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ROCKETS: Reaching Our Community through Kindness, Education, Togetherness and STEM – A Sustainable Communities Project in Sumter County, Georgia

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R.C.K.E.T.S

REACHING OUR COMMUNITY THROUGH KINDNESS, EDUCATION, TOGETHERNESS, & STEM

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ABSTRACT

The three Extension program areas in Sumter County, Georgia collaborated with volunteers and another local youth development program to provide a unique program entitled “ROCKETS”. The ROCKETS project’s goal is to enable middle school youth with disabilities inclusion opportunities to build positive relationships, heighten skills in science disciplines, and enrich their educational learning experience. This project’s skill builder is unique from other special needs workforce preparation services as it focuses on agriculture and STEM education. The sustainable, innovative, and multi-disciplinary program showed effective performance and significant results as youth, families, and schools benefited from the co-curricular standard based lessons during in-school and after-school programming. Teacher evaluations provide evidence of the increase in positive behaviors among participants because of additional 4-H programming through the ROCKETS project.



SITUATION & OBJECTIVES

Sumter County, Georgia is located in southwest Georgia with a population slightly more than 30,000 people. The greatest needs surrounding youth in Sumter County are persistent poverty (25.5%), assisting school youth with disabilities (13%), graduation rate (78.7%); improving college and career readiness, and reducing youth in detention/incarceration. In rural areas, youth living with a disability may feel even more isolated than others, in the same location due to the limited resources and/or access to various groups. Studies show the appearance of limited interaction between families of children with disabilities and families of children without a disability (Tatman, 2005). With limited resources available for youth living with a disability in Sumter County, the University of Georgia Sumter County Extension office program areas of 4-H, Family and Consumer Sciences (FACS), Agriculture and Natural Resources (ANR), along with Georgia 4-H AmeriCorps collaborated to implement an innovative 4-H gardening curriculum and various STEM activities in a unique project entitled “ROCKETS”, *Reaching Our Community through Kindness, Education, Togetherness and STEM*. This multi-disciplinary and integrated project ensures that youth living with a disability have access to inclusive educational and fun experiences in integrated settings inside and outside the classroom.

The ROCKETS project’s goal is to enable middle school youth with disabilities inclusion opportunities to build positive relationships, heighten skills in science disciplines, and enrich their educational learning experience. Existing research shows the strong correlation between youth with special needs and sensory gardens (Hussein, H., 2010; Hussein, H., et al., 2015, & Hussein, 2017), but little research establishes a connection with special needs youth and school/community gardens as a tool for workforce skill building and empowerment to make positive choices. The ROCKETS project will focus on Agriculture literacy and STEM education as content areas to build capacity for problem solving skills in youth.



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STRATEGY & PARTICIPANTS

Youth, regardless of race, ethnicity, socioeconomic status, family history, gender identity or expression, etc. are eligible to participate in the ROCKETS project. The target audience for the ROCKETS project is 4-H youth and youth identified by school administrators and collaborative partners as individuals with a disability. Youth living with a disability were encouraged to join other 4-H youth in adaptive activities and programs in which their skills and abilities are accentuated. Extension staff held a recruitment program at the middle school for youth and their families to learn more about the project. Unique and appropriate teaching strategies were used to meet the needs of youth with a disability to ensure a successful learning experience. The Agriculture team advisors (4-H Agent 100%, ANR Agent 25%, High School Agriculture Teacher/FFA Advisor 10%, 4-H Volunteer 10%), with the assistance of FFA student members, built raised garden beds at participating schools. The Health team (4-H Agent 100%, AmeriCorps member 50% and FACS Agent 50%) led classroom discussions on nutrition and healthy eating utilizing My Plate, the USDA Center for Nutrition Policy and Promotion’s nutrition guide.

The ROCKETS Project provided suitable and adaptable educational materials and hands-on Ag and STEM learning experiences through sessions held in-class and outside the classroom. Participants were exposed to various settings and situations in which they had to also apply social skills learned through in-school and after-school programming with other youth. In each session, youth interacted with ROCKETS adult leaders who facilitated activities and discussions. A school garden was utilized to facilitate and enhance Agriculture and STEM education to participants. Following classroom sessions, youth worked in their school garden to water, weed, and harvest. Participants engaged in sensory activities which included tastings of their garden produce as well as in-season fruits and vegetables. Participants studied agriculture education and healthy lifestyles through a classroom garden, STEM concepts, and sensory activities. Activities included service projects, experiential learning field trips, and 4-H activities. Through these activities, participants learned to better understand themselves, become independent thinkers, and feel their lives have meaning and purpose. To measure the effectiveness and impact of the project, the ROCKETS project adult leaders administered written and electronic surveys to participants. Evaluation tools implemented included, but not limited to, the Learn, Grow, and Eat curriculum and the National 4-H Common Measures instruments.



RESULTS

The ROCKETS project Extension team recruited a diverse team of volunteers and community partners to embrace a standard practice of increasing agriculture awareness, create and advocate for inclusive environments, and ensure sustainability. Over 80 students, grades fifth through eighth, participated in the Sumter County 4-H ROCKETS project bi-weekly, during in-class sessions and monthly outside the classroom sessions. Through various exploration and relationship building activities, ROCKETS participants were encouraged and excited to attend bi-weekly class sessions and monthly 4-H club activities. After five months of implementation, preliminary data shows improvement in positive behaviors and school peer-to-peer interactions and increased agricultural awareness. Participants of the ROCKETS project effectively engaged with Extension staff and volunteers in an inclusive setting that promoted successful learning and unique experiences. ROCKETS participants learned about their environment, safe agricultural practices, and the proper use of gardening tools and equipment. This data indicates the youth with disabilities are learning soft skills and basic gardening practices for growing their own food. Students also gained knowledge to make healthier/fresh food choices. Early data collected using the 4-H Common Measures evaluation tools show that ROCKETS has influenced participants to pay attention to their physical activity level and share with their family a healthy meal and/or snack ideas.

According to the teachers of ROCKETS’ class participants, a positive behavior change among participants was noticed. ROCKETS participants showed an increase in knowledge of the relationship between the foods they eat, crops that are harvested, and their own health. One teacher stated at the end of an evaluation, “My class and I enjoyed planting the garden and harvesting the crops. Each day, they loved going out and watering the garden and making sure it was growing.” ROCKETS participants showed forth their generosity using their raised garden bed project and hosting a canned food drive. Participants extended their hands to a larger service by donating their harvested vegetables to a family with a need for food during the holidays. The adaptive gardening lessons, sensory activities, meal planning illustrations and hands-on learning experiences in and outside the classroom promoted retention and increased involvement in the local 4-H club. In addition to the participants behavior change and social skills, the Sumter County community was impacted by the total wealth of Extension knowledge and resources made available to the local school system. Youth who would not otherwise join a youth development program or extracurricular club were extended a unique opportunity to experience Sumter County 4-H.

CONCLUSIONS

The ROCKETS program model is a complete Extension program collaboration project. The diversity of the ROCKETS project is evident in the youth participants, but also in the adult leaders of the ROCKETS project and the project model. The three Extension program areas of 4-H Youth Development, Family & Consumer Sciences and Agriculture and Natural Resources all collaborated to ensure participants were exposed to the entirety of Extension resources and the diversity in the various roles in UGA Extension. By serving the needs of young people in Sumter County Schools through this unique programming approach, the ROCKETS adult leaders holistically impacted the lives of youth, families and the Sumter County community. Participants of the ROCKETS project engaged effectively with Extension staff and volunteers in inclusive settings that promoted integrated, successful learning and unique experiences. Sumter County 4-H has expanded its reach to youth, increased participation in youth opportunities and increased available resources provided to the community.



REFERENCES

Tatman, P. (2005). 4-H: An Exclusively Inclusive Program. University of Wyoming, Cooperative Extension Service.

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