AFA Members and Delegates: I have been privileged over the past year to oversee, along with our Aerospace Education Council, our Association’s great education programs. I think you will agree with me that these programs and their recipients make us all proud—they change lives, support our men and women serving in our USAF and help nurture and educate our next generation of young Americans and potential Air Force members. Thank you for your support of these programs in the Field.

Sadly, a number of great AFAers flew West this year and we will remember them at the AFA Convention. Two of our former AFA Chairmen are among those remembered, George Muellner, also a former Vice Chairman for Aerospace Education, and Ollie Crawford, a WWII Veteran and superb Air Power Advocate.

We are proud of the AFA Teacher of the Year Program which recognizes some of the best Science, Technology, Engineering, and Math (STEM) educators in the nation. This year’s AFA/Rolls Royce National Aerospace/STEM Teacher of the Year is a superstar from Arizona, Michael Vargas. AFA is proud of him for not only his exemplary classroom teaching, but also his collaborative work with other STEM organizations and leadership in garnering legislative support and funding to increase the number of STEM certified educators.

We are also proud of Susan Mallett being selected as AFA Member of the Year. She has tirelessly worked to further Aerospace Education for both the Civil Air Patrol and the Air Force Association.

This September Newsletter is being published early so Delegates to the AFA National Convention will be able to read more about our Association’s Aerospace Education programs. We will also have breakout sessions on Saturday of the Convention for Delegates to be updated on recent changes to Aerospace Education programs, to include CyberPatriot and StellarXplorers. Finally, let me encourage you to recognize your Chapter’s/State’s outstanding performers with an AFA Aerospace Education Fellowship. Details are on the AFA website and all proceeds go towards AFA Aerospace Education programs.

~ Jim Hannam, Vice Chairman, Aerospace Education
Oliver Ray Crawford, World War II pilot, former president and chairman of the board of the Air Force Association, and advocate for airpower, died July 21 in San Antonio, Texas, two days after his 94th birthday.

Crawford enlisted to join the fight in WWII just after turning 18. He earned his wings and received his commission in April 1945, then qualified in the P-40 Warhawk. The war ended a few months later and he did not see combat, but he trained Chinese pilots in the Warhawk and later remained in the Air Force Reserve for 13 years. After attending law school, Crawford worked for Time, Inc., and in 1974, started TECOM, a defense contractor. In 1981, he created Crawford Technical Services.

Throughout his lifetime, Crawford was a promoter of the Air Force and airpower. He was a charter member of the AFA, and was named its Man of the Year in 1989. Immediately after receiving the award, he served two years as AFA president, and then two years as Chairman of the Board. During his tenure he launched the Air Force Memorial Foundation, which raised money for and ultimately built the Air Force Memorial that stands in Arlington, Virginia. He was also a trustee of the Air Force Academy's Falcon Foundation and created recognition programs for members of Congress and industry who supported a strong national defense.

Crawford successfully lobbied the Air Force to officially recognize the contributions of the American Volunteer Group in China (the “Flying Tigers”). The service did so, presenting the group with a Presidential Unit Citation in 1992. In 1996, all pilots from the group were retroactively awarded the Distinguished Flying Cross, and later the Flying Tigers ground crew received the Bronze Star.

During Ollie’s tenure as AFA Chairman, he concurrently served on the Executive Committee (EXCOM) of the Aerospace Education Foundation (AEF). His insights, contributions, and support were so very valuable in building our AFA educational programs. Ollie was part of that very early group of AFAers who recognized the emerging strong influence of technology on educational systems beginning with use of programmed learning in Air Force technical training and transition of that to public educational systems. As the AEF grew to include support to teachers, Ollie was right there. He will be sorely missed by those of us who knew him and his legacy will live on in the AFA.
Michael Vargas: 2019 National AFA Rolls Royce Aerospace/STEM Teacher of the Year

Michael Vargas is a 9th grade physics teacher at Pinnacle High School in Phoenix, AZ. He has been an educator for 19 years, and in his current position for six.

Coming from a long lineage of educators, Michael Vargas did not intend to become a teacher himself until he was a senior in college. After helping to form Team ASPIRE (AZ Student Program Investing Resources in Education), he traveled the state promoting college to kids in rural areas and realized that he, too, needed to become a teacher to help such students. Thus, he changed his final major to education, graduated, and began a career of exciting students about learning and of pushing for state legislation to provide more STEM resources for educators.

Michael taught for 10 years at a DoDEA International school in Belgium, SHAPE American High School, which provided a strong, global foundation for innovative STEM instructional strategies and experiential learning. Upon returning to AZ, his new perspective about education led him to begin his pursuit of change for AZ. He joined the AZ Science Teachers Association (ASTA), teamed with AZ State University physics department, and began his crusade to knock on as many doors at the state capitol as he could. Forming a loose coalition that included legislative champions, he has helped get two major education bills passed in AZ: one in 2016, to fund 150 scholarships to address the critical shortfall of physics and chemistry teachers (Statewide Leadership: A Bill Become a Law); and, the most recent, at the end of May, bringing an additional $1.2M to extend this scholarship project for three more years. His goal? To drive education policy toward the infusion of physics into every school as the foundational STEM driver and to double the number of physics teachers in AZ in five years.

Mr. Vargas is not just a key public policy voice in his state promoting STEM education as an equity issue for students. He is a powerful voice for his students in the classroom; ensuring they receive a quality physics education that includes relevant, real-life experiences that will lead to their success as adult problem solvers, leaders, and decision makers themselves. He continues to emulate his favorite high school teacher, Coach Coleman, in teaching life lessons that go beyond academics. He has initiated numerous (19) Near Space High altitude balloon launches and many rocket launches with the students making decisions and controlling the programs. He has invited the local Civil Air Patrol to come and teach his students how to track locations using GPS systems in emergency rescue missions, which will translate to their being able to track their weather balloons. A simulated disaster day in the desert allowed application of these skills in a real-life manner. Mr. Vargas involves the community and other STEM organizations in his other initiatives, as well, which brings media attention, and great support to his programs. This, in turn, allows him opportunities to speak about his passion: Physics Education.
Michael Vargas has published numerous professional publications and newsworthy articles, such as his blog for the Governor’s office, entitled, “Why Aren’t Your Kids Taking Physics?” He has also won numerous state awards for his educational strategies and support to other educators in STEM education. His experience as 2016 AZ Education Foundation Ambassador for Excellence will allow him to continue those efforts on a national basis as the AFA/Rolls Royce Aerospace/STEM Education Ambassador. Mr. Vargas will use his voice and actions to further share his belief that “Courage Lies in Every Heart,” and, “STEM for All.” As the AZ Ambassador for Excellence, he stated, “Advocate in simple interactions and break misconceptions. You’re always representing the profession, so represent well.” We think Michael Vargas will do just that for the AFA. AZ has listened to him; we hope our nation will do the same.
Roy Bartnick, Jr.: 2019 Second Place National AFA Rolls Royce Aerospace/STEM Teacher of the Year

Roy Bartnick, Jr., is a 5th grade math, science, English, robotics, and social studies teacher; campus IT coordinator; and Robotics Team Mentor at Coolidge Elementary School in Enid, OK. He teaches in a 97% poverty school with diverse demographics. He has been an educator for 13 years, and in his current position for two.

After retiring from a 22-year career in the US Army, Roy Bartnick entered the Troops to Teachers Program, thinking he would teach high school. As he was preparing to take his alternative certification tests, he was asked to substitute teach in a 5th grade classroom and he has never looked back. Coming from an alternative background, he brought a different paradigm to teaching. He knew if students were kept engaged and were able to demonstrate their knowledge, they would ingrain their new understanding deeper, and, for a longer period of time. This led to his desire to not only teach 5th graders, but to teach other educators how to utilize STEM-centered Project-based Learning (PBL) to engage and enhance their students’ academic achievements. He introduced STEM-based PBL activities that were cross-curricular and reinforced state standards. He has taught other educators at the local, state, national, and international levels about the implementation and success of this program.

His first personal accomplishment in education after spending a year in a study program through a Teachers for Global Classrooms fellowship, was in a US Department of State’s teaching opportunity in Senegal, West Africa. There, he taught the country’s educational leadership how STEM can be integrated into curriculum, even at the village level. He demonstrated that even extremely remote and impoverished village schools can implement STEM-based PBL to greatly enhance their students’ interest, achievement, and future careers. He then developed the US Department of State’s Global Education Online Course.

After returning from Africa, he requested to be transferred to the school with highest poverty in the nearby district. He brought his STEM PBL mentality to the new district and gave his poverty-level students opportunities they would never otherwise encounter. He designed and conducted collaborative global STEM experiments between American, African, and European students. He is also the district’s lead teacher trainer for Project Lead the Way STEM methodology and experiments.
Roy began training other district teachers in robotics, technology-enhanced lesson construction, and STEM-infused lesson plans. He wrote and obtained grants for over $15,000 to develop 40 fully self-contained cross curricular STEM lessons for 1st and 2nd graders. He has made videos for K-12 classroom learning available to teachers located throughout the US via the Great Expectations Organization. He was also awarded $9,000 in STEM grants to develop elementary robotics programs. His 5th grade robotics students won regional and 3rd in state.

He has lived and taught from an undersea habitat 60 feet underwater for a week. This experience allowed him to develop and teach STEM lessons at the international level to over 5,000 students about the importance of STEM research concerning our most critical resource, the ocean.

Roy has become an advocate for STEM education with educators nationwide, and, for STEM product companies. He has won awards in his state, is involved in numerous educational organizations, and continues to lead district professional development initiatives. He just received the OK Educational Association Teachers Teaching Students Instructional Excellence Award.

He developed and led district-wide professional development to bring Skype and Google Hang-outs into the classroom to foster interactions with scientists in the field, to interact with the International Space Station and the Sally Ride SpaceKam program. His students conducted penguin and seal studies with resident scientists in Antarctica.

His fundamental message is that our world needs people now and in the future who can collaborate across cultures and borders to find solutions to challenges that only STEM fields can answer. Finally, he believes that STEM education creates opportunities for all students to be successful, even those who are use English as a second language or have varying exceptionalities.
Lori Nelson: 2019 Third Place National AFA Rolls Royce Aerospace/STEM Teacher of the Year

Lori Nelson is a 5th grade science and social studies teacher at Roger B. Chafee Elementary School in Huntsville, AL, where she has been in the classroom all 10 years of her tenure in education. As a second career educator, at the age of 45, Lori enrolled as a graduate student in elementary education and feels it was one of the best decisions she has ever made. She has blossomed at her school and is quite a leader throughout. She is the Greenpower Engineering Team Sponsor; created and directed a Mission to Mars Summer Camp; is a lead teacher with Project Lead the Way; created and directs the annual Chaffee Rocket Week; directs the annual Science Fair; created and directs the annual ChaffeeStopia STEM Night; and created and directs the annual Veterans Day program.

In addition to her school leadership, she makes presentations at educator conferences, such as the most current ones: the 2019 NSTA conference in St Louis; the 2019 AL Science Teachers Association; and the 2018 Spaceport Area Conference for Educators. Lori feels that when teachers collaborate with other educators, everyone’s teaching craft will improve, and she is evidence of that. She continues her professional development by attending most recent Professional Development events: 2019 Dayton Air Camp and 2019 Space Foundation Space Symposium, CO Springs.

Lori has earned numerous teaching awards, most recently: 2019 NSTA Sylvia Shugrue Award for Elementary Teacher; 2018 AL Science Teachers Association Elementary Science Teacher of the Year; 2018 National Space Club Educator of the Year; and 2018 Dr. Rochelle Abrams Scholarship, The Space Foundation.

Ms Nelson attended Space Academy for Educators in 2015 and since then has integrated aerospace education into her curriculum. She has written grants and earned over $15,000 over the last ten years to purchase STEM materials for her school. She is particularly interested in engineering activities that allow her students to solve real-life engineering challenges, such as designing parachutes to protect a payload or a device to grow plants hydroponically for space travel. She involves families in the annual STEM nights and other school events she has created and directs. She even directed a space-themed community event in March which featured guest speaker Sheryl Chaffe, Roger Chaffee’s daughter. (Roger Chaffee served as capsule communicator (CAPCOM) for the Gemini 3 and Gemini 4 missions, and received his first spaceflight assignment in 1966. In 1967, he died in a fire along with fellow astronauts during a pre-launch test of their spacecraft). As part of Alabama’s Bicentennial focus this year, she completed an oral history project with her students entitled, “Huntsville’s Heroes of Space Exploration.” Her students interviewed twenty retired NASA engineers.

It is efforts such as these that have led Lori to continue to lead aerospace programs in her state. She is a NASA Solar System Ambassador and volunteers for all types of aerospace events.

Lori Nelson believes that when we invest in our nation’s teachers, we invest in America’s future workforce. She believes, also, if we can get students interested in space, this interest will transfer to all other subject areas.

Listen to Lori Nelson’s interview as the 2018-2019 AL Science Teachers Association Elementary Teacher of the Year and to her students speak about her [HERE]!
Susan Mallett is our AFA Member of the Year for 2019

Susan Mallett’s amazing journey with AFA began when she was named the AFA Chapter 102 (Montgomery AL) Chapter Teacher of the Year in 1986. During her 33+ year journey, Susan has always been on the forefront of AFA education programs at the local, state and national levels. For thirteen years, Susan has worked at Civil Air Patrol (CAP) National HQ, and, in that capacity, has forged a tremendous partnership between the AFA and CAP education programs.

Throughout her years as an AFA member, Susan has remained dedicated to Aerospace Education, which is a key pillar of the overarching Air Force Association mission. Susan has served as her Chapter’s Vice President for Aerospace Education for the past twelve years. She dedicates her time to cultivate our future aerospace leaders through military aviation tours, aviation history static display scavenger hunts, orientation flights, and STEM educational presentations assisted by Arnold Air Society and Silver Wings volunteers. Additionally, she continually helps bridge the gap between local educators and AFA members by hosting STEM ‘lunch and learn’ events, which help introduce educators to AFA’s STEM programs, grants, and awards to bolster their own programs. Not only does Susan dedicate her time to local students and educators, but she also coordinates with Alabama State AFA representatives to help provide scholarships to Enlisted Airmen dependents to attend Huntsville’s Space Camp and the National Flight Academy in Pensacola.

As an innovative Aerospace Education leader throughout the AFA, Susan has faithfully served as a member of the Aerospace Education Council for 10 years. Susan initiated the free CAP Aerospace Education Membership Program for AFA Chapters’ use. This initiative has provided over 2,000 educators with free CAP memberships and free STEM resources to help support their students and programs. Additionally, Susan successfully advocated for two key AFA-CAP program advancements. First, through her research into utilization and demands of AFA CAP Educator and CAP Unit Grants, the AEC adopted Susan’s recommendation to focus on the CAP Unit Grants, which generated increased aerospace education outreach for CAP units. Lastly, using Susan’s great “creative marketing” talents, the AEC rejuvenated the ACE program t-shirt program for AFA chapters to support. Since 2008, Susan’s dedicated efforts have resulted in over $237,000 in CAP grants impacting almost 159,000 students throughout the nation.

Susan leads the AFA’s National TOY program for the AEC and has helped recognize over eighteen teachers throughout the past six years. In this role, Susan provides critical guidance to region, state, and chapter leaders, initiated the Chapter, State and National TOY pins, and revamped the TOY nomination forms to ensure the best candidates are recognized appropriately. Additionally, through Susan’s direct initiative and efforts this year, our 2018 AFA Teacher of the Year was able to attend the Educators Air Camp in Dayton, OH, on full scholarship. This TOY award component will continue so that future National AFA TOYs will also be able to participate in this intensive 4-day seminar of aviation-related STEM activities and curriculum development, and, most importantly, will be representing the best of AFA as our Aerospace Education Ambassador.

Susan Mallett’s unwavering commitment to Aerospace Education, educators, students, cadets, past and present Air Force service members, and the Air Force Association is immeasurable. She has made a significant difference throughout her local community and the Air Force Association. Congratulations Susan!
CAP is working to help improve the national pilot shortage through several avenues that promote interest in and knowledge of aviation/space/STEM subjects/careers.

- CAP’s first-year program to help address the pilot shortage crisis, the CAP Youth Aviation Initiative’s Cadet Wings program, has seen 52% of the 62 selectees complete the program this summer and earn Private Pilot Certification. The remaining cadets in the program are on track to complete the program in the coming months.

- Educators are the front-line influencers toward a knowledge about and interest in aviation-related STEM careers. To help prepare educators to provide aviation instruction, CAP received new funding from the Air Force to bolster CAP’s Teacher Orientation Program (TOP) flights. This program allows CAP Aerospace Education Members (formal and informal educators in grades pre K-12) the opportunity to work with CAP pilots in learning about all aspects of general aviation flight from a pre-flight briefing, to flight planning, fueling the airplane, communicating with ATC, working with the glass cockpit and actually handling the controls of the airplane. Over 500 educators across the nation have taken advantage of this program since February. Teachers have taken photos and videos to share with their students. Some have live-streamed their flights with their students. Most have flown over their schools and the area’s geographical region. Being involved in these TOP flights have empowered the teachers to begin connecting the real-life aviation process with classroom skills being taught in STEM, reading, geography, and much more. To get an idea of the excitement of these flights for the educators; excitement that is transferred to the classroom, view this sample video HERE.

- Reminder that AFA Chapters can provide complimentary CAP AE memberships to local educators who can then be eligible for free STEM products and programs, as well as these free TOP flights! See info HERE.

- The list of summer cycle recipients of the AFA’s Grant program for CAP Units is found on the AE Grants page for Units HERE. The aerospace/STEM-related projects are influencing more CAP cadets (and youth in their outreach programs) toward an interest in aerospace, with a strong emphasis on remote-control aircraft and drones (UASs). AFA chapters can reach out to these squadrons to find out more about what they are doing and how they can support or be involved in these dynamic programs.

- CAP’s AE team continues to promote the AFA’s STEM programs, CyberPatriot and StellarXplorer,- in educator conference sessions, in conference exhibit halls, on social media, to CAP members, and on video. Check out this video by CAP AE with STLX leader, Bill Yucuis, at a recent space educators conference- promoting STLX to CAP’s cadets. (Found on the CAP Aerospace Education FB page. Tagged the AFA Aerospace Education FB page, as well.)

- CAP’s K-6 Aerospace Connections in Education (ACE) program has begun registration for the 2019-2020 academic year. As of August 28th, there were already 28,972 students registered. Last year’s 51,000 student record is sure to be surpassed this year. (Did your state have an ACE school last year?) What does that mean for AFA chapters? Chapters can connect with an ACE school or classroom to help support the program, and, even help them purchase their ACE shirts for the year. See last year’s thank you video from a small school in CA!

For any CAP program info, contact: afa@capnhq.gov
Colonel Nick Hague speaks to us from the International Space Station about the upcoming competition.

20190805_Hague_StellarXplorers.mp4

StellarXplorers Website in case you cannot open the mp4.

**StellarXplorers, The National High School Space Challenge**

Registration is open for our coming season, StellarXplorers VI. We are looking forward to another exciting and engaging series of challenges for the teams to tackle, culminating in the National Finals in April, 2020. This season, the Finals will be in Houston, TX, at the Space Center Houston, hosted by our own, former AFA National Teacher of the Year, Kaci Heins. We anticipate another year of growth in overall participation, so have implemented a new registration system, which will automate several aspects, and significantly reduce the workload to administer the Program.

We are pleased the Harris Foundation has continued it support of the Program, renewing at the StellarPlatinum level. Aerojet Rocketdyne has increased its level of support from StellarSilver to StellarGold; SpaceX is continuing at the StellarSilver level.
My Summer Spent in the Five-Sided Building
Cadet April Patko, National Commander, Arnold Air Society

As a member of Arnold Air Society (AAS) at Rutgers University, a professional service organization for cadets in Air Force ROTC, I have had my share of pretty incredible experiences, all due to my membership in the organization. However, all of those experiences have now been topped by the internship that I was awarded by AAS to work in the Pentagon this summer. I worked in the office of the Administrative Assistant for Resources, under the Secretary of the Air Force. It was essentially a finance office which distributed resources for the Headquarters Air Force Portfolio. I am not a finance person by any means, so it was a little overwhelming to start out, but once I learned the basics of how the money moves, everything else started making sense. One thing that my commander always said to me was, “if you understand the money, then you understand how everything happens in the Air Force.”

As a mechanical engineering major, I wasn’t proficient enough to handle large tasks; but I was given many smaller tasks, and I think that made the experience even better. My boss was a GS-15 who was prior enlisted, as well as an Officer Training School graduate, and he became one of my biggest mentors this summer. With the stressful job that he has, he still spent time debriefing me on all the meetings he took me to, telling me stories and offering advice from his time in the Air Force, and setting up one-on-one meetings for me with his bosses (both in the Senior Executive Service) and in other offices of the Pentagon so I could learn even more. I met engineers, maintainers, lawyers, logisticians, comptrollers, and even networked with quite a few Rutgers graduates! As I got further into my internship, I ended up filling up my own schedule each day because of all the connections I was making. On top of all that, I made great friends with all of the other cadets also interning there because of AAS.

In my opinion, there is nothing that could have made working in the Headquarters of the Department of Defense boring. I would walk around the building which looks like a museum, spend time in the beautiful executive hallways where the Joint Chiefs, Service Secretaries, and the Secretary of Defense work, and occasionally run into some of those extremely important people (one time almost literally). Sure, I would get some strange looks because of my cadet ranks while walking around or eating lunch in the center courtyard, but it always sparked a conversation because everyone wants to talk to the cadets and impart some wisdom on them. Working at the Pentagon this summer really was an incredible experience where I learned so much about the Air Force. While I may be going down to the operational level after spending months seeing how things work from the top, it has given me a completely different outlook, and I am better prepared for Active Duty because of it. I cannot say thank you enough to the Executive Management Center of Arnold Air Society for the opportunity!
My Summer as an Air Force Civilian

Nicholas Carrigan, National President, Silver Wings

I am a member of Silver Wings at the Rochester Institute of Technology, a professional service organization built for civilians to grow personally and professionally while supporting local communities.

Silver Wings has provided me with many opportunities to grow, but the most significant in terms of my future, was an internship I received this past summer when I had the opportunity to work as an Air Force Civilian under the Premier College Intern Program (PCIP) at the Joint Warfare Analysis Center in Dahlgren, Virginia, doing software development.

I learned about this program through Silver Wings leadership last year, when the PCIP program just finished its 2nd year and was looking for highly qualified candidates that may be interested in working as Air Force Civilians.

The program itself was great, since I was able to work as a paid intern, travel to a conference paid for by the Air Force, and see what it is like to work as a Civilian for the Air Force, all in one summer.

In my opinion, the program is most interesting because it is designed to build civilians for the Air Force that may ultimately become SES members through a fast-tracked program with Palace Acquire (PAQ). This may include post-graduation benefits such as a fully paid master’s degree. For me, it was a very unique experience that I enjoyed and would highly recommend the program to others interested in supporting the Air Force from the civilian side.
Arnold Air Society/Silver Wings
AREA CONCLAVES (RCONs)

We encourage chapters and states to engage with AAS/SW at their RCONs.

**RCON I**
25-27 Oct in Troy NY at the Hilton Garden Inn. POC is Rachel Pray at rmpray@syr.edu

**RCON II**
8-9 Nov in State College PA at the Days Inn. POC is Matthew Gemmel at mpg5340@psu.edu

**RCON III/IV**
25-27 Oct in Athens GA at the Holiday Inn. POC is Harrison Leigh at Harrison.Leigh@uga.edu

**RCON V**
25-27 Oct in Starkville MS at the Holiday Inn Express. POC is Christian Hardaway at rcon.05.cc@gmail.com (Hayden Coleman): arcop.05@silver-wings.org

**RCON VI**
8-9 Nov in South Bend IN at The Inn at St Marys (Hilton Garden Inn). POC is Jill Ruane at iruane@nd.edu with backup of Marta Kernan at mkernan2@nd.edu

**RCON VII**
POC is Griffen, McAfee-Myers at gkmm8d@mail.missouri.edu

**RCON VIII**
8-9 Nov in Colorado Springs at The Academy Hotel and on the USAFA grounds for business sessions. POCs are Region CC: Frank Daybell Region VIII/CC <area.08.cc@arnold-air.org, McCloskey, Thomas C C4C USAF USAFA CW/CS02 C22Thomas.McCloskey@usafa.edu, Choe, Stephanie H C3C USAF USAFA CW/CS03 C21Stephanie.Choe@edu.usafa.edu

**RCON IX**
18-20 Oct in Baton Rouge La at the Cook Hotel. POC is Benjamin Lanier at blanie9@lsu.edu

**RCON X**
1-3 Nov in Tempe at the Tempe Mission Palms. POC is Arris Austinat at aaustin7@asu.edu

**RCON XI**
11-13 Oct in Seattle at the Warwick Seattle. POC is Cadet Taylor Johnston at tayleelee@uw.edu
Twenty-eight years ago, after retiring from the Air Force, Lt Col Bill Powley, retired, (pictured left) became an instructor in Air Force Junior ROTC in Unicoi, Tennessee. As a new Certified Flight Instructor (CFI) he helped start a flying program for the cadets. In 1999 the non-profit FLIGHT (Flight Lesson Instructional Grants Helping Teens) Foundation was formed to receive donations from the corporate and private sector. Since the first fledgling flight in April of 1992, the group has flown over 10,645 passengers on orientation flights (Cessna-172) soloed 192 (Cessna-150/152/172) and had sixteen private pilots. All of this is with 50% scholarships for the students. Eight of the solo students attended the Air Force Academy, three have gone to West Point, and one to Annapolis. Twelve students have attended Middle Tennessee State University's professional pilot program, and several have attended other professional pilot programs (AFJROTC Flight Academy) such as Purdue, Embry Riddle, and various Airline Transport Pilot (ATP) schools. Many solo students have joined the enlisted ranks in all branches of the service. Lt Col Powley says, “I am very fortunate to have had the two best jobs in the world - being a fighter pilot and teaching youngsters the joy of flying.” The River Rats, and the Air Warrior Courage Foundation has been a contributor to the foundation since 2000. These programs give young men and women the opportunity to learn how to fly.

Pictured below are Kansas University AFROTC Cadet Tyler Lamport, Purdue Aviation Chief CFI Jim "Hoser" Paulsen, and Oklahoma State AFROTC Cadet Logan Wilson while attending an AFJROTC "Winging Banquet" on 26 July at Purdue Airport's Hangar 7. They are standing in front of one of the glass cockpit Cessna 172S Skyhawks that the cadets earned their Private Pilot Certificates in. Both cadets finished their training in under 40 flight hours, leading at the front of the pack. Purdue Aviation donated both a few more hours to pass the magical 41-hour mark required to help in their pilot selection when they are commissioned. Members of a 36-pilot detachment that included high school juniors in AFJROTC and CAP Cadets, Logan and Tyler were leaders in achieving a 100% completion rate in only seven weeks. This is the second year the Air Force has provided these scholarships for worthy cadets, meant to entice these young aviators to pursue military flying careers. Similar detachments at Embry-Riddle, UND, and other college flight programs recently ended their eight-week training periods.
Imagine you’ve just been hired as an IT manager for a small company. You’re responsible for keeping the company’s network safe from viruses, ransomware and myriad cyber threats. Now, imagine you’re a team of six high-schoolers. And you face the same challenge.

A team of Palos Verdes Peninsula High students has worked through dozens of these cyber scenarios. And, out of nearly 6,400 teams, on April 8 they traveled to Baltimore as one of 12 who qualified in the Open Division for the National Finals of CyberPatriot, a national youth cyber education program. Peninsula High has made it to the CyberPatriot nationals six times since 2011. They’ve been competing since 2009, a year after the competition was created by the Air Force Association.

CyberPatriot is the nation’s largest middle school and high school cyber-defense competition. By simulating cybersecurity situations faced by computer administrators, the program trains future generations for cyber careers. Northrop Grumman Foundation, a presenting sponsor for the program, predicts a 1.8 million shortfall in cyber security professionals in the next five years.

Peninsula’s coach, computer science and engineering teacher Hassan Twiets, is hoping his students become part of the solution to that shortfall. But he emphasized the students are not learning hacking. “They call it ethical hacking,” said Twiets, who added students learn how to secure network systems, create strong passwords, limit fire sharing and ensure “the operating system doesn’t have a back door.” “Everything gets secured and locked, so no intruders can come in,” said Twietts, about the work the students do on the network.
The CyberPatriot competition lasts six hours. The extra-curricular Peninsula team met during lunch once a week and every Saturday from 9 a.m. to 2 p.m. to prepare for the contest.

Part of that preparation is to bring in mentors from the refineries, Air Force bases, military and aerospace giant Boeing — in addition to Northrop Grumman engineers — said Twiets.

“So, we get guest speakers and we have students who come back and teach other students as well.”

Twiets doesn’t have any direct experience with cyber security, he has plenty of STEM experience with a masters in software engineering and credentials in engineering in computer technology. He also taught math before he earned his computer science degree.

But you don’t need to be a brainiac to succeed in cybersecurity, according to Twiets. You just need an analytical and organized mind and to know how to multitask. But, most of all, you have to be a team player, said Twiets.

“Yes, you need to be consistent,” he said. “You need to have the math because the math and the physics and the computer science teaches you the discipline to be patient, to investigate, to dig deep, (and to) find alternative solutions because you sometimes get a lot of dead ends, what would you do and how (would you fix it)?”

Peninsula senior R.J. Wakefield-Carl, 18, is the team’s captain. He’s been part of the CyberPatriot program since freshman year. His tactic has been to learn a lot of different computer operating systems as a way to compete nationally.

“I just decided to take my team to another level, so I wanted to get (team captain) position so I could kind of move my team toward competing at that higher level,” said Wakefield-Carl. One member cannot carry the entire group, said Twiets, so the team’s dynamic is crucial. “So, it’s not just one piece and one person—everybody has to work to a common goal and everybody has to have a leader in one area because the competition is multidimensional,” Twiets said. “It’s a puzzle,” he said. “You have to put together to solve it.”

During the competition in Baltimore April 8-10, the teams were allowed to use open source materials. But, they were not allowed to talk with other teams.

And, the competition is timed. If multiple teams reach 100 percent completion, the team who did it the fastest is the winner. It’s a big reason Twiets said it’s important that teams go into the competition with a plan. “They have to prioritize what they need to do,” Twiets said. “At some point it becomes an addiction for them because it’s something you can conquer in your mind. “It becomes likes a sport, you just want to win,” said the cyber coach.
On 29 Jul 2019 AFA launched the first CyberPatriot Summer Camp at Meade HS with a Kickoff Ceremony for dignitaries from the State Legislature, USCYBERCOM, Cyber National Mission Force, and the Anne Arundel County School Board. Ms. Madhu Debnath, AFA National Cyber Education Coordinator represented the national program office. This amazing show of support at the ceremony demonstrated how important the students’ efforts are to the community. The Senior Enlisted Leader for NSA and USCYBERCOM, Master Gunnery Sergeant Scott Stalker, motivated volunteers from military units to support the AFA competition and came to the school several times to encourage them. During the ceremony he spoke directly to the students, inspiring them with hope for a future of using the skills they are developing now. He stressed the opportunity to do what they love, while ensuring the security of our nation’s future.

The school board is delighted with the opportunities provided by the CyberPatriot program. They hired a computer science teacher and built a $200,000 “Cyber Security” computer lab to enable the community schools to participate in CyberPatriot. In addition they offered to fund two camps with daily lunches for the students. Many students stayed for the Advanced Camp during week two because they enjoyed it so much. During the kickoff ceremony, MGS Stalker led an awards ceremony for the dedicated volunteer instructors from the 781st MI Battalion. He and LTC Nally, 781 MI Battalion Commander, presented military awards to the three instructors. Cyber National Mission Force Commander, Maj Gen Timothy Haugh joined AFA Central Region President Peter Jones to present AFA awards to the three instructors from the 781 MI Battalion. MGS Stalker and Mr. Jones presented LTC Nally a statue of a Cyber Knight and a photo signed by the students in appreciation of her support. AFA Central Maryland Chapter President, Janell Kersh, and Donna Malone, MD State AFA Treasurer, had a “giant check” for $750 printed for the Maryland State Teacher of Year Presentation, presented posthumously to Jake Listorti. Mr. Listorti passed away unexpectedly while the students worked through the CyberPatriot competition; that’s when the 781st MI Battalion came to save the day. The students presented MGS Stalker with a photo signed by all of them in appreciation of his unfailing support and for restoring their hope.
Scholarship Program
Congratulations to the 2019 Scholarship winners! The scholarships are available to spouses, children of AF Active Duty/Reserve/Air National Guard and Veterans, AF Active duty/Reserve/Air National Guard members, and Department of the AF civilians. In addition, Delta Dental provides grants to those pursuing academics in advancement of oral health and overall wellness. Finally, Trident University offers full scholarships to 3 AFA members each year. Each scholarship has its own criteria that can be found [HERE](#).

Mike and Gail Donley Donley Spouse Scholarship
Nicole Scott, AETC; Jolie Vega, ANG; Alyssa McKinley, ACC

Col Aaron Burgstein Memorial Scholarship
Hannah Walker

Lt Col Romeo and Josephine Bass Ferretti Scholarship
Danielle Chew-Martinez

Capt Jodi Callahan Memorial Scholarship
Quinn Van Drew, PACAF

Col Loren J. and Mrs. Lawona R. Spencer Memorial Scholarship
Carl Chen, AFGSC; Jennifer Russell, AFMC; David Scalise, AMC

John C. and Blanche Lee Lindsay Memorial Scholarship
Allyson Whittaker

Delta Dental Grants
Justin Orr, Allyson Whittaker, Yoana Mangusheva, Camryn McGrew, Naomi Santana

Trident University Scholarship
Christopher Lancaster
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<td>31 Oct - Qualification Begins</td>
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Note: AAS/SW Scholarship Applications open to AAS/SW on a date to be announced.
# FY 2019 AEC Members

<table>
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<tr>
<th>Jim Hannam</th>
<th>Sharon Branch</th>
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<th>Buck Buckwalter</th>
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<tr>
<td>Dick Bundy</td>
<td>Nicholas Carrigan</td>
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<td>Bob Elder</td>
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<td>Beth Leavitt</td>
<td>Susan Mallett</td>
<td>Mitzi Morrison</td>
<td>April Patko</td>
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<td>Joe Peel</td>
<td>Rick (Rags) Ragaller</td>
<td>Hannah Richmond</td>
<td>Joan Sell</td>
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<td>Bernie Skoch</td>
<td>Mark Tarpley</td>
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<td>Mary Anne Thompson</td>
<td>Kari Voliva</td>
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