



WPAFB Educational Outreach



INSPIRING STUDENTS IN STEM

K-12 STEM ENQUIRER

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International Science and Engineering Fair

The United States Department of Air & Space Force participated as a Special Award Organization at the [2024 Regeneron International Science & Engineering Fair](#) at the Convention Center in Los Angeles, California from May 12 to 17. The DAF K-12 STEM Office in conjunction with the Wright-Patterson Air Force Base Educational Outreach Office awarded 26 cash prizes. Judges from across the Air & Space Force judged hundreds of students S&E projects in 22 STEM categories. The [2025 Regeneron International Science & Engineering Fair](#) will be hosted in Columbus, Ohio.

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Join us next month...
FIRST® Partner Meeting



GRILL Full Throttle

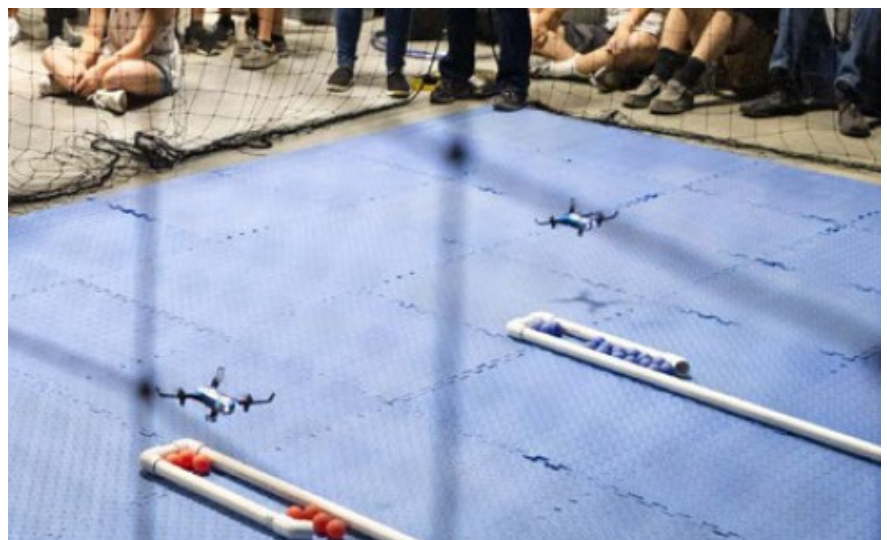
The Education Outreach Office participated in two Full Throttle STEM events in May, hosted by the Air Force Research Laboratory's [Gaming Research Integration for Learning Laboratory](#)® (GRILL®) at the NMUSAF and Eldora Speedway.

The goal of the event is to spark student interest in science, technology, engineering and mathematics (STEM) and increase interest in related career fields. Participating teachers and students utilized a series of project-based STEM learning materials that were developed at the GRILL®. Throughout their academic semester, students focused on applying skills such as physics (in racing), graphic design, and marketing to design, develop and race their own RC car.

The events allowed students the opportunity to showcase their STEM related projects, including their modeling and simulation-based work, and participate in learning opportunities that culminate in a live RC race car competition.



Drone competitions (below and right).



RC competitions (above and left).

LEGACY Student Spotlight

The Department of Air Force Leadership Experience Growing Apprenticeships Committed to Youth (LEGACY) rising Apprentice, Aidan, began LEGACY as an 11-year-old Craftsman camper. He was in the first class of Craftsman campers at the United States Air Force Academy (USAFA). Aidan returned to Craftsman camps each summer, and when he turned 16-years-old, he began the next phase of the LEGACY Program as a Jr. Apprentice.

Aidan is now beginning his third summer as a rising Apprentice. The past two summers, he had the opportunity to work with the Aeronautical Lab and when Aidan was asked about his experience, he said, "I loved it!" The main goal for the summer project was testing different types of AF cadet modeled prototypes in the different wind tunnels. Each aircraft was assigned different tests based on what that specific aircraft was trying to accomplish. He used the Trisonic Wind Tunnel (TWT), which is capable of subsonic, supersonic, and hypersonic speeds; a hypersonic wind tunnel with speeds up to Mach 6 and a water tunnel which is most useful in the research of vortices and fluid dynamics around an aircraft. Other methods used involved more computational problems and simulations, including Vortex Lattice Method (VLM) and Computational Fluid Dynamics (CFD). Aidan said, "I've learned so many things to prepare for my future from my mentors there, Dr. Steve Brandt and Mr. Ken Ostasiewski; I'm incredibly thankful for them and for this opportunity to work in such an amazing place!"

Aidan played on his high school basketball team for two seasons and was a 4-year member of the tennis team where he was captain his senior year. He was a member of the National Honor Society, the National Math Society, and the National Technical Honors Society. He loves everything outside, hiking and skiing especially, and enjoys watching movies, lifting weights, and eating all kinds of foods.



This fall, he will attend Texas A&M majoring in Aerospace Engineering with a focus on fluid dynamics and propulsion. Both of his parents are Texas A&M alumni, which helped influence his decision to attend and also join the Corps of Cadet program. "Once I started looking for colleges myself, I knew I wanted to apply because of the prestigious engineering program, the traditions of the school, Corps of Cadets, warm weather, large and beautiful campus, D1 sports culture, and of course, from all the good things my parents had to say about it," noted Aidan. (*cont'd next page*)

LEGACY Update *cont'd.*

Aidan will be joining the Corps of Cadets program at Texas A&M. According to the Texas A&M website, “The Texas A&M Corps of Cadets is the largest, oldest and most visible student organization and leadership training program at Texas A&M University. The Corps develops well-educated leaders of character who embody the values of honor, courage, integrity, discipline and selfless service. They are academically successful, highly sought-after and prepared for global leadership challenges of the future.”

Working at USAFA has sparked Aidan’s interest in the military. He considered applying to USAFA, but decided he would like to go a little farther from home and to a place a little warmer too! In the end, the decision was Texas A&M due to the Corps of Cadets program, partly because he wanted to keep the option open to join the military as he is still considering joining the Air Force. “I also chose the Corps of Cadets for its unique leadership and service opportunities. All of the outfits have some activity they specialize in, (leadership, service, athletics, academics, etc.) and I loved this idea of choosing an outfit to improve many of my leadership skills, as well as getting the opportunity to continue playing sports, serve my community, and do well in academics,” said Aidan. Currently, his top choices for outfits are Squadron 17 (Challengers), Squadron 2 (Gator 2), and Squadron 11 (Heaven's Eleven).

“The LEGACY program has had a very positive impact on my life, when I first began the Craftsman Camp, I knew that I had discovered my love for engineering and STEM. It has helped me to pursue and hone my love and skills in engineering, especially once I started the second step of the LEGACY program, the paid internship. I began working in the Aeronautical Lab in the summer after my sophomore year of high school and have been there ever since. I love working in the department, I have learned so much from my mentors and all of the skills I need to succeed not just in my field, but in all of the business and my future in the world,” added Aidan.

After college, he plans to pursue a master's degree (possibly an MBA) and hopefully find a job in the aerospace field, where he would like to research advances in fluid dynamics or propulsion. He is also considering commissioning into the Air Force through the Corps of Cadets as a second Lieutenant.

Good luck at Texas A&M and keep up the great work!



Volunteer Spotlight



Name: Jeff Leonard (civ)

EO program volunteering with: I started out as WOW! Volunteer. Over the years I have participated in Job Shadow, Career Speakers, Science Fair Judge, a guest presenter at LEGACY and STARBASE, and just recently have been able to be a volunteer for SEMEDS.

Years volunteering with the EO office: I believe that my first WOW! Presentation was in October 2017, so I have been a volunteer for 7 years.

Why did you become an EO volunteer? I have always been interested in STEM Outreach. I am the Co-Chair for the STEM Committee for the Society of American Military Engineers at both the local Kittyhawk Post and the National Organization’s Community of Interest. I tend to volunteer for a lot of activities; Scout Leader, Tee Ball coach, teaching Sunday School, etc. Giving back makes me happy and I love working with kids. EO is great way to do both. When you connect with a kid or group of kids, and see that click of comprehension/inspiration, it makes you (me, one) feel great.



What is your favorite aspect of volunteering with the EO office? It is easy. All of the programs there are so well run, so well laid out. You know the lessons are well written when a guy like me can present a chemistry lesson. (shameless plug! 😊) OK, let’s try this: It’s fun! I enjoy getting out of the office, and to see the kids’ faces light up at that moment of comprehension is so rewarding.

How does your job at WPAFB tie into STEM? I work as a System Safety Engineer in the AFRL Materials and Manufacturing Directorate. I support almost 200 chemical, material science, and manufacturing research labs, such as the one the SEMEDS program uses. My previous experience as an electrical design engineer and the Base Fire Protection Engineer, gives me a broad background to present a variety of topics at Job Shadow or Career Day presentations.

What advice would you give to potential volunteers? Volunteering is an enjoyable and fulfilling experience. You don’t have to be an expert in the subject matter. All of the programs come with great training, and you are not presenting to fellow PHDs, Engineers, Scientists. To quote my favorite comedian, Jeff Foxworthy, “I am smarter than a fifth grader.”

Interested in becoming an EO volunteer? [Click here](#) to learn more and get involved!

