

Roots to Recipes: Connecting FFA Students with Plant Science to the Plate

Need for Idea

Agricultural education is strongest when students can see, touch, taste, and experience what they are learning. Experiential learning theory emphasizes that knowledge is constructed through concrete experience and reflection (Kolb, 1984). Within agricultural education, hands-on application has consistently been linked to improved engagement, skill development, and retention (Roberts, 2006).

At the Kentucky School for the Deaf (KSD), Special Topics coursework was developed specifically for their on-campus Ag Camp to provide students with meaningful agricultural experiences in an accessible setting. The Special Topics course combines the Plant Science pathway and Food Science pathway with hands-on application.

This course also fulfills the FFA Leadership camp participation experience for students. Traditional FFA camp attendance can be logistically challenging for KSD because it requires one interpreter per student to ensure full access and equitable participation. The cost of a one-on-one interpreter is prohibitive to KSD students attending traditional FFA Leadership Camp. The National FFA Organization emphasizes leadership development, personal growth, and career success through experiential learning and inclusive participation (National FFA Organization, 2023).

Many students learn about plants in the classroom, but they do not always experience how herbs, spices, and crops move from growing in the ground to becoming part of a meal. By hosting KSD students on the University of Kentucky campus, we created an experience that intentionally links plant identification, agricultural systems, and culinary skills into one cohesive learning day.

How it Works

Roots to Recipes is structured as a one-day experience on the University of Kentucky campus as part of the KSD Ag Camp Special Topics course. Students and teachers visited two key locations: The Arboretum and The Food Connection.

The day began at The Arboretum, where students explored spices, herbs, and additional plants and trees. Educators guided discussions around plant identification, plant parts used for consumption, growth conditions, and harvest practices. Students then transitioned to The Food Connection, where they received instruction in proper knife skills, food safety, and culinary techniques. Students worked in teams to prepare fresh salsa, tacos, and vegetable-protein using locally sourced ingredients. The day concluded with a shared meal, reinforcing the complete agricultural cycle from plant to plate.

Leadership and personal growth components are embedded throughout the experience. Students rotated responsibilities, practiced teamwork, and engaged in structured reflection, mirroring the leadership development expectations outlined by the National FFA Organization (2023). Through

this structure, the experience fulfills FFA camp participation requirements while remaining accessible and equitable.

Results and Implications

Roots to Recipes provides students with an agricultural experience integrating plant science, food science, and leadership development. Teachers reported increased engagement, improved confidence in kitchen skills, and stronger understanding of how plant systems connect to food systems.

The program also demonstrates how alternative FFA experiences can meet requirements while removing access barriers. KSD ensures students meet program requirements in a way that honors their communication needs. Exposure to university facilities expands the students' awareness of opportunities available after high school, while supporting career exploration goals within agricultural education.

Future Plans

Future programs will continue in a similar one or multi-day format as part of the KSD Ag Camp Special Topics course. The focus will remain on connecting plant science to food science through campus-based exploration and hands-on food preparation.

In the coming years, the goal is to expand the experience to include animal agriculture. Plans include visiting the University of Kentucky farm to explore livestock systems and eventually touring the meats lab.

Cost/Resources Needed

The program relies on the partnership with the University of Kentucky, minimizing financial barriers. The Arboretum and The Food Connection provide instructional space and expertise. Ingredients for salsa and tacos are locally sourced through the university.

Resources required are transportation for KSD students and staff, kitchen space and culinary supervision, fresh produce and food preparation supplies, and educational facilitators for plant science instruction. Because the experience remains a one-day event embedded within Ag Camp, costs are manageable and sustainable.

Roots to Recipes demonstrates that when agricultural education is intentional, inclusive, and experiential, students not only meet FFA requirements, they gain meaningful and lasting understanding of how agriculture also directly connects to their lives.

References

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

National FFA Organization. (2023). *FFA mission and student development model*.

Roberts, T. G. (2006). A philosophical examination of experiential learning theory for agricultural educators. *Journal of Agricultural Education*, 47(1), 17–29