

Instructional Scenario

Plants, People, and Paychecks



Course/Duty Area: Introduction to Plant Systems/Exploring Plant-Human Relations

Scenario:

Maya Chen has dreamed of opening her own plant-based business since she was in middle school. After graduating from Virginia Tech with a degree in horticulture, she returned to her hometown in southwest Virginia to launch Green Roots, a small company that grows and sells medicinal herbs, specialty vegetables, and native ornamental plants to local markets, health food stores, and individual customers.

Business is picking up, but Maya is struggling to keep up on her own. She has posted openings for two part-time positions this summer and is looking for motivated young people with a basic knowledge of plants and agriculture. One position focuses on growing and production, and the other focuses on marketing and outreach. Both positions require applicants to understand why plants matter to people and to know their way around the different fields of plant science.

Maya has posted the following message on the Green Roots social media page:

"We grow plants that change lives – from the food on your table to the herbs in your medicine cabinet to the flowers in your yard. If you believe in the power of plants and want to help your community understand that connection, we want to hear from you. No experience required, just curiosity and a willingness to learn."

Big Question:

Why would Maya Chen want to hire you to work for Green Roots?

Focused Questions:

Use the questions below to guide your thinking and prepare your application materials.

Understanding Plant-Human Connections:

- How do people depend on plants every day? Think about food, medicine, clothing, shelter, fuel, and more.
- Green Roots grows ornamental native plants. How do plants impact mental and emotional well-being?
- How do plants contribute to the economy of a community or region like Southwest Virginia?
- What are seed banks and seed libraries, and why might they matter to a small business like Green Roots?
- If you had to explain to a neighbor why plants are important to humans, what would you say? What examples would you use from your own life?

Knowing the Fields of Plant Science:

- Green Roots grows vegetables, herbs, and ornamental plants. Which disciplinary fields of plant agriculture apply most directly to Maya's work? (Consider horticulture, agronomy, botany, plant pathology, soil science, and others.)
- Maya is worried about a pest problem in her herb garden. What field of plant science would focus on solving that problem?
- A customer asks Maya about improving the soil in her backyard garden. What field of study would be most helpful?

- Which field of plant agriculture shows the most potential for employment in your community? What evidence supports your answer?
- Maya is thinking about expanding Green Roots to include a small turf and lawn care service. What new disciplinary field would she need to learn about?

Critical Thinking – Go Further:

- Maya wants to expand her business to include a community herb garden where residents can visit, learn, and pick fresh herbs. Which plant-human relationships would this type of project address? Explain your reasoning.
- Imagine Green Roots received a \$5,000 grant to hire a plant science professional for one year. Which disciplinary field would give the business the greatest benefit, and why?
- Some of Maya’s customers ask whether her herbs were grown using safe and sustainable practices. How would knowledge from multiple plant science disciplines – such as soil science, plant pathology, and entomology – help her answer that question honestly?

Student Project or Outcome:

Students will prepare a job application packet for one of the two open positions at Green Roots. The packet should demonstrate the student’s understanding of why plants matter to people and which fields of plant science are relevant to the work.

Position Option A – Growing and Production Assistant:

This role helps Maya in the greenhouse and growing areas. Applicants should be able to explain how plant systems relate to human needs and identify which fields of plant science would be most important for this work.

Position Option B – Marketing and Community Outreach Assistant:

This role helps Maya promote Green Roots to customers and the community. Applicants should be able to explain the value of plants to human life and connect different plant science fields to the products and services Green Roots offers.

Project-Based Assessment:

Each student will select one of the two positions and submit a complete job application packet that includes the following:

- A completed mock job application form (provided by the teacher)
- A one-page cover letter addressed to Maya Chen that
 - explains why you are interested in working at Green Roots
 - describes at least three ways that plants are important to human life (using examples from your own community or daily life)
 - names the plant science field most relevant to the position you chose and explains why
- A “Plant-Human Connections” reference card (half-page, illustrated or written) that
 - lists at least six ways humans depend on plants
 - briefly describes at least four disciplinary fields of plant agriculture in your own words
- (Optional / Extension) A short, written proposal (one paragraph) describing one new product or service Maya could add to Green Roots that would strengthen a plant-human connection not currently addressed by the business. Identify which plant science field would be needed to support it.

Teacher Resources:

- [Virginia Cooperative Extension](#) – Publications on horticulture, agronomy, and plant sciences for Virginia
- [Virginia Department of Agriculture and Consumer Services](#) – Resources on Virginia’s agricultural industries
- [U.S. Department of Agriculture Economic Research Service](#) – Data on the economic impact of plant agriculture in Virginia and the United States
- [National FFA Organization](#) – Plant Science Career Development Event resources for career exploration
- [American Society for Horticultural Science \(ASHS\)](#) – Career and disciplinary field descriptions: ashhs.org
- [Virginia Invasive Plant Species List](#) – Available through the Virginia Department of Conservation and Recreation

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