

Balanced Bites

A lesson on healthy nutrition for your students through a livestock lens.

Learning Objectives:

- Identify basic nutrient groups (carbs, protein, fiber, fats, vitamins & minerals) and explain the role of each nutrient group.
- Understand that both humans and livestock need balanced nutrition to stay healthy.
- Describe how livestock nutrition impacts the animal products we consume.
- Learn how TMR supports livestock nutrition to create a balanced “human TMR” snack mix.

Vocabulary:

- Nutrients
- Balanced diet
- Carbohydrates
- Protein
- Fiber
- Fats
- Vitamins & Minerals
- TMR (Total Mixed Ration)

Materials:

- Individual snack cups
- Snack bowls
- Spoons
- Gloves
- Snack mix ingredients
- “Build your TMR” worksheet

Introduction (10 mins):

- Hook: What’s your favorite food? Have students answer.
 - If that was the only food you ate, would you be very healthy? No!
- Instead, we eat lots of different things to make a balanced diet. We’re going to talk about what a balanced diet is and why it's important.
- So, how would this relate to livestock, like dairy cows?
 - They also need to eat a balanced diet. We’re going to talk about what that is and why it’s also important.

Presentation (20 mins):

- Basic nutrients & their role
 - Carbs = quick energy, protein = muscles, fiber = digestion, fats = energy storage, vitamins & minerals = support

Human Nutrition

- Give some examples of food from each nutrient group.
- Have students match the food to a nutrient group.
- Identify the nutrients on different plates and if they make a balanced meal.
 - No food is “good” or “bad” - it's about what nutrients they provide. Too much or too little? Does it contribute to a balanced meal?
- Emphasize that we need all nutrient groups for “balanced bites.”

Dairy Cow Nutrition

- Give examples of cow feed from each nutrient group, emphasizing that even though the food is different, the nutrients are the same.
- Introduce TMR
 - Total mixed ration: all nutrients mixed together so cows get a balanced bite every time
- What would happen if cows didn't get a balanced diet? How would that affect us?
 - Explain how livestock health affects the nutrient value in the products we get from them.
 - Dairy cows & milk, cheese, butter, yogurt; chickens & eggs, meat; beef cattle, pork from pigs, etc.
 - Key takeaway: If our livestock isn't healthy -> we can't be as healthy

“Human TMR” Activity (15 mins):

- Set out separate bowls of potential TMR ingredients. Have students identify what nutrient group each ingredient belongs to & what role it plays.
 - Recommended ingredients: almonds & pepitas (protein), cheerios & whole grain goldfish (carbs), dried berries & banana chips (vitamins & minerals), shredded coconut & dark chocolate chips (fats)
- Pass out the “Build your TMR” worksheet. Have students plan what they want to put in their TMR to make it balanced. Ensure they have at least one ingredient for each nutrient group, then they can build.
- Give students individual cups. Have students use spoons to build their TMR. Have them mix it up & enjoy their balanced bites.

Wrap-up (5 mins):

- Humans need to eat a variety of foods to get all the essential nutrients.
- Even though the food is different, humans and livestock need the same kinds of nutrients to stay healthy.
- Remember, healthy nutrition is all about balanced bites!