - Discussing the ecological impact of the dust bowl.

Transportation, Distribution and Logistics

23. Determine the role of transportation, distribution and logistics in the sale of agricultural commodities.
24. Determine the importance of small gasoline engines to the agricultural industry.
   - Explaining the theory of operation for two- and four-stroke engines.
   - Demonstrating proper routine maintenance on two- and four-stroke engines.