



## Interactive Virtual Tour Instructor Guide

# Kansas State University Dairy Plant

### To implement this tour, you will need:

The tour link: <https://my.matterport.com/show/?m=oCphU9vWDJ>

A way for your students to view/interact with the tour:

- Option 1: smartphones with Google Cardboard or other viewers
- Option 2: students view the tours via personal computers or tablets with individual headphones
- Option 3: project the tour on a screen at the front of the room for students to view together

### Background Information

The Kansas State University Dairy Plant encompasses 9,600 square feet of area fully equipped to produce a variety of dairy products. Products made in the plant are sold at the Call Hall Dairy Bar, a retail store located nearby, and K-State Housing and Dining Services purchase fluid milk and ice cream from the university plant. All products including raw ingredients and finished products are subject to standard quality tests for food safety.

Note: Starting mid-2025, the KSU Dairy Plant underwent a major renovation project and no longer looks like what is presented in the scan. However, this scan still provides a good representation of what a dairy plant would consist of for learning purposes.

### Purpose Statement and Learning Objectives

The purpose of this iVisit tour is to introduce learners to the Kansas State University Dairy Plant where numerous dairy products available on campus at Kansas State University are made.

### Learning Objectives:

*After completing this tour, students will be able to:*

- Recall the variety of dairy products produced by the KSU Dairy Plant.
- List and describe key pieces of machinery within the plant.
- Describe the pasteurization process.

### Key Terms

<i>Bulk Tank</i>	<i>Milk Churns</i>	<i>Pasteurization</i>
<i>Cheese Vat</i>	<i>Cheese Press</i>	<i>Vat Pasteurizer</i>
<i>Continuous Freezer</i>	<i>Federal Level Filling System</i>	



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### What You and Your Students Will See in the Tour

The tour includes a detailed view of the Kansas State University (KSU) Dairy Plant including various machinery used throughout the process of manufacturing dairy products. You can click the white circles along the ground to move through the tour. You may also use the arrow at the top of the screen to click through the tags in numeric order. (This will show up after you click on a tag.) The following outline can be used to help guide students through the tour in numerical order based on utilizing the arrows at the top of the screen. Various information points throughout the tour can be selected by clicking on floating icons. Each icon provides additional information and media around the area. Refer to the following outline to guide students through the tour. You can navigate the tour using different options:

1. By navigating to the first stop, the arrows will be used to progress to upcoming stops throughout the laboratory from beginning to end.
2. Using the floorplan view button near the bottom left corner of the screen.
3. Use the mouse to simply move and look around at leisure. You can click the white circles along the floor to move throughout the tour.

#### Welcome to the KSU Dairy Plant

Starting point- Front door of the Dairy Plant located in the northwest wing of Call Hall. Begin by clicking the yellow circle with the arrow.

- View the introductory video to hear Jared Parsons, Dairy Plant Operations Manager, discuss the history and background of the KSU Dairy Plant.
  - Read the introduction and welcome points.
- Pivot to the right to view the white coat rack and learn about the personal protective equipment workers and visitors are required to wear when visiting the plant to ensure food safety and cleanliness.
- Move forward to locate the dairy plant office.
- Advance to the next stop, Stop #4, to locate the fire extinguisher in case of an emergency.
- Navigate to the next stop, Farm to Plant, to view a supplementary video to see procedures of the milking process at a dairy in Florida and listen to Dr. Billy Brown discuss the focus of the dairy unit and their emphasis on dairy science, research and dairy nutrition and reproduction.
- Proceed to Stop #6 to locate the bulk tank, where milk is stored before being picked up for processing.
- Turn to the left to view the milk churns.
- Navigate to the next stop, Stop #8, to hear Jared Parsons explain the process milk undergoes high-temperature short-time pasteurization.
- Progress to the Cheese Vat to listen to Jared Parsons discuss the equipment used during the cheese making process.



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- Move slightly over to the Cheese Press, a piece of equipment used when manufacturing pressed cheese.
- Locate the sink nearby to maintain cleanliness and view the reminder sign to wear a hair net.
- Click the white arrow to advance to the Vat Pasteurizer where milk and ice cream mix are pasteurized.
- Navigate over to the continuous freezer, a crucial piece of equipment used in ice cream production. View the supplementary video to see the machine in action and click the link for additional information.
- Move left to the filling station to see how ice cream containers are filled by hand and packaged.
- Pivot 180° to see locate the walk-in freezer with an easy access door.
- Proceed to the next stop, Stop #16, to view the machine used to fill bags with milk that are then placed in a box for transportation.
- Slide to the right to hear Jared Parsons explain the use of the six-turret federal filler. Click the link for additional information.

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### Acknowledgements

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