

School District of Loyal
Dairy Science
Grade: 9-12
Student Learning Targets



Class: Dairy Science		
Students who demonstrate understanding can:		
WI State Standards	Standard:	Student Learning Targets:
AFNR.AS.1	Students will examine components, applications, historical development, global implications, future trends, and career opportunities of animal systems.	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Describe how technology in the dairy industry has changed overtime • Research a career in the dairy field they would enjoy
AFNR.AS.2	Students will classify, evaluate, select and manage animals based on anatomical and physiological characteristics.	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Identify major anatomical structures of dairy cattle, including the digestive, reproductive, and mammary system • Compare anatomical differences among common dairy breeds and explain how these differences influence production traits. • Classify dairy cattle based on breed characteristics, body structure, and functional conformation.
AFNR.AS.3	Students will apply principles and practices of effective animal health care.	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Identify normal health indicators in dairy cattle, including temperature, respiration, heart rate, rumen activity, and behavior. • Recognize early signs of illness, injury, or abnormal behavior in dairy animals. • Follow protocols for maintaining a clean, safe, and low-stress environment for dairy cattle. • Demonstrate proper milking hygiene practices to prevent mastitis and other udder health problems.

AFNR.AS.4	Students will design and provide proper animal nutrition to achieve desired outcomes for performance, development, reproduction and/or economic production.	<p>Students will be able to:</p> <ul style="list-style-type: none"> ● Identify the major nutrient categories (carbohydrates, protein, fat, vitamins, minerals, and water) required by dairy cattle. ● Classify common dairy feedstuffs (forages, grains, byproducts, supplements) and describe their nutritional value. ● Balance a ration for protein needs
AFNR.AS.5	Students will apply principles of animal reproduction to achieve desired outcomes.	<p>Students will be able to:</p> <ul style="list-style-type: none"> ● Identify the major reproductive organs of male and female dairy cattle and explain their functions. ● Model the steps in pregnancy palpation of dairy cattle ● Describe the estrous cycle of a dairy cow, including timing, hormone changes, and behavioral signs of heat.
AFNR.AS.6	Students will prepare and implement animal handling procedures for safety of animals, producers and consumers of animal products.	<p>Students will be able to:</p> <ul style="list-style-type: none"> ● Identify normal and abnormal dairy cattle behavior and explain how behavior influences safe handling. ● Explain the flight zone, point of balance, and other cattle handling principles to reduce stress and risk. ● Evaluate dairy facility features (alleys, parlors, holding pens, stalls) for safety, comfort, and efficiency.
AFNR.AS.7	Students will select animal facilities and equipment providing safe and efficient production, housing, and handling of animals.	<p>Students will be able to:</p> <ul style="list-style-type: none"> ● Explain how facility design impacts cow comfort, production efficiency, and overall herd health. ● Identify the essential components of dairy cattle housing, including stalls, ventilation, flooring, lighting, and bedding.
AFNR.AS.8	Students will analyze environmental factors associated with animal production.	<p>Students will be able to:</p> <ul style="list-style-type: none"> ● Identify environmental factors that influence dairy cattle health and productivity ● Explain how heat stress affects milk production, reproduction, and cow behavior.