

NJ Aviation Education Council Fall Newsletter



September 2024
Vol. 24/5-1

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Message from the Executive Director...

"Space, the final frontier"...

This famous phrase from the opening narration of the original Star Trek television series captures the essence of humanity's enduring curiosity and ambition to explore beyond Earth's boundaries and venture into the vast reaches of outer space.

The phrase reflects several key ideas about space exploration:

- Space represents the ultimate unknown, a vast expanse beyond our current understanding. It embodies mystery, wonder, and the limitless possibilities of discovery.
- The phrase underscores humanity's innate curiosity and desire to explore. It speaks to our adventurous spirit and our relentless pursuit of knowledge.
- By referring to space as the "final frontier," the phrase suggests that space exploration represents the next major step in our collective journey as a species. It implies that venturing into space is the natural progression of our exploration efforts on Earth.
- Space exploration presents immense challenges, from technological hurdles to astronauts' physiological and psychological effects. However, it also offers unprecedented opportunities for scientific advancement, resource discovery, and potential colonization.
- The phrase has become iconic and inspirational, symbolizing humanity's aspirations for a future where space travel and exploration are commonplace. It continues to capture the imagination of people worldwide, encouraging innovation and pushing the boundaries of what we believe is possible.

"Space, the final frontier" encapsulates the grandeur and significance of space exploration as a defining aspect of human civilization's quest for knowledge, discovery, and expansion beyond the confines of our home planet.

"To boldly go where no one has gone before"...

"To boldly go where no one has gone before" encapsulates the spirit of exploration and discovery central to future generations' ethos.

It emphasizes space exploration's courage and adventurous nature, suggesting a willingness to venture into the unknown and push boundaries. The use of "boldly" underscores the idea of facing challenges with bravery and determination, while "where no one has gone before" highlights the pursuit of new frontiers and experiences that humanity has not yet encountered.

This phrase has become synonymous with the spirit of exploration, innovation, and the quest for knowledge, reflecting humanity's enduring curiosity about the universe and our desire to expand our understanding of it.

The legacy of Star Trek is profound and far-reaching, influencing not only popular culture but also technology, science fiction, and societal values. Here are some key aspects of Star Trek's enduring legacy:

- Star Trek introduced numerous futuristic technologies that have inspired real-world innovations. Examples include communicators (like modern smartphones), tricorders (medical diagnostic tools), and replicators (akin to 3D printing). The show's vision of space exploration and technology motivated scientists and engineers to turn science fiction into reality.
- Star Trek was groundbreaking in its portrayal of diversity. It featured one of TV's first multicultural casts and addressed social issues like racism and sexism through allegory and storytelling. Characters like Lieutenant Uhura (played by Nichelle Nichols) and Hikaru Sulu (played by George Takei) broke barriers and became iconic figures in television history.
- Star Trek often explored complex moral and ethical dilemmas, presenting scenarios that challenged viewers to think deeply about the human condition, diplomacy, war, and peace. The Prime Directive, which dictates non-interference with other cultures, is a philosophical concept that has sparked debate and reflection.

Unlike many dystopian sci-fi narratives, Star Trek offered a hopeful vision of the future where humanity overcomes its present-day challenges and unites to explore the cosmos. This optimistic outlook continues to resonate with a positive vision of tomorrow.

Star Trek's legacy is multifaceted and enduring, reflecting its profound impact on technology, diversity, ethics, optimism, community, and storytelling. As a cultural phenomenon, Star Trek continues to inspire and provoke thought about humanity's future and the boundless possibilities of the cosmos.

“If they can dream it, they can do it!”

**Michael Castania
Executive Director
NJAviation Education Council**



Editor's Notes

Thank you for taking the time to read about the wonderful things going on in New Jersey Aviation Education

01

To date, there are **12** schools with an Aviation Program aligned with AOPA's "You Can Fly!" Initiative. Interested schools should contact us for more information ([p.](#))

02

The first students in New Jersey Aviation programs are graduating from 4-year colleges with their credentials. The program works.

03

There are so many ways to get involved. It is vital to the aviation industry's future that we do what we can to spark and foster our children's curiosity and imagination in aviation. Contact us for more information ([p.](#))

04

Please send us articles for the Spring edition of the newsletter. We want to get as much information out to as many people as possible. Send me any ideas or drafts at kdoyle@mhrd.org

Kevin S Doyle, Ed.D..

Egg Harbor Township Summer Aviation Program

Egg Harbor Township Summer Aviation Program

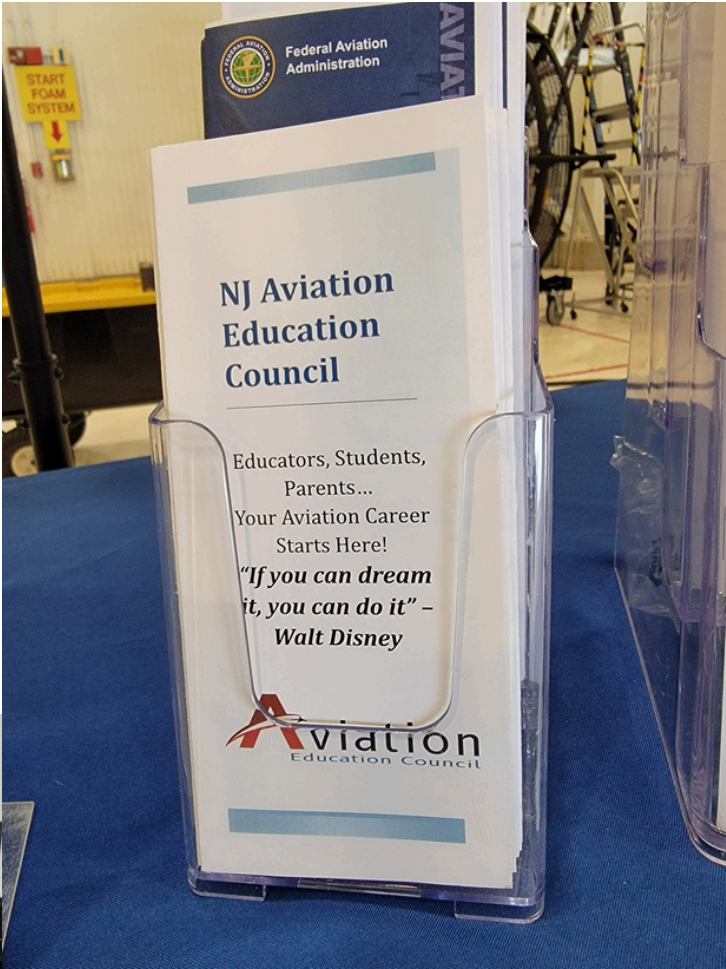
This summer, Egg Harbor Township 7th and 8th grade middle school students engaged in learning about the field of aviation. The students participated in a week-long summer program learning about the principles of flight, aviation careers, and rocketry. Ms. Mina Moazamian from the FAA AvSTEM program visited the program and taught students about aviation careers and their options to engage in aviation studies. The program culminated with a hands-on rocket-building and launching exercise with guest instructor Michael Castania from the New Jersey Aviation Council and the Civil Air Patrol. The students also had an opportunity to visit the Millville Army Airfield Museum, where they saw many artifacts and learned more about the history of aviation.

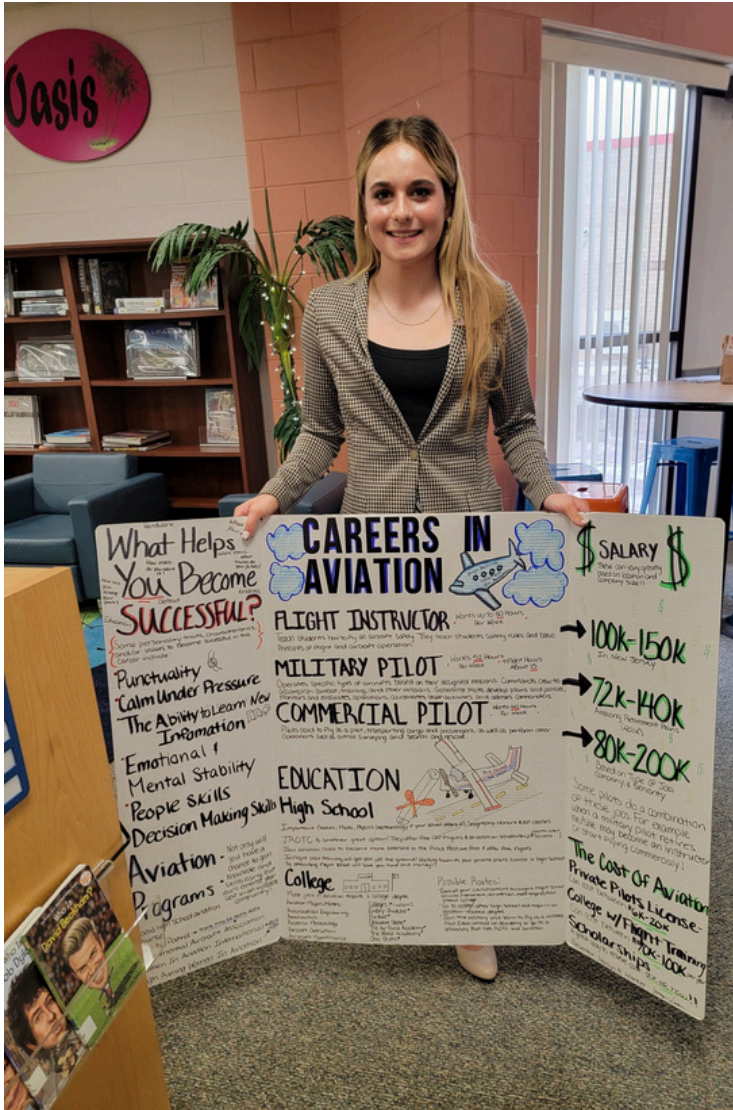


Egg Harbor Township High School Embraces AOPA's Intro to Flight Course
The Egg Harbor Township School District has adopted the Aircraft Owners and Pilots (AOPA) Curriculum as the standard curriculum for their aviation courses. Students who are a part of the Aviation academy and other students who have interest in the courses start with HN Electrical Engineering and then move into the AOPA Introduction to Flight curriculum their sophomore year. These courses have built interest in the field of aviation for young learners in the Egg Harbor Township School district. With an added flight simulator and other relevant course materials students are able to explore the field of aviation through a structured learning approach. The district looks to add the third and fourth year AOPA aviation course of the aviation pilot track in the near future.



NJAEEC in Action





STUDENT ENGAGEMENT AND CAREER DAY

JOINT BASE MCGUIRE - DIX - LAKEHURST

APRIL 19, 2024 / 9AM - 2PM

- ★ AIRCRAFT AND GROUND DISPLAYS
- ★ STEM BOOTHS
- ★ MILITARY WORKING DOG DEMO
- ★ AND MORE!!

REGISTRATION AND EVENT INFORMATION

einvitations.afit.edu/inv/index.cfm?i=8352878k*0A6247087350

What Helps You Become Successful?

- Punctuality
- Calm Under Pressure
- The Ability to Learn New Information
- Emotional & Mental Stability
- People Skills
- Decision Making Skills

Aviation Programs

EDUCATION

High School

College

FLIGHT INSTRUCTOR → 100K-150K

MILITARY PILOT → 72K-140K

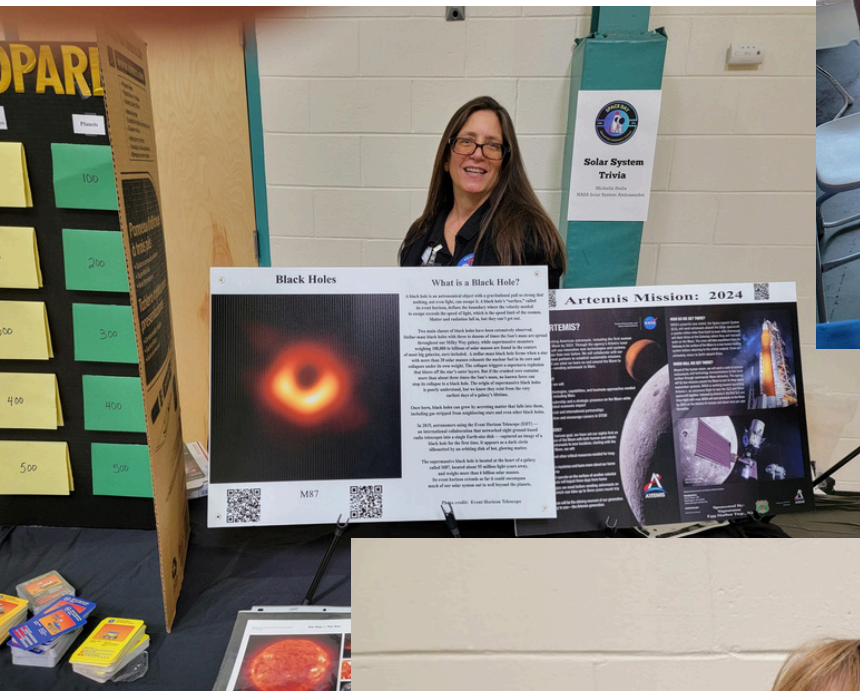
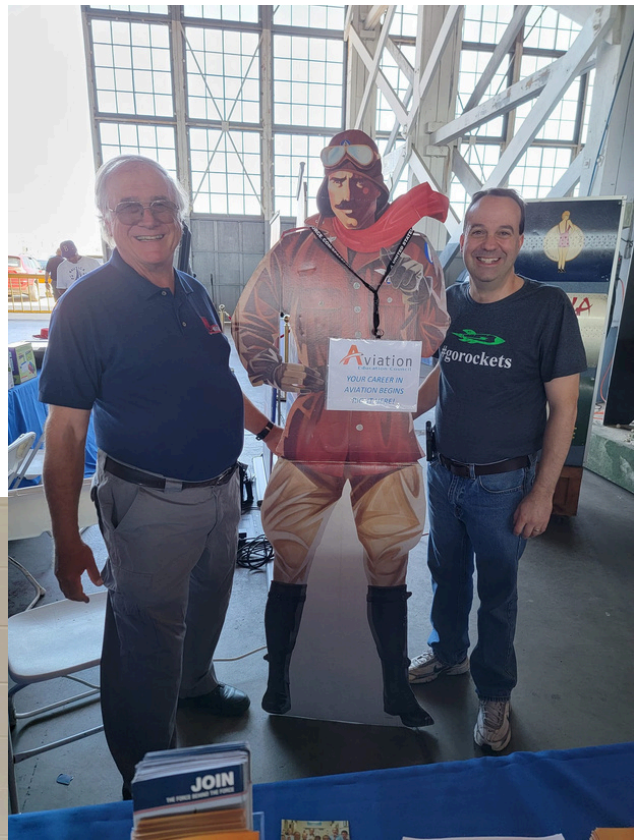
COMMERCIAL PILOT → 80K-200K

THE COST OF AVIATION

Private Pilot License - 10K-20K

College w/ Flight Training - 100K-200K

Scholarships



Networking

Earlier this year, the NJ Aviation Education Council joined the NJWG and the Civil Air Patrol during the Student Engagement and Career Day hosted by JBMDL. The event aimed to foster connections between military personnel and the surrounding local schools and provide students with insights into various career pathways and opportunities within the military and civilian sectors. The NJ Aviation Education Council was the only civilian educational organization asked to participate.

As a proud participant, the NJ Aviation Education Council showcased its commitment to supporting aerospace education initiatives and career pathways while fostering a volunteer spirit among youth in attendance. Lt Col Michael Castania, Director of Aerospace Education for CAP's NJ Wing as well as serving as the Executive Director for the Aviation Education Council, engaged with students, offering valuable insights into Career Pathways as well as CAP's three primary missions: cadet programs, aerospace education, and emergency services.

Castania, along with Lt Col Bill Petzinger and CAP Cadets Allyson Kittel and Cassidy Kittel from the Maj Thomas B. McGuire Jr. Composite Squadron, spoke throughout the day to students and teachers about STEM (Science, Technology, Engineering, and Mathematics) programs, resources for educators, and aerospace-related activities and the myriad of Aviation and Aerospace industries career opportunities. At the same time, CAP members highlighted the organization's role in emergency services, search and rescue operations, disaster relief efforts, and leadership training opportunities.

"This event was a fantastic opportunity for students to explore potential career pathways and gain valuable insights into the workings of a military base," said Castania. "By participating in Student Engagement and Career Day, we connected with many students, and hopefully, inspired them to explore new opportunities with the Education Council and Civil Air Patrol as well as assist them in future career decision makings."

This event offered students a unique opportunity to interact with military personnel from the 87th Airborne, 305th Air Mobility, 305th Operations, and 621st Contingency Response wings stationed at JBMDL. Students were given tours and information about the diverse range of careers available, including aviation, logistics, engineering, healthcare, and more.

Students and teachers were able to tour a U.S. Air Force KC-46 Pegasus, a C-17 Globemaster III, a C-12 Huron military transport aircraft, and a military Humvee.

"Events like these are invaluable for students," said Castania. "They not only get to learn about different career options but also gain a deeper appreciation for the dedication and service of the men and women who serve at JBMDL."

"Student Engagement and Career Day gave local students and teachers a glimpse into the diverse opportunities available in aviation and emergency services," remarked Maj Rob McClellan, Recruiting Officer for CAP's NJ Wing.

"CAP's involvement adds depth to their understanding of these fields and encourages them to explore potential pathways."

Can you say NETWORKING??? JBMDL welcomed more than 2,300 students from 33 schools in the surrounding communities to engage with the military from all branches.

BTW, the New Jersey Aviation Education Council (NJAECE) is a non-profit statewide organization that provides a network for students, educators, the aviation/aerospace industry, and the government to interact and share knowledge and resources to promote the exciting opportunities available in the world of aviation and space. Their Mission: To encourage and reinforce interest in aviation/aerospace subjects and careers and to educate students about the value of the aviation and aerospace industries in the local, state, and national economies, as well as in the security and recreational environments.

To learn more about all the possibilities in aviation and aerospace, including universities and flight schools, aviation technician schools, scholarships, airline training programs, aviation organizations, and military service, check out their website: <https://aviationec.org/>

Founded in 1941 and established as the official civilian auxiliary of the U.S. Air Force seven years later, Congress chartered the Civil Air Patrol as a nonprofit organization for youth development, aerospace education, and to promote general aviation. In an auxiliary role as a Total Force partner of the Air Force, CAP operates the world's largest fleet of single-engine aircraft for search and rescue, disaster relief, training, and education. Civil Air Patrol is dedicated to serving America's communities, saving lives, and shaping futures.

If you are a student between the ages of 12 and 18 or an adult interested in Civil Air Patrol, please contact Maj. McClellan at robert.mcclellan@njwg.cap.gov or visit CAP's website at <https://www.gocivilairpatrol.com/>.

- Maj. McClellan, CAP & NJ Aviation Education Council



Greatness in aviation is a journey rather than a destination...

By Michael Castania
Executive Director
NJ Aviation Education Council

A powerful statement! It highlights the continuous pursuit of excellence and innovation in aviation. Each step forward, whether it is in technology, safety, efficiency, or service, contributes to the ongoing journey toward greatness.

Man's desire to fly has been a powerful and enduring aspiration throughout history. From ancient myths and legends to modern aerospace engineering, the journey to achieve flight embodies human ingenuity, perseverance, and the drive to transcend physical limitations.

“Boy, he sure is a great pilot.” How often have we found ourselves echoing this sentiment, marveling at the prowess of fellow aviators, from legends like Charles Lindbergh and Bob Hoover to those we encounter at our local airfields? However, what truly defines a “great pilot.” Is it innate talent, years of rigorous training, or perhaps something intangible?

It is the culmination of relentless dedication, continuous learning, and an unwavering commitment to excellence. Natural ability may set the stage, but the passion for flying, the mastery of the aircraft, and the wisdom gained from each flight sculpt a good pilot into a great one.

Whether it is the precise execution of maneuvers, the calm decision-making in the face of adversity, or the gentle touch on the controls, greatness is often recognized in moments of challenge. Yet, it is also in the everyday commitment to safety, proficiency, and the joy of flight.

Nevertheless, what exactly is a “great pilot,” and how do you become one? Is it all about experience and training or does it come down to natural ability? Does it have more to do with decision-making or stick and rudder skills? On the other hand, do you simply know it when you see it?

Notable Examples

- Chesley “Sully” Sullenberger: Known for his extraordinary emergency landing of US Airways Flight 1549 on the Hudson River in 2009, demonstrating exceptional skill and composure.
- Amelia Earhart: An aviation pioneer who set numerous records and inspired generations with her courage and determination.
- Bessie Coleman: The first African-American woman to hold a pilot license, overcoming significant barriers and contributing to the advancement of aviation.

As Frank Borman, Apollo 8 astronaut, once said, “The mark of a truly superior pilot is the use of his/her superior judgment to avoid situations requiring the use of his/her superior skills.” This wisdom emphasizes the importance of judgment and decision-making in achieving true greatness in aviation.

The dreams of flight have captivated humanity for millennia, inspiring countless myths, scientific endeavors, and technological advancements. These dreams reflect a fundamental human desire to explore, innovate, and transcend the limitations of the natural world. Here is a brief journey through the history and evolution of humanity's dreams of flight:

- Greek Mythology, the story of Icarus and Daedalus
- The ancient Chinese invented kites over 2,000 years ago
- Leonardo da Vinci was fascinated by the concept of flight and created detailed sketches of flying machines
- In 1783, the Montgolfier brothers in France successfully launched the first manned hot air balloon, marking humanity's first flight in a lighter-than-air craft.
- Sir George Cayley, an English engineer, considered the father of aerodynamics, built and flew the first successful gliders, recognizing the importance of fixed-wing designs for achieving controlled flight.
- On December 17, 1903, Orville and Wilbur Wright achieved the first controlled, sustained flight of a powered aircraft with the Wright Flyer. This milestone marked the beginning of modern aviation.
- Charles Lindbergh: In 1927, completed the first solo nonstop transatlantic flight from New York to Paris in the Spirit of St. Louis, demonstrating the potential of long-distance air travel.
- Amelia Earhart was the first woman to fly solo across the Atlantic Ocean, breaking numerous records and promoting the role of women in aviation.
- In 1961, Yuri Gagarin became the first human to orbit the Earth, fulfilling humanity's dream of reaching space.
- In 1969, Neil Armstrong and Buzz Aldrin walked on the lunar surface, achieving one of humanity's most ambitious dreams of flight.
- Space Tourism: Companies like SpaceX, Blue Origin, and Virgin Galactic are working towards making space travel accessible to civilians, turning the dream of spaceflight into a commercial reality.



Man's desire to fly has led to remarkable achievements and inspires new generations to reach for the skies. Whether through commercial air travel, military aviation, or space exploration, this journey reflects the boundless human spirit of exploration and innovation. These dreams of flight represent humanity's relentless pursuit of exploration and innovation. From mythological tales to cutting-edge technology, the journey to conquer the skies and beyond continues to inspire and propel us toward new horizons.



Shine and Inspire with Civil Air Patrol

C/Capt Sanjna Thoguru - Capt 'Bud' Jackson Composite Squadron, New Jersey Wing



Shine and Inspire Winter Wonderland: Group Photo of event volunteers taken by S&I event photographer

“Shine and Inspire was a profound reminder of how little actions can make huge impacts on your community[...] Seeing the children's reaction brings me back to my first aerospace outreach event in 2018, and how much I enjoyed learning the flight simulator, which set me on a path to set and achieve goals to expand my knowledge of aviation and aerospace. We owe it to the effort of our predecessors to motivate and create the next generation of leaders for our nation, and Shine and Inspire helped remind me and the cadets and senior members present of that principle.” ~ C/Lt Col Satyam Shah, NJWG

Civil Air Patrol(CAP) is a distinguished youth program dedicated to serving America's communities, saving lives, and shaping futures. On December 9th, 2023, a team comprising 13 Cadets and 3 Senior members from New Jersey Wing's Capt Bud Jackson Composite Squadron was able to do just that.

Partnering with the Shine and Inspire Organization for their annual Winter Wonderland event(an event supporting families with young children) the CAP team was able to give back to their community by providing STEM activities to entertain and introduce the children to Airpower and Cyberspace. With donations from generous sponsors(including gifts and money) and the help of local businesses(barbers service, ect.) the event organizers were able to arrange a wonderful event with cookie decorating, balloon twisting, and of course STEM.



Shine and Inspire Winter Wonderland: C/Maj Sanjna Thoguru, C/2d Lt Darsh Shah, and C/MSgt Teerth Shah teaching attendees how to build rubber band rockets.

“I’ve always loved events like this one because on top of doing a service to my community, I’ve found that for many people in these communities, aerospace education is not prioritized or even covered in their school’s curriculum. Many of them pursue higher education with no real knowledge of what aerospace and cybersecurity are. Hopefully, we were able to change that for some people.”

~ C/Capt Sanjna Thoguru, NJWG

Working with the event coordinators Mrs. Nawaz Merchant, Mrs. Donna Powell, and Mrs. Carol Feldman, the CAP event leadership team from NJ-102 (C/Sanjna Thoguru, C/Satyam Shah, SM Purnima Kulkarni, SM Ratan Narnolia, and SM Suman Shah) was able to work with the children who attended the event. The families invited by Shine and Inspire were picked from a list provided by the local school district. Those whose names were provided were considered by the state to be at or below the poverty line, meaning that, for many of the children, the winter wonderland event was their first encounter with aerospace.

Initially, the young attendees were indifferent to the CAP stations, being more drawn to the balloon twisting and coloring. After circling around, though, the curious attendees, both young and old, came back to check out the flight simulators and model rocketry activities. For some of them, this encounter was inspiring.



Shine and Inspire Winter Wonderland: C/2d Lt Justin Moscaritolo, C/Lt Col Satyam Shah, and C/1st Lt Kulkarni showing attendees and volunteers how to fly flight simulators.

“[...]While everyone was having a good time, I was able to witness how the kids lit up with excitement and wonder when experiencing activities based on aerospace education, asking many questions in the process. Through Shine and Inspire, I was able to become a part of something and showed people how fulfilling and interesting aerospace education can be.”

~ C/CMSgt Milla Kumar NJWG

As a volunteer for this event, I had one final thought: Shine and Inspire is doing a very special thing for their community. Throughout the event, I was approached by many parents, both with questions about our program and those who wanted to thank us for our time. Many parents were surprised to find that their kids enjoyed aerospace more than arts and crafts.

I would also like to highlight Shine and Inspire’s goal: To inspire members of their community to inspire other members of their communities.

When I attended this event, I felt even more inspired to give back to my own community, and am incredibly thankful for the experience that the founders of this organization have given to me and all of the children in the room that day. I truly believe the kids walked out with much more than a bag of presents.

Resources

New Jersey Aviation Education Council



<https://aviationec.org/>

New Jersey STEM Pathways Network

Defining and guiding a STEM vision for cradle-to-career pathways in New Jersey.

- ALIGNS RESOURCES TO SCALE AND REPLICATES PROMISING PRACTICES.
- PROMOTES STEM CAREER PATHWAYS BY TRAINING STATE LEADERS AND CREATING DEEPER PUBLIC AWARENESS OF OPPORTUNITIES AVAILABLE IN THE 21ST CENTURY WORKFORCE.
- IDENTIFIES LEARNING OPPORTUNITIES BY CONVENING NEW JERSEY'S STEM EXPERTS.

Learn more: <https://njstempathways.org/>

Pathways to Aviation



The Civil Air Patrol



Young Eagles



AOPA You Can Fly! Initiative



AOPA | YOU CAN FLY

Member Schools

Barnegat High School
Boonton High School
Buena Regional High School
Daylight Twilight High School
Egg Harbor Township High School
Franklin Township High School
Hoboken High School
Indian Hills High School
Monmouth Regional High School
Morris Hills High School
Morris Knolls High School
Pequannock High School
Ramapo High School
Raritan High School
Ridgefield Park High School
Roxbury High School
Sayreville War Memorial High School
Trenton Central High School