

Instructional Scenario



Vent Malfunction Emergency

Course/Duty Area: Horticulture Sciences: Selecting, Operating, and Maintaining Greenhouses

Scenario:

Jake is the greenhouse manager at Blooms & Blossoms Nursery, which specializes in cultivating a wide variety of flowers for local garden centers and landscaping projects. Among their prized blooms are vibrant petunias, known for their colorful blossoms and resilience in different environments.

One sunny morning, Jake receives an urgent message from one of his greenhouse assistants, Lily.

"Hi Jake, it's Lily. We have a problem with the petunias in House C. Many of them seem to be drooping and showing signs of wilting."

Jake immediately heads over to House C to assess the situation. Upon arrival, he notices that the temperature inside the greenhouse is unusually high, likely due to a malfunction in the ventilation system. The petunias, sensitive to heat stress, are struggling to cope with the excessive warmth.

Recognizing the urgency of the situation, Jake needs to find solutions as soon as possible.

Big Question: How is Jake going to resolve the issue with the ventilation system?

Focused Questions:

- What needs to be done to bring the petunias back to a healthy state?
- What could be done to avoid this issue in the future?
- How can fertilizer levels be adjusted to assist with nutrient deficiency?
- In retrospect, what could Jake and his team have done differently to prevent the issue with the petunias in House C?

Student Project or Outcome: Students determine solutions to the scenario and share their thoughts with the class.

Project-Based Assessment:

- Students work together to generate a list of solutions for the ventilation system failure. Once students have solutions, they can pair with another group and work collaboratively to solve how to return the petunias to a healthy state. Then, the groups will share their solutions with the class.
- Students research several varieties of petunias. They can compare the temperature, sun, and irrigation requirements for each of them.

Instructional scenario submitted by Elizabeth Daney, Louisa County High School, Louisa County Public Schools