



Interactive Virtual Tour Instructor Guide

Texas Tech University Greenhouse

To implement this tour, you will need:

The tour link: <https://my.matterport.com/show/?m=LS3YDGN6GNB>

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

This tour will guide students through the Texas Tech University (TTU) Greenhouse complex. This tour has a companion tour of the TTU gardens as well. Through this tour, you will learn about the different classes taught in the greenhouse, spaces, plants, and a few educational videos.

Website Link: <https://www.depts.ttu.edu/pss/research/Facilities/greenhouse/index.php>

Purpose Statement and Learning Objectives

This iVisit tour aims to introduce learners to greenhouses used for propagation, education, and research.

Learning Objectives:

After completing this tour, students will be able to:

- Name the key spaces in the greenhouse.
- Describe the major zones of the TTU greenhouse.
- Explain which zones contain classrooms or plant materials.
- Discuss the function and layout of greenhouses.
- Discuss why classrooms in greenhouses are important.
- Name different components or equipment used to grow plants.
- Present potential needs for growing and propagating plants in a greenhouse.

Key Terms

Bays

Headhouse

Classrooms

Horticulture

Greenhouse

Propagation

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What You and Your Students Will See in the Tour

This tour includes greenhouse bays 2, 3, 6, and 7, along with the classrooms and headhouse area of the greenhouse. There are information points you can click on to learn more information and view additional media about the area throughout the tour. Refer to the following outline to guide students through the tour. You can navigate the tour using different options:

1. Navigating to the first stop and then using the arrows to progress through the greenhouse from beginning to end.
2. To move to a specific area in the greenhouse, use the floorplan view button. This button is on the bottom left side of the screen.
3. Using the mouse to simply move and look around. You can click the white circles along the floor to move through the tour.

Throughout the tour, you can click on information points to learn more and view additional media about the area. You can use the following outline to guide students through the tour.

Greenhouse Entrance

Starting point – Welcome to the TTU Greenhouse and Gardens Complex

- Pop-up #1
 - Senior Lecturer Alicia Thomas introduces the area surrounding the greenhouse and the places to park.
 - As you head down the hallway, you can see the walkways, potting, and workstations lining it and the greenhouse bays that branch off on either side.
- Pop-up #2
 - Alicia will tell you about the teaching bays for our PSS 1411 – Principles of Horticulture class.
- You can see that teaching greenhouse bays are on either side of the hallway, and the tour will guide you through Bays 2 and 3 before continuing.

Greenhouse Bays

- Head inside bay 2 to tour the TTU plant collection and learn how to propagate succulents with Dr. Baliga
- On the right-hand side of the bay, when entering, you will see the Grover Murray Cactus Collection and various succulents.
- On the left-hand side of the bay entrance, you will see our collection of tropical plants.
- Pop-up #3
 - Greenhouse manager and Assistant Professor of Practice Dr. Vikram Baliga will show you how to propagate succulents.
- When you are done, enter bay 3 across the hallway. Here, you can see materials we use in classes, propagate for plant sales, and some of our learning materials.



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- There are no pop-ups in Bay 3, but feel free to look around and see our facilities and plant materials.
- Once you are done browsing bay 3, head back into the hallway.
- Continue down the main hallway to learn about the rest of the bays.
- Pop-up #4
 - Fire extinguisher location (right; red symbol)
- Pop-up #5
 - Cleaning supplies (left, green symbol)
- Pop-up #6
 - At the very end of the hallway, Alicia describes the research bays and reminds students (non-virtual) that they do not need to enter them. We will then return to the classroom and headhouse popups.
- Head into bay 6 on your left to explore a research greenhouse bay.
- In this bay, you can see experimental plant materials being dried, an enclosed NFT system, an ongoing experiment on tomatoes, and various spaces where experiments are conducted.
- Pay attention to the pink lights in bay 6. These LED lights provide plants with supplementary lighting in different wavelengths so they can grow more effectively.
- We also have shade cloths covering experiments to ensure excess light won't affect our experiments.
- As you continue through Bay 6 into Bay 7, you can see research on other crops, such as cotton, sorghum, and corn.
- Once you are done looking around, head back into the hallway and back to the middle area where the classrooms and headhouse are located.

Headhouse and Classrooms

- Move through the third and final floor of the station to explore an extension specialist's office, student workspace, and classroom teaching area.
- The classrooms should be on your right-hand side if you come from bays 6 and 7.
- Pop-up #7
 - Alicia will show you where our classrooms are located.
- Click on the classroom door to room 101 to enter the classroom.
- Pop-up #8
 - Dr. Baliga talks about one of our many events held in the greenhouse, an Earth Day planting event, and how to propagate plants from succulents or seeds.
- Look around our classrooms and head into the next classroom through the door at the back.
- Both classrooms have technology that allows us to present lectures and record materials. Our equipment has been updated since this tour was recorded, but our classrooms are still similar.
- Next, head back out to the hallway and continue straight to the following pop-up.
- Pop-up #9



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- Turn in Tower – where our students turn-in assignments to teaching assistants and lecturers.
 - Pop-up #10
 - Alicia will tell you about our greenhouse manager's office and where the Material Safety Data Sheets for chemicals are located.
 - Pop-ups #11 and 12
 - The location of the MSDS sheets and the second bathroom locations
 - Pop-up #13
 - Get to know our greenhouse cats.
 - Pop-up #14
 - Eyewash location
 - Pop-up #15
 - Alicia tells you more about the greenhouse headhouse and what we use it for.
 - You can explore our storage and growth chamber space as you go down the hallway. This is where our supplies and tools are stored, and we keep growth chambers and cold storage for flower arrangements.
 - This concludes the greenhouse tour. However, you can tour the gardens on the TTU Gardens iVisit tour.
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Acknowledgments

TTU Greenhouse images & tour created by:

Dr. Catherine Simpson, assistant professor – Texas Tech University Department of Plant and Soil Sciences

Dr. Monsur Muntazar, assistant professor – TTU Department of Landscape Architecture

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Dr. Courtney Meyers, professor – Texas Tech University Department of Agricultural Education and Communications

Cambry Cline, graduate student – Texas Tech University Department of Agricultural Education and Communications

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