

Kentucky Middle School Standards

Level 1

Ag Systems

Animal Science

- OA1 Define key terminology related to animal science (maturity and gender of animals by species.)
- OA2 Understand the role, importance, and scope of livestock, companion, and exotic animals.
- OA3 Identify the basic needs of animals related to nutrition, housing, and care.

Plant Science

- OA4 Identify and describe major plant parts and their functions
- OA5 Determine the optimal conditions required for plant growth and germination.
- OA6 Explain the life cycle of plant growth (seed to plant to harvest)

Consumerism

- OA7 Describe and explain the impact of agriculture on daily life.
- OA8 Identify products and byproducts from livestock animals and plants.
- OA9 Identify the sources of different types of food, fiber, fuel, and natural resources.
- OA10 Describe the journey of food from farm to plate.
- OA11 Identify the top 10 agricultural commodities specific to Kentucky.
- OA12 Locate and map distinct agricultural commodities in Kentucky as they relate to geography.

Careers

- OA13 Understand the importance of having a career that meets student interests and life goals.
- OA14 Explore the broad job and career opportunities that can be found in the agricultural industry.

Leadership

- OA15 Explain the history, mission, and benefits of FFA.
- OA16 Communicate basic concepts about agriculture through speeches, writings, and/or presentations.

Kentucky Middle School Standards Level 2

Aq Systems

Animal Science

- OB1 Analyze the role and importance of different livestock production systems (beef, dairy, pork, equine, and small ruminant.)
- OB2 Differentiate 4-5 major animal breeds per species (beef, dairy, swine, poultry, equine, companion.)
- OB3 Identify the major components and functions of animal digestive systems (ruminant and non-ruminant.)

Plant Science

- OB4 Explain the requirements necessary for photosynthesis to occur.
- OB5 Identify the products and byproducts of photosynthesis.
- OB6 Explain the structure and function of the reproductive parts of a plant.
- OB7 Explore the areas of horticulture and crop production (floriculture, nursery/landscape, orchards/gardens, row crops, forages.)

Natural Resources

- OB9 Describe renewable and non-renewable natural resources and energy sources.
- OB8 Discuss how agricultural practices positively and negatively impact the environment and natural resources (cover crops, no-till, timber management, manure management, fish stocking.)
- OB9 Describe renewable and non-renewable natural resources and energy sources.
- OB10 Assess ecosystems in terms of sustainable habitat management.

Agricultural Power, Structural, and Technical Systems

- OB11 Perform basic measurements using a tape measure or ruler.
- OB12 Identify and safely operate basic hand tools (saw, level, screwdriver, hand tools, etc.)
- OB13 Identify common safety signs and terminology.

Consumerism

- OB14 Analyze the impact and changes throughout the history of American agriculture.
- OB15 Describe agricultural practices that ensure a safe and reliable food supply.
- OB16 Investigate and differentiate food labels (nutritional facts, health claims, production practices)
- OB17 Demonstrate safe methods for food handling, preparation, and storage in the home.
- OB18 Explain how factors such as culture, convenience, access, and marketing affect food choices.

Careers

- OB19 Demonstrate ability to wear appropriate PPE for the career site.
- OB20 Design and carry out a Supervised Agricultural Experience (SAE) program based on career goals and industry needs for each individual.
- OB21 Exhibit critical thinking and problem-solving skills to locate, analyze, and apply information in real-world situations.

Leadership

- OB22 Develop goals related to leadership, personal growth, and career success.
- OB23 Effectively communicate and collaborate with peers through reading, writing, and speaking.
- OB24 Seek and capitalize on self-improvement opportunities through school and community groups including the National FFA Organization.

Kentucky Middle School Standards Level 3

Aq Systems

Animal Science

- OC1 Recognize the signs and symptoms of poor animal health (diseases, parasites, disorders)
- OC2 Identify processes to prevent the spread of diseases, parasites, and disorders (sanitation, biosecurity, VCPR)
- OC3 Evaluate livestock or companion animals based on industry standards.
- OC4 Demonstrate safe handling techniques and proper restraint methods for animals.

Plant Systems

- OC5 Explain the harmful and beneficial effects of various organisms in relation to plant production (insects, microbes, fungi)
- OC6 Identify agricultural practices related to preventing plant pests and diseases.
- OC7 Analyze the life cycle of plants in relation to optimal growing conditions and seasons.
- OC8 Utilize the applications of art and design in agriculture/horticulture.

Agricultural Power, Structural and Technical Systems

- OC9 Identify and safely operate basic power tools (drill, skill saw, etc.) and/or equipment in the agriculture mechanics laboratory.
- OC10 Plan, estimate cost, and construct basic agricultural construction/mechanics projects.
- OC11 Discuss and demonstrate safety procedures and appropriate behavior while working in the agriculture classroom, laboratory, and/or worksite.

Agriscience

- OC12 Connect and apply scientific concepts in practical agricultural applications.
- OC13 Operate basic laboratory equipment and measurement devices (microscope, graduated cylinder, scale, etc.)
- OC14 Analyze technological trends and research in agriculture and natural resources.
- OC15 Employ the steps of the scientific method in conducting an investigation related to agriculture.

Consumerism

- OC16 Identify primal and retail cuts of meat.
- OC17 Demonstrate practices to prevent food-borne illnesses (food safety, cooking temperatures/thawing, cross-contamination, sanitation, allergens.)
- OC18 Evaluate consumer demand and its impact on agricultural production practices.

- OC19 Identify the four P's/marketing mix used in a marketing plan for agricultural products (product, place, price, promotion.)
- OC20 Identify how communication technology (social media, print news, television) impacts public perception of the agricultural industry and how these can be used to positively advocate for the industry.

Careers

- OC21 Explore basic employability skills (resumes, applications, cover letters, interview skills.)
- OC22 Formulate individual and business goals and objectives.
- OC23 Maintain basic records related to Supervised Agricultural Experience (SAE) programs, community involvement, and personal finance.

Leadership

- OC24 Develop a plan for an activity (FFA event, fundraiser, community service project, etc.)
- OC25 Demonstrate professional public speaking ability through a speech, demonstration, or presentation.
- OC26 Identify the components of a successful meeting (agenda, minutes, procedures.)