

Advanced Agriscience

Foundational Standards	<ol style="list-style-type: none"><li data-bbox="454 422 1511 556">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<li data-bbox="454 724 1511 840">2 Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork. F.2<li data-bbox="454 577 1511 693">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<li data-bbox="454 871 1511 955">4 Demonstrate digital literacy by using digital and electronic tools appropriately, safely, and ethically. F.4<li data-bbox="454 987 1511 1060">5 Participate in a Career Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork. F.5<li data-bbox="454 1092 1511 1165">6 Participate in Supervised Agricultural Experiences and/or work-based, experiential, and service learning. F.6
Impact of Agriculture	<ol style="list-style-type: none"><li data-bbox="454 1228 1511 1333">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	<ol style="list-style-type: none"><li data-bbox="454 1396 1511 1480">2 Assess agriculture record keeping systems utilizing electronic record-keeping software. Example: Agriculture Experience Tracker (AET) 2<li data-bbox="454 1501 1511 1617">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	<ol style="list-style-type: none"><li data-bbox="454 1680 1511 1816">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	<ol style="list-style-type: none"><li data-bbox="454 1879 1511 1915">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
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- 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
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- 8 Identify anatomical and physiological characteristics of various livestock, including cattle, swine, sheep, equine animals, and poultry.** 8
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- 9 Compare methods of breeding and reproduction in livestock. Examples: artificial insemination (AI), embryo transplant; natural selection, cross-breeding, selective breeding** 9
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- 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
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- 11 Evaluate methods of disease prevention in livestock. Examples: parasite control, vaccination, sanitation** 11
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- 12 Identify drugs used to treat animal diseases.** 12
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- 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
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- 14 Discuss the proper disposal of waste material associated with livestock. Examples: poultry litter, dead birds, composting materials** 14
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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
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16 Differentiate among different building construction systems, including floor systems, wall systems, and ceiling and roofing systems. 16