

GROW YOUR PALS PROGRAM GUIDE



THE NATIONAL FFA MENTORING PROGRAM

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LESSON 30

Handy Milking

Unit:
ANIMAL SCIENCE

PRECEPTS

- F. Continuous Improvement
- F4. Adapt to emerging technologies

NATIONAL STANDARDS

NSS-USH.K-4.1 Living and Working Together in Families and Communities, Now and Long Ago



Lesson Type:
One-on-one

STUDENT LEARNING OBJECTIVES

As a result of this lesson, the student will ...

1. Compare past and present methods of milking cows.
2. Show the steps milk goes through from the producer to the consumer.





TIME

Instruction time for this lesson: **20 minutes.**



RESOURCES

How it's Made: Milk

<http://www.youtube.com/watch?v=kIbVwE5zb1Y>

Murphy, Andy. Out and About at the Dairy Farm. Bloomington, Mn. Picture Window Books, 2003.



TOOLS, EQUIPMENT AND SUPPLIES

- ✓ latex rubber gloves
- ✓ straight pins or safety pins
- ✓ clothesline
- ✓ milking pail
- ✓ stool or chair
- ✓ water
- ✓ PALS.30.AS.A – 1 per student



KEY TERMS

The following terms are presented in this lesson and appear in ***bold italics***:

Hand-milking
milking machines

INTEREST APPROACH



Have you ever wondered how our food gets to us? Where it comes from? How it is processed? Today we are going to explore milk, where it comes from and why it is good for us. Brainstorm all of the food items you can think of that come from milk.

GO!

You can use this as a discussion starter or actually have your mentee write down a list. Provide about a minute for brainstorming.



Some of my favorite foods--milk, cheese, ice cream and yogurt—come from milk. But how do we get milk in the first place?

Allow for open discussion time.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

OBJECTIVE 1. | Compare past and present methods of milking cows.



Milk has been used for human consumption for thousands and thousands of years. Before modern conveniences like electricity and running water, farmers were milking cows by hand. There were no machines or robotics, just the farmer, who milked every morning and evening regardless of the weather.

With your mentee, follow the steps provided to set up the milking demonstration. You will need to attach your clothesline to something secure to hang your glove “udder,” and then allow the student to milk the cow.



How would you like to milk a cow today? Great! But first let’s find out how they used to milk cows. First we will hang the clothesline that will act as the cow’s body. Next, we will fill the glove with milk just like the milk in a cow’s udder and attach it to the clothesline. Grab a stool and sit down like a farmer. I will poke this pin into the glove; cows naturally have a small opening in their teat to allow the milk to flow out. Now, it’s time to milk.

Allow your mentee to try to milk the water out to the best of his or her ability. Once your mentee has tried a few times, you should demonstrate how to milk a cow.



The most efficient way to milk a cow is to grasp at the top of the teat and strip out the milk into the bucket. Then the milk will drop again, and you repeat this process until the udder is empty.

I. Methods of Milking

A. **Hand-milking** – using pressure to push milk out with the hand.

B. **Milking Machines** – using mechanical suction to remove the milk.



Why do you think they designed machines to milk the cows rather than milking by hand?

Anticipated answers: hand-milking takes more time, more people, etc.

OBJECTIVE 2. | Show the steps milk goes through from the producer to the consumer.



Now that your mentee understands how cows are milked, we will review how the milk gets to the store where it is purchased.



Where do you get your milk?

Families a long time ago used to raise and care for dairy cows to get their own milk. They had to feed the cows and milk them every morning and night, no matter the weather or what was going on. The dairy cows had to be milked twice daily or they could get sick. Now most of us purchase milk from the store. So how do you think the milk gets from the dairy farm to the store?

Present PALS.30.AS.A for your mentee to complete while you go over the following steps.

II. Steps from the farm to the store

1. The PRODUCER milks the cows.
2. Milk from the cows is STORED at the farm.
3. The stored milk is TRANSPORTED in a truck.
4. The milk is PROCESSED and packaged into jugs.
5. The milk is TRANSPORTED to stores.
6. CUSTOMERS purchase the milk.



Why do you think the milk has to go through so many steps to get to you?



Anticipated Answers: The cows are a long way from here; milk has to be cleaned and put into jugs etc.



REVIEW / SUMMARY

Use the Eyewitness News Moment to interview your mentee about how milk gets from the farm to the store.



Today you have become an expert on how milk is produced. I am going to be a news reporter and will interview you, the milk expert, on how milk gets from the farm to the store.

Ask questions related to today's information, and use the activity sheet for ideas if needed.

APPLICATION



Large Group Suggestion: *As a class, watch the You Tube video “How it’s Made: Milk.”*



Continued One-on-One Discussion/Activity: *Read the book “Out and About on a Dairy Farm.”*



EVALUATION

Have the students draw a map that shows how the milk gets from the farm to the store.

ANSWERS TO PALS.30.AS.A:

Answers will vary, but look for the following steps.

1. The PRODUCER milks the cows.
2. Milk from the cows is STORED at the farm.
3. The stored milk is TRANSPORTED in a truck.
4. The milk is PROCESSED and packaged into jugs.
5. The milk is TRANSPORTED to stores.
6. CUSTOMERS purchase the milk.

PALS.30. AS.A

Milk: From the farm to the store.

1. The _____ milks the cows. (Insert picture of milking a cow)
↓
2. Milk from the cows is _____ at the farm. (Insert picture of a milk bulk tank)
↓
3. The stored milk is _____ in a truck. (Insert picture of a milk truck)
↓
4. The milk is _____ and packaged into jugs. (Insert picture of a processing plant or a jug of milk)
↓
5. The milk is _____ to stores. (Insert a picture of a grocery store)
↓
6. _____ purchase the milk. (Insert a picture of a customer purchasing a jug of milk)