



NEW YORK WING, CIVIL AIR PATROL



AEROSPACE EDUCATION NEWSLETTER ONLINE

July – August 2021



Source – CAP Glider Academy

CELEBRATING NEW YORK WING AE ACHIEVEMENTS

2021 SCHOLARSHIP FINALISTS



- C/LtCol Grant Becker
- C/2nd Lt Nicholas Randall
- C/Col Aaron Weiss
- C/Lt Col Sahil Swalil
- C/Maj Ramffys Paniagua
- SEG, NY-048 - CAP Cadet Flight \$1,000
- FLG, NY-273 - CAP Cadet Flight \$1,000
- LIG, NY-311 - CAP Cadet Academic \$2,000
- MEG, NY-415 - CAP Cadet Academic \$2,000
- MEG, NY-415 - CAP Cadet Flight \$1,000 and USAFA Preparatory School Recommendation

STEM KIT COMPLETION (to-date)

WNYG:	SEG:	FLG:	CNYG:	LIG:
NY-020	NY-033	NY-111	NY-135	NY-247
NY-351	NY-048	NY-253	NY-406	NY-311
NY-402	NY-159		NY-408	
NYCG:	NY-238	MEG:		SEG:
NY-301		NY-388		NY-283



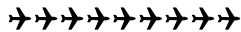
AEX PROGRAM COMPLETION (to-date)



FLG: NY-253 SEG: NY-159 NYCG: NY-384

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NEW YORK WING AEO ACHIEVEMENTS



Congratulations to the new AEOs and those who are advancing in their specialty track! From the Wing Commander's Dashboard – note that numbers change when members transfer in or out of wing, become a Patron, or leave CAP

New Assigned AEOs: 15	(140, no rating)
New Technician Ratings: 6	(83)
New Senior Ratings: 3	(32)
New Master Ratings: 2*	(39)

Total AEOs: 169
Total AEMs: 59
Total AEX Units: 17
Total AEX Schools: 9

* A. SCOTT CROSSFIELD AWARD RECIPIENTS!

Master Rated Aerospace Education Officers and 25 new Yeager Awards earned this year – total 565 in the Wing – 52.22% of SMs

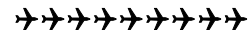
ADDITIONAL AE ACHIEVEMENTS

OUTSIDE (NON-CAP) ACTIVITIES COMPLETED (Reported To Date)

These include:

- Red Ribbon Academy
- STEM Competition
- TARC (Team America Rocketry Competition)
- UAS4STEM
- CyberPatriot
- StellaXplorers

- WNYG: NY-022
- CMG: NY-030 & NY-072
- SEG: NY-033 & NY-048
- FLG: NY-273
- SCG: NY-283
- LIG: NY-288
- NYCG: NY-417



QUALITY CADET UNIT AWARD (QCUA) – 2021

The following squadrons have earned 5 or more points and are on track to earn the 2021 award.



SEG:

- NY-033
- NY-048
- NY-159
- NY-238

LIG:

- NY-311

MEG:

- NY-388

FLG:

- NY-273

SCG:

- NY-283

NYCG:

- NY-301
- NY-417



AE EDUCATOR 101

By Lt Col Anita Martin, Director Aerospace Education

Background: When the CAP School Program began, it typically was staffed with school educators who operated on a yearly curriculum. To assist the teachers, a school training plan was given to them. Today, that training plan is *available to all units* and is located on the CAP national website, in the Cadet Library. Go to:

www.qocivilairpatrol.com/programs/cadets/library

This is a full 24month plan to get through the first two leadership books (along with applicable leadership activities), all six AE Modules (also with applicable activities), model rocketry and AEX! We want to give you ways to extend your AE training to receive more credits for less work!

→→→ **This July/Aug Wing Tips** will reference National’s Cadet Programs’ Cadet Library, Squadron Training Plan, for the 19th and 20th months. The 19th Month (July) schedules **Aerospace Dimensions (AD) 3.4 Weather Stations**. This chapter explains the water cycle and how moisture in the air affects weather. Also, what the cloud formation indicates about the weather and how it might be important for a pilot to know this information. The AD provides a good choice of hands-on activities: make a cloud, make fog and make sweaty hands.

This may be complemented by bringing in AEX for **Middle School Earth & Space Science Lesson Nine - Weather – Up Front with Fronts**. This is a wonderful resource explaining weather fronts.



Acu-Rite Weather Station

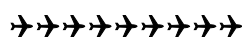
The **STEM kit Weather Station** is a great resource to coordinate with this AD chapter. Cadets build the Acu-Rite Weather Station. Cadets can have hands on experience with this STEM kit. Altogether, this is a Three-fer-One opportunity learning about the Weather with AD, AEX and STEM activity!

The 20th Month (Aug) schedules the booklet, **Let’s Go Flying (AGF), Part Four, 4 Fun Things to Do in Aviation**. AGF is CAP’s Drug Demand Reduction Program to raise the awareness of how the aviation industry has a zero tolerance for alcohol and drug abuse. This chapter is designed to give the young aviation enthusiast a look at just a small number of the available opportunities.

This always gives you a Two-fer-one: Aviation lesson with a Drug Demand Lesson! The Instructor’s Guide Part Four Drug Issue: There are many fun aviation-related alternatives to drugs! There are other, better things to do than drugs. One of the fascinating places for someone interested in airplanes is a hobby shop. Hobbies are also a way of getting students, cadets and teachers away from television and video games. Let’s Go Flying and Let’s Go Flying Instructor Guide can be found at:

<https://www.qocivilairpatrol.com/programs/cadets/activities/cadet-flying/lets-go-flying>

Stay tuned for the **Sept/Oct Edition of Wing Tips** for more exciting AE Educator 101 tips to get more “Bang for your Buck”



CADET WINGS PROGRAM - The New York Wing Congratulates Its Cadet Pilots!

The goal of **Cadet Wings** is to assist cadets in obtaining their **Private Pilot Certificate (PPC)**, recognized by industry as the first milestone for those who have a serious desire to pursue a flying career. As part of the [Youth Aviation Initiative \(YAI\)](#), Cadet Wings is a merit-based program, providing formal flight training for CAP cadets pursuing a PPC. As of 20 July, 106 have earned their PPCs. More information can be found in the [Cadet Wings Student Guide](#).



Connor Gleason (#108), WNYG, NY-020
20 July 2021



Felice Rucci (#98), FLG, NY-273
5 July 2021



Joshua Hubbard (#97), MEG, NY-392
29 June 2021



Nicholas Randall (#96), FLG, NY-273
25 June 2021



Alexander Realuyo (#90), NYCG, NY-301
9 June 2021



Gavin Swanson (#41), WNYG, NY-402
29 November 2021

AEROSPACE EDUCATION REFLECTIONS

C/1st Lt Alexander Realuyo, NY-301



After joining the Civil Air Patrol in 2017, I have had the privilege to participate in many AEX activities and programs. The **CAP Aerospace Education** program is unique, and I am grateful to all who have contributed to create this influential program.

Ever since I was a kid, I had always been interested in engineering and STEM. Math and Science were and still are my strongest and favorite subjects. I enjoyed problem solving, hands-on work, and figuring out how the world works. Aerospace was interesting, but I had not yet developed the passion for aviation that I have today. AEX helped me find and explore that passion.

Not only were the activities fun and hands-on, but my AE Officer always found a way to relate the principles, physics, and chemistry to other subjects to make the activities even more beneficial and interesting. I believe that this was instrumental in building my interest in aviation. Most recently, I followed that interest and with the help of some other great Civil Air Patrol programs (Cadet Wings Flight Scholarship and Cadet Aviation Ground School), I was able to earn my Private Pilot Certificate. This was a huge achievement for me and will help me as I pursue a career in the future.

Again, I am grateful to all who have taught and helped me develop within AEX and the Civil Air Patrol. I believe that everything I learned in these programs was a big factor in being accepted to the United States Military Academy (USMA), the United States Air Force Academy, and the United States Coast Guard Academy. I ultimately chose to attend the USMA and have some challenges ahead, but I will be thinking back to my time in CAP participating in AEX activities as I pursue a career as an Army Aviator.

NY-292 CADETS MEET THE THUNDERBIRDS

Senior Member David Grate, NY-292

The **Greater Binghamton Air Show** returned after a year's absence and residents and visitors alike enjoyed the Thunderbirds, the Golden Knights, and other exciting attractions on Saturday, 18 July 2021. But the excitement for our local CAP cadets and senior members began on Friday.



Joined by cadets and seniors from around the region, the **NY-292 Southern Tier Cadet Squadron** had the privilege of a meet-n-greet with officers and crewmembers of the **Thunderbirds** and were able to speak with them one-on-one.



explained.

Events like the Greater Binghamton Air Show provide opportunities for both the Civil Air Patrol AE program as well as STEM options and possibilities. **Congresswoman Claudia Tenney**, pictured with the female cadets of the NY-292 expressed interest in bringing great opportunities to the young women in this community. *"We need women with a strong interest in the sciences; this gives more women the option to learn about becoming pilots,"* Congresswoman Tenney



GO FLY A KITE! NEW YORK WING KITE DAY COMPETITION EXTENSION



**The deadline for entering the
New York Wing Kite Day Competition
has been extended to 16 August 2021**

Objective: Hold “Kite Days” throughout the wing as a COVID safe outdoor AE activity!

Note: Kites were distributed to NYW squadron AEOs/Commanders through US mail in early May. *Contact Lt Col Martin if you did not receive them.*

Prizes: \$100 prize for best photo or video in each of the following categories:

❖ **Most Creative/Best Decoration** ❖ **Most Fun** ❖ **Teachable Moment**

Rules:

1. Send submissions to capaerospace@gmail.com
no later than 16 August
(Links to the files are allowed)
2. Photos (JPEG format under 6MB) or Videos (MP3 or MP4 under 10 min or 10 MB)
3. One submission per category, per unit
4. Include:
 - Category you want the submission considered
 - The photographer’s/videographer’s grade, name, and contact info
 - Unit name and mailing address
5. As the photos and videos will be used by CAP to promote AE, *image releases* must be available for people appearing in the photo/video. They are required so that NHQ and NER may publish the images. They do not have to be attached to the submission but will be required before being declared the winner.
6. Winners will be determined by the NYW AE Staff

Please send all inquiries to **Capt Burt Dicht** at capaerospace@gmail.com



NYW STAFF AEX CHALLENGE Now Open to Include Groups & Senior Squadrons

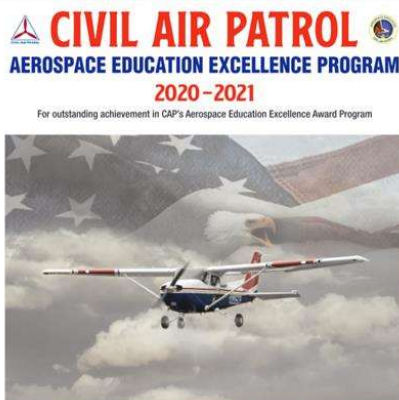


NYW HQs Staff has entered the AEX program for the 2020-2021 Fiscal Year. All the activities are posted on the [NYW AE Resources](#) page for downloading and completion before the **30 Sept deadline**. All who accept the challenge and submit the check-off list -- with six of the seven activities completed -- to Lt Col George Geller will receive a certificate of completion.

All activities are interesting *readings* with a couple of verifying questions to answer on the check-off list. These were not chosen as hands-on activities for cadet squadrons which cadets love but rather good biographies of famous folk in aviation field. One of the seven is **Exercising in Space**. Members can choose this and get an exercise band from NYW AE Department to build up their physical fitness!

Below is the list of activities:

- [AEX Challenge Memo & Checklist](#)
- [AEX I 2020 Activity 3 - Back to Basics / Paper Airplanes](#)
- [AEX II Vol I Activity 10 - Lost on the Moon](#)
- [AEX for SM Activity 13 - Astronaut Leroy Gordon Cooper, Col, USAF](#)
- [AEX II Vol II Activity 13 - Exercising in Space](#)
- [Women in Aviation Vol II Ch 2 – Dr Katherine Johnson](#)
- [Women in Aviation Vol II Ch 13 – Col Nicole Malachowski](#)
- [Women in Aviation Vol I Ch 12 – Col Mary S. Feik](#)
- [Required Field Experiences - Visiting an Aerospace Museum](#)
- [Required Field Experiences - Aerospace Museum Virtual Tours](#)



All Group and Senior Squadron AEOs were invited to also enter their units in the AEX Challenge. This was to raise the number of our units registered for the program and help meet our goal for 2020-2021. **Currently, only one Senior Squadron (NY-207) has accepted the AEX challenge. Thank you NY-207.** Again, all activities remain posted on the NYW AE Resource website for easy access. **AEOs, please consider entering your group or senior squadron into this interesting and fun challenge.**

To complete the challenge, officers must complete **six (6) of the seven (7) tasks** listed on the attachment plus the Field Experience: The Museum Virtual Tour. All resources are on NYW website and

are linked in this article.

When all activities have been accomplished, e-mail the **completed form any time before the 30 September deadline** to NYW Internal AEO, Lt Col George Geller at georgegeeg@aol.com. Upon receipt, your AEX Award Certificate will be emailed to you to print and save.

ATTEND A CAP CONFERENCE

CAP 2021 National Conference – 12-14 August



CAP members can take advantage of free registration that has been extended for the three-day virtual event scheduled for 12-14 August. Registration remains open at no cost (\$50 ticket value). Join 5,129 of your fellow members who have already signed up for direct access to over 140 educational opportunities to propel your leadership skills to the next level offered only at the National Conference.

[Register today](#) to check out the conference Donor Wall and recognize a cadet or member by supporting CAP's national scholarship program.

Your ACCESS CODE for registration is 1941history2021

**Note: Don't miss Capt Burt Dicht's presentation – AEX in a Virtual World
Friday, 13 August at 1900 (7:00 pm EDT)**

NER-CTWG CONFERENCE

Friday 20 August - Sunday 22 August 2021

The conference details and schedule can be found on the:

[NER-CTWG Conference Website](#)

The event will be held at the Sheraton Hotel at Bradley Airport
1 Bradley International Airport
Windsor Locks, CT

NEW YORK WING CONFERENCE

Friday 12 Nov – Sunday 14 Nov 2021

The conference details and schedule can be found on the:

[NYWG Conference Website](#)

The event will be held at the Fort William Henry
Hotel & Conference Center
Lake George, NY

NEXT STOP: SPACE FOR ARIZONA WING'S PROCTOR

Maj. Margot Myers
PAO, Arizona Wing



Ask her what she's doing this summer, and Maj Sian Proctor will tell you she's "learning to fly a Dragon to space."

Proctor, a member of the Arizona Wing's Sky Harbor Composite Squadron, will be the mission pilot on the privately funded **Inspiration4** flight aboard a SpaceX Crew Dragon capsule.

She is an active contributor to the Arizona Wing Aerospace Education team, a professor at South Mountain Community College in Phoenix, a

geoscientist, an analog astronaut and a space artist and poet. Proctor was selected recently as a member of the *Explorers Club 50: Fifty People Changing the World the World Needs to Know About*.

The commander of the Inspiration4 flight is Jared Isaacman, a pilot and billionaire businessman who's paying an undisclosed amount for the mission, designed to raise awareness and funds for St. Jude Children's Research Hospital. Proctor won a spot on the crew in a competition for small businesses that are customers of Isaacman's company, through her space art website, [Space2Inspire](https://www.space2inspire.com).

The flight name – Inspiration4 – commemorates the four-person crew and its associated "pillars of support" for the hospital. Isaacman represents *leadership*. Proctor represents *prosperity*. Hayley Arceneaux, a physician's assistant at the hospital, represents *hope*. Chris Sembroski, a former U.S. Air Force missileman and data scientist, represents *generosity*.

When notified of her selection, Proctor told The Associated Press, "It was like when Harry Potter

found out he was a wizard, a little bit of shock and awe."

Proctor applied three times to NASA's astronaut corps and came close to selection in 2009. As an analog astronaut, she has participated in four simulated Earth-based missions, pursuing space-related exploration in Hawaii, Utah and Poland.

Proctor's father encouraged her to join the Civil Air Patrol when she was 13 or 14. "My dad, who knew I wanted to be a military aviator and go to the Air Force Academy, told me about the Civil Air Patrol and asked me if I wanted to join," Proctor recalls. "I became a member of the *Rochester Composite Squadron in New York (NY-273)*, and it was fantastic.

Reprinted from [CAP News](#). Use the link to see the complete article.

QUARTERLY NYWG AEO MEETING

The New York Wing Quarterly AEO Meeting was held on Monday, 26 July from 1930 to 2030.

All AEOs were invited and 11 attended.

The following topics were discussed:

- AEX Status For The Year
- The POA and the Squadron Aerospace Education Achievement Award
- 2021 AE Activity Reports
- NYWG AEX Challenge
- Upcoming Conferences
- NYWG Go Fly a Kite Competition
- Wing Tips
- Open Discussion

Use this link to view a recording:

[26 July NYWG AEO Meeting](#)

Password: 51wQ0uf?

Note: The recording access expires on 31 Aug.
The next AEO Meeting will be held on
25 October. All AEOs invited!

WALLY FUNK AND HER QUEST FOR SPACE



*Wally Funk at Fort Sill
Source Smithsonian*

In 1961, at twenty-two years of age, professional aviator Mary Wallace "Wally" Funk reacted to an article in *Life Magazine* that described a test of a woman in an isolation tank as a prelude to a possible spaceflight. Intrigued, Funk sent off a letter to the investigating doctor, William Lovelace.

Lovelace had designed the intensive testing that all of the Mercury astronauts went through, and he was now directing a study to assess the performance of women going through the same tests. His interest was in determining the suitability of female astronauts. To conduct the tests, Lovelace partnered with the accomplished aviator Jerrie Cobb to

identify a group of female pilots that might go through the testing. They identified the lower age limit of this group as 24, thus Funk was not invited to participate.

But Funk was persistent in her correspondence with Dr. Lovelace and ultimately she was invited to participate and was one of thirteen female aviators to undergo and pass all of the same rigorous testing that the Mercury 7 completed. In fact, the performance of these women either matched or exceeded their male counterparts of the Mercury 7, and Funk excelled.

Their excitement about flying into space as part of NASA's Mercury program soon turned to distress and they never even made it to the launch pad. Lovelace's program, named the **Woman in Space Program**, was never sanctioned by NASA. It was soon ended with bitter disappointment from the female aviators, later named the **Mercury 13**. Debates in the public arena and Congress followed as to the appropriateness of adding women to the astronaut corp. NASA never relented as to the requirements that astronauts be test pilots, even though several of the Mercury 13 had more flying time than the Mercury 7 astronauts.



*Funk (2nd from left) at the launch of Eileen Collins in
1995 with six other members of the Mercury 13
Source - NASA*

Funk's dream of space was quashed but never fully extinguished. She continued to lobby NASA as they selected new classes of astronauts and made it a personal quest for the rest of her career. Funk was born in 1939 and took to flying at a young age. She soloed at 17 and soon after earned her pilot's license. While in college she continued to build her hours and in her senior year she earned a trophy recognizing her as the most outstanding pilot at the local airport. The airport manager, when he gave it to her said, "Mark my words, if ever a woman flies into space, it will be Wally, or one of her students."

Her first job as a professional pilot was at Fort Sill, Oklahoma, where she was a civilian flight instructor for US army noncommissioned and commissioned officers. And in the fall of 1961, she became a CFI, Certified Flight Instructor and chief pilot with an aviation company in Hawthorne, California.

Some of her aviation accomplishments include:

- Earning her Airline Transport Rating in 1968, the 58th woman in the U.S. to do so
- Earning the rating of flight inspector from the Federal Aviation Administration (FAA) in 1971 and becoming the first woman to complete the FAA's General Aviation Operations Inspector Academy course
- She worked for four years with the FAA as a field examiner, the first woman to do so
- In 1974, the National Transportation Safety Board (NTSB) hired Wally as its first female Air Safety Investigator, and in the course of her career she investigated 450 accidents
- After her retirement from the NTSB in 1985, Funk was then appointed an FAA Safety Counselor and became a renowned pilot trainer and speaker on aviation safety
- In 1987, Funk was appointed Chief Pilot at Emery Aviation College, Greeley, Colorado, overseeing the entire flight programs for 100 students from Private to Multi-engine Flight Instructor and Helicopter ratings
- Funk has been chief pilot for five aviation schools across the country
- As a professional Flight Instructor she has soloed more than 700 students and put through 3,000 Private, Commercial, Multi-engine, Seaplane, Glider, Instrument, CFI, AI, and Air Transport Pilots
- In all, Funk accumulated more the 19,600 flight hours

With all she has accomplished in aviation, the dream of spaceflight kept burning. Funk even went to Russia to do training with the cosmonauts. In 1995, Lt Col Eileen Collins became the first woman to pilot a Space Shuttle into space and Collins invited Funk and six other members of the Mercury 13 to view the launch and get a behind-the-scenes VIP tour of the Kennedy Space Center complex. It helped publicize Funk's quest for space and the legacy of the Mercury 13.

By that time Funk was 56 and too old to become a professional astronaut. As she continued her aviation career time was not on her side for making that spaceflight. She continued to explore all avenues and as the concept of commercial space flight in the new age of space entrepreneurs opened new opportunities, Funk put a deposit down in 2012 to fly on Virgin Galactic's Spaceship 2. But with the program delayed Funk wondered if she would ever make it.



*Funk emerging from the New Shepard capsule after her flight
Source - Blue Origin*

Then, at age 82, another space entrepreneur, Jeff Bezos, invited Funk to join him in the first human passenger flight of the Blue Origin New Shepard rocket. On 1 July 2021, Bezos announced Wally would join Bezos, his brother Mark, and 18-year-old Oliver Daemen from the Netherlands, on the flight. On 20 July 2021, Wally's quest was complete, and she participated in an 11-minute suborbital flight that took her to 66 miles, above the Karmen line and into space. During the successful flight Funk, at age 82, became the oldest person to fly to space, exceeding John Glenn's record at the age of 77 in 1998 aboard the space shuttle. Following the flight Wally expressed her joy and the desire to fly again. **Congratulations Wally on your space achievement and all you have done to further aviation and inspire the next generation!**



Capt Garrick

CREATING A YEAGER EXAM REVIEW CLASS

1st Lt David Steinberg, NY-207
Capt Trevor Garrick, NY-207



1st Lt Steinberg

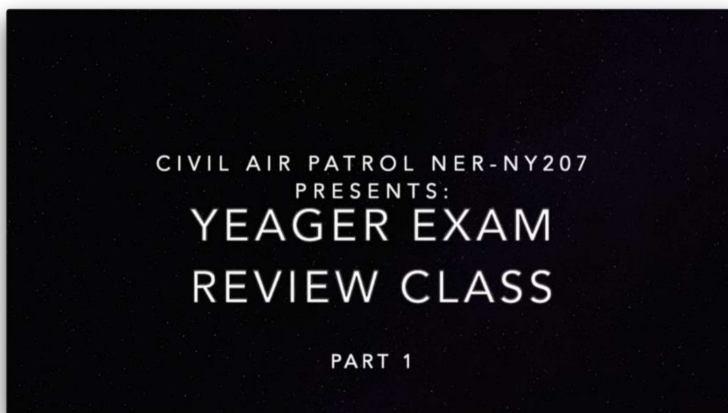
The Civil Air Patrol has named awards after unique individuals who have made significant contributions to aviation and/or aerospace. A very special award has been named in honor of **Brig General Charles E. “Chuck” Yeager** for his life’s work in those areas. This award is given to those members who study, take and pass the Yeager exam. CAP members who successfully complete the Yeager exam are authorized to wear the Yeager Achievement Award Ribbon and will receive a printed Award Certificate as well. This exam is a requirement for Senior Members completing Level II in their professional development as airman.



General Yeager was an aviation legend who was the first human to break the sound barrier while flying an experimental Bell X1 named Glamorous Glennis, in October 1947. This accomplishment pushed the jet age to new heights and enabled an unlimited number of advancements in the development of fighter jets.

General Yeager was also a distinguished WWII Fighter Pilot “Ace” (12.5 kills), flying P51s. After leaving active duty, he became an advisor to the aviation industry. In his 60-year flying career, he notably served as a test pilot, and a contributor to new air and spacecraft systems, along with seeing combat in 3 wars—earning many medals and awards.

What is the Yeager Exam?



The Yeager exam is an open book exam based on self-paced study of **“Aerospace: The Journey of Flight—3rd Edition”**. This 500+ page textbook presents the history of Aviation and Space—from the first balloons all the way up to the present time. It discusses the origin of aviation itself, along with the principles of flight, weather concepts, manned and unmanned aircraft, and the space programs. It also documents historical events

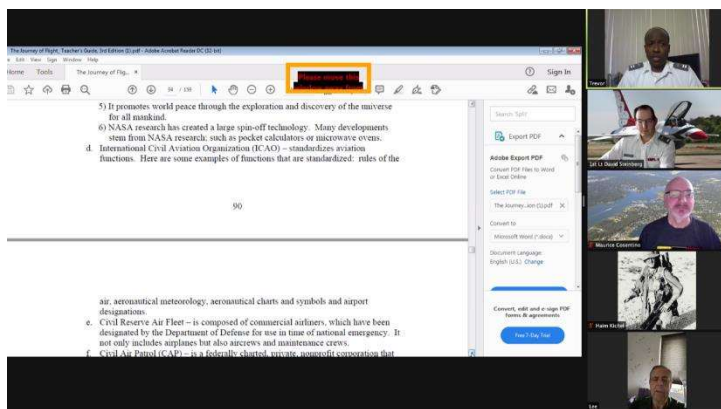
and individuals who either made significant breakthroughs or were pioneers at the very leading edge—to help propel humanity’s foray of exploring the atmosphere and beyond.

The book is divided into six parts, with a total of twenty-seven chapters:

- Part One: The Rich History of Air Power
- Part Two: Principles of Flight and Navigation
- Part Three: The Aerospace Community
- Part Four: Air Environment
- Part Five: Rockets
- Part Six: Space

In order to assist the members of our unit, the commander of the Long Island Senior Squadron (NY-207) tasked Capt Trevor Garrick and myself—as the AEO’s of our squadron—with developing a program to assist in preparing for the exam. As previously mentioned, studying 500+ pages can be difficult. We responded to the challenge by organizing and presenting a class not only to our squadron members, but as many CAP members as possible.

Due to COVID restrictions, we were unable to hold our class sessions in person. Undaunted by that obstacle, we found a solution to training our members in what has now become a useful resource for the whole organization. We held the classes virtually, via Zoom meetings. In total, Capt Garrick and I presented five virtual sessions, covering the entire textbook.



Intended to be just a review of the material and not a lecture, each session runs from 2 to 3.5 hours each—we completed the “filming” of the classes in four months. Capt Garrick and I each presented the lesson objectives, which included the main, key points that were discussed in the book. At the end of each chapter, we held a fun, interactive Question and Answer “mini-quiz” with the attendees who participated. For some concepts, we even utilized

models of aircraft as “props” to demonstrate! No pun intended!

We were pleased to receive very positive feedback from those who sat in on our sessions. Even more exciting, we were surprised to learn that two of our attendees were inspired by the content of our class presentations. They took the initiative to take the exam, even before we completed all of the class sessions and they passed!

Great Job! Congratulations!!

We are making the recordings available to all CAP members. The first session has been uploaded and more sessions will be added soon. You can find them on our squadron Facebook page Long Island Senior Squadron’s Facebook page Civil Air Patrol:

[Long Island Senior Squadron, Civil Air Patrol - Posts | Facebook](#)

Here, you can view each session as a “guide” and then download them so you can study at your own convenience.

Do YOU have The Right Stuff?! Check out our class and take the Yeager exam today!!

AEROSPACE EDUCATION RESOURCES

DID YOU KNOW?

AEROSPACE EDUCATION RESOURCES AND LESSON PLANS

The following links were curated by **Lt Col Michael Castania**, DAE, NJ Wing, as a resource for AEOs and AEMs. See how they can be incorporated into your AE program.

[AIAA Aerospace Micro Lessons](#)

[CAP Lessons and Activity Resources](#)

[CAP Aerospace/STEM Resources for Remote Education](#)

[For Teachers - Aerospace Education](#)

[Aerospace & Aeronautical Engineering](#)

[32 Cool Aerospace Education Activities](#)

[Aerospace Engineering Projects & Worksheets](#)

[Aerospace Engineering Activities & Worksheets](#)

[NASA Aerospace Activities & Lessons](#)

[United - At Home Aviation Activities for All Age Groups](#)

[Aerospace Online Upcoming Virtual Events](#)

[Aerospace Games Online](#)

[Aerospace Engineering PBS Learning Media](#)

[Fun Science Activities for Kids](#)

CAP'S TEACHER ORIENTATION PROGRAM – FLIGHT INFORMATION FOR TEACHERS AND DAES

*(reprinted from the July 2021 issue
of **Aerospace Education**)*

Any educator member of CAP, whether AE member or senior member in uniform who is an educator, is eligible for **ALL CAP AE** products and programs! A favorite is the **Teacher Orientation Program (TOP)** flights! TOP flights are flown over each educator's local area at a local airport in CAP airplanes by experienced CAP pilots! This is a perfect time of year to schedule as many TOP flights as is desired as there is plenty of funding for all wings!!

This event can be an excellent way for teachers to learn more about how aviation principles are directly related to the STEM concepts being taught. Teachers can video the pre-flight briefing with all airplane control surface explanations, the in-flight experience --even flying the plane -- and the aerial views of the students' geographic area -- even their school -- to share with the students. Find out more about TOP flights, to include FAQs for teachers from the [DAE TOP Flight Guide](#).

To arrange a TOP flight, teachers should contact their state's Director of Aerospace Education ([list HERE](#)). Don't forget to get the [TOP flight certificate](#) signed by the pilot and the [after-experience evaluation form](#) with photos to send to ae@capnhq.gov for posting of the events on the [CAP AE Facebook](#) page. (Tagging @CAPaerospace on any personal or squadron FB posts will allow CAP to then share that post!) For more information, contact ae@capnhq.gov.

LOGIC AND PUZZLE SECTION

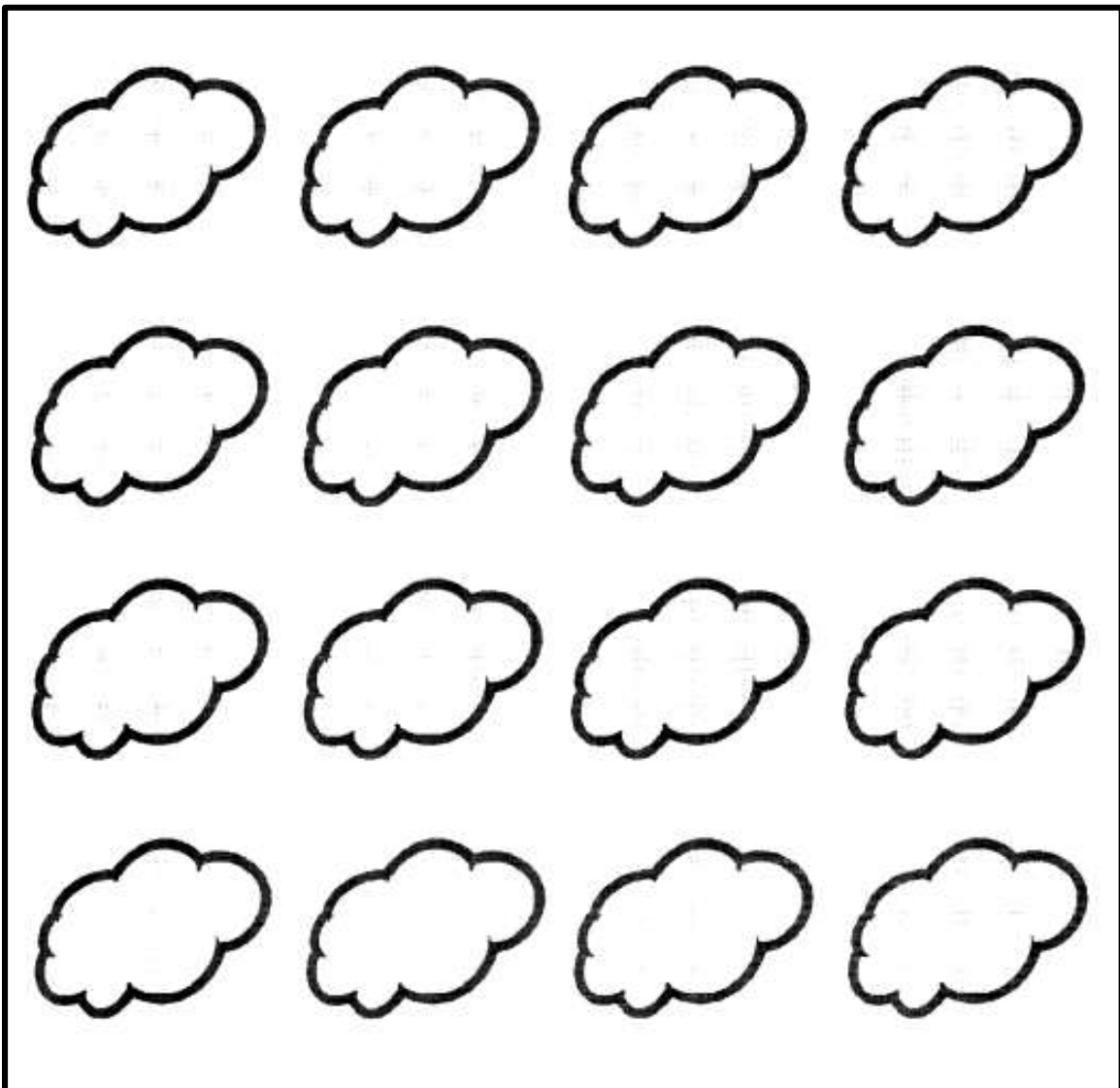
From CAP Aerospace Mini Book of Logic and Puzzles

By Lt Col Anita Martin, DAE

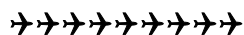
In each *Wing Tips* issue, we are providing you with a Critical Thinking Puzzle from *the Civil Air Patrol Aerospace Mini Book of Logic and Puzzles*. The Civil Air Patrol believes that "Critical Thinking" is a valuable skillset for leaders, and it devotes a whole chapter to it in the LEARN TO LEAD: VOLUME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

This issue's Critical Thinking Puzzle is "Number the Clouds"

Using numerals 1 to 16, number the clouds. Number in sequence cannot be placed next to each other in any direction



Solution can be found on page 17



NEW SPACE AND ITS IMPACT ON CAP AE PROGRAMS

By Capt Burt Dicht, Assistant Director for AE, NYW

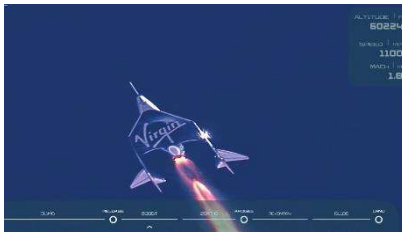


Growing up as a member of the Apollo Generation (I was 10 when Apollo 11 landed on the Moon), I dreamed of becoming an astronaut. I even wrote to NASA asking how I could become an astronaut and I received a letter back from Deke Slayton, a member of the Mercury 7. He encouraged me to study hard, especially in science and math.

Of course, becoming an astronaut was a lot more involved than that and very competitive. I did become an engineer and I had a very rewarding career in aerospace, but the reality was, that dream was beyond my reach. I have enjoyed my role both in CAP, my professional life and in other volunteer positions as a STEM ambassador, working to inspire the next generation to pursue careers in aerospace. And I'm often asked by kids, "How can I become an astronaut."

I'm flattered that they are asking that question and I do my best to answer and provide guidance. The recent success of both Virgin Galactic and Blue Origin to send passengers on sub-orbital flights made me think about how we can factor "**New Space**" into our CAP AE program.

The reality is that becoming a professional NASA astronaut is and will remain exceeding difficult. In the last class of astronauts, more than 18,000 people applied and only twelve were accepted. Exceptional backgrounds in aviation, medicine, engineering and science as well as being well rounded are still the paths to the astronaut corp. Now in the context of this article, I'm going to refer to astronauts as those whose job it is to live and work in space. Paying passengers don't qualify. But to the students aspiring to fly into space, NASA will not be the only avenue.



*Virgin's Unity 22 climbing to the edge of space – 11 July
Source - Virgin Galactic*

The space entrepreneurs, Branson, Bezos and Musk, are opening up new paths to space. Companies interested in participating in the space economy might create their own astronaut corps and then send them to space to conduct their own research and experiments on a leased spacecraft/rocket from Virgin Galactic, Blue Origin or SpaceX. This new dynamic will enable more people to fly into space and we should be sharing what this new era in space means for kids today.

Our cadets will have many more opportunities to fly into space and participate in this new space economy than we can envision right now. There will be new technologies developed and that will require a skilled space workforce. So we should be sharing these stories with our cadets and encouraging them to explore and find out more how they might play a role. I've created two exercises for our AE program that focused on the many planned flights in 2021 and a more specific one called "Rocket Summer" which highlighted these recent sub-orbital missions.



*Blue Origin's New Shepard carries passengers for the first time - 20 July-
Source – Tony Gutierrez, AP*

What I intend to do over the next several months is to document some of these highlights and convert them into lessons that others can use to better share the wonder and excitement of these flight. For example, we can focus not on the passengers, but on the engineers who have helped make these flights possible. Look for more details in a future issue of Wing Tips. **And if you are interested in helping to develop these types of lessons, please contact me.**

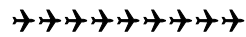
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For questions or comments about any of this issue's topics or contributions to a future issue, please email: amartin31392cap@juno.com or capaerosapce@gmail.com



Solution – Number the Clouds

Two solutions are 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

