

Agricultural Education School Year _____
Fundamentals of Agriculture
 Course Code # 5104 or 5154 Term: ___Fall ___Spring
 1 Credit _____

Student:	Grade:
Teacher:	School:
Number of Competencies in Course: 54	
Number of Competencies Mastered:	
% of Competencies Mastered:	

Standard 1.0 The student will evaluate the theories of animal science as they pertain to the following areas: animal's role in the ecology, animal anatomy and taxonomy, nutrition, facilities, basic genetics and reproduction and identification and functions of basic livestock breeds.

Learning Expectations		Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
1.1	Analyze the basic role of animals in the environment.			
1.2	Examine the concepts of basic animal anatomy and taxonomy including life's basic unit (cell) and the functions of the organ systems.			
1.3	Describe the classes of feed needed by animals.			
1.4	Determine the importance of waste management.			
1.5	Summarize the basic principles involved in reproduction and genetics.			
1.6	Discuss the types of disease and parasites involved in herd health.			
1.7	Recognize and describe the functions of the basic breeds of livestock.			

Standard 2.0 The student will summarize the basic principles involved in agribusiness including recordkeeping, leadership, principles of supply and demand and associated agribusiness careers.

Learning Expectations		Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
2.1	Illustrate the basic principles of supply and demand and their relationship to production.			
2.2	Summarize the basic principles involved in financial recordkeeping and accounting.			
2.3	Evaluate career opportunities in agriculture.			
2.4	Analyze the principles involved in reading a financial statement and planning a budget.			
2.5	Summarize the terminology that is associated with business.			
2.6	Utilize the principles involved in problem solving.			
2.7	Determine the roles of oral and written communication in agribusiness.			
2.8	Describe ways basic parliamentary law is used in business.			

Standard 3.0 The student will investigate the principles involved in soil structure and formation, plant taxonomy, soil conservation and water quality, soil and plant relationships and ecology.

Learning Expectations		Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
3.1	Examine the basic principles of soil texture, structure and formation.			
3.2	Analyze the relationship between soil, plants and nutrients.			
3.3	Evaluate the role of ecology in the environment.			
3.4	Assess the importance of soil, water and air quality.			
3.5	Outline the principles of seed germination.			
3.6	Relate plant process to plant health and growth.			
3.7	Differentiate between sexual and asexual reproduction.			

Standard 4.0 The student will utilize mathematical computations and agricultural lab equipment for basic agricultural construction.

Learning Expectations		Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
4.1	Apply general safety precautions involved in general shop work and tool use, metalworking and electricity.			
4.2	Categorize common tools, give the application of each and describe its maintenance.			
4.3	Evaluate the principles and theories involved in hot and cold metalwork including both arc and oxy-acetylene welding.			
4.4	Examine the principles of electricity, including wiring, electrical properties, identification of electrical materials and tools.			
4.5	Differentiate between 2-cycle and 4-cycle engines and their functions.			
4.6	Outline principles and fundamentals of internal combustion engines.			
4.7	Specify common building materials and estimate the cost of the materials.			
4.8	Use the formula involved in figuring areas of different geometric figures.			

Standard 5.0 The student will demonstrate academic integration in Fundamentals of Agriculture.

Learning Expectations		Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
5.1	Write a grammatically correct speech on the importance of agriculture in our society.			
5.2	Browse and select research materials from the Internet on career opportunities in agriculture.			
5.3	Write a report based on one of the first four standards in this course.			
5.4	Calculate square footage.			
5.5	Use proper formulas to calculate area.			
5.6	Calculate acreage.			
5.7	Use a measurement device to determine materials needed for a project.			
5.8	Calculate cost per unit.			
5.9	Convert Metric measurements to English.			
5.10	Differentiate plant parts.			
5.11	Classify plants based on their taxonomy.			
5.12	Differentiate organ systems of animals and give their functions.			
5.13	Balance chemical equations.			
5.14	Assess the effect of animals on the local ecology.			
5.15	Analyze different types of pollution.			
5.16	Assess the impact of ions on soil fertility.			
5.17	Examine the effects of different types of bonding on soil chemistry.			
5.18	Summarize the principles of elements as outlined on the periodic table.			
5.19	Analyze the effects of agricultural pollution on the environment.			

Standard 6.0 The student will develop premier leadership and personal growth in the area of Fundamentals of Agriculture.

Learning Expectations		Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
6.1	Demonstrate a positive work ethic and attitude.			
6.2	Demonstrate proper time management skills.			
6.3	Apply problem-solving skills.			
6.4	Describe career plans that develop critical life-long thinking skills and allow for life long learning.			
6.5	Demonstrate the ability to conduct a meeting in accordance with Robert's Rules of Order.			

Additional comments: _____