LEE COUNTY ACADEMY

STEM FUTURES
THE LEADERSHIP & WORKFORCE ACADEMY FOR JROTC

CADET IMPACT REPORT 2025

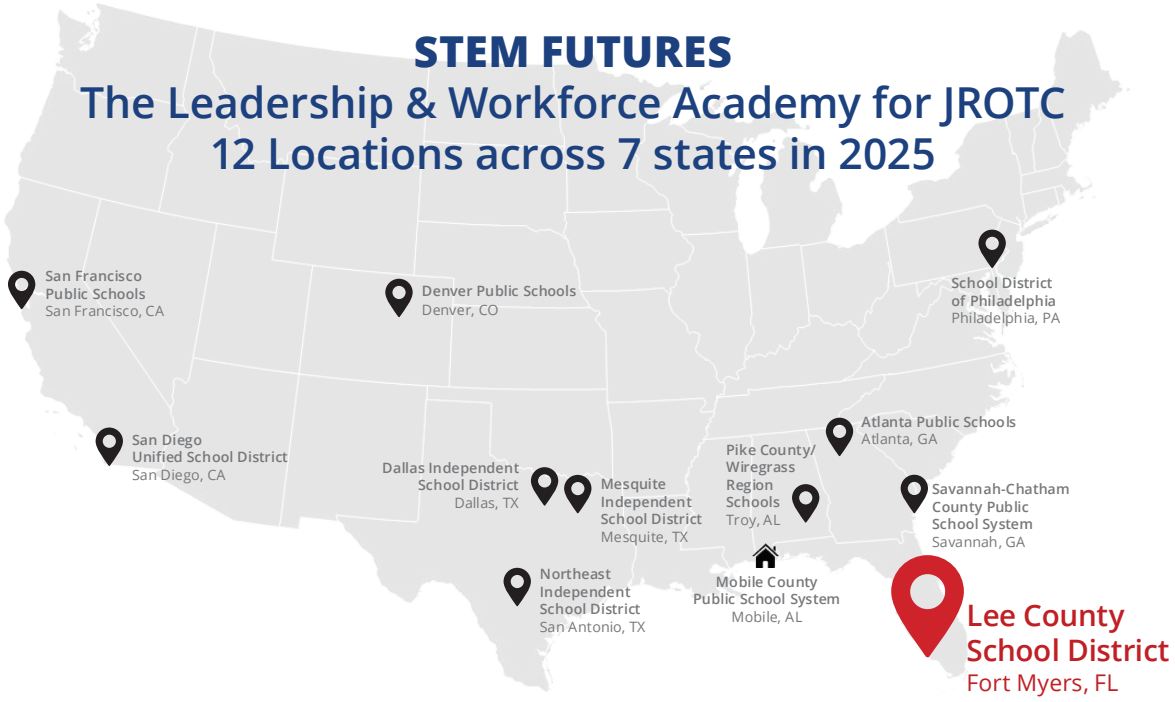
STEM FUTURES: The Leadership & Workforce Academy for JROTC is a week-long residential summer camp that helps meet today's workforce needs by engaging high school students—rising 9th-12th grade JROTC Cadets—in activities that open pathways to STEM learning and careers.

The Academy seeks to increase Cadets' awareness of local high-paying, in-demand STEM career opportunities and their understanding about what it takes to secure these jobs. To do this, the Academy integrates activities aimed at informing JROTC Cadets about STEM jobs, piquing their interest to pursue these jobs, giving them hands-on application of STEM concepts in a team setting and developing 21st century workforce skills.

The 2025 Lee County Academy took place at the Florida Southwestern State College in Fort Myers. The focus of this Academy was on the maritime industry and a related STEM-on-the-Water curriculum in which Cadets designed, built, programmed, and tested robotic boats and completed three missions with increasing complexity.

16 HIGH SCHOOLS | **104** CADETS

STEM FUTURES
The Leadership & Workforce Academy for JROTC
12 Locations across 7 states in 2025



INTEGRATED ACTIVITIES

- STEM Design Challenges
- Visits to Workplaces and Universities
- JROTC Cadet Leadership Challenges
- Inspirational Guest Speakers

How did **Cadets** respond to teamwork experiences?

Our team faced tough challenges today as we had to test our robot for the 2nd mission four times. We got frustrated but did not give up. We analyzed the problem and worked through it as a team.

RISING 12TH GRADER
GATEWAY HIGH SCHOOL, 2025 LEE COUNTY ACADEMY

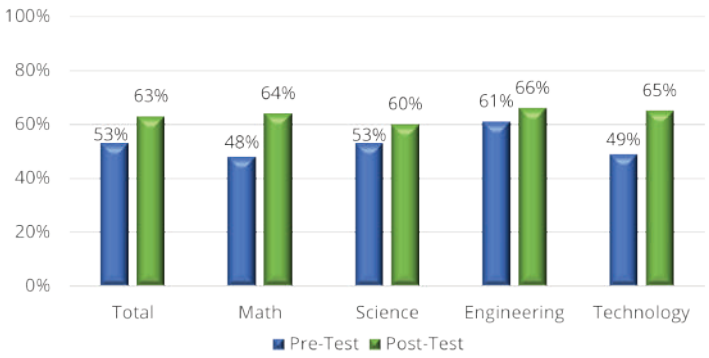
STEM Futures: The Leadership Academy for JROTC engaged Cadets in developing and valuing teamwork, communications, and leadership skills needed to be successful contributors and collaborators. Carefully structured activities designed to do this included:

- **Winning Colors®** Personality Assessment
- Team Building Activities
- Enginnering Design Challenges
- JROTC Fitness Challenges and Sports Nights
- Team Poster Presentations

STEM-on-the-Water Team Design Challenges

Cadets at the 2025 Lee County Academy applied concepts of the center of mass, Newton's third law, coding, gears, and the engineering design process during their team challenges for the maritime-themed curriculum. Cadets designed and built robotic Lego boats that moved in different directions at various speeds and used sensors to distinguish color. Cadets conducted trial and error analysis, under specified constraints, to meet criteria and presented the process and results to Academy leaders, peers, and visitors. Pre- and post-assessments showed Lee County Academy Cadets made statistically significant gains in STEM content overall and in areas of math, science, and technology.

2025 LEE COUNTY ACADEMY CADETS' CORRECT ANSWERS TO STEM CONTENT QUESTIONS



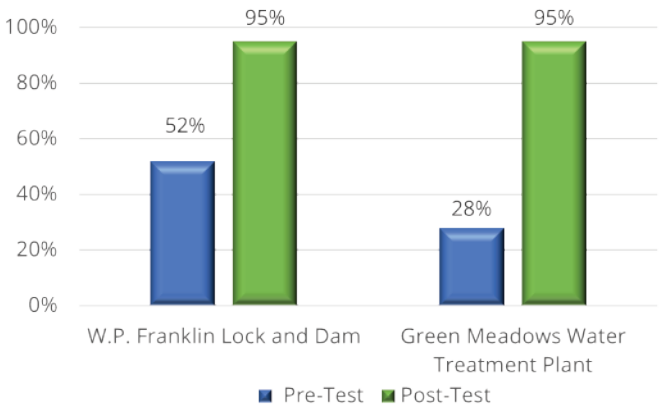
Spending time in the classroom and building the robots was my favorite part because it helped me meet and communicate with so many new people.

RISING 11TH GRADER
RIVERDALE HIGH SCHOOL, 2025 LEE COUNTY ACADEMY

Workplace Visits

To raise Cadets' awareness of how STEM is used in water-related industries, the 2025 Lee County Academy arranged visits to the Green Meadows Water Treatment Plant and the W.P. Franklin Lock and Dam. Cadets interacted with engineers, scientists, technicians, and other professionals who talked about their work, hiring requirements, traits and skills needed, training offered, and salaries for local, high-demand STEM jobs.

2025 LEE COUNTY ACADEMY CADETS ABLE TO DESCRIBE WORKPLACES VISITED

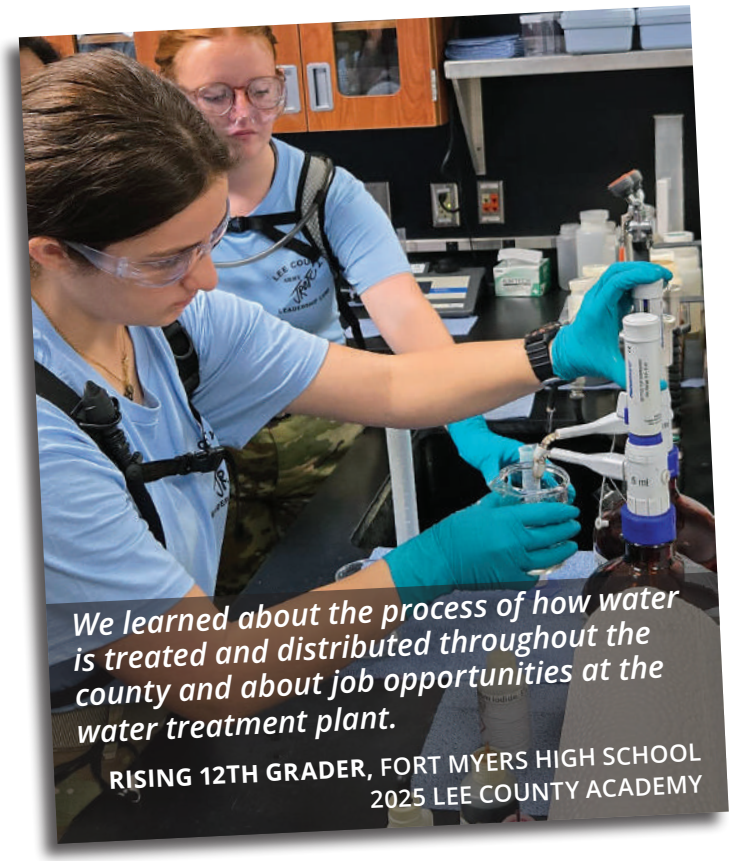


I loved learning about the ecosystem of the lake at Franklin Lock and Dam. They showed how engineering and creativity are used to protect animals and maintain a certain ecosystem standard.

RISING 11TH GRADER, MARINER HIGH SCHOOL
2025 LEE COUNTY ACADEMY

Educational Experiences

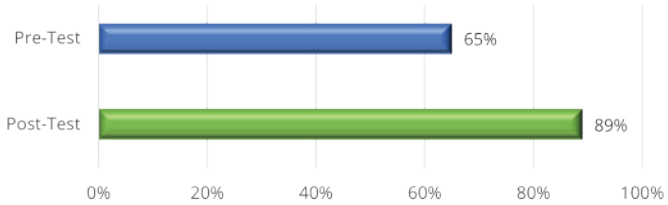
The 2025 Lee County Academy Cadets resided at Florida Southwestern State College where they got a taste of campus life and learned about programs offered, admissions, and financial aid. Guest speakers shared inspirational accounts of their lives and career paths that highlighted perseverance and commitment to success. Cadets heard from David Lui, West Point Cadet; Gavin Demaria, recent high school graduate; Lieutenant Nolan Nguyen, U.S. Army; Lieutenant Commander Russ Schott, West Point; Tiana Bohrer, Women Veteran Warriors; and Brandyn Langston, engineer at Lee County Electric Cooperative.



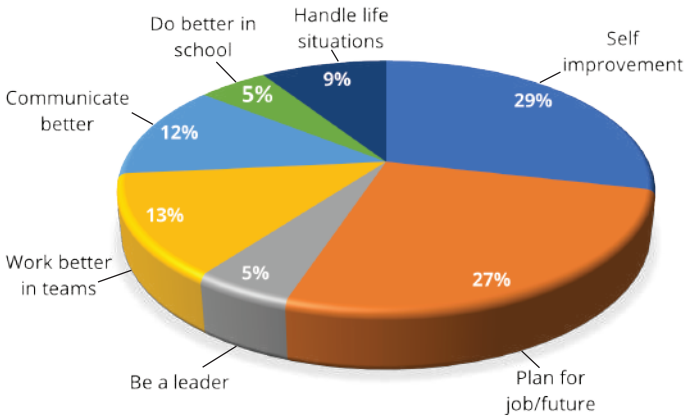
We learned about the process of how water is treated and distributed throughout the county and about job opportunities at the water treatment plant.

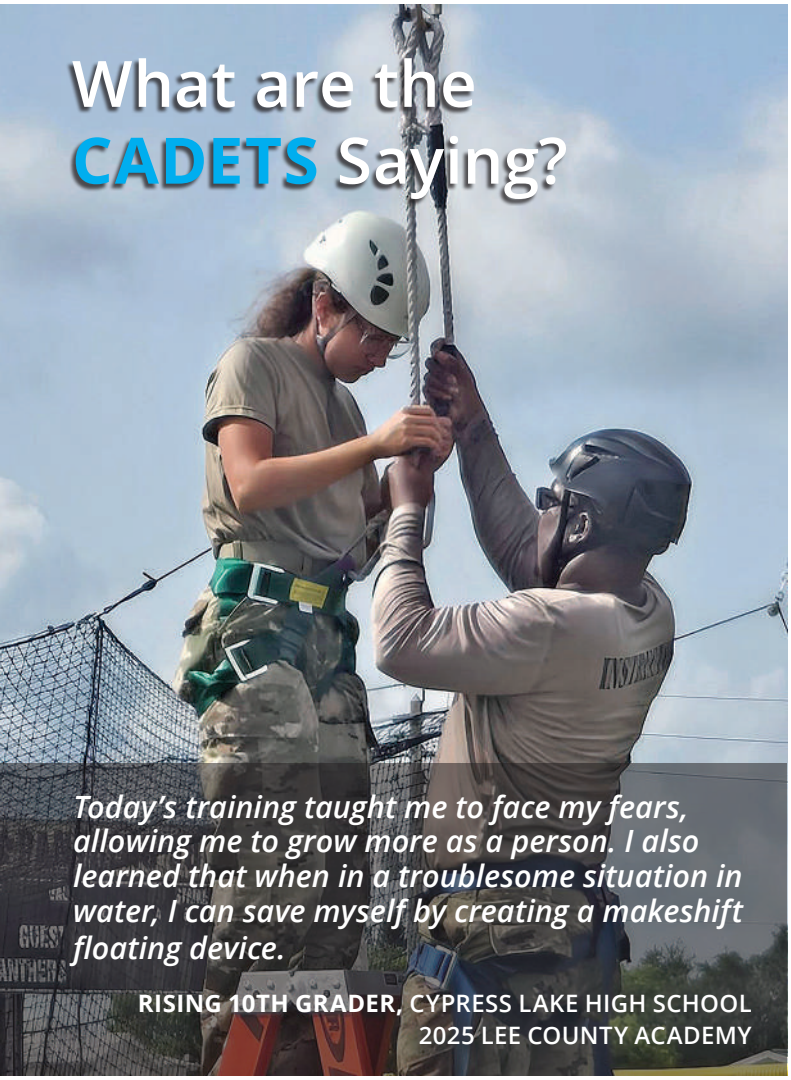
RISING 12TH GRADER, FORT MYERS HIGH SCHOOL
2025 LEE COUNTY ACADEMY

2025 LEE COUNTY ACADEMY CADETS AWARE OF LOCAL, GOOD-PAYING STEM JOBS



HOW WILL 2025 LEE COUNTY CADETS USE ACADEMY EXPERIENCES IN THE FUTURE?

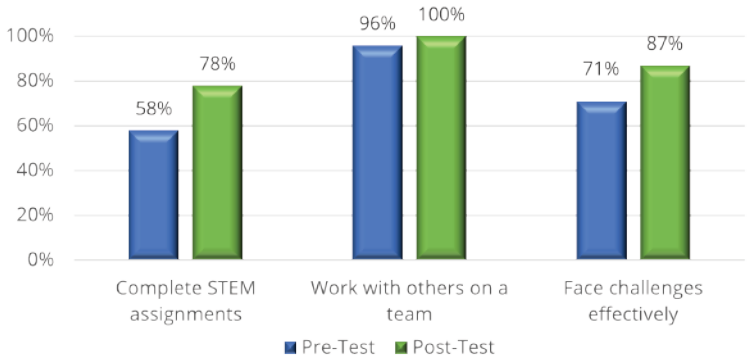




JROTC Cadet Leadership Challenges

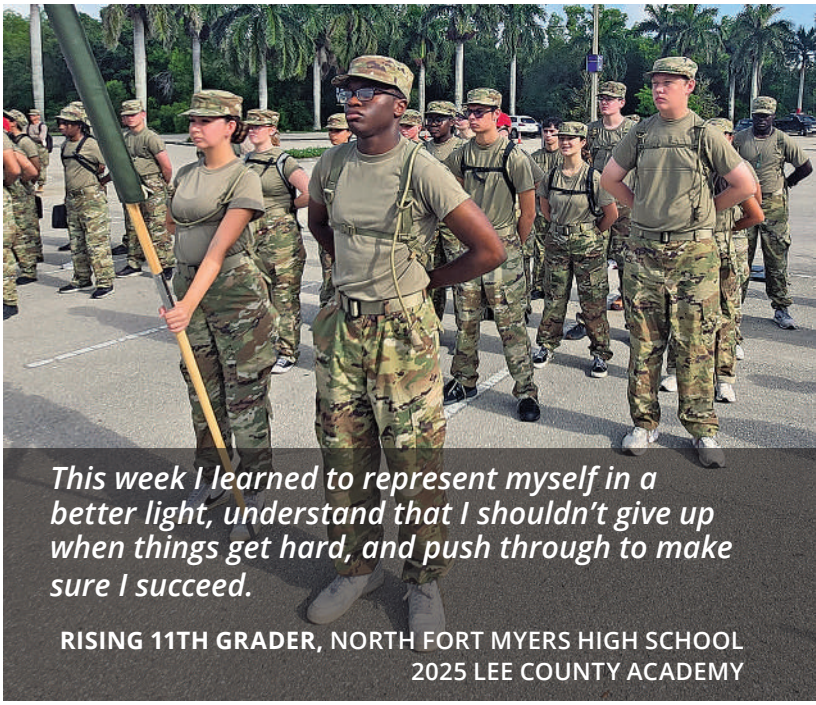
The foundation of the Academy lies in the JROTC culture and character education curriculum. Cadets who attended the Academy received additional exposure to that curriculum and culture by participating in JROTC Cadet Leadership Challenge (JCLC) activities, including land navigation, drown-proof training, ziplining, canoeing, team sports, and physical fitness training. Cadets consider JCLC activities a highlight of the camp that engages them physically while building personal confidence and team camaraderie. Combining JCLC activities and STEM design challenges resulted in linked experiences that helped build academic, team, and leadership skills and promoted self-improvement.

2025 LEE COUNTY ACADEMY CADETS' BELIEFS IN THEIR ABILITY TO...



Overall Conclusions

Based on the analysis of quantitative and qualitative data collected, the **2025 Lee County Academy STEM FUTURES: The Leadership & Workforce Academy for JROTC** increased Cadets' awareness of and interest in local STEM career opportunities and increased their confidence to pursue STEM learning and careers. Cadets made gains in math, science, engineering, and technology concepts aided by hands-on application of those concepts, which increases the likelihood they will be successful in STEM courses and careers. Cadets gained skills in teamwork, leadership, communication, and other 21st century workforce skills and experienced growth in social skills, confidence, and productivity. All combined, the Academy provided experiences that opened pathways to STEM learning and careers.



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