NEW YORK WING, CIVIL AIR PATROL

Wing Tips

AEROSPACE EDUCATION NEWSLETTER ONLINE

May – June 2021

Photo credit – Arthur Levy

CELEBRATING NEW YORK WING AEO ACHIEVEMENTS

Congratulations to the new AEOs and those who are advancing in their specialty track!

Total Active in the Wing:

New Assigned AEOs: 9	**(137, no rating)**	**Total AEOs: 168**
New Technician Ratings: 5	**(84)**	**Total AEMs: 57**
New Senior Ratings: 2	**(30)**	**Total AEX Units: 12**
New Master Ratings: 2*	**(39)**	**Total AEX Schools: 5**

***CONGRATULATIONS TO OUR NEW A. SCOTT CROSSFIELD AWARD RECIPIENTS!**

Master Rated Aerospace Education Officers

And 17 new Yeager Awards earned!

INSIDE THIS ISSUE

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QUARTERLY NYWG AEO MEETING

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

All AEOs were invited and 31 attended. The turnout was the best yet for these meetings with 20 squadrons represented.

The following topics were discussed:

- New York Group AE Mid-Year Survey
- Cadet Orientation Flights – Redbirds
- Wing AE Contest
- NER Kite Competition
- Planning for the Remainder of the Year
- May-June Wing Tips

To view a recording for the meeting use this link:

26 April NYWG AEO Meeting
Password - 5Na9Z?^s
Note: The recording access expires on 20 June

The next AEO Meeting will be held on 26 July. Watch for more details soon – all AEOs invited!

CADET NEWS
Launch of ***Aviator Update***

Earlier this month saw the first flight of the ***Aviator Update,*** a newsletter designed by cadets for cadets. The newsletter will feature articles about aviation opportunities within CAP along with articles about current aerospace events!

This inaugural issue included articles about the NASA Mars Rover Perseverance and highlighted pioneering African American aviators. The *Wing Tips* Editorial Team will be working closely with the *Aviator Update* team to ensure both offer complementary articles and resources that can benefit all AEOs and cadets in the New York Wing.

We are looking forward to many interesting and informative issues. If you have any questions about the *Aviator Update* or have material for publication, contact Maj Katherine Torres, Director of Cadet Programs, NYWG at ktorres@cap.gov.


Civil Air Patrol
Aviator Update

Welcome

Welcome to the first of many Civil Air Patrol Aviator Updates! In these newsletters, you will find articles about aviation opportunities within CAP along with articles about current aerospace events! This month, we will be focusing on African American Aviators and the NASA Perseverance Mars rover.

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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.gocivilairpatrol.com/programs/cadets/library

This is a full 24-month 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 **May/June Wing Tips** will take look at **National's Cadet Programs' Cadet Library, Squadron Training Plan**, for the 17th and 18th months after we offer an **AEX I, Vol I, Activity 2: Kites, The Very First Flying Machine**. It is also included in the AEX I (2020) Vol I - Sled Kites. This activity description includes Teaching the Flight of Kites lesson describing the three forces acting upon the flying kite and includes a Flying Journal with questions related to flight modifications. Of note is the fact that neither volumes included the **SAFETY PRECAUTIONS** that *were* included in the AEROSPACE 2000 Activity One - The Sled Kite. Use the following for *your* safety briefing:

1. *The kite should be flown in a large open area away from power line and trees.*
2. *If the weather looks at all threatening, wait until later to fly the kite. Although Ben Franklin did it don't mess with lightning. . . it's dangerous!*

The second activity also included tips for the make-your-sled kite.

Additional stability can be given to the kite by adding 'ribbons' hanging off the spars. They also add visual impact to the actual flying of the kite. If you want to hold a squadron competition, prizes can be given for altitude, maneuverability and design graphics. If your squadron members wish to do more kite flying they can visit www.intothewind.com The web site has an outstanding inventory of kites and other flying toys!

The NER DAE provided our CAP Kites. They were shipped to me first, (Lt Col Martin), and then I shipped them to each unit's AEO or CC. Be sure to keep your eServices Duty Assignments up to date. *I am sorry to hear some were charged extra for the educational rate I asked for. You may submit receipt to NYW FO for reimbursement.*

The Kite Activity introduces students to the very first "aircraft." The lesson has instructions to construct and fly a simple sled kite that you may use to augment the CAP Kites shipped to you. Teams may be formed to allow more participation for the CAP Kites. NER has also initiated a Kite Competition for units to submit photo or video to compete for the $100 prizes in three

categories. **Please see Kite Contest Rules listed under Section 4 in the attached announcement (page 5). Submissions NLT 16 June to: phirons@ner.cap.gov**

Lt Col Hirons, Assistant NER DAE, writes: "A question was raised about the creative /decorating portion of the contest. Would adding to the red prop or covering it defeat the PR portion of the goal? I'd suggest each event have at least 1 undecorated kite. But I'll leave that to the DAEs to decide. We always have the uniform to distinguish ourselves."

Let's Go Fly a Kite! Good Luck to all. Those who just fly for fun and learning and those who enter the contest!

The **17th Month (May)** schedules **Aerospace Dimensions, (AD) 3.2 Air Circulation**. This chapter discusses how the Sun heating the Earth is the beginning for our various weather conditions. The differences in the surfaces of the earth and how fast they are heated and cooled, causes temperature and pressure differences. The movement of the Earth causes the air to move over the surface of the Earth.

AD 3 Activity Four – Wind Currents – conducts a visual demonstration of wind currents as air moves up and around mountains or objects. This could preface your **Go Fly a Kite Day**. Those currents will affect the kites as they take off and hold flight.

The **18th Month (June)** again references the booklet, **Let's Go Flying (AGF) -- Part Three – Special Programs** for your aviation interest. 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 select few of the available career opportunities. This will give you a 2-4-1: Aviation lesson with a Drug Demand Lesson!

Let's Go Flying and the Let's Go Flying Instructor Guide can be found at:

https://www.gocivilairpatrol.com/programs/cadets/activities/cadet-flying/lets-go-flying

The Instructor's Guide Part Three Drug Issue:

If exploring things in life is to get one "high," it is important to focus on "getting high" on aviation opportunities instead of drugs and alcohol. Remind cadets to "stay on course" while off attending special schools and programs and abstain from alcohol and substance abuse.

You have Two Bangs for the Buck with Aerospace Dimensions and AEX and Two Bangs for the Buck with Aviation and CAP's Drug Demand Reduction zero-tolerance message! Once again, that's **ONE** CREDIT FOR DOING AEROSPACE DIMENSIONS activity and **ONE** FOR AEX CREDIT! ***Again, that's Two Bangs for your Buck!!*** Stay tuned for the **July/Aug** Edition of Wing Tips for more exciting AE Educator 101 tips to get more "Bang for your Buck"! ✈✈✈

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SPECIAL AE RESOURCE TIP

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY	**Free Aviation 101 online class from Embry-Riddle Aeronautical University. Great for any high school or college *cadets and senior members*: http://erau.edu/aviation101**

GO FLY A KITE! NORTHEAST REGION KITE DAY COMPETITION

Announcing the Kite Day Competition – May and June 2021

Objective: Hold "Kite Days" throughout the region 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.*

Dates: May through 16 June 2021

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 phirons@ner.cap.gov **no later than 16 June**
   (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 NER AE Staff

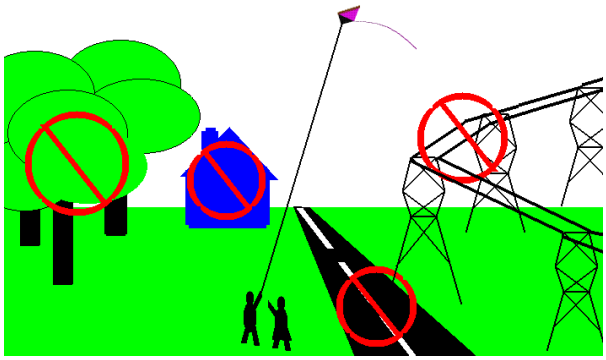
Please send all inquiries to **Philip G. Hirons, Jr**, Lt Col, CAP, Assistant Internal AEO
phirons@ner.cap.gov

Attention Kite Flyers - Get TWO Bangs for the Buck with TWO Entries!

The **New York Wing** is matching the NER and **offering $100 prizes for each of the same categories**. Following the exact same rules, also send your entry to capaerospace@gmail.com by 16 June and have a chance to win two prizes. *Contact Capt Dicht at the above email for any questions.*

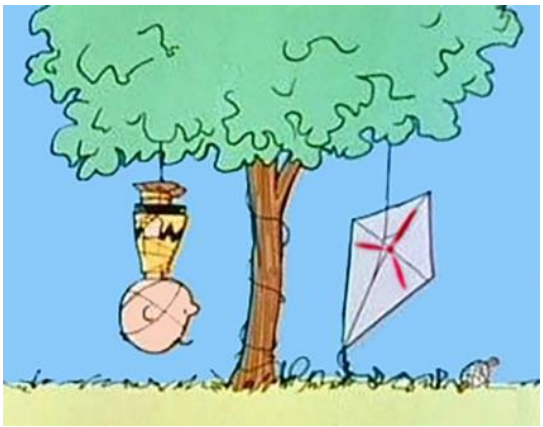
ADDITIONAL KITE RESOURCES

Kite Safety Glenn Research Center



NASA Kite Safety Tips
https://www.grc.nasa.gov/www/k-12/airplane/kitesafe.html

- Fly your kite in an open field or near the shore where there are no obstacles
- Never fly near trees. As Charlie Brown observed (see photo below), they like to eat kites
- Never fly near a highway. You can be hurt chasing your kite across the highway and people driving can be distracted by kite flyers
- If your kite gets hit by a car, you're going to need a new kite
- Never fly near houses. Your kite can do damage to the windows, sidings and roof of a house
- **And never, never fly near high tension wires.** If your kite touches the wires, you can be killed by the electricity



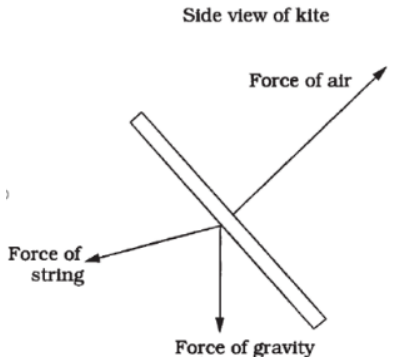
©PNTS

The Aerodynamics of Kites

There are three forces acting upon a flying kite. The force of gravity is pulling down, the force of the air is pushing up and the force of the string controls the altitude. When the kite is in stable flight, all of these forces are balanced. If the forces weren't balanced, the kite would move in the direction of the greatest force. An example would be gravity. This would cause the kite to fall.

Newton's Third Law, "...for every action there is an equal and opposite reaction" can be applied to a kite in flight. The force of the air is the action and the kite moving upward is the reaction. As the particles of air in motion (wind) hit the kite, they bounce off. Because the kite is at an angle, it pushes the air particles downward. This makes the kite move upward. The kite pushes the air down and back and at the same time the air pushes up and forward on the kite. This is known as lift.

Some kites have tails and tails add stability. They keep the kite from "darting" around while in flight. If a kite "darts" around, the flow of air will become erratic and move more in one direction than another. Sometimes, a kite will get turned completely sideways and this causes it to stall and subsequently fall to the ground. The sled kite works quite well without a tail, but experimentation is encouraged.



Excerpt from AEX I Volume One, Activity 2 (Kites)

To Squadrons Participating in the National CAP High Altitude Balloon Challenge:

We are excited to now invite your squadron to formally register for **the 2021 National CAP High Altitude Balloon Challenge** conducted for CAP by StratoStar! At this point, we have almost 100% of the wings participating in this first-ever FREE National CAP HAB Challenge!

Our New York Wing will be represented this year by:

- **NY-351 Dunkirk Composite Sq – 1st Lt Rob Przybysz, AEO**
- **NY-033 Putnam County Composite Sq - Maj Elena MacDermant, CC, & 2d Lt Craig Treco, AEO**
- **NY-402 Jamestown Composite Sq - Lt Col Ellen Maternowski, CC**

Congratulations to these units who responded with their intent to participate. National has covered their $250 participation cost. We look forward to reporting their results in Wing Tips.

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CAP'S TEACHER ORIENTATION PROGRAM (TOP) FLIGHTS ARE FUNDED AND READY FOR TAKE-OFF

Any CAP member who is a teacher can request a **Teacher Orientation Program (TOP**) flight from their state's Wing Director of Aerospace Education (see list HERE). If COVID restrictions will allow the wing to fly orientation flights now, teachers' flights can be coordinated and flown. If the wing is not in the safe COVID phase yet, TOP flights can be requested and scheduled as soon as the wing is cleared to fly. (As their wing's TOP Flight PoC, Wing DAEs should coordinate flights with their Wing DO or designee.)

Teachers have the opportunity to be taken "out of the classroom and into the sky" with CAP airplanes and pilots. They can fly over their geographical area, even their school, while learning how all aspects of STEM connect with aviation principles and actions. Taking videos and photos of the flight and sharing with students is quite an exciting opportunity!

Reprinted from CAP's Monthly AE Newsletter (May 2021)

CELEBRATING THE 60th ANNIVERSARY OF THE FIRST AMERICAN IN SPACE

Alan Shepard's Mercury-Redstone Launch
Source NASA

This month marks the 60th anniversary of America's entry into human spaceflight. On May 5, 1961, NASA astronaut Alan Shepard launched into space on a Redstone rocket. Flying in a Mercury capsule, Shepard become the first American and the second human in space. Soviet Cosmonaut Yuri Gagarin became Earth's first space traveler and the first to be in orbit when he launched almost a month earlier, April 12, 1961, aboard his Vostok 1 spacecraft.

Alan Shepard, the first American in Space
Source NASA

Shepard's flight was modest compared to Gagarin's, a 15-minute suborbital flight, but it set the stage for President Kennedy's decision to send an American astronaut to the Moon before the end of the decade. Since the inauguration of human spaceflight in 1961, almost 570 people representing more than 35 countries have flown into space.

And this 60th anniversary year promises to be an exciting one for human spaceflight. Virgin Galactic conducted the first human spaceflight from the State of New Mexico on 22 May 2021 with SpaceShipTwo VSS Unity, paving the way for sub-orbital tourist flights. Blue Origin is planning the first crewed flight sub-orbital flight of the New Shepard spacecraft for July 20. Then the Inspiration4 flight, featuring the first completely private orbital crew will launch on a SpaceX Crew Dragon/Falcon 9 in September. And finally, Space Adventures, the company that coordinates private spaceflights announced that two private citizen non-astronauts plan to fly on the Russian Soyuz flight MS-20 from the Baikonur Cosmodrome on December 8, 2021 to the International Space Station.

40TH ANNIVERSARY OF THE FIRST SPACE SHUTTLE LAUNCH

STS-1 Columbia Thunders Into Space on its First Flight
Source NASA

This year also marked another important anniversary in the history of human spaceflight. On April 12, 1981, exactly 20 years after Gagarin's flight, NASA launched the space shuttle Columbia – the first orbiter of the Space Shuttle program and the first reusable spacecraft. The flight was commanded by astronaut John Young, who was on his fifth spaceflight and was the ninth person to walk on the Moon in 1972 and piloted by a rookie astronaut Robert Crippen.

This first flight of the space shuttle was designed to test all the shuttle's systems, also known as the Space Transportation System. Columbia spent two days in space and orbited the Earth 36 times. On April 14, the shuttle successfully landed at Edwards Air Force Base in California. During its service life, Columbia flew 28 missions and spent more than 300 days in space. In all there were 135 space shuttle flights, including the tragic accidents of Challenger (1986) and Columbia (2003).

AMAZING UAS OPPORTUNITIES ARE READY TO TAKE FLIGHT!

Lt Col Thomas S. Vreeland, NY Wing UAS Program Manager

2021 is the year of the Unmanned Aerial Systems (UAS) for cadets in New York Wing. New York Wing was the first Wing in the country to achieve UAS Full Operational Capability. This year, in addition to maintaining the flight proficiency of our UAS Pilots and Aircrews, we have identified UAS leadership teams in most of our Groups. These include a Group UAS Program Manager, UAS Instructor Pilots, UAS Pilots, and some UAS Technicians. We have also created a UAS Flight Proficiency Curriculum, which can be used in your Group, to train Cadets and Senior Members in basic UAS flying skills, maneuvers, and safety. We will be coordinating a FREE UAS Part 107 Ground School Course in July and August. We have also developed a UAS Demonstration and UAS Orientation Flight Guide.

Members of the NYW UAS Program have participated in Counter UAS Training in support of the USAF Security Forces, and have been transported to Florida, Georgia, South Carolina, and Puerto Rico to support FEMA Urban SAR teams on the ground in earthquakes, hurricanes, and other disasters. Their services have been requested from as far away as American Samoa. Our experienced UAS Mission Pilots fly a variety of quadcopter, hexacopter, and complex fixed wing UAS. We train at two locations: the USARNG Camp Smith Training Site in Westchester, and the State Preparedness Training Center in Oriskany, NY.

There are two categories of UAS activities in Civil Air Patrol. The first category is the UAS ES Mission Operations, which requires experienced UAS pilots with FAA Remote Pilot Certificates (commercial drone licenses), and additional, advanced training for CAP UAS Mission Pilots and CAP UAS Mission Technicians. These highly trained professionals will participate in Air Force Authorized Missions and Corporate Missions as part of Wing UAS Rapid Response Teams, and they follow the FAA Part 107 rules. They may be Senior Members or Cadets over the age of 16 who have passed a CAP Form 91U flight evaluation.

Cadet 2nd Lt Dalton Hindsley, a CAP UAS Instructor Pilot, checks out equipment during a UAS Flight Clinic

The second category of UAS activity in CAP is Educational UAS, which focuses on Aerospace Education and Cadet Program activities. CAP UAS Demonstration Pilots do *not* need to have an FAA Part 107 Certification (commercial drone license) and may be Cadets or Senior Members who complete a Wing approved two-day UAS Primary Flight Proficiency program, training on FAA Part 101 Recreational UAS regulations, and successfully complete a CAP Form 5U check flight. These CAP Demonstration Pilots help conduct UAS Flight Clinics, public UAS demonstrations, and UAS Orientation Flights within Squadrons and Groups.

No one may fly UAS (including STEM kits) for any of CAP's three corporate missions (AE, CP, and ES) without proper registration, training, qualifications, safety and risk management instruction, and a current CAP UAS aeronautical rating based on a Form 5U check flight. In 2021, we will provide the Groups with the tools to meet this requirement.

Why should you want your Group to be active in the UAS program? You should want your Group to be involved in the CAP UAS Program in order to make UAS a vital part of your Aerospace Education, Cadet Program activities, and Emergency Services training. The UAS Program is highly motivating, and as we get ready to re-mobilize and meet again face to face, it offers a great opportunity to engage cadets and seniors. That is why we have set a UAS Program Goal of training 100 cadets in 2021 at two-day Wing approved UAS Flight Clinics, which will qualify them to wear the forthcoming UAS Flight Proficiency Badge on their uniforms. They will then provide the core of UAS expertise which will train and qualify over the next few years for CAP UAS Pilot, CAP UAS Demonstration Pilot, CAP UAS Instructor Pilot, and CAP UAS Mission Pilot ratings.

Each Group will have a qualified UAS Program Manager assigned by their Group Commander, to lead the Group's UAS program, to plan and schedule UAS training events, and to identify qualified individuals for UAS training. In 2019 we conducted UAS Train the Trainer programs for almost all the Groups in the Wing.

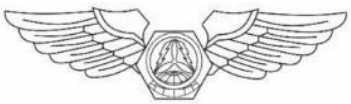
Only one Group currently has no trained personnel. We are seeking individuals from SCG who want to be trained. We will be asking all of the Group Commanders to designate one of the TTT graduates, from their Group, to be their interim UAS Program Manager.

Steps you can take as an AEO to get started implementing a Squadron and Group UAS Program are:

1. Take a census of existing FAA Certified UAS Remote Pilots in your Squadron and send it to your Group
2. Take a census of existing UAS assigned to, or owned by, your Squadron and Group
3. Participate in verifying the FAA registration process for every UAS in the Squadron and Group census
4. Have all cadets join the free membership program of the Academy of Model Aeronautics
5. Organize and participate in a Wing approved UAS Flight Proficiency Clinic
6. Graduate 10-20 cadets from a Wing approved UAS Flight Proficiency Clinic
7. Award those cadets with the Primary Flight Proficiency Badge which can be worn on the uniform (regs pending) (see middle image below)

Guidelines on how to perform each of these tasks, curriculum and documentation for the UAS Flight Clinic and the UAS Orientation Flight Guide will be provided to each Group UAS Program Manager in June. This material should help you to plan for your summer UAS Activities. The Wing UAS program will support Groups and Squadrons in these UAS activities with leadership, documentation, curriculum, UAS hardware, training aids, and volunteer UAS Instructor Pilots if needed.





National Headquarters has gone through a deliberate process over the last 4 years to receive approvals from the NHQ Uniform Committee, CAP Leadership, and CAP-USAF, to provide wings for CAP UAS pilots, badges for UAS aircrew members, and an entry level UAS Flight Proficiency Badge (similar to the current pre-solo and solo badges). All of the directives and these badges should be announced later this year. Some of the wings and badges are depicted above.

Help NY Wing to achieve this goal of graduating 100 cadets from two-day Wing UAS Program approved, Group or Squadron run, UAS Primary Flight Proficiency Clinics. If we succeed, meeting this one goal could have profound impact on the future of the Cadet program in New York and in the country.

AEROSPACE EDUCATION RESOURCES

DID YOU KNOW?

IMPACT OF CAP'S STEM KIT PROGRAM

Totals so far for fiscal year 2021 (for STEM Kit applications received through March 2021):

- Filled 1,418 applications
- Distributed 3,030 STEM Kits

Totals since 2013 (for STEM Kit applications received through March 2021):

- Filled 17,662 applications
- Distributed 30,746 STEM Kits

80% of participants are more interested in STEM after being involved in the STEM Kit program.

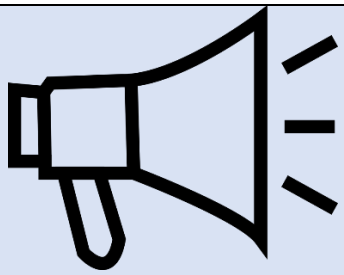
STEM kits come at no cost to AEOs and are designed to enhance current CAP educational curriculum and programs. To learn more about CAP's STEM Kit Program or to request a kit go to:

https://www.gocivilairpatrol.com/programs/aerospace-education/programs/stem-kits

VIRTUAL TOUR OPTIONS FOR AEX

While some musuems are opening up for tours, it still might be too early to conduct an in-person visit to complete your AEX requirements. Many musuems have created enaging virtual tours that CAP will accept as meeting the *in-person tour requirment*. Use the hyperlinks below to connect to these virtual tours:

- Cradle of Aviation Museum
- Cosmosphere
- Evergreen Aviation and Space Museum
- International Women's Air and Space Museum
- Intrepid Air, Sea and Space Museum
- The Museum of Flight
- NASA Visitor Centers
- National Museum of the United States Air Force
- National Naval Aviation Museum
- Pima Air and Space Museum
- National Air and Space Museum
- Wings Over the Rockies



NEW YORK WING AEROSPACE EDUCATION SNAPSHOT

Even with the pandemic, our squadrons are performing well in meeting the CAP's Aerospace Education Mission. Through April we have achieved the following:

- Quality Cadet Unit Award: Earned by 24 squadrons for 2019-2020; 4 points are directly related to AE activities, including AEX and STEM; [earned by 13 units for 2018-2019 and 23 units for 2017-2018]
- Cyber and STEM: 21 squadrons reported out of 56 (37.5%) that 4 cadets earned the Basic Cyber Badge and 12 earned the Basic STEM badge, with additional reports anticipated.
- Squadrons with a dedicated AEO: 48 out of 56 (86%)
- AEX Program Participants: 457
- AEX Completion Unit Total: 13 of 56 (23%)
- Model Rocketry Completion: 11 of 56 (19.6%)
- Model Rocketry Badges Awarded: 112
- Squadron ordered & received STEM kit: 36 of 56 (64.2%)
- Squadron Completed STEM kit eval: 26 of 56 (46.4%)
- Members participating in STEM kits: 494

Congratulations to the Squadron AEOs and Commanders for maintaining quality AE programs!

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NORTHEAST REGION AEO COURSE

NEW YORK WING GRADUATES

The following NYW Members graduated from the NER AEO Course
held 23 March to 8 April 2021:

AEM Christopher Doran, NY
AEM Pamela J. Doran, NY
SM Rachel Gershon Rourke, NY-073
2d Lt William Campbell, NY-117
Capt Brenda M. Morrissey, NY-147
2d Lt James D. Erthal, NY-153
Capt William Harvey, NY-156
1st Lt Jeffrey Straus, NY-238
Maj John C. Francolini, NY-247
Capt Jonathan McGarvey, NY-109
1st Lt Maria C. Massone, NY-332
2d Lt Brianne J. Forman, NY-351
1st Lt Claire I. Sullivan, NY-387
SM Jamie Bowers, NY-387
1st Lt Wallace Pishtey, NY-387
Capt Richard F. Jensen, NY-388
Capt Matthew L. Perkins, NY-406

Congratulations on a job well done and
we look forward to your contributions to CAP's AE Program!

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:

…. critical thinking is the habit of being guided by universal values of logic and a deep respect for the truth. As with other aspects of leadership, becoming a critical thinker is more a journey than a destination. Everyone is subject to lazy thinking or irrational thought from time to time. Therefore, developing the ability to think critically is a lifelong endeavor, a never-ending process.

"[Critical thinking] is a desire to seek, patience to doubt, fondness to meditate, slowness to assert, readiness to consider, carefulness to dispose and set in order; and hatred of every kind of imposture."

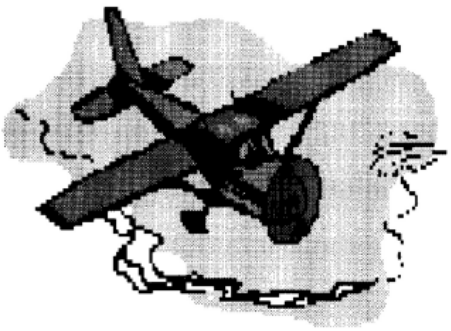
Sir Francis Bacon - One of the first thinkers to use the scientific method

If you think you can, you can.
If you think you *can't*, you're right – **Mary Kay Ash**, American businesswoman

This issue's Critical Thinking Puzzle is "Soaring Aloft"

Soaring Aloft

At eight o'clock this morning, three pilots headed out to do some recreational flying. Each of the pilots was flying in a different type of craft: one in an airplane, one in a glider, and the third in a helicopter. Use the clues to discover each pilot's craft as well as how long they expected their flight to last.



1. Edwin does not like loud noises.
2. The pilot who is flying the airplane will travel to another city for a meeting in the afternoon.
3. Connie has an appointment across town at nine o'clock this morning.
4. The pilot who flies with the thermals has no plans for the afternoon.

PILOT	TYPE OF AIR CRAFT	DURATION OF FLIGHT
Allen		
Connie		
Edwin		

Select each pilot's type of air craft and duration of the following two lists:

Type of Air Craft:	**Duration of Flight**:
airplane	an hour or less
balloon	one day
glider	several hours
helicopter	unknown

Solution can be found on page 17

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AE DOWNLOADS & RESOURCES

https://www.capnhq.gov/CAP.AEDownloads.Web/

The Civil Air Patrol's Aerospace Education 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. The 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.

To earn the AEX award you must complete six activities (from any of the AE resources or an aerospace education lesson plan of your choice) during the fiscal year and complete at least a two-hour field experience (such as a space day, a virtual aerospace-related field trip, model rocket launch, etc.) to earn color certificates for your cadets and senior members. *Please contact Capt Dicht if you would like to learn more and also how several activities can be conducted virtually*.

PERSPECTIVES ON MANAGING YOUR AEROSPACE EDUCATION WORKLOAD

By Capt Burt Dicht, Assistant Director for AE, NYW

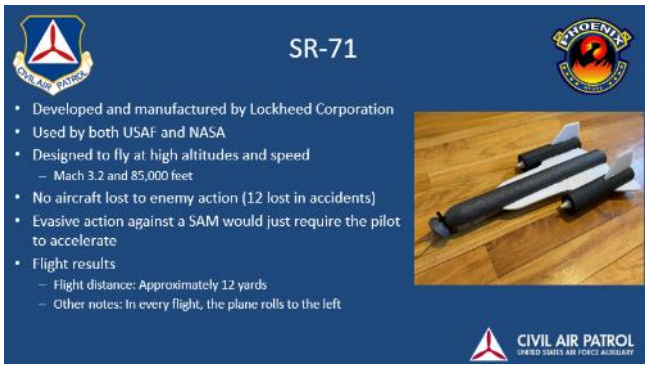
It's been a busy few months since the last issue of *Wing Tips*. I've been supporting activities within the wing as well as the NYCG and my home squadron. And of course I've had to balance family, my professional life and several other groups I volunteer for in what is left of my free time. At times it can be a little overwhelming as I look on all of the things I wanted to do but have not been able to find the time.

The best remedy for this is to *focus* on what has been accomplished and work to build on those successes. Let me start with a short report on the **Home AEX Kit** I developed for the Phoenix Composite Squadron and announced in the Jan-Feb issue of Wing Tips. I promised to provide an update.

Through May, we have completed four of five activities. I can report they have all gone extremely well. From the feedback I have received, the kits are easy to use and the cadets, especially, are enjoying taking part in this style of AEX activity. It has provided a familiar connection again to CAP AE and created a sense of continuity within the squadron. We have one more activity to complete in June and with the other sessions have completed the requirements for AEX excluding the in-person or virtual museum visit.

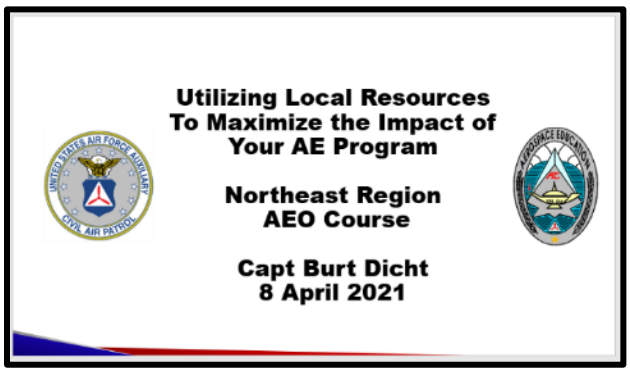
I am very pleased with the results, not just in the build activities but in the report-out. All activities are documented and during the virtual session cadets and senior members share their designs and what they learned. I have shared several of the report out slides so you can see how we are using this as an ideal AE learnig opportiunity.

I do intend to prepare a final report once we complete the home kits and also compile my lessons learned. The early success of the program got me thinking about how I could incorporate a virtual option into our AE program even when we return to in-person activities.



This led me to develop a presenetation proposal for the CAP's annual conference in August. On 23 March, I submitted a propsosal titled "**AEX in a Virtual World: Complementing Your Program with an At-Home Option."** The theme of the presentation is to envision the future of the AEX program that includes a mixture of in-person and at-home activities. I hope to hear soon whether it was accepted, but in either case I am developing the presentation to share with the wing AEOs.

I also spent some time on developing and making AE presentations. On 8 April, I had the privilege of presenting "**Utilizing Local Resources To Maximize the Impact of Your AE Program**" to the NER AE Course.



The focus of the presentation was sharing the wealth of external AE resources that AEOs could use to maximize their own programs. It was a great opportunity for me to share what I have learned with other AEOs. And that was followed by a presentation to the ASME New Haven Section on 15 April titled "**Space 2021 – Previewing an Amazing Year in Space**."

This presentation had its origins in my squadron AEX, as we conducted an activity where the members had to highlight one of the planned space missions for 2021. It was a lot of fun and I was able to turn it into a presentation. Several of my squadron members even attended the session.

The final success I want to report on is a mid-year survey I conducted in the NYCG. I asked the AEOs from the 8 NYCG squadrons to complete a short survey on the status of their AE programs. I was not receiving many reports and I was concerned about the activities. As it turned out, my worries were off base as the squadrons were doing a good job in delivering AE to their members. I heard back from all of the squadrons and I want to share the results with them before sharing them in this publication.

Here is a list of the survey questions:

- Did you complete a POA?
- Did you or are you planning on completing AEX?
- Did you or are you planning on completing a STEM Kit?
- Are you planning to submit an AE Award nomination?
- Do you have members working toward the Yeager Award?
- Do you have members enrolled in the AE specialty track?
- Did you or are you planning on conducting an external AEX program?
- Did you apply for an AE Grant?
- Did you or are you planning to recruit an AEM?
- Did you compete in CyberPatriot?
- Did you or are you planning on completing Model Rocketry?
- Number of virtual AE meetings to-date?

I used a Google Form, and it was very easy to collect and sort the information. The survey results are helping me plan out how I can utilize my resources and time to assist the squadron AEOs.

You can see, while I was concerned about the things I couldn't get to and instead focused on what I had done, I demonstrated the need to celebrate what we can do. In the last issue, I shared some tips on setting priorities. **If you stay focused you will be able to accomplish far more than you think. Don't put additional burdens on yourself . . . Do what is possible. And have fun!**

If you would like copies of my presentations or more information about the survey, please let me know.

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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

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Solution – "Soaring Aloft"

PILOT	AIRCRAFT	DURATION OF FLIGHT
Allen	Airplane	Several Hours
Connie	Helicopter	An Hour or Less
Edwin	Glider	Unknown