Agriscience
Kansas Agricultural Education

Hours Completed _____ Competencies Completed _____/125

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

Agriscience in Our World

3 2 1 0 1. Define and relate agriscience to agriculture, agribusiness, and renewable natural resources. (LA)

3 2 1 0 2. Connect biology, chemistry, and biochemistry to agriscience (S)

3 2 1 0 3. Analyze how the world population affects today's agriculture industry. (SS)

3 2 1 0 4. Identify significant historical developments in agriscience. (SS)

3 2 1 0 5. Examine important research achievements in agriscience and future research implications. (S)

3 2 1 0 6. Compare and contrast the methods of agriculture used in the local, county, state, nation, and world. (SS, LA)

3 2 1 0 7. Describe the importance of agriculture products in everyday life. (E, SS)

Opportunities in the Agriculture Education & FFA

3 2 1 0 1. Distinguish between and describe the three parts of the agricultural education model and how they work together. (LK HS 114) (LA)

3 2 1 0 2. Identify different areas and describe the importance of agriculture education and the agriculture education mission statement. (L, LA) (LK HS 110)

3 2 1 0 3. Create a timeline of important events in FFA history. (LA) (LK HS 109)

3 2 1 0 4. Identify and describe the FFA mission statement. (L, LA) (LK HS 110)

3 2 1 0 5. Recite and understand the FFA Creed. (E, LA) (LK HS 110)

3 2 1 0 6. Relate the FFA motto to daily life. (L, E) (LK HS 110)

3 2 1 0 7. List the requirements for FFA degrees. (L, E) (LK MS 70)

3 2 1 0 8. List the items of official dress required for your gender & the guidelines to abide by when wearing the jacket. (L, E) (LK HS 115)

3 2 1 0 9. List and describe the symbols of the FFA emblem. (L) (LK HS 111)

3 2 1 0 10. Identify the colors of the FFA. (L) (LK MS 65)

3 2 1 0 11. Research 3-5 potential Career Development Events. (CD)

Careers in Agriculture

3 2 1 0 1. List the career pathways for agriculture, food and natural resources (LK.HS.31). (CD)

3 2 1 0 2. Research a potential agriculture career based on your interests. (CD)

3 2 1 0 3. Develop a strategy to advance in that career (LK.HS.40). (CD, L)

Leadership and LifeKnowledge

3 2 1 0 1. Identify five characteristics of leadership (LK HS 1). (L)

3 2 1 0 2. Define the term "leadership" (LK.HS.1). (L)

3 2 1 0 3. Identify available leadership opportunities (LK.HS.1) (L)

3 2 1 0 4. Differentiate between a group and a team (LK.HS.65). (L)

3 2 1 0 5. Define teamwork and identify six benefits to working in teams (LK.HS.65). (L)

3 2 1 0 6. Understand and create personal goals using S.M.A.R.T. goals. (L, LA) (LK HS 45)

3 2 1 0 7. Describe the purpose and benefits of parliamentary procedure. (L, LA) (LK HS 81 & AHS 47)

3 2 1 0 8. Demonstrate five parliamentary procedure motions. (L, LA)

Public Speaking

3 2 1 0 1. Explain the relationship between communication and leadership. (L, LA)

3 2 1 0 2. List reasons why students should learn public speaking. (L, LA)

3 2 1 0 3. Create an outline and manuscript for an agricultural or leadership speech. (LA)

3 2 1 0 4. Demonstrate basic principles of speaking. (LA, L) (LK HS 90 & 91)

Supervised Agricultural Experience/Record Keeping

3 2 1 0 1. Explain the importance of record keeping (LK.MS.69). (LA)

3 2 1 0 2. Describe the different types of SAEs (exploratory, research, entrepreneurship and placement). (LK.HS.126) (CD)

3 2 1 0 3. Develop a plan for establishing an SAE

program (LK.HS.127). (LA)

3 2 1 0   4.   List proficiency award opportunities available through your SAE. (CD)
3 2 1 0   5.   Record income and expenses into a record keeping format. (M)
3 2 1 0   6.   Record current and non-current inventories. (M)
3 2 1 0   7.   Compare and contrast entries for personal and SAE inventories. (M)

Agribusiness Systems

3 2 1 0   1.   Compare the three segments of agribusiness. (CD)
3 2 1 0   2.   Identify examples of each segment and its role in the community. (CD, L, SS)
3 2 1 0   3.   Define entrepreneurship. (CD, LA)
3 2 1 0   4.   Identify methods of marketing. (CD, LA)
3 2 1 0   5.   Graph an agricultural example of supply and demand. (CD, SS)

Plant Systems

3 2 1 0   1.   Draw and label the major parts of plants. (S)
3 2 1 0   2.   Describe the major function of roots, stems, fruits and leaves. (S)
3 2 1 0   3.   Draw and label the parts of a typical root, stem, flower, and leaf. (S)
3 2 1 0   4.   Distinguish between sexual and asexual reproduction. (S)
3 2 1 0   5.   Draw and label the reproductive parts of flowers and seeds. (S)
3 2 1 0   6.   Compare the primary methods of asexual reproduction. (S)
3 2 1 0   7.   Identify the top five crops in your county and state.
3 2 1 0   8.   List the requirements for plant growth. (S)
3 2 1 0   9.   Illustrate the importance of photosynthesis. (S)
3 2 1 0   10. Compare and contrast monocots and dicots. (S)
3 2 1 0   11. Identify machinery used in forage, crop, horticulture, and landscape businesses. (CD)

Animal Systems

3 2 1 0   1.   Define domestic animals. (CD)

3 2 1 0   2.   List the basic needs of animals. (CD, S)
3 2 1 0   3.   Discuss the purposes of livestock and companion animals. (E, LA)
3 2 1 0   4.   Identify the importance of vaccinations. (CD, S)
3 2 1 0   5.   Describe characteristics of unhealthy animals. (CD)
3 2 1 0   6.   Compare animal digestive systems. (S)
3 2 1 0   7.   Identify and compare breeding management systems (reproduction). (S)
3 2 1 0   8.   Identify animal gender terms. (S)
3 2 1 0   9.   Identify major breeds of livestock. (CD)
3 2 1 0   10. Identify types of companion animals. (CD)
3 2 1 0   11. Describe trends in the animal science industry (such as the increase in poultry production). (CD)
3 2 1 0   12. Research an animal of your choice. (LA)

Power Structural and Technical Systems

3 2 1 0   1.   Explain and abide by the safety guidelines. (CD)
3 2 1 0   2.   Demonstrate safety practices in laboratory work. (E)
3 2 1 0   3.   Locate safety equipment and emergency exits in the agricultural mechanics laboratory. (E)
3 2 1 0   4.   Identify common hand and power tools. (CD)
3 2 1 0   5.   Demonstrate proper safety techniques for using hand and power tools. (CD, E)
3 2 1 0   6.   Identify the major parts of an arc welder. (CD)
3 2 1 0   7.   Select the proper electrode to use when welding. (CD)
3 2 1 0   8.   Demonstrate basic welding skills using the arc welder. (CD, E)
3 2 1 0   9.   Distinguish between different welding practices. (CD, E)

Natural Resource Systems

3 2 1 0   1.   List and describe major kinds of natural resources. (S)
3 2 1 0   2.   Define sustainable resources. (S)
3 2 1 0   3.   Compare and contrast conservation and preservation. (S)

3 2 1 0   4.   List types of alternative fuels and explain why they are important. (S)
3 2 1 0   5.   Illustrate and describe the food chain. (S)
3 2 1 0   6.   Identify wildlife habitats for native Kansas animals. (S)
3 2 1 0   7.   Research an endangered species. (S)
3 2 1 0   8.   List the four components of soil.(S)
3 2 1 0   9.   Identify the different soil classes. (S)
3 2 1 0   10. Compare sand, silt, and clay particles in a soil sample. (S)

Environmental Systems

3 2 1 0   1.   Discuss major types and sources of pollution. (S)
3 2 1 0   2.   Develop a plan of action to improve the environment. (LA)
3 2 1 0   3.   Illustrate the water cycle. (S)
3 2 1 0   4.   Discuss global warming and the greenhouse effect. (S)

Food Products and Processing Systems

3 2 1 0   1.   List the steps food must go through to from the producer to the consumer. (S)
3 2 1 0   2.   Identify food safety concerns. (S)
3 2 1 0   3.   Identify government agencies involved in food production. (S,SS)
3 2 1 0   4.   Discuss biotechnology advancements currently in the food industry. (S)
3 2 1 0   5.   Discuss future developments predicted for the food industry. (E)

Agricultural Issues

3 2 1 0   1.   Define agricultural industry terms (ex. Biotechnology, bio-terrorism, wind power). (CD, E)
3 2 1 0   2.   Identify and describe a technological advancement that has happened in the last five years. (LA, L)
3 2 1 0   3.   Research a current agriculture issue. (LA)
3 2 1 0   4.   Discuss nutritional needs of humans and the food groups they need. (S)
3 2 1 0   5.   Cite important relationships between land characteristics and water quality.

Wok Place Skills
Listening Skills

1.   Follows oral instructions:

Kansas Agricultural Education Course Profile, *Agriscience*

3 2 1 0   a. Listen for and identify key words.
3 2 1 0   b. Listen for words that identify a
              procedure.
3 2 1 0   c. Listen for steps or actions to be
              performed.
3 2 1 0   d. Listen for clues regarding the
              order or sequence in which a task
              is performed.
3 2 1 0 2. Distinguish fact, opinion, and
              inference in oral communication.
3 2 1 0 3. Interpret nonverbal cues (eye
              contact, posture, gestures).
3 2 1 0 4. Analyze a speaker's point of view.
3 2 1 0 5. Draw conclusions or make
              generalizations from another's oral
              communication.
3 2 1 0 6. Restate or paraphrase a
              conversation to confirm what was
              said.
3 2 1 0 7. Reduce barriers (or interference)
              that may impede effective listening.

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.
3 2 1 0 2. Determine cost, time, and resources
              needed to complete a task within an
              industry or occupation.
3 2 1 0 3. Explain the relationship between
              setting goals and managing money.
3 2 1 0 4. Identify fixed a flexible expenses.
3 2 1 0 5. Identify planned and impulse
              buying.

Oral Communications

3 2 1 0 6. Organize notes and ideas for formal,
              semiformal, and informal
              presentations.
3 2 1 0 7. Prepare and deliver a presentation
              appropriate to subject matter,
              purpose, and audience.
3 2 1 0 8. Use interviewing techniques to
              gather information.
3 2 1 0 9. Participate in group communication
              activities.

3 2 1 0 10. Incorporate visual media into a
              presentation.
3 2 1 0 11. Demonstrate concise impromptu
              speaking skills.
3 2 1 0 12. Give oral directions.
3 2 1 0 13. Demonstrate job interview skills.