Alabama CTE

Advanced Agriscience

Foundational Standards	1	Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces. F.1
	3	Explore the range of careers available in the field and investigate their educational requirements, and demonstrate job-seeking skills including resume-writing and interviewing. F.3
	2	Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork. F.2
	4	Demonstrate digital literacy by using digital and electronic tools appropriately, safely, and ethically. F.4
	5	Participate in a Career Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork. F.5
	6	Participate in Supervised Agricultural Experiences and/or work-based, experiential, and service learning. F.6
Impact of Agriculture	1	Describe the impact of agricultural commodities on Alabama's livestock industry, including feed, animal products, and by-products. Examples: legumes, cotton seed, grains 1
Technology Applications	2	Assess agriculture record keeping systems utilizing electronic record-keeping software. Example: Agriculture Experience Tracker (AET) 2
	3	Compare and contrast various technologies that have enhanced the agriculture industry. Examples: microchipping, tagging, electronic control systems, drones, Global Positioning System (GPS), Geographic Information System (GIS) 3
Agribusiness Leadership	4	Relate opportunities within the agriculture industry to the three-circle model. Examples: working toward FFA awards and degrees, participating in Career/ Leadership Development Events (CDEs) and Supervised Agriculture Experience (SAEs) 4
Foods and Food Processing	5	Explain criteria for identifying and determining the quality of meat products. 5

Animal Science

6 **Distinguish among unique characteristics of prominent animal breeds. Examples: beef/dairy, swine, equine animals, goats, sheep, specialty animal breeds** 6

- a Identify economically important specialty animals and animal products. Examples: animals—alligators, cashmere goats, quail, ratites, pheasants, bees; animal products—specialty meats, cheeses, emu oil 6.A

7 **Compare various types of facilities and structures for domesticated animals.** 7

- a Design appropriate handling facilities. 7.A
- b Demonstrate the proper construction of various types of fencing. Examples: barbed wire, wooden, electric slick fencing, poultry netting, hog netting/fencing 7.B
- c Explain the importance of constructing and maintaining farm ponds and farm pond ecosystems. 7.C

8 **Identify anatomical and physiological characteristics of various livestock, including cattle, swine, sheep, equine animals, and poultry.** 8

9 **Compare methods of breeding and reproduction in livestock. Examples: artificial insemination (AI), embryo transplant; natural selection, cross-breeding, selective breeding** 9

10 **Describe the importance of animal biotechnology to humans, including medical, environmental, and production advancements. Examples: medical – synthesis of medicines environmental – animal disease resistance, pest control production – increased yield, disease-resistant ani** 10

- a Gather and share information about ways scientific research, consumer preferences, and advances in biotechnology influence animal production and development. 10.A

11 **Evaluate methods of disease prevention in livestock. Examples: parasite control, vaccination, sanitation** 11

12 **Identify drugs used to treat animal diseases.** 12

13 **Differentiate animal rights from animal welfare.** 13

- a Describe responsible ownership of animals. 13.A
- b List ways the use of animals in research has benefited humans and animals. 13.B
- c Describe laws governing the use of animals for research. 13.C

14 **Discuss the proper disposal of waste material associated with livestock. Examples: poultry litter, dead birds, composting materials** 14

Industrial Agricultural Technologies

15 Identify various types of building materials. 15

- a Contrast hardwoods and softwoods including grades and markings. 15.A
- b Calculate a bill of materials, linear feet, and board feet. 15.B
- c Compare and contrast the uses of different fasteners and adhesives. 15.C

16 Differentiate among different building construction systems, including floor systems, wall systems, and ceiling and roofing systems. 16