



Interactive Virtual Tour Instructor Guide

Kansas State University O.H. Kruse Feed Technology Innovation Center

To implement this tour, you will need:

The tour link: <https://my.matterport.com/show/?m=s8UQp1HGV41>

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

A primary focus of the K-State Feed Science Program and the O. H. Kruse Feed Technology Innovation Center is the training of the next generation of feed industry leaders through student involvement, hands-on instruction, internships, and extension workshops. This educational program provides training in the areas of feed safety, quality assurance, and feed processing technology to students attending K-State. In addition, the extension program provides outreach in these areas to the citizens of Kansas, the United States, and people throughout the world. The emphasis of our current research and training is the testing of new products and feed manufacturing processes that allow animal agriculture to efficiently produce a safe food supply of meat, milk, and eggs.

Purpose Statement and Learning Objectives

The purpose of this iVisit tour aims to bridge the gap between the need for immersive, interactive experiences in Food and Agricultural Sciences (FAS) and the lack of field trips that can be taken to fulfill this need. By using 3D spatial scanning technology, the team members of the iVisit project have created interactive virtual tours (IVTs) as well as supplemental learning materials that can be implemented in the classroom for a unique look into FAS facilities.

Learning Objectives:

After completing this tour, students will be able to:

- Identify key equipment used in feed milling.
- Explore career opportunities in the feed milling industry.
- Acquire knowledge about the overall process of feed milling.



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Key Terms

<i>Cleaning and Conditioning</i>	<i>Crushing or Breaking</i>	<i>Reduction</i>
<i>Grain Cleaning/Vibration Screen</i>	<i>Aspirator</i>	<i>Disc separator</i>
<i>Scourer</i>	<i>Magnetic Separator</i>	<i>Washer stone</i>
<i>Tempering</i>	<i>Entoleter</i>	<i>Grinding bin</i>
<i>Sifter</i>	<i>Purifier</i>	<i>The down purifier</i>

What You and Your Students Will See in the Tour

This site includes all five floors of the KSU Feed Mill Facility; however, the tour begins on the second floor and from there advances down to the first floor and then back up to the fourth floor. There are no stops on the third and fifth floor included in the tour but feel free to view those at leisure. Each floor is made up of key equipment, transportation, careers, and safety. 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.



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Second Floor

Starting point – Front door entering the stairway to the second floor. Begin by clicking the yellow circle with the arrow.

Stop #1 – Welcome to the Feed Technology Innovation Center

- View introductory text to learn more about the primary focus of the KSU Feed Technology Innovation Center and its impact on animal agriculture.
- Pivot to the right to view lockers and cabinets where employees and visitors have access to hard hats and other personal protective equipment to prevent potential injuries when working or visiting the facility.
- Advance to the next stop to locate the fire extinguisher and hand sanitization station. All employees and visitors are required to use the hand sanitization station before entering the facility.
- Turn to the right to view the vertical mixer, a piece of equipment that uses a vertical screw to mix materials by bringing feed ingredients to the top and mixing them back down with the motion of the screw.
- Advance to the next stop, Stop #5, to learn how feed pellets and mixtures are bagged and weighed on the packing scale.
- Rotate 180° to find a First-Aid Kit. Additional First Aid Kits are located throughout the facility.
- Maneuver to the next stop to learn careers and the duties asked of feed mill employees.
- Move forward to the blue icon with a car. The KSU Feed Mill produces feed in bulk sent out on semi-trucks to local farms near Manhattan.

First Floor

- Navigate to the next stop, Stop #9, to read more about the responsibilities of a feed truck driver.
- Advance to the next stop, located at the front of the truck to learn the difference between feed transported in the semi-truck versus this smaller truck.
- Maneuver over to the Hammer Mill. Read the text and click the link to view how a hammer mill operates.
- Turn left and move down to the 3 High Rolling Mill. Read the text to understand what a rolling mill does.



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Fourth Floor

- Navigate to Stop #13 to read background information on Dr. Charles Stark.
- Pivot to the right to the pellet mill. Click the link included to watch a pellet mill in action.

Acknowledgements

KSU Feed Mill images and tour created by:

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