Building the Foundation: Connecting Middle School Youth to Agriculture

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INTRODUCTION

N.C. Cooperative Extension - Union County Center and Union County Public Schools recognized the importance of agriculture and its economical impact in eastern union county. Through this, East Union Middle School was identified as an Agriculture Technology Academy, where students and educators in all subject matter areas would engage with each other through educational facilitation involving an agriculture-based curriculum. N.C. Cooperative Extension - Union County Center partnered with Career Readiness educators to determine the initial needs of the program, and created a development plan for program expansion. This development plan identified several key outcomes and impacts.

- Provide exposure to community-based agriculture, focusing on underserved populations
- Increase awareness and appreciation for food production systems
- Create community support for the AgTech Program

NC Cooperative Extension

4-H Agent, Livestock Agent, and Ag

development for East Union Middle

Parkwood Middle School starts Agriculture &

Natural Resources program

Tech Educators led curriculum

School Science Teachers

2022

installed irrigation system

Allow youth to explore local agriculture career opportunities

TIMELINE Union County Public Schools hired a new Ag Tech teacher at East Union Middle School NC Cooperative Extension partners with East Union Middle School to host Camp Jumpstart for rising 6th graders 4-H Agent introduced Cooperative Extension at East Union Ag Tech Career Day 2020 NC Cooperative Extension helped to build a greenhouse for East Union Middle School UCPS hires second Ag Tech teacher at East Union Middle School 2021 Ag Agents led lessons on sweet potato and

mushrooms

strawberry project

Small Farms Agent introduced the

UCPS Leadership Team, East Union Middle

School Ag Tech, & Cooperative Extension

establish monthly committee meetings to

future of the Ag Tech program

discuss goals and plans for the program and

Expansion of the curriculum development

into Math, ELA, and Social Studies

EDUCATIONAL PRACTICES

- The Youth Agriculture Program Team developed activities and curriculum
- Students were provided with the opportunity to explore new passions and interests in the field of agriculture
- Grade level specific project-based lessons enable students to excel both individually and in team environments
- A variety of activities were created that allow for various learning styles to accommodate a larger base of students

"Union County Extension has played an instrumental role in establishing collaborative partnerships between the school and various partners from the Ag Tech community. Additionally, the Extension Service has contributed innovative ideas in discussion aimed at optimal engagement of students in Ag Tech activities." - Dr. Jay Jones, Union County Public Schools Director of Middle School Performance

Experiential Learning

Hands-on demonstrations and lessons

- Strawberry ProjectMushroom Experiment
- Sweet Potato
 Demonstration



Design and Construction of Curriculum

Project Based Science Lessons

- Ecosystems on Mars
 Blue Ribbon Winner:
- Blue Ribbon Winner:
 Using Animal Genetics
- Plant Power: A Potato Biofuel Experiment

Professional Development for Educators

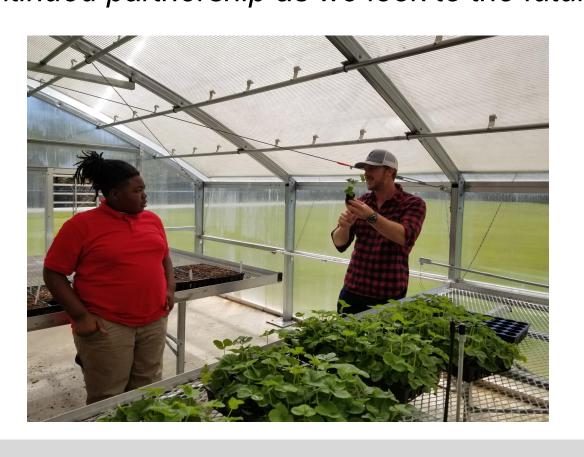
- Held trainings for implementing developed science lessons
- Provided guidance and mentoring for new subject matter
 - Establishing partnerships between educators and community partners

RESULTS

Forest Hills High School has seen growth in their FFA program due to the influence of the Ag Tech Middle School program. According to Brooke Phipps, Forest Hills FFA Ag Teacher, "Having a feeder program coming into the high school agriculture education program from the middle school has really helped us develop stronger ties to students before they even set foot at the high school. We are able to work with students through collaborative events, or just help the middle school build resources. While other schools are struggling coming out of the pandemic and maintaining membership we finished the year with 135 members and average 40-50 members at each FFA meeting. The involvement we have seen has dramatically increased and I think having a feeder middle school plays a huge part in that."

The success of this program has been well noticed by the UCPS administration and has led to plans for future expansion of the Ag Tech Middle School program. Brian Davis, UCPS Director of Career Readiness, said, "I must commend Union County Extension Staff for their leadership and partnership that benefits UCPS students. The staff understand how important it is to provide students with opportunities to learn about agriculture so they understand the future career opportunities in the industry. I look forward to our continued partnership as we look to the future."







FUTURE PROGRAM EXPANSION

2022/2023 Expansion of the Strawberry Project into two feeder elementary schools, Wingate and Western Union Elementary Expansion of the Strawberry Project into Forest Hills High Expansion of agriculture curriculum at EU into all grade levels for science, math, language arts, and social sciences 2023/2024 Expansion of agriculture curriculum at EU into all grade levels for Career Exploration Build a community garden for the community surrounding East 2024/2025 Construction of new On-Farm Site Farm and Demonstration Area for East Union Elementary and Forest Hills High School

SUMMARY

"I am here today as an officer for Forest Hills FFA because of the classes offered at East Union Middle School. The agriculture classes I took gave me a spark of interest for agriculture and has since led me to continue my classes at Forest Hills and become more involved in our FFA chapter." - Mikayla Whitmire, 10th Grade, Forest Hills FFA Chapter Secretary"

- UCPS and Union County Extension identified the need for an agriculture technology program in Eastern Union County.
- Partnerships were created to develop short, medium and long term goals for the overall program.
- Action plans were implemented using a variety of delivery methods for student and educator success.
- Program evaluations have determined the successful execution of program outcomes.
- Through program impacts achieved, additional middle schools have been identified to expand the agriculture-based curriculum.

"The Union County Agriculture Extension is a major partner in the educational structures and opportunities to K-12 students in the areas of agricultural sciences. Whether students are exploring career opportunities within the agriculture industry, taking an agricultural course within Union County Public Schools, or are heavily involved in 4-H, the Union County Cooperative Extension provides assistance, resources, and guidance that help give the students within Union County a great experience." -Dr. Brad Breedlove, Union County Public Schools, Chief Academic Officer

ACKNOWLEDGEMENTS

 The authors would like to thank the Union County Public Schools Board of Education and the Union County Board of County Commissioners for their continued support for university programming and research.







