

Lesson 2: Milk Quality & Safety: Keeping Milk Fresh

Lesson Introduction

How does milk get from the cow to the consumer? Students will learn the steps taken to make sure milk is safe and a quality food from the time it leaves the cow to when it is bought in the store to when they drink it or eat foods made with it. The lesson will also highlight the career of being a milk inspector.

Lesson Objectives

- Students will define pasteurization.
- Students will explain the steps taken to ensure milk goes from cow to consumer safely and is a quality food.
- Students will list the skills, education, and responsibilities of being a milk inspector.
- Students will explain how fat molecules change in milk.

Time: 45 - 60 minutes

Standards: See the [Discover Dairy website](#) for complete listing by grade level.

Vocabulary

- Inspector, milk tank, milking equipment, pasteurization, processing plant, sanitize, teats, and udder

Materials Needed

- Computer
- Lesson Presentation: [PowerPoint](#), [Canva](#)
- Multimedia Projector and Screen
- Color Explosion Lab Materials
- Writing Prompts
- Internet Access
- Pencils
- [Discover Dairy and Milk Safety](#) Video
- [Ag Careers USDA Milk Inspector](#) Video
- [USDA Milk Inspector Career Spotlight](#)

Activities

- [Milk Quality and Safety Video Discussion Guide Fill in the Blank](#) and [Answer Key](#)
- [Milk Quality and Safety Video Discussion Guide Without Word Bank](#)
- [Keep It Fresh eBook](#)
- [USDA Milk Inspector Career Spotlight Video](#) and [Outline](#)
- [Color Explosion Lab with Directions, Lab Sheets, and Answer Key](#)
- [Writing Prompt with Drawing Option](#)
- [Writing Prompt without Drawing](#) and [PDF Fillable Version](#)
- [Dairy Word Search & Dairy Product ID](#)
- [Kahoot! Game](#)
- [Quizziz Activity](#)
- [Quizlet Set](#)

Procedure

Introduction (10 minutes)

- Go over the essential vocabulary terms and their meanings for this lesson. Use Lesson 2 PowerPoint slides 2-3 for the introduction and vocabulary.
- **Activating Strategy:** Let's discover how milk is kept clean and safe from when it leaves the cow to when we drink it by watching the video, [Discover Dairy and Milk Safety](#).

Steps to Keeping Milk Fresh and Safe (8-15 minutes)

- Introduction
- Discuss the Steps to Keeping Milk Fresh and Safe using slides 5-14. Students can also read the [Keeping It Fresh eBook](#) together or on their own to learn the same information.
- Closure: We discussed how dairy farmers and others do many things to make sure the milk we drink is fresh and safe. However, once we get it home, it is up to us to keep milk safe and pure. Tell us how you can do your job to make sure milk is safe.

Career Spotlight: Milk Inspector (6 minutes)

- Introduction, slide 15
- Facilitate the Career Spotlight on Milk Inspectors using the Ag Careers USDA Milk Inspector video and discussion of responsibilities and education.
- Share the [USDA Milk Inspector Career Spotlight worksheet](#) with the students. Use slides 16-19 to guide the conversation.
- Closure: Milk inspectors are needed to make sure that milk and dairy foods are safe and quality foods to drink and eat.
 - Tell us one way that milk inspectors make sure our milk is fresh and safe.
 - Are you interested in being a milk inspector when you grow up?



Summative Activity (30 minutes)

- Introduction, slides 20-22
- Pass out the [Color Explosion Lab Directions](#) and [Lab Sheet](#) to students.
- Allow students class time to complete the lab.
- Walk around, offering help and answering questions as needed.
- **Lesson Closure:** Today you learned about the journey of milk from the cow to you and what important steps are taken by farmers, inspectors, processors, and even us to make sure milk and dairy foods are fresh and safe. Tell us one thing you learned today about "Keeping Milk Fresh."

Extension Activities (10-15 minutes)

- Other activities that can be used instead of or in addition to the above activities are:
 - Writing Prompts
 - [Quizziz Activity](#)
 - [Quizlet Set](#)
 - [Kahoot! Game](#)
 - [Dairy Word Search & Dairy Product ID](#)

Career Spotlight

Milk Inspector

Summative Assessment

Students will complete the Color Explosion Lab Sheet with a mastery level of 80% or higher.