Agriculture MS

Course Description:

The curriculum for this elective course is developed from the Wisconsin Standards for Agriculture, Food and Natural Resources. Students will be exposed to and practice skills related to: (even years) animal science, small animals as pets, plant science, and food science; (odd years) careers in agriculture, agriculture issues, natural resources, and science and technology in agriculture. Students will learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions, and learning. Grades are determined by quizzes, tests, projects and daily work. The information in this course overview outlines what students should understand and be able to do by the end of the semester.

Mastery Standards:

Even Years:

Students will think and work creatively to develop innovative solutions to problems and opportunities. (4C1)

Students will communicate and collaborate with others to accomplish tasks and develop solutions to problems and opportunities. (4C3)

Students will examine the components, historical development, global implications and trends of the animal systems industry. (AS1)

Students will classify, evaluate, select and manage animals based on anatomical and physiological characteristics. (AS2)

Students will provide for the proper health care of animals. (AS3)

Students will prepare and implement animal handling procedures for the safety of animals, producers and consumers of animal products. (AS6)

Students will apply safety principles. (FPP2)

Students will apply knowledge of plant classification, anatomy and physiology to the production and management of plants. (PS1)

Students will prepare and implement a plant management plan that addresses the influence of environmental factors, nutrients and soil on plant growth. (PS2)

Odd Years:

Students will think and work creatively to develop innovative solutions to problems and opportunities. (4C1)

Students will formulate and defend judgments and decisions by employing critical thinking skills. (4C2)

Students will communicate and collaborate with others to accomplish tasks and develop solutions to problems and opportunities. (4C3)

Students will consider, analyze and apply an awareness of self, identity and culture to identify skills and talents. (CD1)

Students will identify and apply employability skills. (CD4)

Students will explain interrelationships between natural resources and humans necessary to conduct management activities in natural environments. (NR1)

Students will apply knowledge of natural resources to production and processing industries. (NR3)

Unit	Description of Unit and Learning Targets
Unit Title: Animal Science Essential Questions: ● What is animal science? ● How is animal science a global economic system? ● Why is animal science considered a dynamic process? ● How is the development of life skills supported by animal sciences? ● In what ways do animals affect the quality of life?	Students will……. Learning Targets: ● Work creatively with others to develop solutions and products. ● Work collaboratively with others. ● Identify domesticated animals used in production agriculture and pets by sight and/or sounds. ● Recognize products and the animals that the products are derived from. ● Identify body parts of domestic food animals and pets. ● Explain basic care of animals and how it affects their health. ● Identify photos of equipment used to keep animals healthy. ● Explain the importance of biosecurity to the animal industry.
Unit Title: Plant Science Essential Questions: ● What are plant and animal life cycles?	Students will... Learning Targets: ● Work creatively with others to develop solutions and products. ● Work collaboratively with others. ● Classify agricultural plants according to taxonomy systems. ● Apply knowledge of plant anatomy and the functions of plant structures to activities associated with plant systems. ● Apply knowledge of plant physiology to plant systems. ● Determine the influence of environmental factors on plant growth.
Unit Title: Food Science Essential Questions: ● How does food get from a producer to a consumer? ● What preventative measures can be taken to prevent foodborne illness?	Students will... Learning Targets: ● Work creatively with others to develop solutions and products. ● Work collaboratively with others. ● Describe the dangers associated with foodborne illness. ● Explore the sensory aspects of various foods (taste, touch, smell, etc.).
Unit Title: Careers in Agriculture Science Essential Questions:	Students will... Learning Targets: ● Work creatively with others to develop solutions

- What career opportunities are available in agriculture and natural resources? - How can I use my strengths and weaknesses to help select a career? - How can I start a Supervised Agricultural Experience (SAE) program? - What are the benefits of a SAE and what type of SAE program is right for me? - Why is it important to start planning my career path now?	- and products. - Work collaboratively with others. - Assess personal strengths, aptitudes and passions related to potential future careers. - Identify long and short term goals. - Use technology to assist in career exploration and job seeking activities. - Interact with others in a respectful and non-judgemental manner.
Unit Title: Agriculture Issues Essential Questions: - How can optical illusions affect my perception of items? - What are the ethical dilemmas people eating meat might face?	Students will... Learning Targets: - Work creatively with others to develop solutions and products. - Work collaboratively with others. - Develop effective resolutions for a given problem, decision or opportunity using available information. - Develop a resolution for a new situation using personal knowledge and experience.
Unit Title: Natural Resources Essential Questions: - What are natural resources? - Why are natural resources important for sustaining plant and animal life cycles? - What is conservation and how does this affect the preservation of our natural resources? - What is a renewable resource and why is a forest a good example of this?	Students will... Learning Targets: - Work creatively with others to develop solutions and products. - Work collaboratively with others. - Identify natural resources. - Differentiate between renewable and nonrenewable natural resources. - List and describe differences in trees. - Compare and contrast wildlife species. - Demonstrate how to use maps to identify directions and features, and calculate actual distance. - Identify uses and products obtained from wildlife and aquatic species. - Identify recreational uses of natural resources.