NEW YORK WING – CIVIL AIR PATROL

Wing Tips

AEROSPACE EDUCATION ONLINE MAGAZINE

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PUTNAM COUNTY COMPOSITE SQUADRON WINS CYBERPATRIOT COMPETITION

For the second year in a row, cadets from the Putnam County Composite Squadron won the State's 1st Place Award in the All Services Division Platinum Tier in the CyberPatriot Competition.

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JP O'CONNOR COMPOSITE SQUADRON COMPETES IN STELLARXPLORERS

The JP O'Connor Composite Squadron for the second year, has been competing in StellarXplorers and they have completed two qualifying rounds plus the third practice round.

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QUALITY CADET UNIT AWARD FY 2022 WINNERS

Congratulations to the 22 NYW Squadrons that earned the Quality Cadet Unit Award (QCUA) certificate, emblem and streamer for their 2022 activities – that's a 69% increase over last year's 13 winners!

Reprinted from the 22 Jan 2023 CAP Props Newsletter
https://www.cap.news/props-newsletters/

Image Credits – CAP

CADET WINGS PROGRAM: SOMETHING TRULY SPECIAL THROUGH AN AMAZING OPPORTUNITY PROVIDED BY CAP

C/Capt Kane Deterding of the Texas Wing's Sulphur Springs Composite Squadron earned his private pilot certificate through the Cadet Wings program. Read his full interview about the experience as well as several other cadets in the 22 Jan 2023 issue of CAP Props.

PUTNAM COUNTY COMPOSITE WINS CYBERPATRIOT COMPETITION

For the second year in a row, cadets from the Putnam County Composite Squadron won the State's 1st Place Award in the *All Services Division Platinum Tier* in the CyberPatriot Competition – the Air Force Association's (AFA) National Youth Cyber Defense Competition.

Cadets are holding the 1st Place State Award
(l to r) C/SrA Kenneth Lin, C/SrA Daniel Lin and C/MSgt Eric Song
(Not pictured - C/A1C Michael Strang and C/AB Madelon Gorman)
Photo by 2d Lt Bruce Geller

By 2d Lt Bruce Geller
Putnam County Composite Squadron, NY-033

Led by Coach 2d Lt Bruce Geller, Mentors 2d Lt Craig Treco and SM Xiaoyan Shao, the team of cadets, C/MSgt Eric Song, C/A1C Michael Strang, C/SrA Daniel Lin, C/SrA Kenneth Lin and C/AB Madelon Gorman excelled in the CyberPatriot XV State Round held in December. Their performance was a demonstrtation of teamwork, critical thinking, and the technical skills needed for a successful career in cybersecurity. In addition to the **State's 1st Place Award** in the **All Services Division Platinum Tier** in the State Round, the team's performance earned it a spot in the Semifinal Round in January.

The **AFA CyberPatriot** competition challenges teams of high school and middle school students to find and fix cybersecurity vulnerabilities in virtual operating systems and to understand how to create and secure computer networks. Using a proprietary competition system, teams are scored on how secure they make the system.

For cadets Daniel Lin, Kenneth Lin, and Madelon Gorman, this is their first competition while cadets Eric Song and Michael Strang are returning competitors. All the cadets receive weekly training in cybersecurity including Windows, Linux, and networking to prepare for the competition rounds.

Each competition round lasts six hours and the cadets work together to find the vulnerabilities in the virtual images provided, take a networking quiz, and create a secure virtual network. The top teams advance through two scoring rounds and the State Round to qualify for the Semifinal Round. The top scoring teams in the Semifinal round will advance to the in-person National Finals Competition in Bethesda, MD this March.

The **Putnam County Composite Squadron** has been competing in the AFA CyberPatriot Competition since the 2014-2015. The competition and is open to any cadet in the Putnam County Composite Squadron and nearby squadrons interested in learning how to combat cyber threats by identifying vulnerabilities and securing networks.

For information on how to join the Putnam Country Composite Squadron team, please contact Maj Elena MacDermant (Commander) at elenamac@aol.com. Information on the AFA CyberPatriot Competition is available at https://www.uscyberpatriot.org/ or from the CyberPatriot staff at info@uscyberpatriot.org.

INSIDE THIS ISSUE

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JP O'CONNOR COMPOSITE SQUADRON COMPETES IN STELLARXPLORERS

By Lt Col Anita Martin, NYW DAE

In association with Satellite Tool Kit (STK), the Air & Space Forces Association (AFA) has an exciting and challenging national competition that involves the use of STK. StellarXplorers is a dynamic program and competition available to any high school team from schools, youth organizations, JROTC, or CAP!

The **JP O'Connor Composite Squadron** (NY-388) based in Plattsburg, for the second year, has been competing in StellarXplorers and they have completed two qualifying rounds plus the third practice round. They have placed in the top 35 teams for the National competition. The third qualifying round was held on 28 January 2023. A team must place in the top 75 to move on to the semi-final round which will be in February. The Air & Space Forces Association manages StellarXplorers and will then select the top ten teams.

The final round this year will be held 20 to 22 April 2023 at Space Center Houston. The team will be flown there all expenses paid with their Team Director and Commander, Capt Rich Jensen. Last year this team finished in the top 150 of the 350 competing. The team is performing better than last year so they are very hopeful to be very competitive and improve their standing.

Registration opens each April and it is free; there are no registration fees! If your Squadron wishes to participate, contact Capt Jensen at jensen3831@gmail.com for more information. Each team needs a minimum of two cadets, so this is a great activity for small units.

Capt Jensen delivered an outstanding AE Seminar at last year's NYW Conference in Lake George and completed his Aerospace Education Specialty Track Master Rating. *Editor's note: StellarXplorers requires its own STK, not the CAP issued STK.*

https://www.gocivilairpatrol.com/programs/aerospace-education/programs/systems-tool-kit

AWARDS AND RECOGNITION

QUALITY CADET UNIT AWARD (QCUA) - NYW 2022 WINNERS

Congratulations to the 22 NYW Squadrons that earned the Quality Cadet Unit Award (QCUA) certificate, emblem and streamer for their 2022 activities – that's a 69% increase over last year (13 winners) -- and we tip our hat to our AEOs, CPOs and Commanders who contributed to this success!

Squadron		Points	Group
NY-033	Putnam County Composite	8	SEG
NY-048	Westchester Cadet Squadron 1	8	SEG
NY-117	Col Francis S. Gabreski Cadet	6	LIG
NY-135	Syracuse Cadet Squadron	7	CNYG
NY-153	Leroy R. Grumman Cadet	6	LIG
NY-159	Dutchess County Cadet	9	CMG
NY-173	TAK Composite Squadron	6	WNYG
NY-253	Batavia Composite Squadron	6	FLG
NY-283	Twin Tiers Cadet Squadron	8	FLG
NY-288	Lt Quentin Roosevelt Cadet	6	LIG
NY-292	Southern Tier Cadet Squadron	7	CNYG
NY-301	Phoenix Composite	7	NYCG
NY-311	9th Suffolk Cadet Squadron	8	LIG
NY-328	Suffolk Cadet Squadron 10	6	LIG
NY-332	Spirit of Tuskegee Cadet	6	LIG
NY-351	Dunkirk Composite Squadron	6	WNYG
NY-387	Sullivan County Cadet	7	CMG
NY-388	James P. O'Connor Composite	6	MEG
NY-390	Vanguard Composite Squadron	8	MEG
NY-392	Howard K. Vedder Composite	6	MEG
NY-417	Stalwart Cadet Squadron	6	NYCG
NY-422	Lt Anthony L. Willsea Cadet	7	SEG

QCUA Program:

The award criteria are entirely objective. Units with a minimum of 10 cadets that met at least 6 of the 10 criteria on 31 August 2022 earned the award. Note that there are *new* and *adjusted* criteria for 2022/2023. See article below.

Our AEOs have a direct impact on whether their squadron earns the QCUA; five out of seven activities are needed to win AND three of those are directly AE and AEO related!

1. Guiding AE sessions that help cadets understand the concepts and history presented in their Aerospace Dimensions booklets to pass their AE tests and earn their promotions (at least 40% of cadets to earn their Wright Brothers Milestone to earn a point)
2. Completing an AEX program (by 31 August) and/or sending in an After-Action Report after ordering a STEM kit
3. Leading cadets to participate in a STEM Competition such as: TARC, StellarXplorers, or UAS4STEM

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2022-2023 QCUA CRITERIA

Below is a list of the criteria, including those that are new and adjusted. Also listed are tips for how AEOs can get involved and support the **QCUA** achievement. Award winners are determined by their performance from 01 September 2022 through 31 August 2023. The award criteria are entirely objective. Units with a minimum of 10 cadets that meet at least 6 of the 10 criteria listed below on 31 August 2023 earn the award.

- ***Enrollment:** Unit has at least **25** cadets listed on its roster (earns a point)
- **Onboarding:** 70% of all new cadets from 31 August 2022 earned first Achievement (1) in 8 weeks
- **Cadet Achievement:** 45% of cadets on roster have attained the Wright Brothers Award *(This requires passing 2 Aerospace Dimensions Modules online tests - AEOs can have direct influence on which AD Modules the cadets pick [they are numbered 1 to 6, and tests can be taken in any order; many cadets have reported that AD 4, 5 & 6 are easier than 2 & 3, with 1 being the hardest of all])*
- **Orientation Flights:** 70% of cadets on roster have first flight credit (O-*flights come directly under AE and we need to encourage more AEOs to learn how to organize them and how to be an effective OIC for this cadet activity)*
- ***Encampment:** 50% of cadets on roster have graduated encampment
- **Emergency Services:** 60% of cadets on roster have GES certification
- ***Outside Activities:** Unit participated in a Red Ribbon Leadership Academy, AE ACE+ Adopt Program, or a STEM competition listed here: CyberPatriot, StellarXplorers, The American Rocketry Challenge, UAS4STEM, High Altitude Balloon Challenge *(100% within the AEO AOR)*
- **Aerospace:** Unit has submitted an Aerospace Excellence Award (AEX) Completion Report or sent in an AAR after ordering a STEM Kit during this award cycle *(The most obvious, we AEOs have direct control, work with the unit CC to confirm required scheduling)*
- **TLC Graduates:** Unit has at least 3 current Training Leaders of Cadets graduates on its roster *(AEOs can help by making sure to take and stay current with their Training Leaders of Cadets courses - Basic, Intermediate, Advanced)*
- **Specialty Track:** Unit has at least 2 Senior Members with a Cadet Programs Specialty Track rating *(AEOs who work with cadets, can easily fulfill requirements to get their CPO Tech rating, check CAPP60-11, Para 5.4)*

*Editor's note: * New or adjusted for 2023*

Eligibility:
All cadet and composite squadrons and flights with a minimum of 10 cadets are eligible

Outside Activities:
The goal of the Outside Activities criterion is to encourage units to interact with organizations outside of CAP. The following activities/competitions are approved for credit:

Red Ribbon Leadership Academy	CyberPatriot
Team America Rocketry Challenge	StellarXplorers
UAS4STEM	High Altitude Balloon Challenge
AE ACE+ Adopt Program	More coming in QCUA 2024!

To receive credit for an above STEM competition or RRLA please submit proof of participation here. Credit will be automatically added to the QCUA reports in March/April for CyberPatriot and StellarXplorers and in late summer for High Altitude Balloon Challenge and AE ACE+ Adopt. If you're familiar with another STEM competition that you think should be included for future years, please submit to cadets@capnhq.gov for consideration.

WING AE NEWS

AE HISTORY MYSTERY SOLVED

By Lt Col Jacqui Sturgess, Interim NYW Historian

Since my appointment as Interim Historian for our Wing, I have begun cataloging the historical artifacts in the Historian's office at Wing HQ, at Westchester County airport. One of my recent 'discoveries' was a plaque from Northeast Region to the **AE Teacher of the Year for 2010** . . . yes, 12 years ago! The recipient was **Mr Richard Raggo** and I began looking for him – knowing that he must have been from NY since the plaque said so and it was in our office! An Internet search produced his name associated with Salesian High School in New Rochelle – as a social studies teacher. The school is a private boy's school founded in 1920 – but Mr Raggo's name was not listed as a current teacher. Happily, an enquiry to the school resulted in a former colleague of his contacting him suggesting that he contact me; he did and explained that he had relocated to Bishop England High School in Charleston, SC … so I was able to mail him his award and we had a happy conclusion to this AE history mystery story!

Photo Credit: CAP NYW

Editor's Note: if you have any information about this topic, please let us know!

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REMINDER – AEO MEETING WITH COMMANDER

The **AE Activity Report** that is filed at the end of the fiscal year requires the AEO to meet with the Squadron Commander to identify and review AE activities to be accomplished during the fiscal year. Use the AE POA (available on the NYW web site) to satisfy the requirement. The meeting should be documented with notes or audio/video recording. The meeting is an important step in planning and executing a robust and impactful AE program for the year. As we are now in the Q2 of FY 2023, this is a good time to check on the status of this meeting. **Have you met with your commander?** If not, there is still time. **Schedule a meeting ASAP and try to complete it before the end of February.** This will ensure you get credit for this requirement and provide a roadmap to achieving your AE goals for the year.

HISTORY OF NYW AE AWARDS

For Excellence in Aerospace Education and
Outstanding Achievement in the Aerospace Mission Awards Program
By Lt Col Jacqui Sturgess, Interim NYW Historian

The walls of our Wing HQ at Westchester Airport carry evidence of accolades for our members' CAP mission success over the years. **In 2022 our wing received the NER 1st Place AE Mission Award*** – recognizing the success of our members in fulfilling the AE mission – so it seemed natural to research if we had previously earned this award. A quick trip to Wing HQ revealed the strength of our Aerospace Education mission over the years as evidenced through earning these awards:

Year	Award
2003	1st Place - NER - NYW
2005	1st Place - NER - NYW
2008	1st Place - NER - NYW
2008	3rd Place *National* - NYW
2010	1st Place - NER - NYW
2011	1st Place - NER - NYW
2011	3rd Place *National* - NYW
2012	1st Place - NER - NYW
2013	1st Place - NER - NYW
2014	1st Place - NER - NYW
2015	1st Place - NER - NYW
2019	1st Place - NER - NYW
2022*	1st Place - NER - NYW

Photo Credit: Col John Jones

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HAPPY THIRD ANNIVERSARY – US SPACE FORCE

The NYW extends its congratulations and happy third anniversary to the US Space Force (USSF), which was established Dec. 20, 2019, when the National Defense Authorization Act was signed into law (with bi-partisan support), creating the first new branch of the armed services in 73 years. The photo to the right depicts an Atlas V CST-100 Starliner rocket successfully launched over a Redstone rocket at Cape Canaveral Air Force Station, FL, Dec. 20, 2019, the same day the USSF was formed. The Starliner launch marked the last official launch of the United States Air Force; ushering in a new era of dominance in the space domain.

Photo Credit: Senior Airman Dalton Williams and USAF

ALPHA ADMIRATION! -- OR THE STORY OF 'BLUE'

By 'The Rocket Lady'

I attended the National Conference on Aviation and Space Education (NCASE) back in 2002 in Washington DC and one of the sessions was about 'how to build a model rocket'. In a massive auditorium, model rocket kits were handed out to all the participants and the instructor appeared on stage to lead the session. In simple, show-n-tell style she walked us through the components, how they fit together and in what order to glue them – I walked out of that auditorium determined to find somewhere back home to launch my new joy – a blue built-it-myself model rocket!

The Garden State Spacemodeling Society (GSSS) meets monthly at the North Branch Park in New Jersey to launch rockets. The members are friendly, and the public is welcome to watch the launches and bring their own rockets to launch. I was thrilled when my 'Blue' shot skyward so fast it was hard to track it; at apogee the second ignition pushed the parachute out, the canopy opened and my 'Blue' began gracefully descending; then, a breeze from nowhere blew it off track and instead of landing in the huge field, poor 'Blue' landed in a tree! Oh, the horror of it! Oh, the shame! A catastrophe on my first launch! A GSSS member set off determinedly towards the tree with a telescoping pole – apparently tree-landings were not unheard of here! But, alas, even the telescoping pole was not long enough to reach my 'Blue' and I sadly left without it.

I have been back to the GSSS launch site many times over the years, usually with cadets working on their Model Rocketry Badge requirements. Initially my grandson – who likes large rockets – and later with my great grandson – he enjoys helping cadets load the wadding and the motors – it has been a 'family affair'! I always looked for my first rocket, my 'Blue', in that darned tree and watched sadly as, out of reach, it deteriorated from rain and age, the cardboard body tube unraveling, the plastic parachute shredding, until eventually, bit by bit, it disintegrated and fell to earth. ***A sad ending to the noble 'Blue' . . .***

NYW Encampment 2003
Apha III, E2x

'Blue Two'
Alpha, Level 1

60th Anniversary
Alpha VI, E2x

Above: 'Blue Two' in the middle & a pair of cousins all 3 produced by Estes

THE AIR FORCE MARATHON

By Lt Col George Fillgrove, NYW External AEO

In roughly 200 days Civil Air Patrol (CAP) members will have a unique opportunity to combine aerospace education with physical fitness, and the best part is that some of it can be done from home. Thursday 14 Sept 2023 begins race day weekend for the 27th annual Air Force Marathon, at the National Museum of the U.S. Air Force.

In 2022, 8,500 athletes and 1,500 volunteers traveled to this annual event from all 50 states, and 18 foreign countries. It also draws CAP members from across the nation, either as an athlete or volunteer and you can do it, too.

"The Air Force Marathon is a very high visibility event that attracts not only runners from all over the country but distinguished visitors like the Secretary of the Air Force and the Air Force Chief of Staff," said **Chaplain (Lt Col) Timothy H. Miner**, CAP Chaplains Corps, in announcing CAP support for the 2020 event. *"It is a great chance for us to give back to the U.S. Air Force."* The event has also been promoted by CAP's National Task Force for Wellness due to the emphasis on member fitness.

Gen David Goldfein

Started in 1997, in celebration of the 25th anniversary of the U.S. Air Force, the Air Force Marathon always features a current or former aircraft in the Air Force inventory -- hence the aerospace education lesson. For 2023, three helicopters are featured: the UH-1 Huey, the MH-139 Grey Wolf, and the HH-60 Jolly Green II. As with past races, athletes get to experience the aircraft either as a flyover or static display.

There are numerous opportunities to participate. Race weekend consists of seven races, including a full marathon, half marathon, 10-kilometer race, 5-kilometer race, a three-member relay, and a one-kilometer race for youth. The 26.1-mile course winds through Wright-Patterson's Area A and B, past Huffman Flying Field where the Wright Brother's tested their aircraft, past the base's active flightline and back to the Air Force Museum where the last mile involves running under the wings of historic aircraft in the outside air park. The 5K race is done the evening before on the campus of Wright State University, that race's co-sponsor.

There is a sports expo, a dinner and an afterglow party. There are medals, patches, gear, and opportunities to rub shoulders with nationally recognized athletes like Olympic Gold Medalist Paul Chelimo and Paralympic Gold Medalist Grace Norman. In 2019, half-marathon finishers were surprised to find Gen. David Goldfein, former Air Force Chief of Staff, presenting medals at the finish line. He had just finished the race himself.

Lt Col George Fillgrove

A separate series, "History & Heritage," offers six races a year that are exclusively virtual. Each race features a different aircraft in the museum's collection. Each of these races offers a medal, a patch and a flash card that explains the featured aircraft. In 2021, the Air Force Marathon honored the CAP's 80th anniversary by featuring the museum's CAP J-3 Cub (see patch image below) that hangs from the ceiling in the WW II gallery.

But there's more. The Air Force Marathon operates the U.S. Space Command's T-Minus 10-Miler both a virtual and in-residence race at Cape Canaveral SFS, Florida. The inaugural race was just completed in December. For cyclists, the Air Force's 23rd annual Blue Streak Time Trial, a 10-mile race is offered in March.

More information about the Air Force Marathon is available at: https://www.airforcemarathon.com. For the Air Force Marathon History & Heritage series, please visit: https://www.airforcemarathon.com/virtual-series.

For the Space Force T-10-Miler, please visit: https://runspaceforce.com. For the Blue Streak Time Trials, please visit: Blue Streak Time Trial - Powered by the Air Force Marathon (bluestreaktt.com).

Photo Credit: All images and photos - U.S. Air Force and Air Force Marathon

RESOURCES FOR AEROSPACE EDUCATION OFFICERS

AE EDUCATOR 101

By Lt Col Anita Martin, NYW DAE

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. To assist the teachers, a school training plan was given to them when the school squadron was chartered. Today, that 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 Plans**."

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! It also adds the CAP Drug Demand Reduction, "Let's go Flying". We want to give you ways to extend your AE training to receive more credits for less work! Two Bangs for your buck!

✈✈✈ ATTENTION✈✈✈

This January/February Wing Tips takes look at the Cadet Programs' Cadet Library, Squadron Training Plan for the January, the 13th month. The focus is **Aerospace Dimensions, (AD) 1.3 *Balloons – They Create Their Own Thermals.*** We learn the principle of buoyancy, the history and components of a balloon.

The Civil Air Patrol has hot air balloons in its inventory and we had one brought to Newburg for the air show a couple of years ago. The FAA Balloon Flying Handbook provides additional information for further study. https://www.gocivilairpatrol.com/programs/emergency-services/aircraft-operations/aircraft/balloons

To help reinforce the understanding of how a hot air balloon works, review **AD Activity 8** (The Hot Air Balloon). As we look for a corresponding Activity in AEX, AEX I Vol 1 Activity 12, *Hot Air Balloons – The First True Powered Aircraft,* introduces students and cadets to hot air balloons.

This activity is shown with a hot air balloon kit that needs to be purchased to do this activity. These kits may be purchased through some science education supply companies such as Pitsco.
This is an opportunity to purchase the kits at $4.50 each when 30 or more are ordered. Every cadet can make their own balloon to launch. A hair dryer is used to later inflate the balloon so the builder can check for holes. For the actual launch, an electric paint-removing gun works best. For more help go to "How to Make a Hot Air Balloon"

✈✈✈ IMPORTANT NEW OPPORTUNITY!! ✈✈✈

February, the 14th month in the Squadron Training Plan, highlights the booklet, **Let's Go Flying (LGF) – Drug Demand Reduction Program**, Educational Programs Directorate, with **Part One – The Airworthy Human**. The **LGF** book prepares the aviation enthusiast, who has a fascination for flight, for the reality of what it takes to

become an aviation professional. This will raise awareness of how the aviation industry has zero tolerance for alcohol and drug abuse.

A memo from Maj Gen Mark E Smith dated 13 November 2017, to all Commanders, Directors of Cadet Programs and DDR Coordinators, details the "**Future of the DDR Program (Drug Demand Reduction)**." This can be found in the Cadet Library: https://www.gocivilairpatrol.com/programs/cadets/library, and it explains how the Drug Demand Reduction effort is no longer positioned as a stand-alone program but integrated into the overall Cadet Program.

"The cadet program management regulation now highlights drug-free programming as an important component of cadet character education, instead of treating that content area as a separate program called DDR governed by its own regulation. The new goal statement for cadet character education reads: 'To develop in cadets an ability to think critically about moral and ethical issues and to develop a commitment to live CAP's Core Values . . . . Three topics receive special emphasis in the character element [including that] CAP challenges cadets to become ambassadors of a drug-free ethic ' CAPR 60-1, Cadet Program Management (1 February 2018), section 1.9.4."

The memo goes on to further clarify: *"There is no longer a requirement to report DDR-related activities through eServices, but we encourage units to report their activities so staff at higher echelons may identify top-performing units and share best practices."*

Although the program has moved to **Character Development,** the implementation of the activities described in another book **"Fit for Flying (FFF)"** can now be included into the **Above and Beyond section of your year-end AE Activity Report.** There are five chapters in the book. The anti-drug message also may be implemented in an easy, 'off the shelf' offering to your local Middle School or Scout Troop as External AE outreach! It is quite a long presentation of 54 slides, so it probably will need to be conducted during several sessions.

The **FFF Instructor's Guide** provides a multiple-choice "Learning Evaluation" that may be conducted in written or audible discussion format. There are 20 multiple choice questions for each chapter. The *LGF*, the *Instructor's Guide* and a slide discussion presentation for each chapter along with the slide of Quiz Discussion may be found at here **Fit for Flying.**

Each squadron was mailed a hard copy when they were published. Look on your shelf at your squadron library.

Part One – The Airworthy Human is the first chapter and makes it understood that the medical certificate is equally as important as the pilot certificate.

The activity that is highlighted in this Part One is from the **DDReXcellence** is **Activity 31 - Are You Fit For Flying?** Objective: To raise awareness of the medical standards a pilot must maintain throughout a flying career by giving complete coverage of every aspect of the medical test instrument known as the 8500-8. Find this Activity 31 here: https://www.gocivilairpatrol.com/media/cms/DDRx_Book_Final_Copy_D754E76B9224D.pdf

*You have **two bangs for the buck for January** with Aerospace Dimensions and AEX and **two bangs for the buck for February** with **Aviation and CAP's Drug Demand Reduction** zero-tolerance message.* **Make sure you add this to your AE Notebook in preparation for your end of year Above and Beyond Record.** You will need it in anticipation of the end of the fiscal year 2023!

To clarify, Fit For Flying (FFF) is a companion book for Let's Go Flying (LGF) – both focusing on DDRx & aviation.

AE SAFETY CHECK

These safety nuggets come 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 for Aerospace Education. Reprinted from the Dec 2022 and Jan 2023 issues of NHQ/AE's Aerospace Education newsletter.

BE SAFE WHEN LIFTING HEAVY OBJECTS (January 2023)

So how much does that thing weigh? Should you pick it up alone, or should you have help? People face these questions all the time, including for some of the AE Activities. Since you should always have your Wingmate with you, why not have them help you pick up and carry things that are heavy, bulky, or just tough to carry. Even the Department of Defense has limits on how much weight one person, two people, and four people are allowed to carry including how far they are allowed to carry it. I know you have heard this before, but it should be repeated: Bend your hips and knees to squat down to pick up your item, keep it close to your body, keep your back straight, and straighten your legs to lift. Never lift a heavy object above shoulder level. Avoid turning or twisting your body while lifting or holding a heavy object.

SAFETY GOGGLES HELP PROTECT EYES (Dec 2022)

Photo Credit – CAP

Several of our AE activities require the use of goggles, and there is always an option to use them, even if they are not required (the activity leader decides it would be a good thing to do, or you may feel more comfortable wearing them). Occasionally, you will hear the question "Do I need to wear goggles if I am already wearing glasses?" The answer is yes -- Even if you wear eyeglasses, you'll still need to wear safety goggles as personal protective equipment. Unless prescription glasses have been specially designed to also be safety glasses, they cannot be used as protective eye gear. You can always wear goggles over your glasses.

THINK SAFETY WITH AE ACTIVITIES

When working with students or cadets, please be sure to conduct a safety briefing prior to the activity. The information should be specific to the materials and conditions for each activity. Such things as snap knives, adhesives, spray paint, or any material that could cause injury should be discussed and caution should be used. Carelessness and/or playing should be discouraged. Please have proper emergency plan and first aid measures available and stress the importance of "safety first." If necessary, post a set of safety rules in the area where the activity will be conducted.

For more information see "Think Safety with AE Activities"

Remember: SAFETY, SAFETY, SAFETY!!!!

STEM KIT UPDATE

Reprinted from the January 2023 issue of Aerospace Education

FEATURED STEM KIT - SPHERO BOLT/SPHERO CODE MAT: The Sphero BOLT/Sphero Code Mat STEM Kit is more than a robot kit; it's a learning experience that inspires cadets and students through its interactive applications. Sphero BOLT is a small orb wrapped in polycarbonate plastic, capable of rolling around, changing colors, running programs and being controlled by a smartphone or tablet. Working with the Sphero Edu app, BOLT will motivate, create and excite users as they paint, swim and/or dance with the help of the Sphero Edu app and youth imagination. This kit comes with Sphero BOLT a charging base with USB charging cable, 360-degree protractor with heading, directions, and clock, sticker sheet, Quick Start guide, Sphero Code Mat with Solar/Soccer theme, 3 packs of activity cards featuring 20 fun coding challenges and games. Tip sheets and lessons are found in the Learning Management System section of CAP's member portal, eServices. Student and adult creativity will guide the unique usage of this kit! The kit is recommended for ages 8 and older.

Cyber Connection: This mini robot will help youth apply skills, such as sequencing, estimation, control and problem-solving, as they begin a path to early cyber knowledge. Learning directional language and algorithms sets the stage for involvement in cyber competitions, such as the Air Force Association's national youth cyber education program, CyberPatriot, and interest in potential cyber careers in coding, programming or computer engineering.

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IMPACT 0F CAP'S STEM KIT PROGRAM

The STEM Kit program continues to set new records!

Totals so far for fiscal year 2023 (for STEM kit applications received through December 2022)
Filled over 900 applications
Distributed over 2,600 STEM Kits
Reached over 77,000 participants

Totals since 2013 (for STEM Kit applications received through December 2022)
Filled over 24,000 applications
Distributed over 47,000 STEM Kits
Reached over 2 million participants

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.

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

AE DOWNLOADS & RESOURCES

https://www.capnhq.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**.

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WOMEN IN AVIATION INTERNATIONAL

Women in Aviation International (WAI) is a nonprofit organization dedicated to the encouragement and advancement of women in all aviation and aerospace career fields and interests. Their diverse membership includes astronauts, pilots, maintenance technicians, engineers, air traffic controllers, business owners, educators, journalists, flight attendants, high school and university students, air show performers, airport managers, and many others. In addition to their Aviation for Girls magazine, they offer many resources you can use in your AE programs.

***Aviation for Girls 2023 Issue 1* Available!**

In 2023, ***Aviation for Girls*** magazine will be published semi-annually and is targeted for girls ages 8-17. Each 36-page issue features an array of fun activities, project ideas, aviation book recommendations, and unique aviation stories that are great for both young readers as well as classroom, club, and school organization education efforts. In addition, experienced female aviators will offer insight and advice as positive role models to inspire girls to pursue their dreams. Stories from young women around the world also encourages the AFG reader to think about the importance of STEM studies as it relates to her future.

A fun and educational resource to inspire youngsters, ages 8-18, this 36-page issue is now available in print and digital bringing the excitement of aviation and aerospace to girls around the world.

This issue of *Aviation for Girls* magazine features positive female role models, age-appropriate stories and content for three groups: elementary, middle, and high school.

CELEBRATING AVIATION AND SPACE HISTORY

BLACK HISTORY MONTH

February is Black History Month, an annual celebration of achievements by African Americans and a time for recognizing their central role in U.S. history. Also known as African American History Month, the event grew out of "Negro History Week," the brainchild of noted historian Carter G. Woodson and other prominent African Americans. Since 1976, every U.S. president has officially designated the month of February as Black History Month. Other countries around the world, including Canada and the United Kingdom, also devote a month to celebrating Black history. (From https://www.history.com/topics/black-history/black-history-month) In this issue we will celebrate the contributions of several black aviation and space pioneers. *Use these examples to develop an AEX activity for your squadron.*

CELEBRATING BESSIE COLEMAN

From the NYW DE&I Team

"Brave Bessie" Coleman dreamed of becoming a pilot. Her brothers had brought back stories from war about courageous pilots soaring through the air, lighting a spark in her. She began applying to flight schools all over the country, ignoring the fact that women at the time were not allowed to learn how to fly. However, women *were* allowed to learn in France. Bessie Coleman would go on to attend aviation school in France earning her international pilot's license in 1921 and becoming the first woman of African American and Native American descent to become a pilot in the United States. In her short life, Bessie Coleman taught us that the sky's the limit. She was an advocate and pioneer and encouraged women to go after their dreams and to never let anything stand in their way. Her pioneering role was an inspiration to early pilots and to the African American and Native American communities.

"The air is the only place free from prejudices. I knew we had no aviators, neither men nor women, and I knew the Race needed to be represented along this most important line, so I thought it my duty to risk my life to learn aviation..." – Bessie Coleman

Editor's Note: The US Mint has just produced a new coin in the American Women Quarters program honoring Bessie Coleman on her 125th birthday, born 26 January 1898, and depicts 'Queen Bess' as she suits up in preparation for flight, her expression reflective of her determination to take to the skies, the only place she experienced a freedom she did not have on the ground. The inscriptions are "UNITED STATES OF AMERICA," "QUARTER DOLLAR," "E PLURIBUS UNUM," "BESSIE COLEMAN," and "6.15.1921," the date Coleman received her pilot's license.

CELEBRATING EUGENE JACQUES BULLARD: FIRST AFRICAN AMERICAN MILITARY COMBAT PILOT

Eugene Jacques Bullard
Photo Credit: National Museum of the US Air Force

Born in Columbus, Georgia in 1895, Eugene Jacques Bullard had lived many interesting lives before and after making history as the first Black military pilot.

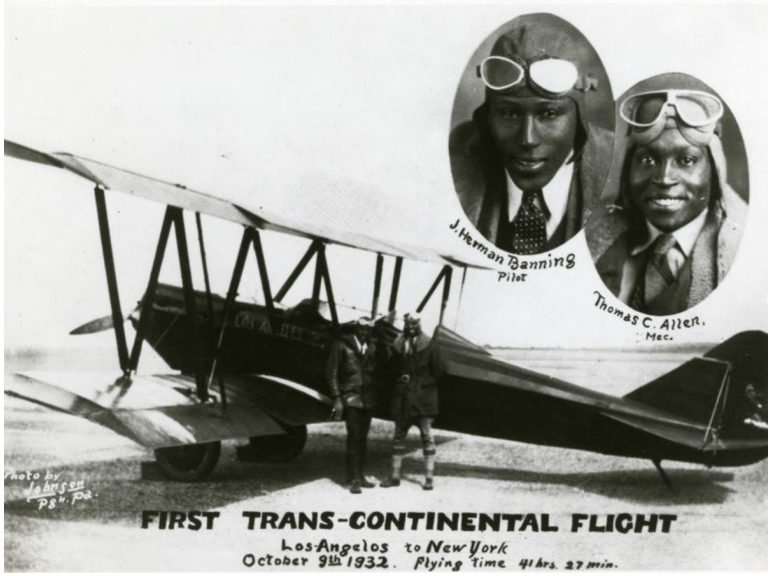
As a teen, he found his way to London and later settled in France as both an entertainer and a boxer. When World War I broke out, he fought for France and became a decorated infantryman before training as a pilot, receiving his license in 1917.

Known as the 'Black Swallow' Corporal Bullard went on to participate in more than 20 combat missions before becoming a prominent nightclub owner in France and rubbing elbows with the likes of Louis Armstrong and Josephine Baker. However, after fighting and getting wounded in World War II, he returned to the States and settled in Harlem, New York. He died in 1961.

CELEBRATING JAMES BANNING: FIRST AFRICAN AMERICAN PILOT TO FLY ACROSS AMERICA

Born in 1900, James Banning held onto his childhood dreams of flying, despite the fact no school in America was willing to train a Black man. Thankfully for Banning, he found a white pilot who taught him the ropes and in 1926 became one of the first African American pilots in history.

In 1932, with only four people coming out to watch his epic endeavor from a small airport in Los Angeles, Banning set off with his mechanic Thomas C. Allen on a coast-to-coast, history-making flight. Known as the "Flying Hoboes," the two made the harrowing 3,300-mile journey and landed in Long Island, New York, clocking in at 41 hours and 27 minutes. Banning was unable to enjoy the fruits of his labor, however; he died just four months later in an air show plane crash in San Diego.



James Banning and Thomas C. Allen
Photo Credit: NASM (99-15420)

CELEBRATING THE TUSKEGEE AIRMEN: FIRST BLACK MILITARY AVIATORS IN THE U.S. ARMED FORCES

The Tuskegee Airmen stand with an airplane at the Tuskegee Army Flying School, Tuskegee, Alabama, 1942
Photo Credit: Afro American Newspapers/Gado/Getty Images

Led by C. Alfred Anderson, who was known as the "Father of Black Aviation," the Tuskegee Airmen (active 1940-1948) had a lot to prove to their country and the rest of the world as the first Black military pilots in the U.S. Armed Forces. Subjected to discrimination both on and off the battlefield, the Tuskegee Airmen's service during World War II was at a time when the military was still segregated.

Known as the Red Tails, due to the distinctive color of their P-51 Mustangs, their heroic missions — escorting heavy bomber aircraft and conducting successful attack missions in 1945 — earned them distinguished honors and helped bring about the desegregation of the military.

CELEBRATING MAE JEMISON: FIRST AFRICAN AMERICAN WOMAN IN SPACE

Born in Alabama in 1956, Jemison grew up in Chicago and was involved heavily in dance yet also held a fascination with science.

She graduated from Stanford University with a chemical engineering degree in 1977 and received her medical degree from Cornell Medical College four years later. After holding a brief medical practice, Jemison took time off to serve in the Peace Corps, which is when she discovered she was accepted into the NASA program.

On 12 Sept 1992, Jemison became the first Black woman in space as a member of the Space Shuttle Endeavour. A person with many skills and interests, Jemison retired from the program a year later and went on to establish her own tech research company and write a memoir. She is currently a professor at Cornell University.

Mae Jemison
Photo Credit: SSP/Getty Images

These short biographies are reprinted from biography.com. You can find these and more at:
https://www.biography.com/news/bessie-coleman-black-pilots

A MESSAGE FROM THE EDITOR

By Maj Burt Dicht, NYW Internal AEO

When I first joined CAP I did not fully understand the range and depth of CAP's professional development program. For that reason, I was slow to embrace the specialty track training. I was an aerospace engineer and historian. What could I possibly learn from CAP? It turns out, a lot. I soon discovered that the AE specialty track not only provided insight to CAP's full range of AE programs, but it also required on-the-job experience as well and insights on how to be a better AEO. I was hooked and I made it a goal to achieve the Master rating.

Now I am a strong proponent of AEOs advancing through the track, not only for their own professional development, but for what it means to your squadron and serving as a role model for your cadets and other members. The reason I'm sharing this is that I compiled a report for the New York City Group (NYCG) following the AE Activity report submission and noticed that many AEOs did not even have their technician rating. That made me curious and I decided to review the specialty track rating for all NYW AEOs. The results aligned closely to the NYCG.

For all *active duty* NYW AEOs Enrolled in the AE Specialty Track :

- 30 Master Ratings
- 17 Senior Ratings
- 49 Technician Ratings
- 73 No Rating

Wow, 73 AEOs enrolled in the AE specialty track *do not have a rating*. That provides us with an enormous opportunity to advance these AEOs and help them earn their Technician Rating. And there are many opportunities to help our AEOs with Technician and Senior Ratings advance. We discussed this during the last AEO meeting, and I suggested a program to help our AEOs earn their ratings. **You will be hearing more about this in the coming weeks.** If you are an AEO with no rating or want to advance your current rating, please contact me. We can work with you and get on track to advance to better serve your squadron and to satisfy your own professional development needs.

AIRCRAFT IDENTIFICATION QUIZ

Photo Credit - National Museum of the USAF

Can you identify this aircraft?
The first two correct answers received via email to capaerospace@gmail.com will receive a special space patch.

Hint: Designed and manufactured by North American Aviation as an entry in a United States Air Force tactical fighter-bomber design competition of the 1950s. It first flew in 1956, but it never went into production as the program was cancelled in 1957.

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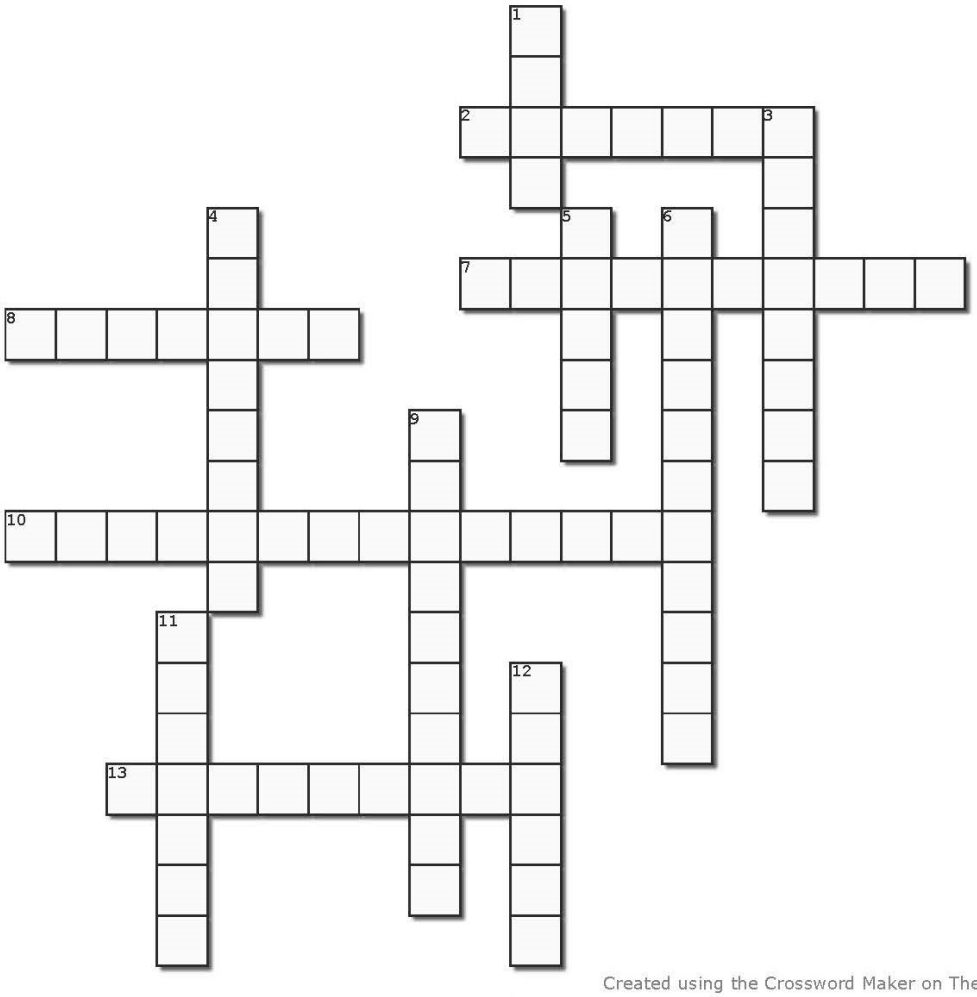
AE PUZZLES

AEROSPACE DIMENSIONS 1-3

BALLOONS - THEY CREATE THEIR OWN THERMALS



Created using the Crossword Maker on TheTeachersCorner.net

Across

2. A lightweight, low carbon fuel used in hot air balloon burners.
7. An instrument to determine the rate of climb or descent; sometimes referred to as vertical velocity indicator.
8. A wicker basket, hanging below the envelope, used to transport passengers and propane tanks.
10. Located at the top of the balloon's envelope that allows it to be deflated (2 words).
13. Instrument to provide height of balloon above sea level.

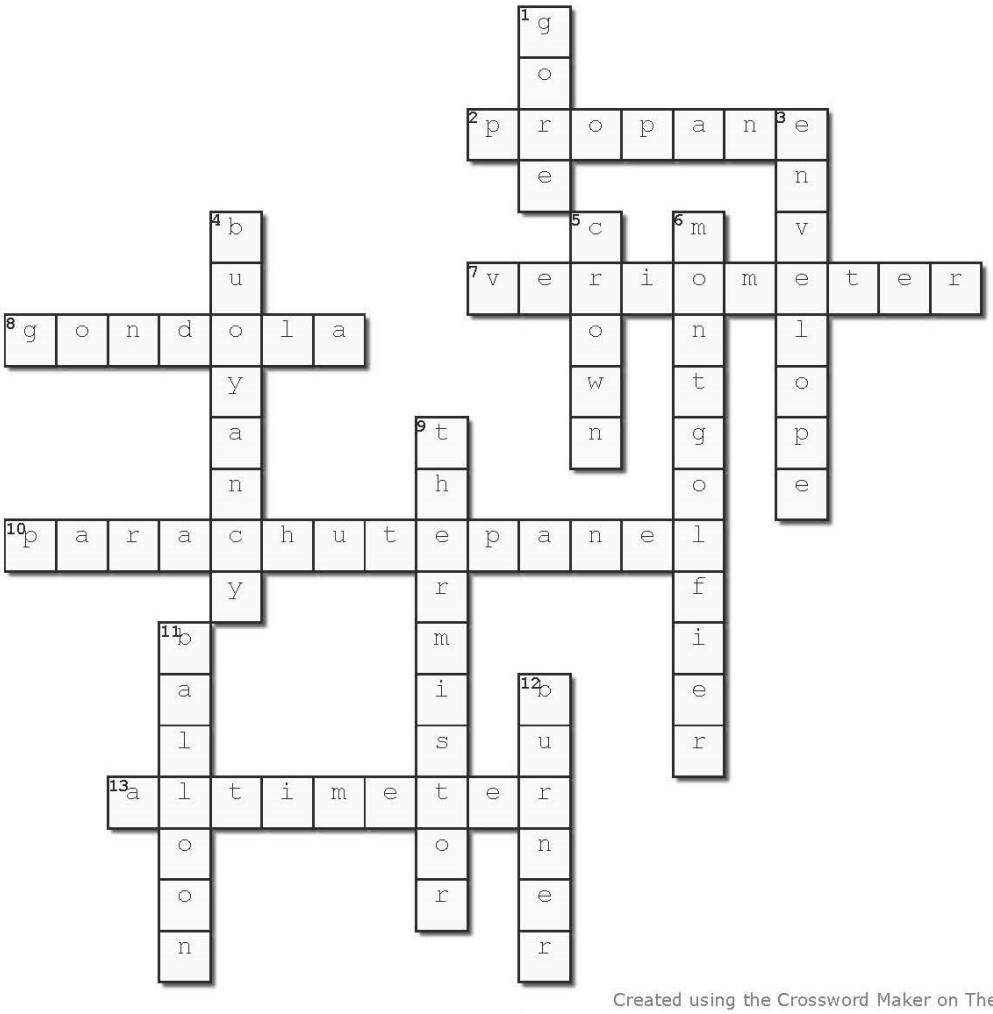
Down

1. One of several vertical panels that make up the envelope.
3. The main body of the balloon, usually made of nylon, that is filled with lighter-then-air gas.
4. To rise or float on the surface of water or within the atmosphere.
5. The top of the hot air balloon's envelope.
6. The name of two French brothers who created the first successful manned hot air balloon in 1783.
9. An instrument which measurer the temperature within the envelope.
11. An aircraft that uses lighter-then-air gas for its lift, with no built-in means of horizontal control.
12. The heat source for filling the envelope with hot air.

ANSWERS

AE PUZZLE - AEROSPACE DIMENSIONS 1-3

BALLOONS - THEY CREATE THEIR OWN THERMALS



Created using the Crossword Maker on TheTeachersCorner.net

Across

2. A lightweight, low carbon fuel used in hot air balloon burners. (**propane**)
7. An instrument to determine the rate of climb or descent; sometimes referred to as vertical velocity indicator. (**veriometer**)
8. A wicker basket, hanging below the envelope, used to transport passengers and propane tanks. (**gondola**)
10. Located at the top of the balloon's envelope that allows it to be deflated. (**parachutepanel**)
13. Instrument to provide height of balloon above sea level. (**altimeter**)

Down

1. One of several vertical panels that make up the envelope. (**gore**)
3. The main body of the balloon, usually made of nylon, that is filled with lighter-then-air gas. (**envelope**)
4. To rise or float on the surface of water or within the atmosphere. (**buoyancy**)
5. The top of the hot air balloon's envelope. (**crown**)
6. The name of two French brothers who created the first successful manned hot air balloon in 1783. (**montgolfier**)
9. An instrument which measurer the temperature within the envelope. (**thermistor**)
11. An aircraft that uses lighter-then-air gas for its lift, with no built-in means of horizontal control. (**balloon**)
12. The heat source for filling the envelope with hot air. (**burner**)

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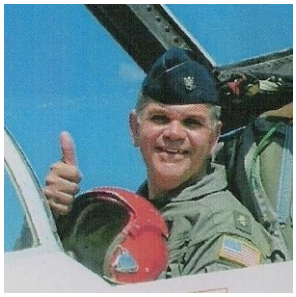

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Photo Credit – discoveringcap.com

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