Dairy

*Lesson Plan for Grade 5 , English Language Arts*

*Prepared by NAITC*

*Modified by Mississippi State University, School of Human Sciences*

*for Mississippi Farm Bureau Federation - AITC*

# OVERVIEW & PURPOSE

# In this lesson, students will learn about the numerous career opportunities involved in the dairy industry. They will also practice real world math problems related to specific careers within the industry.

# EDUCATION STANDARDS

**Mississippi College-and-Career Readiness Standards:**

SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly.

ELA-RI 5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

**NALOs**

T3.3-5 f Identify careers in food, nutrition, and health

T5.3-5 d Explain the value of agriculture and how it is important in daily life

# OBJECTIVES

* Students will be able to list careers related to the dairy industry.
* Students will be able to compare and contrast different types of careers related to the dairy industry.

# MATERIALS NEEDED

* [Milk Makin' Math Activity Book](https://cdn.agclassroom.org/media/uploads/2015/02/02/Milk_Makin_Math.pdf), 1 per student
* Large piece of paper & markers, 1 per group
* One-dollar bill, 1 placed at station 4
* Checkbook or sample of a check, 1 placed at station 4
* One or more photos showing the inside of a milk barn, 1 or more placed at station 2
* Feed Samples (optional), 1 or more placed at station 1
* Syringe with needle removed, 1 placed at station 3
* Digital Scale, 1 placed at station 6
* Gallon of milk, 1 placed at station 6

Essential Links:

* [Milk Makin' Math Activity Book](https://cdn.agclassroom.org/media/uploads/2015/02/02/Milk_Makin_Math.pdf)
* [Milk Makin' Math Key](https://cdn.agclassroom.org/media/uploads/2015/02/02/Milk_Makin_Math_KEY.pdf)

# Lesson Set Up:

Interest Approach

* Prepare all of the necessary materials for each student or each group of students
  + Markers
  + A large white sheet of paper

Activity 1:

* Have each station set up with one table and chairs for each student in the group
* Have copies made of the [Milk Makin' Math Activity Book](https://cdn.agclassroom.org/media/uploads/2015/02/02/Milk_Makin_Math.pdf) for each student
* Hand out an index card to each student

# Vocabulary

**accountant:** an accountant keeps records of business-related financial transactions. They record business expenses and calculate the profit earned.

**dairy farmer:** a farmer who specializes in raising dairy cattle, specifically for milk and/or cheese products

**dairy nutritionist:** an animal health professional who specializes in the nutritional needs of dairy cows. Nutritionists recommend the best diets for cows and monitor how cows respond to their feeding program.

**marketing manager:** a marketing manager advertises, promotes and sells milk to distributors, processing plants, and, eventually, to the public

**safety inspector:** a safety inspector helps prevent harm to workers, property, the environment and the general public. Safety inspectors make sure the dairy products we consume are safe and healthy to eat. They also make sure the food we eat is free from germs and stored at the correct temperature.

**veterinarian:** a doctor who treats animals

# Ag Facts:

* 8,500 milk cows in Mississippi in 2020.
* 65 Grade A dairy herds in Mississippi in 2020.

# Background Information for Teacher:

This lesson is part of a series called, *Milk Matters: Discovering Dairy*. These lessons introduce students to the history, production, nutritional value and economic significance of the dairy industry. Other related lessons include:

* [Cowabunga! All About Breeds](https://agclassroom.org/matrix/lesson/248/)
* [Sun, to Moo, to You](https://agclassroom.org/matrix/lesson/251/)
* [The Ultimate Efficient Recycler](https://agclassroom.org/matrix/lesson/254/)
* [A Day Without Dairy](https://agclassroom.org/matrix/lesson/255/)

Dairy careers require a variety of skills, including skills in science, technology, reading, writing and mathematics. This lesson features real-life math challenges that individuals working in the dairy industry face everyday. Students will make important connections between the math problems completed in school and the math skills essential to employment. Students will study the career fields of a **safety inspector, marketing manager, accountant, veterinarian, and dairy nutritionist.**

More background information on the dairy industry can be found [here.](https://cdn.agclassroom.org/media/uploads/2015/06/02/Dairy_Background_Information.pdf)

# LEARNING PROCEDURES

Interest Approach:

1. Draw! Give students markers and a large white sheet of paper, and three minutes to brainstorm dairy-related careers. Working in groups, students draw as many images as possible representing careers found in a dairy.
2. Encourage students to share their drawings with the entire class. Create a master list of careers on the board and brainstorm important skills these individuals need to be successful with their jobs.
3. Discuss and emphasize how math skills are essential for all jobs, including work on a dairy.

Procedures:

1. For this lesson, groups of students (determined by the teacher) will rotate between six different learning stations. Each station should be set up with one table and chairs for each student in the group. Each station will focus on a different dairy career. Students will move around the room, completing math challenges found in each student’s *“Milk Makin’ Math”* Activity Book. Set up each of the stations as follows:

* **Station 1: Dairy Nutritionist**   
  Visual: Samples of hay, dairy feed components. With each sample, include a label and definition
* **Station 2: Dairy Farmer**Visual: One or more photos showing the inside of a milking barn.
* **Station 3: Veterinarian**Visual: A syringe with the needle removed.
* **Station 4: Accountant**Visual: A checkbook to represent expenses and a dollar to represent profit. Using index cards, define and label each as profit or expense.
* **Station 5: Safety Inspector**Visual: A large weather thermometer that shows temperature in degrees Fahrenheit.
* **Station 6: Marketing Manager**Visual: Place one gallon of milk on a digital scale.

1. Instruct students who complete stations early to illustrate the cover of their activity book.
2. Review the answers to the problems with the entire class. Conclude the lesson with a class discussion on:

* What are your impressions on the amount of math needed to be successful in your career?
* Which career would you enjoy most? Why?
* Which job is the most difficult? Why?
* Which job is the easiest? Why?

1. On an index card, students write down one fact they learned about one of the possible dairy careers. Students will use this “ticket” to be excused for lunch, recess or a nutrition break.

**Concept Elaboration and Evaluation**

After conducting these activities, review and summarize the following key concepts:

* There are many careers related to dairy farming.
* Agriculture is responsible for producing the most important necessities for daily living including food, fiber, and shelter.
* Dairy farms produce milk, but they also provide many different jobs.

# Additional Learning Procedures

To help students review and elaborate more about dairy, try using the [“I used to think.. Now I think…”](https://drive.google.com/file/d/142oXY1ueLk_wsOe_lB2itT9uZZhRbKaD/view?usp=drive_link) method to allow students to think deeper and make new connections.

Additional texts to Include:

[A Big Cheese for the White House: The True Tale of a Tremendous Cheddar](https://agclassroom.org/matrix/resource/1151/)

[Clarabelle](https://agclassroom.org/matrix/resource/11/)

[It’s Milking Time](https://agclassroom.org/matrix/resource/1260/)



Source: <https://www.agclassroom.org/teacher/matrix/>

*The MS Farm Bureau Women’s Committee has additional resources to help aid you in this lesson with a lifesize cow prop, please contact Dedra Luke at 601-977-4169 to learn more!*

*For more information and additional lessons visit*

*https://msfb.org/ag-in-the-classroom/lesson-plans/.*