Animal Science
Kansas Agricultural Education

Hours Completed _____ Competencies Completed _____/83
Verification Signatures:

Student: _____ Date: _____

Instructor: _____ Date: _____

Name: _____

Instructor:_____ _____School Year:_____

Key to Integrated Competencies
(CD)- Career Development
(L)- Leadership
(E) - Experienced Based
(LK) - LifeKnowledge Lessons
(LA) – Language Arts
(M) - Math
(S) – Science
(SS) – Social Science

Circle to indicate level of competency achieved:
3 - Skilled-Works Independently **2** Limited skill-Needs assistance **1** -Skill undeveloped-but received instruction **0** -No exposure

Animal Science Orientation

3 2 1 0 1. Research a production system for a particular species (LA)
3 2 1 0 2. Project future systems of production for food and specialty animals.
3 2 1 0 3. Compare past systems to present systems.
3 2 1 0 4. Discuss livestock systems by regional, local and worldwide production.(SS)
3 2 1 0 5. Compare salaries within a production system and across systems with regard to experience, education and training. (CD)
3 2 1 0 6. Determine various levels of education required for careers in animal science (CD)
3 2 1 0 7. Classify livestock species
3 2 1 0 8. Identify food and non-food uses of livestock.

Anatomy and Physiology

3 2 1 0 1. Identify components and functions of common domestic animal skeletal structures. (S)
3 2 1 0 2. Identify parts and functions of the genital-urinary system. (S)
3 2 1 0 3. Identify parts and functions of the circulatory system. (S)
3 2 1 0 4. Identify parts and functions of the nervous systems.
3 2 1 0 5. Identify parts and functions of the respiratory system. (S)
3 2 1 0 6. Identify and explain functions of epithelial, connective, and muscular tissue. (S)
3 2 1 0 7. Identify the anatomy and physiology of various animal digestive systems and explain functions as affected by digestive components. (S)

Animal Health & Management

3 2 1 0 1. Demonstrate skills related to healthy livestock production including: vaccination, castration, heat detection, pregnancy checking, docking, clipping needle teeth, etc. (E)
3 2 1 0 2. Identify and demonstrate the proper use of livestock equipment and facilities. (E)
3 2 1 0 3. Describe hazards related to livestock production. (LA)
3 2 1 0 4. Take a field trip to a livestock producer or veterinarian to observe livestock handling procedures and practices. (E)
3 2 1 0 5. Investigate and describe animal behavior in response to internal and external stimuli changes. (LA)
3 2 1 0 6. Explain and identify the functions and parts of cells. (S)

Nutrition

3 2 1 0 1. Identify the six nutrients and explain the function of each. (S)
3 2 1 0 2. Interpret and understand a feed tag.
3 2 1 0 3. Identify common feed stuffs and classify them into their nutritional categories. (E)
3 2 1 0 4. Formulate balanced rations.(E) (LK HS 42)
3 2 1 0 5. Identify the advantages of various types of feed processing techniques and their importance to various species
3 2 1 0 6. Calculate cost of ration. (M)
3 2 1 0 7. Describe the nutritional impact of range and pasture management practices.

Genetics

3 2 1 0 1. Explain how genetics relates to improvement in efficient livestock production. (S)
3 2 1 0 2. Investigate and describe how DNA carries the genetic code. (S)
3 2 1 0 3. Describe how genes and chromosomes affect the genotype and phenotype of animals. (S)
3 2 1 0 4. Understand and explain mutations. (S)
3 2 1 0 5. Define heritability and discuss how genetics and environment influence the phenotype of animals. (S)

Livestock Marketing

3 2 1 0 1. List and differentiate between methods of marketing (auction alternatives, direct sale and terminal). (LA)
3 2 1 0 2. Identify marketing techniques and demonstrate proper calculation of

marketing problems such as futures, hedging, options and contract sale. (M)

3 2 1 0 3. List price factors affecting quality and yield grade.

3 2 1 0 4. Describe economic value of livestock to USA and Kansas. (SS, LA)

Current Animal Ag Issues

3 2 1 0 1. Identify and discuss the major issues impacting the livestock industry.(LK AHS 40) (LA)

3 2 1 0 2. Discuss different livestock production systems and their effect on the community and environment (SS)

3 2 1 0 3. Select, research and debate an animal issue, i.e. cloning, waste management, animal rights, organic farming, global warming (LA) (LK AHS 40)

Reproduction

3 2 1 0 1. Describe management care to maximize reproductive efficiencies. (LA)

3 2 1 0 2. Define terminology required to study and apply reproductive management.(LA)

3 2 1 0 3. Identify reproductive maturity stages of animals.

3 2 1 0 4. Discuss the stages of embryo and fetal development in animals. (S)

3 2 1 0 5. Analyze the process and impact of reproductive technology techniques like Artificial Insemination and Embryo Transplant (S)

Animal Products

3 2 1 0 1. Outline humane slaughtering and processing procedures.

3 2 1 0 2. Explain safe handling of meat, poultry and dairy products.

3 2 1 0 3. Differentiate between various U.S.D.A. grades for various animal related products.

3 2 1 0 4. Identify livestock inspection procedures (S, E)

3 2 1 0 5. Identify wholesale and retail cuts of meat and poultry (E)

Fish & Wildlife

3 2 1 0 1. Understand the relationship between ecology and agriculture (S)

3 2 1 0 2. Identify and manage wildlife resources

3 2 1 0 3. Explain problems related to endangered species (S)

3 2 1 0 4. Identify methods of aquaculture management and production.

Opportunities in the FFA

3 2 1 0 1. Research and present a 3-5 minute speech on an agricultural topic.(LK HS 90) (L, LA)

3 2 1 0 2. Serve on a POA committee.(LK AHS 45) (L)

3 2 1 0 3. Participate in a local chapter activity. (L)

3 2 1 0 4. Demonstrate how to conduct an engaging chapter meeting. (LK AHS 47) (L)

3 2 1 0 5. Identify and relate the benefits of FFA to his/her education and personal goals. (L)

SAE

3 2 1 0 1. Maintain records on income and expense.(LK MS 69) (M, CD, E)

3 2 1 0 2. Complete a cash flow statement. (M, CD, E)

3 2 1 0 3. Complete year-end records.(M, CD, E)

3 2 1 0 4. Complete a SAE packet.(LK AHS 53)

Wok Place Skills

Career Development

3 2 1 0 1. Compile a list of animal science career areas.(LK HS 31)

3 2 1 0 2. Compose a letter of application and personal resume for a selected animal science career. (LA) (LK HS 37)

3 2 1 0 3. Participate in mock interviews. (L, LA) (LK HS 38)

3 2 1 0 4. Develop a career path and identify the opportunities in that path. (CD)

3 2 1 0 5. Identify, investigate and target a career choice.(CD)

3 2 1 0 6. Apply for acceptance to further education in that career choice.(CD)

3 2 1 0 7. Apply for FFA awards upon graduation and post graduation.

Resource Management

3 2 1 0 1. Locate information and select the materials, tools, and equipment needed to perform an activity or build a project.(CD)

3 2 1 0 2. Determine cost, time, and resources needed to complete a task within an industry or occupation. (CD)

3 2 1 0 3. Explain the relationship between setting goals and managing money. (CD)

3 2 1 0 4. Identify fixed a flexible expenses. (CD)

3 2 1 0 5. Identify planned and impulse buying.

Oral Communications

3 2 1 0 1. Organize notes and ideas for formal, semiformal, and informal presentations.(L, LA)

3 2 1 0 2. Prepare and deliver a presentation appropriate to subject matter, purpose, and audience. (L, LA)

3 2 1 0 3. Use interviewing techniques to gather information. (L, LA, CD)

3 2 1 0 4. Participate in group communication activities.(L)

3 2 1 0 5. Incorporate visual media into a presentation. (L, LA)

3 2 1 0 6. Demonstrate concise impromptu speaking skills.(L)

3 2 1 0 7. Give oral directions.(L, LA)

3 2 1 0 8. Demonstrate job interview skills. (L, LA)