



NEW YORK WING, CIVIL AIR PATROL



AEROSPACE EDUCATION NEWSLETTER ONLINE

March – April 2022

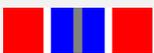


Image Credit - C/2d Lt Jason Materazo

NEW YORK WING YEAGER AWARD CHALLENGE

Lt Col Anita Martin

The NYW is challenging its squadrons and members to increase our Yeager Awards this year. Through 25 March, we already have 16 new awards achieved. Our goal is to encourage more to complete the **Yeager Test**, which is described in paragraph 2 of **CAPP 280-2** and further described in **CAPP 50-1**. After successful completion of the test, members are authorized to wear the **Yeager Award Ribbon**.



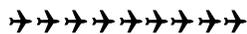
To assist you, there are new **Yeager Test Study Resources** on the [NYW website](#) under the “Aerospace Department” for quick easy access. The resources are:

- [Aerospace: The Journey of Flight - 4th Edition](#) - requires eServices login
- [Aerospace: The Journey of Flight - 3rd Edition Teacher's Guide](#) - requires eServices login
 - The Teacher’s guide is the study guide and also an “open-book” test resource
- [Long Island Senior Squadron Yeager Review Videos](#)
 - There are six videos, typically 2 hours long and they can be viewed privately or as a class
- [Yeager Exam](#) - requires eServices login - then click *Course Catalog*, click *All Courses*, select *Aerospace*, and click *Enroll* to begin *Yeager Exam*

Completion of the Yeager Test signifies a member has a working knowledge of aerospace history and a basic understanding of aerospace technology. **Encourage your members to complete this important AE milestone.**

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CYBER ACTIVITY SET THIS SUMMER AT AIR FORCE ACADEMY

Reprinted from March 2022 issue of Props

CAP Cyber Programs will be hosting an in-residence cyber program in collaboration with the Rocky Mountain Region at the U.S. Air Force Academy the week of **June 13-18**. This program is limited to 20 cadets at a cost per cadet of \$225. **Please alert your cadets.**

The prerequisites for this program are at least two years as a CyberPatriot competitor (in any division including Middle School) with at least one year as a competitor in the Platinum Tier.

During the session, the cadets will learn about application stacks (LAMP stack with WordPress), Domain Controllers and distributed security policies and configuring an email server with all the necessary protocols and programs.

[For more information use this link.](#)

NEW CAP PROMOTIONAL DISPLAYS AVAILABLE

By Lt Col Anita Martin

National AE is pleased to provide each **Region DCS and Wing AEO** with one set of pull-up display banners - an AE specific version and a CAP overview. (see photos)



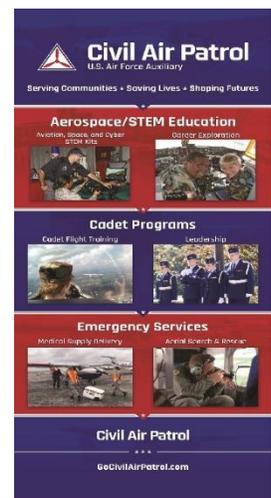
CAP AE

As each wing returns to less restrictive phases, the intent is for these banners to support squadron outreach efforts.

Retractable banner information:

- The lightweight banner stand is an easy-to-use, high-quality retractable banner stand.
- Each banner is 33.5” wide and has a variable height from 60”- 83.25”.
- The retractable banner neatly rolls down into the casing of its protective base, making it easy to transport. A 3-piece hybrid bungee/telescopic pole allows for different graphic heights.
- Each banner comes with a protective padded carry bag.

If any extra banners are desired, these templates can be sent to the local print shop to duplicate. **If you wish to order your own set or if you would like to use these, please contact Lt Col Martin.**



CAP Overview

THE PHOENIX COMPOSITE SQUADRON TAKES FLIGHT

CADET "O-FLIGHT" REPORT

By Lt Col Jacqui Sturgess

On Saturday, 5 March, several cadets from the Phoenix Composite Squadron had the great experience of participating in a Cadet O-Flight event at MacArthur Airport with Long Island Group (LIG) members. In addition to the O-Flights, Phoenix also became part of "Operation Starlift", which was a U.S. Department of Defense-style communications exercise conducted on 4-5 March, involving a post-hurricane scenario in the eastern half of the U.S. So, there was a lot going on at the LIG Headquarters.

Phoenix cadets **C/MSgt Kayla Santana (and Mom)**, **C/SrA Ben Barth (and Uncle)**, **C/A1C Darwin Greenfield and Dad)**, **C/AB Leandro Ortega (and I)** -- had an introduction to the Mission Radio Room where members were participating in the radio communications exercise for Operation Starlift. This exercise included roughly half the country -- all of the wings in the Northeast, Mid-Atlantic, Great Lakes and Southeast Regions and the DoD were participating. The exercise was a simulation of how CAP would be involved in relaying messages via our unique HF radio capabilities in the case of a large area affected by disaster, such as a hurricane.

Meanwhile in the main area of LIG HQ local cadet officers were running all-day training classes for new cadet NCOs - ranging from how to project your 'parade ground' voice and commands, to proper wear of uniforms both cadet and senior member! And more. Participants had an opportunity to practice no-notice mini presentations in front of the class - they chose their own topic that ranged from pets to an encampment experience!



Each flight sortie began with an introduction to the aircraft, a 4-seater Cessna 182 with a 'glass cockpit' instrument panel. Our group listened in while **pilot Capt Eric Chan** discussed both pre-flight inspection and talked about careers in aviation. Formerly from NYCG's Falcon Senior Squadron, Capt Chan has recently moved up to Wing staff as Assistant Information Technology Officer. He is a

qualified FAA Flight Instructor with an instrument and commercial pilot rating. On the ramp and managing our flights was **Capt Billy Metallinos**; he is well known to Phoenix cadets as their Character Development Instructor and meets with them every month via Zoom. Capt Metallinos is a qualified Ground Instructor with an FAA instrument and commercial pilot rating.

Their flight path took them from MacArthur Airport, Ronkonkoma, northwards past Port Jefferson, and the Northport Power Station with its four red and white chimneys better known to pilots and aircrew as 'the Stacks,' – and out across Long Island Sound on a beautiful day for

flying! The air was calm all day, perfect for flying cadets on their 'first flight'. Their landing destination on the other side of the Sound was near the historic seaport city of Bridgeport, Connecticut on the estuary of the Pequannock river -- Sikorsky Memorial Airport.

On the way over each cadet sitting front right seat had the opportunity to take the controls and experience making turns, ascending, and descending the aircraft. At Bridgeport cadets switched with the back-seater and had their own experience with flight controls on the way back to MacArthur.



Back in the debrief room each cadet was presented with their **CAP First Flight Certificate** and in turn the cadets presented Captains Chan and Metallinos with a Certificate of Appreciation signed by all four cadets. The Long Island Group Commander, **Maj Andreas Niens**, joined in the celebration and encouraged members to participate in future LIG activities and training.

C/MSgt Kayla Santana was surprised when on behalf of the outgoing New York City Group Commander, **Lt Col Lynn Walker**, she was presented with a **CAP Achievement Award** by Lt Col Jacqui Sturgess. This award was in recognition for her work on both the NYCG and the NYW Cadet Advisory Councils during the 2020/2021 CAC term.



Lastly in an unexpected bonus, **Lt Col Andrew Balistreri, Commander of Suffolk Cadet Squadron 10**, and the Deputy Commander for LIG, 'opened' the uniform supply storage to our cadets. Uniform items - ranging from a complete set of ABUs to the much-coveted green Polartec to dress blues shoes - were taken home by our cadets.

And yes, those readers monitoring the squadron's status for the Quality Cadet Unit Award will be pleased to learn that the squadron has earned another point towards success!

It was indeed a GOOD DAY for ALCON.

The Phoenix Composite Squadron wishes to thank the members of the CAP LIG for their professionalism and hospitality. And a special thanks to **cadet Public Affairs Officer - C/2d Lt Jason Materazo** - in attendance who documented the day in photos (all of the photo credits are his). [To see more photos of the O-Flights, use this link.](#)

2022 NATIONAL AE HIGH ALTITUDE BALLOON CHALLENGE

In our last issue we shared some of the success stories from NYW squadrons who participated in the 2021 Challenge. **The 2022 challenge is now open for registration through 30 April 2022. We encourage you to share this with your squadron and cadets and consider entering the challenge this year.**

All 2022 Challenge directions are found on the liftoff event recording, [HERE](#). (Squadrons can view this to determine if they can and will participate.)

- View the 2-min video of the 2021 National winning team encouraging other cadets to join the 2022 Challenge [HERE](#).
- **Challenge Ambassador, retired USAF Col Joe Kittinger, famed high altitude balloon scientist** will be returning for the 2nd year and will again be providing the \$5,000 prize and Kittinger Cup for the top squadron in all aspects of the Challenge with the highest scores as determined by a panel of judges.

The schedule is below:

2022 National AE High-Altitude Balloon Challenge for Cadets Schedule:

22 February - Lift-off event at 7 p.m. CST and team registration opens
30 April – Registration closes midnight (your time zone)
2 May - Challenge capsules shipped to teams
22 July - Teams ship test and control capsules to Indiana for launch
6 August - High-altitude balloons launched in Indiana (live-streamed) and capsules shipped back to squadrons for post-launch experiment analyses
13 August - Back-up launch and ship date
26 September - Teams submit all Challenge reports and documentaries for awards judging
22 October - National Challenge awards event with Col. Kittinger in Orlando, FL (live-streamed)

The rules are as follows:

- Only one team per squadron may register.
- Each team should have at least two cadets for a team to be registered.
- Each squadron team can have as many cadets as are interested in actually working on the project. (No limit, but suggest that only those who want to work on this actually join the team.)
- Two composite or cadet squadrons can register as one team, but only one squadron should actually register (and add the second squadron at the bottom of the registration).
- If a senior squadron wants to work with a composite or cadet squadron, the composite or cadet squadron POC should register and add the Sr squadron's info at the bottom of the registration.



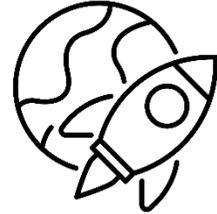


AE EDUCATOR 101

Lt Col Anita Martin
Director Aerospace Education



Background: When Lt Col Martin started the **AE Educator 101** series two years ago, it was meant as a full **24-month plan** to assist AEOs in developing an effective curriculum. In providing these activities, that were drawn from all six AE modules, model rocketry and AEX, AEOs would have a variety of options to fashion an engaging and impactful AE program. The last issue of **Wing Tips** (Jan/Feb 2022) saw the beginning of a new 24-month plan. With this issue, Lt Col Martin covers month's three and four, providing AEOs with new ideas and resources to best develop their own plans.



→→→ This **Mar/Apr Wing Tips** follows **National's Cadet Programs' Squadron Training Plan**, found in eServices, **Aerospace Downloads and Resources**. The National Plan calls for one classroom lesson in leadership and aerospace per month, with each augmented by at least one hands-on activity per month. Following National's Training Plan will include the first two leadership books with activities, all six aerospace modules, physical fitness, Aerospace Excellence along with the Fit for Flying Drug Demand Reduction Books. This is a really good way to get started to create and follow your own squadron training plan.

March, month 3, schedules **Aerospace Dimensions (AD) Module 2, Chapter 1, Airplane Systems**. This chapter describes how a reciprocating aircraft engine operates along with its parts. It also describes how a jet engine operates. The basic cockpit-mounted power controls and flight instruments are taught. And GPS technology is described.

Activity 1 – the Gyroscope cross references with the AEX II Activity Four Spinning “Sight” Sensations. The cadets can experience the rotational inertia used for flight instruments – gyro power. It provides the pilot with an “artificial horizon.” It is better to purchase a few expensive gyroscopes for cadets to share rather than the inexpensive “one for everyone” gyroscope. **There's your Two' fer One!**



April, month 4, schedules **Aerospace Dimensions (AD) 2, Chapter 3, Airport to airport – Aeronautical Charts**. Cadets will become familiar with the layout of the sectional chart and

legend. They will read latitude and longitude and find features on the chart and information about an airport using the legend.

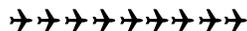


An excerpt from an aeronautical sectional chart

Once the cadets have looked at the sectional in AD give them the sectional from AEX II Vol 1, Activity Eleven – Cool Cartographics – Aeronautical Charts. This is a great lesson to have one of your pilots give. When I gave the lesson to one of my pilots, she was

so surprised. It was the area of the country she was from! She added to the lesson with some personal insights. Be sure you have one copy of the sectional for each cadet. Senior Members enjoy this AEX lesson, too. The lesson describes a game that’s great fun!

Again, you are able to accomplish the AD lesson along with getting credit for the AEX activity. **Another Two ‘fer one!**



NEW YORK WING AEROSPACE EDUCATION GOALS – 2022

- Increase the number of Squadrons that earn the **Squadron Aerospace Education Achievement Award (SAEAA)** by 20%: **Goal for FY22 – 44 Squadrons**
 - 37 Squadrons earned the SAEAA in FY21 (COVID adjusted criteria)
- Increase the number of Squadrons that order **STEM Kits** from NHQ and complete the evaluation report by 20%: **Goal for FY22 – 29 Squadrons**
 - 24 Squadrons ordered STEM kits and completed the evaluation reports in FY21
- Increase the number of Squadrons that complete the **Aerospace Excellence Award (AEX)** by 25%: **Goal for FY22 is 33 Squadrons**
 - 27 Squadrons completed the AEX program in FY21
- Publish 6 bi-monthly issues of **Wing Tips**
- Hold 4 quarterly Wing AEO Meetings
- All NYW AEOs hold the Specialty Track Tech Rating

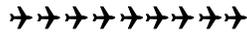


CADET WINGS PROGRAM



Image Credit – Civil Air Patrol

Congratulations to Cadet 2d Lt Joshua Dykstra from the Rochester Composite Squadron. He is the latest graduate of the **Cadet Wings Program**; he earned his Private Pilot Certificate on 7 Feb 2022. The goal of Cadet Wings is to assist cadets in obtaining their Private Pilot Certificate, recognized by industry as the first milestone for those who have a serious desire to pursue a flying career. Through 25 March, 149 cadets have completed the program. To learn more about the program – [use this link](#).



AE SAFETY CHECK

This safety nugget comes from **Lt Col Karen Cooper**, who works in safety and risk management on the AE National Headquarters Staff and is also the Northeast Region DCS/Aerospace Education. *Reprinted from the March 2022 issue of Aerospace Education.*

SAFETY WITH REMOTE-CONTROLLED AIRCRAFT



Image Credit - Civil Air Patrol

Are you using the **Remote-Controlled Aircraft (RCA) STEM Kit**? This particular aircraft is hand-launched (pictured). That does NOT mean that the landing is performed the same way. Catching an RCA during landing, while the propeller is spinning, creates a hazard that could result in bodily injury – an injury that could be easily avoided by allowing the aircraft to land on the ground as intended. For this STEM kit, as well as some of the others, always be aware of the exposed, moving parts that can cause serious injury and/or damage.

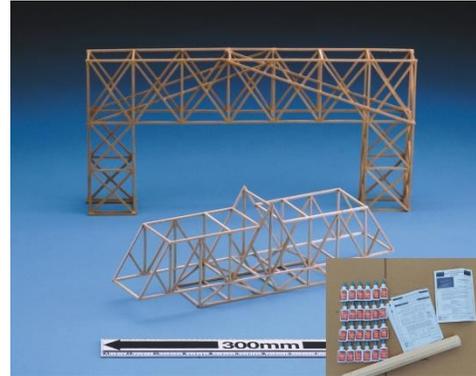
SAFETY NOTE: CAP squadron members are given clear safety briefings on the [CAP NCSA & Encampment Safety webpage](#), and in CAPR 62-1. You can easily access/read/use the two pertinent activity safety documents in the Related Links section of this page.

Remember: SAFETY, SAFETY, SAFETY!!!!

STEM KIT UPDATE

Reprinted from the March 2022 issue of Aerospace Education

FEATURED STEM KIT - BRIDGE BUILDING: The Bridge Building pack contains enough materials for 24 cadets/students to build and test their very own bridges. While working on this kit, cadets/students will be challenged to design structurally sound bridges while using problem solving skills to implement changes in their design. Cadets/students will study the properties of physics and its place in structural engineering.



This kit comes with 360 pieces of Basswood, 24 bottles of glue, 24 sets of instructions and a Teacher’s Guide -- **Teaching with Model Bridge Building Programs**. A DVD also will be included that follows a class throughout the bridge-building process. This kit, recommended for ages 9 and older, is perfect for young architects and engineers to design the bridges of the future.

NOW IS THE TIME TO ORDER A STEM KIT

By Sue Mercer

Program Manager, Aerospace Education

The STEM Kit Committee wants to spread the news - AE’s STEM Kit Program continued to grow in the last year! Yes, that’s right, CAP now has **21 FREE STEM Kits** available to our squadrons. These kits are designed to teach aerospace education using fun, hands-on activities and easy to use curriculum. Check out the STEM Kits that you can apply for and use in your squadron. Here are the FREE STEM Kits that are available in three core areas:

AVIATION	CYBER	SPACE
AngLegs	Bee-Bot/Code & Go Mouse	Astronomy
Bridge Building	Let’s Go Code	Hydraulic Engineering
Cross Country Navigation	Raspberry Pi	Mechanics
Energy	Sphero Bolt & Mat	Renewable Energy
Flight Simulator	30 Days Lost in Space	Robotics Workshop
Indoor Quadcopter		Rocketry
Outdoor Quadcopter		Weather Station
Remote-Controlled Aircraft		
Snaptricity		

To order a STEM Kit - Use your CAPID# and password to log into eServices and fill out the application. If you need assistance, please don’t hesitate to email stem@capnhq.gov

[For more on all the kits available, please click this link.](#)

<p>NYW QUARTERLY AEO MEETING</p> <p>The next New York Wing Quarterly AEO Meeting is scheduled for Monday, 25 April 2022 from 1930 to 2030 hours.</p> <p>The Preliminary Agenda includes:</p> <ul style="list-style-type: none"> - NYW 2022 AE Goals <ul style="list-style-type: none"> o Status - Status of Squadron AE Programs <ul style="list-style-type: none"> o AEX o Squadron AE Achievement - NYW Conference (Oct) - Open Discussion <ul style="list-style-type: none"> o Successes o Challenges o How can NYW help <p><i>You will receive a formal invite in a separate message. Please mark your calendar.</i></p> <p><u>To Join the Meeting Use This Link</u></p> 	<p>NATIONAL AEO SCHOOL Registration Opened on 22 March</p> <p>The 19th Annual CAP National Aerospace Education Officers School is open to Aerospace Education Officers (AEOs). The school will be held on Patrick Space Force Base, Florida. Presentations, hands-on activities, field trips and networking opportunities highlight the week.</p> <p>Where: Cocoa Beach, Florida When: Monday, June 27 - Friday, July 1</p> <p>Registration fee: \$129 - Registration fee includes:</p> <ul style="list-style-type: none"> • All course materials • Fieldtrips to Kennedy Space Center and Cape Canaveral • Lunch on Monday, Tuesday, Thursday <p><u>For More Information and to Register Use This Link</u></p> <p><i>Registration is limited to the first 70 AEOs. Registration closes June 1 or when the limit has been met</i></p>
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AE DOWNLOADS & RESOURCES

<https://www.caphq.gov/CAP.AEDownloads.Web/>

The Civil Air Patrol's Aerospace Education Program offers many resources that are free to its members, and it includes a series of



engaging and hands-on aviation and space-related activities for both cadets and senior members. One program is called AEX, and the acronym stands for "Aerospace Education EXcellence". AEOs can request full-color books that feature national standards-based aerospace activities - or - download them in AE Downloads and Resources.

CELEBRATING 100 YEARS OF US NAVY AIRCRAFT CARRIERS

By Maj Burt Dicht

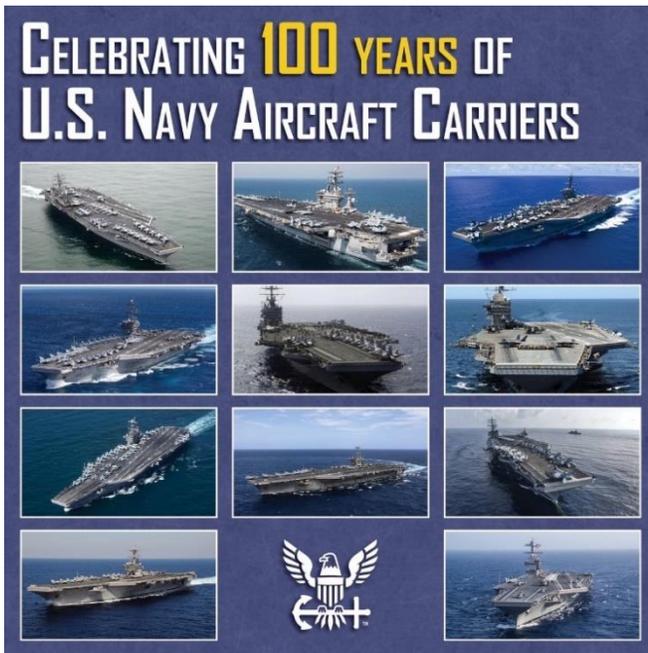


Image Credit - US Navy

On 20 March 1922, the aircraft carrier **USS Langley (CV 1)** was commissioned. Its launch marked the beginning of a new approach to sea warfare and would eventually establish the US as a dominant naval power. The Langley was not a true carrier as we know them today.

It was converted from a collier or cargo ship, the **USS Jupiter (Navy Fleet Collier No. 3)**, and it was also the US Navy's first turbo-electric-powered ship. It was named in honor of **Samuel Pierpont Langley**, an American astronomer, physicist, aeronautics pioneer and aircraft engineer.

The aircraft carrier concept originated with **Cmdr. Kenneth Whiting**, a naval aviator, as a way to transport planes within the fleet using cargo ships. Whiting was involved in the conversion of the Jupiter to the first aircraft carrier. While the Langley was an experimental platform, it eventually proved out the concept and aircraft carriers replaced battleships as the mainstay of naval battle groups.



Sailors on the USS Nimitz form a "100" to celebrate the anniversary of the aircraft carrier
Image Credit - US Navy

Since their inception with the Langley, aircraft carriers have been the Navy's primary and preeminent power projection platforms and have served the nation's interest in times of war and peace, from WWII to the Cold War, to Vietnam and up to the war on terrorism. Today's Nimitz class carriers, and the newest carrier, the **USS Gerald Ford (CVN-78)** continue patrol the seas, providing the United States with its strongest asset in maintaining the peace and ensuring the freedom of the seas.

AERSOSPACE IN THE NEWS

NASA'S NEW MOON ROCKET

By Maj Burt Dicht

Standing 322.4 feet tall, weighing 5.75 million pounds fueled, and producing 8.8 million lbs of thrust at liftoff, the Space Launch System (SLS) is now awaiting its first flight at Launch Complex 39-B at the Kennedy Space Center. NASA rolled out this massive new Moon rocket on 17 March in preparation for the Artemis I test flight. The Artemis program is NASA's newest series of missions designed to return astronauts to the Moon.

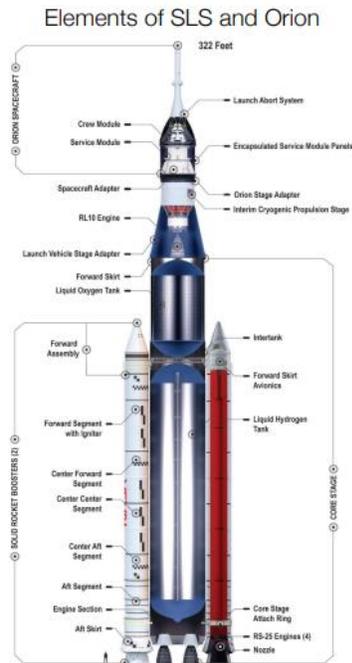


Image Credit - NASA

Consisting of the SLS rocket and the Orion spacecraft, the Artemis I test flight will provide NASA with a chance to test out all the systems in deep space, as well as their procedures on the ground, **before taking the next giant leap and sending astronauts to the Moon.** While the SLS is a new rocket, it uses proven propulsion systems consisting of solid rocket boosters (SRB) and liquid-fuel RS-25 engines (Space Shuttle Main Engines) mated to a new central core stage.

The SRBs on the SLS are larger than those used on the space shuttle and the liquid hydrogen/liquid oxygen-fed RS-25 engines will operate at 109% thrust, higher than during shuttle missions. The main rocket component, known as the core stage, is all-new consisting of propellant tanks, avionics, and related equipment, and houses the four RS-25s and provides attach points for the boosters.

Above the core stage, the Interim Cryogenic Propulsion Stage (ICPS) provides in-space propulsion. The launch vehicle stage adapter partially encloses the ICPS and changes the diameter of the rocket. The Orion stage adapter, located between SLS and the Orion crew vehicle, contains CubeSat payloads for the Artemis I mission and connects the rocket to the Orion spacecraft.

Artemis I rolled out of the Vehicle Assembly Building at approximately 5 pm ET and moving at .82 mph on the Mobile Launch Platform, it finally arrived at Pad 39-B and 4:15 am ET. Now engineers and technicians are preparing the Artemis I rocket for its final major test – the wet dress rehearsal.

This two-day test will demonstrate the team's ability to load cryogenic, or super-cold, propellants into the rocket, conduct a launch countdown, and practice safely removing propellants at the launch pad. After the wet dress rehearsal, engineers will roll the rocket and spacecraft back to the Vehicle Assembly Building for final checkouts before launch.



Image Credit - Scott Schilke - Space News



Image Credit - Scott Schilke - Space News

NASA will review data from the rehearsal before setting a specific target launch date for the Artemis I launch, which will not likely occur before June. This first Artemis mission will carry the Orion spacecraft on a three-week mission around the Moon. This flight, without astronauts, will set the stage for the Artemis II mission which will carry astronauts on an orbital mission to the Moon. The preparations and the ultimate launch of Artemis I promise to be very exciting. The SLS Block 1 configuration as it is called, has more thrust than the Saturn V Moon rocket (8.8 million lbs. compared to 7.5 million lbs.)

The last launch of a Saturn V was on 14 May 1973 to place Skylab in orbit. **The Artemis I launch will have the space coast rocking once again.**



Image Credit - Scott Schilke Space News



Image Credit - Scott Schilke Space News



[Use this link to learn more about the SLS Rocket](#)

[Use this link to learn more about the Artemis I Mission](#)

CELEBRATING WOMEN'S HISTORY MONTH

By Maj Burt Dicht

Since 1995, presidents have issued a series of annual proclamations designating the month of March as “**Women’s History Month.**” These proclamations celebrate the contributions women have made to the United States and recognize the specific achievements they have made over the course of American history in a variety of fields. **In this issue of Wing Tips, it is our honor to celebrate women pioneers in aviation and aerospace, those who pushed the boundaries of flight and space to help advance technology, exploration and human achievement.**

Source – The following tributes are reprinted from the Smithsonian National Air and Space Museum’s Women in Aviation and Space History exhibition and website:

<https://airandspace.si.edu/exhibitions/women-aviation-and-space-history>



Harriet Quimby purchased a Bleriot 50 monoplane in France in March 1912 and began preparations for an English Channel flight. Her advisor, Gustav Hamel, unsure of a woman's ability to make such a flight, offered to disguise himself as Quimby and make the flight for her. She refused and flew from Dover, England, to Hardelot, France (about 25 miles (40 kilometers) south of Calais) on April 16, 1912. She became an instant sensation and returned triumphantly to the U.S.



Bessie Coleman received her FAI license on June 15, 1921, becoming the first African American woman to do so. On September 3, 1922, in a borrowed Curtiss JN-4D Jenny at Curtiss Field on Long Island, Coleman made the first public flight by a Black woman in the United States. It was followed by a flight in Memphis, Tennessee, and then a triumphant exhibition before the friendly, integrated crowd of 2,000 at Checkerboard Field in Chicago on October 15.



Amelia Earhart is one of the most famous American pilots. A record setting aviator, she was the second person to fly solo across the Atlantic and the first woman to fly solo and nonstop across the United States, among other accomplishments. Her flying feats spurred her into the international spotlight, where she lectured widely, wrote several books, and advocated for causes she cared about. She tragically went missing while attempting to fly around the world.



Geraldine "Jerrie" Mock was a mother of three with 750 hours of flight time, a newly minted instrument rating, and a determination to see the world. In a 1953 Cessna 180, a rugged single-engine four-seat airplane officially named Spirit of Columbus, Mock became the first woman to fly around the world (March 19-April 17, 1964).



Patty Wagstaff began flight instruction in a Cessna 185 on floats and earned her private pilot license in 1979. She entered her first aerobatic competition in 1984 and in 1991 she became the first woman to win the title of U.S. National Aerobatic Champion. She defended her title in 1992 and 1993. In 2004, Wagstaff was inducted into the National Aviation Hall of Fame.



Dr. Sally Ride became the first American woman to fly in space on June 18, 1983. Ride joined NASA in 1978, part of a class of six women astronauts. She was named a mission specialist on the seventh flight of the Space Shuttle Challenger in 1983 and flew on a second mission in 1984. After retiring from NASA, Sally Ride became a physics professor and launched a variety of business ventures that would inspire the next generation of astronauts and scientists.



Dr. Mae Jemison, on September 12, 1992, made history as the first African American woman to fly in space. Inspired by Sally Ride and Guy Bluford, Jemison left her private medical practice in Los Angeles and applied to become an astronaut candidate. In 1987, she was one of 15 ascans (astronaut candidates) chosen from a pool of 2,000 applicants. After leaving NASA, Dr. Jemison went on to teach, formed a company that researches advanced technologies, and is a public speaker.

This is just a small sampling of the many women who have made significant contributions to our nation's aerospace legacy. The CAP has also created educational resources that you can use for your squadron's AE activities. **Two of CAP's curriculum books, "Women in Aviation Volumes I and II", are devoted to telling the stories of 25 women air and space pioneers.** The books align with national academic standards and highlight a wide variety of careers. Currently, these books are available in the **AE Downloads and Resources** section, along with our other curriculum products in CAP's member portal, eServices, at www.caphq.gov. [For more information use this link.](#)

A MESSAGE FROM THE EDITOR

Maj Burt Dicht

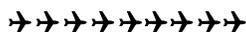
New York Wing, Internal AEO



We are about to transition from March to April. This is not just a reference point that tells us spring is here and summer is just around the corner, but that we have reached the midway point in FY 2022. This is the perfect time to reflect on what you have accomplished so far and what your plans are for the remainder of the year. **Are you on your way to accomplishing your 2022 AE goals?**

A good place to start is with a complete review of your Plan of Action (POA). If you did not complete one, use the documentation of your meeting with the squadron commander to discuss your 2022 goals. I have been reviewing my goals and I am assessing the status and what needs to be done in order to get them accomplished. I encourage you to do the same and do not get discouraged or frustrated that after conducting your assessment you feel you are behind.

Realizing that we are still faced with the challenges of the pandemic, there might have been circumstances that have been beyond your control. If that is the case, it is fine to plan adjustments. But I urge you to consult with your commander and your AE team to see what actions are needed to achieve your goals. **Wishing you much success as you plan out the rest of the year.** If I can be of assistance, please let me know.



ADDITIONAL AEROSPACE EDUCATION RESOURCES

FREE FAA PUBLICATIONS:

[Airplane Flying Handbook](https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/airplane_handbook/media/00_afh_full.pdf)

https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/airplane_handbook/media/00_afh_full.pdf

[Pilot's Handbook of Aeronautical Knowledge](https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/pilot_handbook.pdf)

https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/pilot_handbook.pdf

[Remote Pilot - Small Unmanned Aircraft Systems Study Guide](https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/media/remote_pilot_study_guide.pdf)

https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/media/remote_pilot_study_guide.pdf

[Aviation Weather](https://www.faa.gov/documentlibrary/media/advisory_circular/ac%2000-6a%20chap%201-3.pdf)

https://www.faa.gov/documentlibrary/media/advisory_circular/ac%2000-6a%20chap%201-3.pdf

[Airmen Information Manual](https://www.faa.gov/air_traffic/publications/atpubs/aim.html)

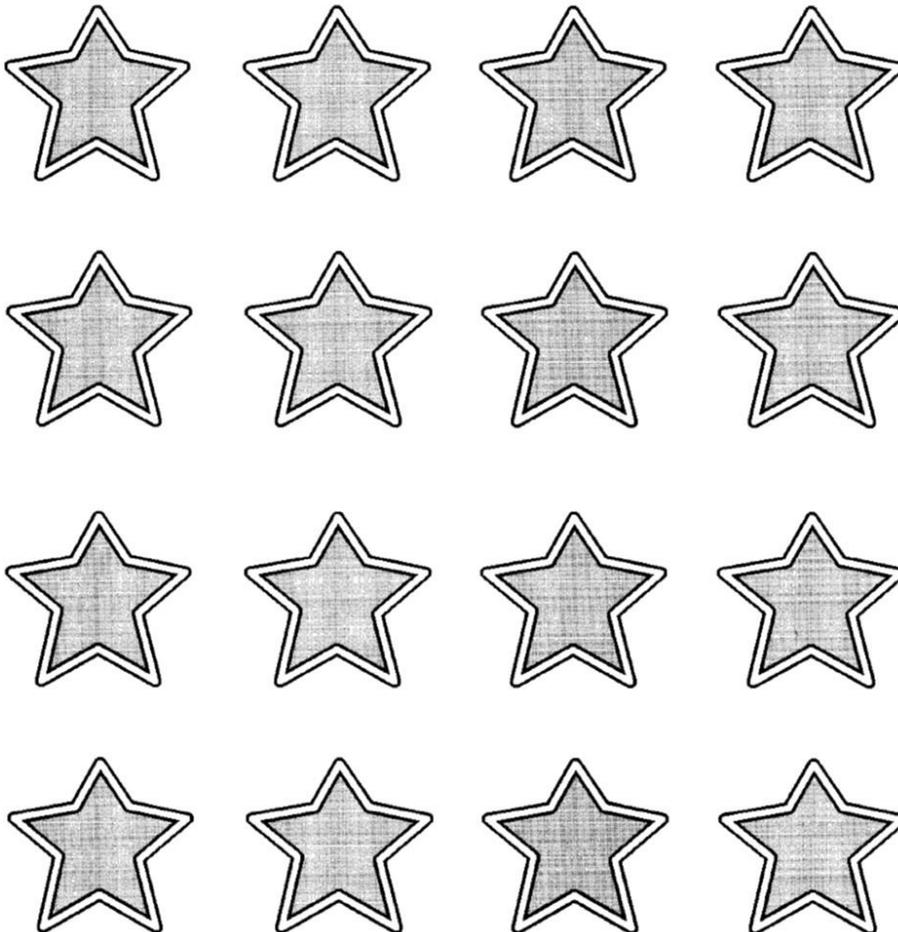
https://www.faa.gov/air_traffic/publications/atpubs/aim.html

LOGIC AND PUZZLE SECTION

In each *Wing Tips* issue, we are providing you with a Critical Thinking Puzzle. **This puzzle comes from The Mini Book of Logic and Puzzles.** The Civil Air Patrol believes that “Critical Thinking” is a valuable skillset for leaders and cadets, and it devotes a whole chapter to it in the LEARN TO LEAD: VOLUME TWO: TEAM LEADERSHIP, Ch 5: Brain Power for Leadership; Principles of Critical Thinking. (Solution is on Page 18)

NUMBER THE STARS

Using numerals 1 through 16, number the stars. Numbers in sequence cannot be placed next to each other in any direction.



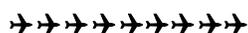
Problem Solving / Numerical Relationships

NUMBER THE STARS PUZZLE SOLUTION

For the Instructor:

There are several placements of the numerals in the stars. Here are two solutions shown below.

3	5	1	13	7	1	14	10
12	16	11	6	15	11	4	12
8	4	9	15	6	9	16	8
10	14	2	7	13	2	5	3



PLANNING FOR 2022 – IMPORTANT DEADLINES

Item/Activity	Due Date
AEX Completion Report for QCUA point	30 August
STEM Completion Report for QCUA point	30 August
AEX Completion Report	30 Sept
STEM Completion - 30 Sept	30 Sept
AEX Application (FY 2023)	1 Oct
STEM Application (FY 2023)	1 Oct
Squadron AE Activity Report (FY 2022)	30 Oct
Nominated AE Awards - Squad to Group	15 Dec
Nominated AE Awards - Group to Wing	15 Jan 2023
AFA AE Cadet of the Year Award	15 Jan 2023

WING TIPS EDITORIAL STAFF: (from left to right)

Lt Col Anita Martin, NYW DAE; Lt Col Marilyn Rey, NYW DAE Emeritus.

Lt Col George Geller, Asst Internal AEO; Maj Burt Dicht, Internal AEO



For questions or comments about any of this issue's topics or contributions to a future issue, please email: amartin31392cap@juno.com or capaerospace@gmail.com

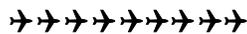


Image Credit – Chino Cadet Squadron

*Volunteers Serving America's Communities,
Saving Lives, and Shaping Futures*

