

NEW YORK WING, CIVIL AIR PATROL



AEROSPACE EDUCATION NEWSLETTER ONLINE

May-June 2020

ANNOUNCING THE WINNERS!



Squadron Aerospace Education
ACHIEVEMENT AWARD
FOR COMMENDABLE AE PROGRAMS PERFORMANCE

Congratulations to the following 11 squadrons that earned the very first *Squadron Aerospace Education Achievement Award*, for the period Oct 2018 to Sept 2019:

NY-033 Putnam County Composite
NY-111 Newark Composite
NY-117 Col F. S. Gabreski Cadet
NY-288 Lt Q. Roosevelt Cadet

NY-301 Phoenix Composite
NY-373 Floyd Bennett Composite
NY-388 J. P. Connor Composite
NY-402 Jamestown Composite

NY-406 Ft Drum Composite
NY-417 Stalwart Cadet
NY-422 Lt A. L. Willsea Cadet

The award certificates have arrived and will be presented as soon as possible. Criteria for this award can be found in CAPR 50-1 AE Mission, Para 9.1.4. *Squadron AE Achievement Award*. The Squadron AE Achievement Award identifies *squadrons that successfully perform at least eight of the fourteen criteria*, which encompass both internal and external programs in AE. Refer to Attachment 5, page 14, for additional details about the award criteria.

This award is calculated similarly to the QCUA, points are *automatically* tabulated from the *Annual AE Activity Report* and the *AE Plan of Action* as reported in eServices. The period covered was 01 Oct 2018 to 30 Sept 2019.



AE Educator 101

By Anita Martin, Lt Col, Director Aerospace Education

This section will aim at every-day help for Aerospace Education Officers at the squadron level to assist them in administering the AE Mission. We will endeavor to give ideas that will be helpful in more than one area.

Help for CAP AE Schedulers

Background: When the CAP School Program began, it typically was not staffed with experienced CAP officers but with school educators who operated on a yearly curriculum. They did not know how to fit in enough minutes for required sessions for *leadership, aerospace, physical fitness, drill and character development*. To assist, a school training plan was given to them when the school squadron was chartered. Today, this training plan is available to *all* units and is located on the CAP national website, in the Cadet Library, at the bottom right side of the screen and is called the “Squadron Training Plan” 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! You could start today planning for the sixth month on that 24-month schedule, as June is coming soon. The 24-month schedule continuously rotates so it does not matter where you start!

It leaves open the fifth meeting of a month, which typically occurs three or four times a year -- depending on the meeting day of the week. Those fifth meetings of the month can be a regularly scheduled Open House to satisfy Nat’l Requirement.

CAPR 60-1.3.1.1. Cadet Recruitment. All cadet and composite squadrons must strive for positive growth, as measured from year to year. All cadet units must conduct at least one recruiting campaign or open house each year. Units that conduct an open house similar to what is suggested in CAPP 60-21, Cadet Great Start, satisfy this requirement.

When your squadron schedules regular Open Houses, they gain experience and get very good at scheduling and holding Open Houses. When you choose an AE component (such as “*Final Approach*” from the AEX program), you will get credit for completing (1) the activity for AEX and (2) record it as External AE for credit on your Annual Activity Report – and – when the SUI is conducted. That’s a “Two for One!” Even better (3) and obviously this is a recruiting opportunity! Encourage every person to invite at least one guest to the Open House. Local newspapers are glad to put notices like this on their community calendar page. They do need lead time, so planning ahead is crucial.

Look for the next edition’s useful “AE Educator 101” tips.

TWO-FER? HOW ABOUT A THREE-FER!

From Lt Col Jacqui A. Sturgess

Our CAP AE programs are more interconnected than you may realize. Here is a way to get ‘more bang for the buck’ in your AE program:

- The **AEX Program** has become well-known since it was first introduced. What you may not realize is that many of the activities in our AEX booklets are lifted *directly* from the pages of the 6 Aerospace Dimensions booklets – which are required reading for cadet progression. Help cadets do better on their aerospace scores by selecting workshops that cover concepts that are both AD and AEX!

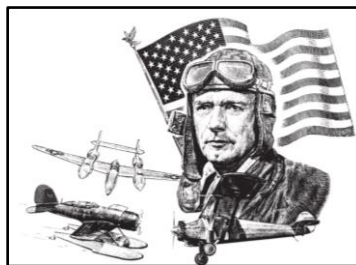
Running the **Model Rocketry Program**? Note the Redstone Stage of the program contains 2 projects that are *also* AEX workshops!

- Completing the AEX program earns a point towards the **Quality Cadet Unit Award** – and – a point towards the new AE Achievement Award. Plus a handsome certificate for participants and one for the squadron!

Cadet STEM Badge (basic, intermediate & advanced) – criteria for earning this relatively new badge can be found in CAPP 60-41. Time spent on the AEX program counts cumulatively towards the 12 hours required at each stage. The easy-to-use spread sheet helps the cadet (or the AEO) track each cadet’s progress toward completion. O-flights and other activities also count towards the time required.

- **CAP STEM Kits:** not only does completion of this program earn participants a handsome certificate, it earns the squadron a point in the QCUA program, a point towards the AE Achievement Award, *and* racks up time towards the Cadet STEM Badge! **Oh wait! When properly reported, that’s a four-fer!**

20 to 21 May 1927 -- First non-stop solo transatlantic flight from Lt Col George Geller



This month we celebrate the anniversary of Lindbergh’s most famous flight. That gave him the platform to help move commercial aviation forward, while promoting aviation. He was also instrumental in the success of the space program. In his spare time, he assisted in creating the first blood perfusion pump. My tip is to choose an aviation related topic to study and understand such that you are ready to use it to promote your squadron & CAP. Most importantly you need to not *just give dates*, but to find facts that make it interesting and make the audience (whether 1 or 50) want to know more.

Spotlight on: Capt Burt Dicht

AEO for New York City Group & Phoenix Composite Squadron

Capt Dicht’s passion for aerospace began on Christmas Eve 1968, as he watched the coverage of Apollo 8 orbiting the Moon. Wondering how such an accomplishment could be achieved, project Apollo inspired him to become an engineer. He studied Mechanical Engineering at Temple University in Philadelphia and while in college he was selected as a summer intern at NASA’s Kennedy Space Center. Capt Dicht had a successful career as a lead engineer for Northrop Grumman and Rockwell’s Space Transportation System’s Division. He worked on projects such as the F-5E/F Tiger II, the F-20A Tigershark, the F-18E/F Super Hornet, the YF-23A Advanced Tactical Fighter and the Space Shuttle.



With the YF-23A at
Edwards Air Force Base, Oct 1990

While working as an engineer Capt Dicht began visiting schools to introduce engineering and aerospace to students. He commented “There is nothing more rewarding than giving back to the profession by inspiring the next generation of engineers”. Today, he serves as the Director of Student and Academic Education Programs for IEEE*, where he is responsible for managing pre-university STEM programs.



The PCS Senior Members and their ISS Model (Capt Dicht on the right)

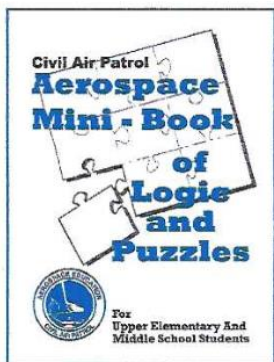
Capt Dicht is also an aerospace historian, having published numerous articles on space program history and he is a frequent guest speaker on aerospace topics. He is a volunteer at the *Intrepid Sea Air & Space Museum* and a chance meeting there with the then commander of the Phoenix Composite Squadron, led him to join the CAP in 2013. He became the squadron AEO in Feb. 2014 and because of his dedication and commitment he was appointed the NYC Group AEO in August 2017. Capt Dicht is most proud of the variety of activities he has conducted through the CAP.

This has included both internal and external AEX programs as well as STEM projects. Capt Dicht has worked with numerous schools and community groups such as the Cub Scouts and the NAACP. On his accomplishments he said “Nothing can top the excitement of sharing the wonders of aerospace with cadets and students.” In recognition of his achievements Capt Dicht was named the NYC Group AEO of the Year three times, the NY Wing AEO of the Year in 2016 and the NER AEO of the Year for 2019. Upon hearing of this last award, he said, “I am honored by the recognition; I am truly motivated by CAP’s mission and the joy of educating the aerospace leaders of tomorrow.”



With the PCS cadets after constructing X-15 models (Capt Dicht in the middle)

LOGIC AND PUZZLE SECTION
From CAP Aerospace Mini-Book of Logic and Puzzles
By Anita Martin, Lt Col



Civil Air Patrol believes that *Critical Thinking* is so valuable as a leadership skill that it devotes a whole chapter to it in the LEARN TO LEAD, VOL TWO: TEAM LEADERSHIP:

“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.”

A quote from Sir Francis Bacon, one of the first thinkers to use the scientific method.

Along with leadership training, CAP developed a small booklet: *Civil Air Patrol Aerospace Mini-Book of Logic and Puzzles*. Some of our cadets may find them too simple others more challenging. Even though my cadets said, "It was too easy, Ma'am" -- they then would add, "Do you have another?" They are **fun!** And are another way of helping to train the mind in logical and critical thinking.

While the book is out of print, you can download a copy by logging into eServices and going to *AE Downloads and Resources*. Each *Wing Tips* issue we will bring you one of the Critical Thinking Puzzles from the book. Enjoy. Have fun!. (Hint: We will give solution at the end of the issue. Don't look 'till you've tried!!)

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For questions or comments about any of this issue's topics, please email: amartin31392cap@juno.com

But wait! There's more

Flying High!

I If a jet travels 300 miles per hour, how many feet per second will it travel?

II.

MILEAGE BETWEEN CITIES						
Philadelphia Pennsylvania	Memphis Tennessee	Dallas Texas	Phoenix Arizona	Los Angeles California	Denver Colorado	Philadelphia Pennsylvania
[start]	989	455	2,045	389	1,009	1,762

[To use the chart: Start at Philadelphia. The distance to the first stop [Memphis] is 989 miles. The distance between Memphis and Dallas is 455 miles; between Dallas and Phoenix, 2,045 miles, and so on until you return to Philadelphia from Denver.]

If you flew a route that took you from Philadelphia to Memphis, Dallas, Phoenix, Los Angeles, Denver, and back to Philadelphia, how far would you have traveled?

If your jet flew at 300 miles per hour, how long would it take you to fly between each of the cities? (Round your answer to the nearest tenth.)

If you allowed an additional fifteen minutes for each takeoff and fifteen minutes for each landing, how much time would your complete flight plan require?

Your plane uses an average of 25 gallons of fuel per hour of flying time (including the takeoffs and landings). How many gallons of fuel will you need to complete your trip?

If your fuel costs \$2.25 per gallon, how much will the fuel cost?

III. The Wright Flyer was the first heavier-than-air powered craft to fly successfully. It flew for 12 seconds, covering 120 feet. The Flyer was 21 feet, 1 inch long, weighed 746 pounds, and had a wing span of 40 feet, 4 inches. The SR-71 Blackbird was a high-altitude, high-speed military reconnaissance plane. It set a world speed record in 1976, flying 2,193.7 miles per hour in a straight line at 85,000 feet. The SR-71 was 107 feet, 4 inches long, weighed 67,550 pounds (without fuel), and had a wing span of 55 feet 6 inches. Compare the length, weight, and wing span of the two planes.

Example: The wing span of the Wright Flyer is _____ more / less than the SR-71 or
The wing span of the Wright Flyer is _____ % of the wing span of the SR-71.

If the SR-71 flew 15,000 miles in ten and one-half hours, what would be its average airspeed (in miles per hour)?

A SR-71 surveyed 723,042.6 square miles of the nation in one hour.

How many square miles are there in the United States? _____

How much of the United States did the plane's flight cover? _____

For the instructor:

Flying High!

1. One mile equals 5,280 feet. Multiply by the 300 miles; this equals 1,584,000 feet in 300 miles. One hour equals 3,600 seconds (60 minutes per hour times 60 seconds per minute). Divide 1,584,000 by 3,600 to get 44 feet per second.

Miles	Time [miles ÷ 300 mph]	Rounded Time
989	2.296 hours	2.3 hours
455	1.516 hours	1.5 hours
2,045	6.816 hours	6.8 hours
389	1.296 hours	1.3 hours
1,009	3.363 hours	3.4 hours
1,762	5.873 hours	5.9 hours
6,649	[Totals]	21.2 hours

Add the mileage legs together: 6,649 total miles.
 Add rounded hours: 21.2 hours.
 Multiply 15 minutes X 12 for takeoff / landing times. Divide by 60 to reduce to hours.
 Add the 3 hours to the trip hours.
 Total time: 24.2 hours
 Fuel: $25 \times 24.2 = 605$ gallons
 $605 \text{ gallons} \times \$2.25 = \$1,361.25$

- III. To compare measurements, subtract the Wright Flyer measurements from the SR-71 measurements: The SR-71 is 86 feet 3 inches longer, weighs 66,704 more pounds, and has a wing span 15 feet 2 inches larger than the Wright Flyer.
 To find the average airspeed per hour, divide 15,000 miles by 10.5 hours; the average airspeed is 1,428.57 miles per hour.

The United States covers 3,615,213 square miles. If the SR-71 surveyed an area measuring 723,042.6 miles, that would be an area equal to two-tenths of the total square mileage of the nation.