MAYWOOD PUBLIC SCHOOL
Agriculture Curriculum

Agriculture Philosophy

Agricultural Education will encourage cooperation and acceptance of all people, regardless of economic strata, ethnicity, or gender to create a climate of dignity and respect. Ag will promote the universality of work, and the manufacturing of a product, while utilizing a variety of world wide standards in discussion, demonstration, and practice.

Agricultural education encompasses the study of applied sciences (biology, chemistry, physics) and business management principles. One of the major purposes of agriculture education is to apply the knowledge and skills learned in several different disciples to agricultural situations.

Agricultural education goes beyond knowledge and skills development in that students are able to develop an understanding of the:
1) significance of agriculture in a global society, and the U. S. society in particular, though the application of scientific and business principles and problem solving strategies;
2) interdependency and relationships between the agricultural industry and other significant businesses interwoven with the entire economic and social structure of the community, state, nation, and world. This program places an emphasis on food systems, environmental issues and development of life skills.

The study of agricultural education focuses on the needs of individuals and groups and in developing individually satisfying and socially responsible knowledge, skills, and occupational values. Such a focus recognizes the value of and relies heavily on experience as the context in which knowledge and skills are learned. Agriculture education focuses on, but is not limited to, study in horticulture, forestry, conservation, natural resources, agricultural products, mechanics, sales and service, economics, marketing, and leadership development. Agricultural education programs assist with providing life-long learning opportunities in and about agriculture to everyone interested. Agriculture education provides opportunities to learn basic agricultural skills and knowledge, occupational training and retraining and professional growth and development.

Agriculture Exit Outcomes

By the end of the tweflth grades, students at Maywood Public Schools will be able to:

Plant Sciences
1. Understand plant structures and their functions.
2. Will be able to demonstrate team skills through problem solving activities.
3. Will gain practical experience in plant sciences through laboratory and field work.

Animal Sciences
1. Understand livestock body systems and the organs their functions.
2. Identify basic livestock maintenance and health.
3. Demonstrate team skills through problem solving activities.
4. Gain practical experience in animal sciences through laboratory and field work.

I = Introduced   D = Developing   M = Mastered

Natural Resources
1. Understand all classifications in the Animal Kingdom.
2. Understand the importance of soil and water and their relationship with one another.
3. Demonstrate team skills through problem solving activities.
4. Gain practical experience in natural resources through laboratory and field work.

Agricultural Strands

1. Plant Sciences
2. Animal Sciences
3. Natural Resources
4. Ag Leadership

Agriculture Curriculum Matrix

By the end of the twelfth grade, students at Maywood Public School will be able to….

1.   Plant Sciences - Horticulture and Floriculture and Agronomy

Identifier	Objective	Agriculture 6	Agriculture 7	Agriculture 8	Introduction to Agriculture	Animal Science	Plant Science	Natural Resources	Horticulture
1.1	List and describe the plant structures and their functions.	I	I	I	D		M		M
1.2	Explain the process of photosynthesis and respiration.			I	D		M		M
1.3	Explain the process of pollination.			I	D		M		M
1.4	Use plant taxonomy and classification.				I		M		
1.5	Explain steps of germination.	I	I	I	D		M		M
1.6	Compare and contrast dicot and monocot stems.				I		M		
1.7	Identify and explain seed structures and functions.	I	I	I	D		M		M
1.8	Identify different root systems.	I	I	I	D		M		M
1.9	Compare and contrast different soil mediums.	I	I	I	D		M		M
1.10	Explain soil composition.	I	I	I	D		M		M
1.11	Identify soil profiles.				I		M		
1.12	Use soil textural triangle.				I		M		

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Identifier	Objective	Agriculture 6	Agriculture 7	Agriculture 8	Introduction to Agriculture	Animal Science	Plant Science	Natural Resources	Horticulture
1.13	Explain plant responses to the environment.				I		M		
1.14	Demonstrate all types of asexual reproduction.	I	I	I	D		M		M
1.15	Understand plant hormones and their role in plant growth.						I, M		I, M
1.16	Differentiate between indirect and direct seeding methods.	I	I	I	M		M		M
1.17	Carry out proper steps of seedling transplant.	I, M	I, M	I, M	M		M		M
1.18	Identify various modified stems and roots.						I, M		I, M
1.19	Identify common plant insects and diseases.						I, M		I, M
1.20	Perform correct treatments to plant disorders.						I, M		I, M
1.21	Identify common household plant, flowers, trees, and shrubs.	I	I	I	I				I, M
1.22	Identify and use floral design tools and equipment.	I	I	I	I				I, M
1.23	Construct bud vases, centerpieces, corsages.	I	I	I	I				I, M
1.24	Construct floral bows.								I, M
1.25	Calculate bills using wholesale and retail prices on floral arrangements.				I				I, M
1.26	Apply the color wheel theory to floral design.				I				I, M
1.27	Understand basic design terms and principles.						I		I, M
1.28	Identify common grasses, forbs, shrubs of Nebraska.	I	I	I	I, M		I, M		
1.29	Identify common crops, weeds of Nebraska.						I, M		
1.30	Explain the relationship between water and soil.						I, M	I, M	I, M

2. Animal Sciences

Identifier	Objective	Agriculture 6	Agriculture 7	Agriculture 8	Introduction to Agriculture	Animal Science	Plant Science	Natural Resources	Horticulture
2.1	Identify common breeds of cattle, sheep, and cattle.	I	I	I	I	M			
2.2	Identify livestock structures.	I	I	I	I	M			
2.3	Select breeding/market animals based upon structural correctness.	I	I	I	I	M			
2.4	Interpret EPD to aid in breeding livestock selection.	I	I	I	I	M			
2.5	Evaluate breeding livestock based upon production scenarios.					I	M		
2.6	Evaluate balance and finish on market livestock.					I	M		
2.7	Identify the structures and functions of a male and female cattle reproductive system.					I, M			

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Identifier	Objective	Agriculture 6	Agriculture 7	Agriculture 8	Introduction to Agriculture	Animal Science	Plant Science	Natural Resources	Horticulture
2.8	Develop a set of evaluation notes over market and breeding livestock classes.				*I*	*M*			
2.9	Perform a set of oral reasons.					*I, M*			
2.10	Explain the role of the various reproductive hormones.					*I, M*			
2.11	Create a reproduction calendar and plan for a specific breeding scenario.					*I, M*			
2.12	Explain extrous synchronization systems.					*I, M*			
2.13	Demonstrate proper artificial insemination techniques.					*I, M*			
2.14	Identify various AI tools and equipment.					*I, M*			
2.15	Explain the different stages of the Estrous Cycle.					*I, M*			
2.16	Determine the falue of feedstuffs on a drymatter and as fed basis.					*I, M*			
2.17	Identify the basic nutrients livestock need.					*I, M*			
2.18	Compare and contrast difffernt food sources.					*I, M*			
2.19	Explain and identify nutritional deficiencies and symptoms.					*I, M*			
2.20	Read and identify the basic parts of a feed tag and determine its nutritional level.					*I, M*			
2.21	Critique feed labels based upon nutritional needs of certain species and their stage of development.					*I, M*			
2.22	Formulate a ration relative to the nutritional needs of a specific species.					*I, M*			
2.23	Differentiate between feed additives, supplements, forages, and concentrates.					*I, M*			
2.24	Discuss different feed sources available in Nebraska.					*I, M*			
2.25	Identify diseases common to our livestock industry.					*I, M*			
2.26	Identify external parasites common to our livestock industry.					*I, M*			
2.27	Collect fecal samples nad determine threshold levels of parasites.					*I, M*			
2.28	Discuss and determine withdrawal times on various vaccinations.					*I, M*			
2.29	Read and explain the parts of a vaccine label.					*I, M*			
2.30	Administer correct dosage and location according to product label.					*I, M*			
2.31	Perform proper shot administration steps.					*I, M*			
2.32	Correctly use a pistol grip syringe.					*I, M*			

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2.33	Evaluate the health of livestock by visual appearance.					I, M			
2.34	Discuss various vaccination plans for different livestock species.					I, M			
2.35	Determine Condition Scores of cattle.					I, M			
2.36	Calculate AUM requirements on range and pasture.				I	I, M			
2.37	Identify common pasture grasses and forbs.				I	I, M			
2.38	Name, locate and describe the structures and functions of the digestive system of cattle, swine, chicken and horses.					I, M			
2.39	Classify livestock as either ruminant or non-ruminant.					I, M			
2.40	Identify each bone in the skeletal system of cattle and swine.					I, M			
2.41	Classify bones as part of either the axial or appendicular skeletal system.					I, M			
2.42	Describe the anatomy of a bone.					I, M			
2.43	Describe and identify the fossas and processes on a bone.					I, M			
2.44	Identify the different classifications of bones.					I, M			
2.45	Describe the difference between primal and retail cuts of meat.					I, M			
2.46	Identify the different retail cuts of beef, swine, and lamb.					I, M			
2.47	Perform and calculate quality and yield grades on beef, swine, and lamb.					I, M			
2.48	Calculate the percent marbling of a rib-eye.					I, M			

3.   Natural Resources

Identifier	Objective	Agriculture 6	Agriculture 7	Agriculture 8	Introduction to Agriculture	Animal Science	Plant Science	Natural Resources	Horticulture
3.1	Classify land into the 8 land capability classes.							I, M	
3.2	Identify factors affecting soil formation.				I		I, M	I, M	
3.3	Determine Soil texture using various methods.						I, M	I, M	
3.4	Explain the relationship among food chains and food webs.							I, M	
3.5	Classify animals into the proper orders of the Animal Kingdom.							I, M	
3.6	Discuss wildlife habitats and ways to improve.							I, M	
3.7	Determine carrying capacities.							I, M	
3.8	Identify common fish in Nebraska.							I, M	
3.9	Identify common trees in Nebraska.							I, M	
3.10	Use a dichotamus key for tree identification.							I, M	

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3.11	Perform tests on the Medicine Creek to determine turbidity and water flow.							*I, M*	

4.   Ag Leadership

Identifier	Objective	Agriculture 6	Agriculture 7	Agriculture 8	Introduction to Agriculture	Animal Science	Plant Science	Natural Resources	Horticulture
4.1	Utilize correct parliamentary procedure.				*I*	*I*	*I*	*I*	
4.2	Describe the characteristics needed to develop desirable personal and social skills.				*I*	*I*	*I*	*I*	*I*
4.3	Explain group dynamics and conflict resolution.				*I*			*I*	*I*
4.4	Write, research, and give an informative and demonstrative speech.				*I*				
4.5	Employ leadership skills through a group activity.				*I*	*I*	*I*	*I*	*I*
4.6	Create a resume and references.				*I*				
4.7	Practice interviewing skills.				*I*				
4.8	Develop a cover letter and thank you letter.				*I*				
4.9	Utilize networking skills.				*I*	*I*	*I*	*I*	*I*
4.10	Complete SAE Record Book for freshman students.				*I*				
4.11	Analyze and evaluate the SAE program.				*I*				

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