



WPAFB Educational Outreach



INSPIRING STUDENTS IN STEM

K-12 STEM ENQUIRER

November 2022

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Job Shadow Day 2023!

The EO office is happy to announce plans are in motion to bring the Job Shadow Day Program back for Spring 2023! High School Juniors and Seniors visit WPAFB and spend the day with Base personnel, learning first-hand about some of the exciting careers available across dozens of fields. Stay up-to-date by visiting the [events](#) page!



If interested in being a Mentor, please contact [Kim Stultz](#).

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LEGACY in the News



This summer, LEGACY (Leadership Experience Growing Apprenticeships Committed to Youth) Jr. Apprentice, Sebastian Smits, became the youngest Assistant Editor of USAFA's Space and Defense Magazine through the Eisenhower Center.

The Eisenhower Center provides cadets and faculty at USAFA with unique opportunities to participate in research and policy discussions. The journal, Space and Defense, promotes an ongoing discussion of space and security policy issues. To checkout the publication that Sebastian edited, [click here!](#)

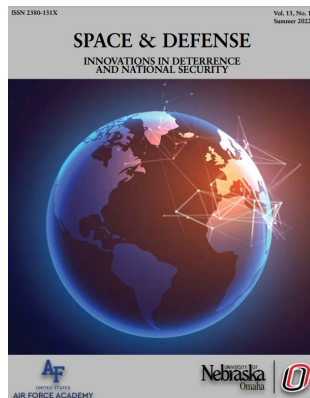
Sebastian is in his 5th year with the LEGACY program and his 3rd year as an intern. He plans to study electrical engineering and is currently involved with rock climbing for California State University San Marcos.

Keep up the great work, Sebastian!



Join us next month...

FTC Updates



FLL Regional Competitions

FIRST LEGO League Challenge teams from around the state are intensely preparing for competitions!

FLL Ohio kicked off the competition season at Ross Middle School in Cincinnati on November 19. Teams gathered to compete in head-to-head robotics matches trying to score as many points as possible in 2.5 minutes. Teams also spent time in judging sessions; explaining their teamwork, strategy, design process, and innovations. The judges were beyond impressed!

This season, themed Super Powered, has teams working to understand problems associated with our energy grid and usage, and proposing innovative solutions to their identified problem. Teams design and program a robot to autonomously solve LEGO missions related to the energy theme, all while developing their teamwork and collaboration skills using the FIRST Core Values. To find out more about this season's challenge [click here](#).

Five teams have qualified for the next round of competition which takes place in January where they will compete to qualify for the Ohio Championship in March. Congratulations to these teams for advancing to the next round: 353 LEGO Maskers (*Hamilton*), 2751 Lego Legion (*Cincinnati*), 37575 Howl Bout It (*Cincinnati*), 38060 Legomoji (*Cincinnati*), 52756 Brain Gears (*Dublin*).

We can't wait to see what all the teams competing in December accomplish next!



FLL Volunteer Workshops



FIRST LEGO League Challenge tournaments rely on volunteers to serve in various roles, some of which require specific training. We learned a thing or two over the past two years about providing high-quality training via Zoom for our volunteers.

Depicted below is Richard Storrick, Ohio's Head Referee, leading an online training session to get our volunteer referees up to speed and ready to evaluate teams at competitions. Referees from around the state joined us to learn about the Super Powered robot game, the season specific rules, and how each mission will work.

Our referees are taught to evaluate the team's robot performance, while building kids up and encouraging them to continue improving their programming and strategizing skills.

Are you interested in joining our volunteer team? Contact [Brenda Ronnebaum](#) (or [Kim Stultz](#)) to learn more!



WOW! Coding Materials

Materials are available to help students learn CODE!
See [WOW! on Wheels](#) for information on borrowing materials.



Students new to coding:



SPHERO INDI: The Sphero indi is a screen-free option for young learners as they are introduced to coding.



OZOBOT EVOS: Students start coding screen-free with Color Codes, learning basic coding concepts like cause/effect, critical thinking and debugging.

Students with some coding experience:



FINCH ROBOT 2.0: This robot uses the micro:bit and is a great tool for icon and block-based coding. Designed for students and teachers who are new to coding—needs can be met at all experience levels.



SPHERO BOLTS: This robot helps students learn coding while completing fun activities—best for students grade 2+.

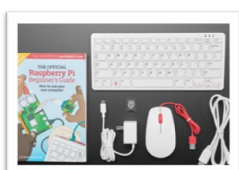


MICRO:BITS: The micro:bit is “a pocket-sized computer” that allows students the opportunity to program it by connecting it to the internet via a computer or tablet. As students learn more about input and output, and how processors and sensors work, they can create and code hundreds of projects.



MAKEY-MAKEYS: This mechanism turns everyday objects into touchpads and computer keys. Beginners and experts use Makeys when doing art, engineering, and everything in between. Students use Makeys to understand circuits, conductors, insulators, and sensors.

Students with advanced coding experience:



RASPBERRY PI 400: *Coming Soon!* The Raspberry Pi is a complete personal computer—the 400 has the Raspberry Pi designed into a keyboard. Power supply, HDMI cables, SD card, mouse and small monitor are included. It’s a great educational tool when teaching computing concepts like programming, physical computing and networking.

WOW! Teacher Workshops



The WOW! program was excited to offer a free Teacher Workshop at the end of October, in addition to our normal summer workshops. WOW! partnered with SOITA of Dayton and CET-PBS of Cincinnati for a fun two days of networking, idea sharing, and a chance to use some of the WOW! materials.

Summer 2023 Workshops have been scheduled!

- July 12-13 for 5th-8th grade teachers
- July 17-18 for Kindergarten-4th grade teachers

Registration will open in May.

Workshops will be held at SOITA (1205 E. Fifth Street, Dayton, OH 45402.

Additional workshop specifics to be announced.

Please contact [Angel Callahan](#) with any questions.

Employee Spotlight

Name: *Nicole Lange (civilian)*

Title: *LEGACY Program Manager*

Program(s): *LEGACY*

Years with the EO office: *6 years*



What do you enjoy most about your role in the EO office? *I love being able to work with students who are interested in pursuing AF careers!*

What accomplishment are you most proud of in the EO office? *I think it's so exciting that through the LEGACY program (to date) we've been able to help 9 students earn AF careers.*

What's one fun fact people would be surprised to learn about you? *Thanksgiving is my favorite holiday, but my birthday falls on Halloween.*

If you had one superpower, what would it be and why? *I would like to teleport, so I can travel more!*

