

# CAP's External Aerospace/STEM Education Outreach Programs

Civil Air Patrol offers numerous quality aerospace educational products and programs in fulfillment of both its internal and external aerospace education mission. This wealth of products and programs allows great opportunity to enrich the squadron cadets' AE experiences and allows for interesting and engaging outreach initiatives. CAP's aerospace products serve to perpetuate an interest in STEM (science, technology, engineering, and math) subjects and careers. Thus, CAP currently refers to the AE program as CAP's aerospace/STEM education program.

CAP's external AE program presents aerospace/STEM education to the public; particularly, to schools. This is accomplished through academic programs within the educational systems and through contact between CAP members and their communities. It is incumbent upon CAP members, especially AE Officers, to become aware of the importance of the external AE program, and to conduct outreach initiatives that will perpetuate CAP's AE mission throughout our great nation. CAP's external AE outreach programs should encourage participation in community aerospace/STEM activities outside of CAP and should involve the AEOs working as a team with cadets and their adult leaders, as well as the public affairs team.

## 1. Aerospace Education Member (AEM)

AEM is a special membership category open to both formal and informal educators and/or any reputable individual or organization with a desire to promote the aerospace objectives and purposes of CAP. The AEM is not a member of any local squadron or unit, thus, as a member of the NHQ-004 unit, has limited access to cadets in squadrons, and has limited membership privileges. AEMs do have member benefits that include eligibility to receive or be involved in any of CAP's free aerospace/STEM Ed products and programs. AEMs are eligible for Teacher Orientation Program (TOP) flights, which allow CAP Wings to support these educators both in and out of the classroom/learning environment. ***Educator members are a vital and key resource in CAP***, as they have access to, and influence upon, the future of our country; our nation's youth. *CAP's educator members include AEMs, as well as senior members who are educators.*

## 2. Aerospace Education Workshops and Activities

CAP makes an outstanding contribution to the educational system by supporting aerospace/STEM education workshops in school systems, colleges, museums, and conferences/symposiums throughout the country. These outreach activities are designed to provide educators with a basic knowledge of aerospace and how this topic can become an integral part of an educational institution's course of study or enrichment programs. This is a great opportunity for CAP squadrons, groups, and wings to become involved in the outreach initiatives of CAP.

## 3. Aerospace Education in Local Schools and Other Community Organizations

CAP members are encouraged to become involved and cooperate with schools and other community youth organizations by helping to promote aerospace/STEM education efforts by providing aerospace/STEM education curricula; assisting with materials, people and appropriate program resources; arranging field trips; judging STEM/Science Fairs; etc. It is through these local contributions and involvement that grass roots public awareness leads to organizational membership growth.

## **Outreach**

### **verb**

a: to surpass in reach

### **noun**

a: an effort to bring services or information to people where they live or spend time

### **Aerospace Education Outreach Goals...**

*CAP's goal should be to support the external AE programs by whatever means possible.*

This element asserts that it is the responsibility of all senior members; not just unit AEOs, to promote aerospace/STEM education within CAP and out in communities. Making this element a priority of CAP's service to communities should be a team effort; *Together Each Achieves More*. Coordinating school visits (to talk with students, educators and school administrators), school presentations, and civic organization presentations ensure a professional image of CAP is being projected. Many people across the country are unaware of Civil Air Patrol's existence and the availability of myriad aerospace/STEM education opportunities for students and cadets. We need to work to improve the visibility of CAP in communities.

The CAP AE Program is continuing its long tradition of supporting youth development programs to prepare young people for exciting STEM careers. Addressing current needs of educators, as well as needs of CAP cadets and the nation's students in formal and informal settings, is a priority for the CAP AE team by assisting in preparing young adults, as well as the general population, to take their place in the technological, global aerospace society in which we live. Competition for highly qualified, technical talent will continue to intensify to keep pace with technological innovation. To meet the challenge, educators and community leaders must rapidly develop and implement robust and flexible aerospace/STEM education curriculum, often with limited funding. Fortunately, CAP/AE recognizes the need for a specialized future workforce and has invested in dynamic academic programs to assist in this national challenge. CAP's K-12 aerospace/STEM education offerings, aligned with national academic standards, are promulgated via textbooks, thematic units, visual aids, STEM Kits, special programs, and **your help**.... AE supports existing curriculum requirements.... AE supports real-world learning.... AE supports programs involving peer coaching, peer tutoring, group learning, and mentoring.... These outreach examples exemplify the fulfillment of this element.

It is realized that it is often a daunting task for one to simply reach out and make contact with "strangers." Thus, the CAP NHQ AE Outreach Coordinator, Lt Col Michael Castania, offers a number of **Aerospace Education Outreach Strategies** that have worked well for him in the NJ Wing. Not every region, wing, or squadron share the same resources, opportunities, and/or difficulties, so each person is encouraged to share their own successful strategies that will make the effort less intimidating to others. In addition, besides sharing some successful strategies of Lt Col Castania's and of others, it is hoped that new initiatives will be identified and implemented in order to continue to build on successful **Aerospace Education Outreach Strategies**.

# Aerospace Education Outreach Strategies

~ Lt Col Michael Castania, CAP NHQ Outreach Coordinator

## Find Who's Out There

Google "*Aviation Groups*" in your Region to see who would be willing to offer assistance... You may have manufacturers, businesses, and/or organizations in your area; resources will vary state by state. Some general organizational examples are listed and hyperlinked below:

[Academy of Model Aeronautics \(AMA\)](#)

[Air Force Association \(AFA\)](#)

[American Institute of Aeronautics & Astronautics \(AIAA\)](#)

[American Astronomical Society \(AAS\)](#)

[American Meteor Society \(AMS\)](#)

[Astronomical Society of the Pacific \(ASP\)](#)

[Aircraft Owners & Pilots Association \(AOPA\)](#)

[Experimental Aircraft Association \(EAA\)](#)

[Federal Aviation Administration \(FAA\)](#)

[Flight Safety Foundation \(FSF\)](#)

[General Aviation Manufacturers Association \(GAMA\)](#)

[Institute of Electrical & Electronics Engineers \(IEEE\)](#)

[National Association of Rocketry \(NAR\)](#)

[Ninety-Nines](#)

[Soaring Society of America \(SSA\)](#)

[Women in Aviation International \(WAI\)](#)

[Women's Soaring Pilots Association \(WSPA\)](#)

## Connect with Educational Groups/Organizations

This list will also vary from state to state. Who are the educational power brokers in your state, county, district who can assist in promoting our Aerospace Education Member Program?

State PTO/PTA Groups

State School Board Association Conventions/Conferences

State School Administrators/Business Administrator Conventions/Conferences

State Teachers Association Conventions/Conferences

State Principals and Supervisors Associations/Conferences

State Gifted & Talented Education Programs

Charter School Associations/Conferences

Parochial School Association/Diocese

Home School Associations/Conferences

## **Plan Cooperative Learning with AFJROTC Programs**

**Share the wealth... AFJROTC instructor membership in our AEM program is free. Collaboration between our two groups could bring about surprising joint ventures. We are not in competition with each other, but complement each other's organizations well. This is a win/win scenario.**

## **Use Social Media**

**In today's world, social media has become an essential ingredient in our daily needs. Use social media to promote aerospace education activities to strengthen public understanding. Be sure to use your cadets' expertise in this area while reaching out to others. Always be professional and positive in all postings.**

YouTube

Facebook

Twitter

Podcasts

Webinars

AEO & AEM eNewsletters via Constant Contact or similar media

## **Notify News Media**

**Mass media shapes and influences public awareness. Get the word out; preach the gospel of aerospace education to the masses. Let folks know what's going on in your Region, Wing, or Squadron.**

Broadcast television

Cable Television (Community Access)

Radio

Newspapers

Create and distribute a dedicated AE color tri-fold AEM brochure promoting your programs

## **Create CAP/AE Displays in Malls, Shopping Centers, Libraries, Community Centers, and Other Public Locations**

Visibility is the key to recruiting... many of the above would LOVE to provide room for some type of aerospace education display. Invest a little money in a nice stand-up banner. Ensure you have a sample of all the AE materials to display.

## **Stress a Stronger Cooperative Relationship Between Your AEO and AEM Programs/Schools**

Visit classrooms/talk to students... Invite them to community outreach activities...

## **Create AEM Workshops/Activities**

New AEMs are often overwhelmed with the volumes of available educational materials. Show educators and youth leaders ways to incorporate aerospace education materials and STEM kits into their curriculum by conducting a short workshop- with refreshments!

## **Take Part in Local Aviation/School Career Days**

## **Take Part in STEM Fairs/Competitions Held at Local Schools, Colleges, and Civic Organizations**

## **Partner with EAA's Young Eagle Flights**

Offer aviation-related workshops prior to actual flights

Bring your Microsoft X Flight Simulators; let the children fly them

Make sure all know that CAP cadet flights are registered as EAA flights so cadets can take advantage of the free EAA membership and benefits for a stronger alliance

## **Team Up with a Local AMA RC Flying Club's Open House**

Bring your Real Flight RC Simulators

BTW, AMA membership is free to cadets and offers scholarships

## **Partner with a Local NAR Club**

Clubs often times offer safe launch sites in addition to valuable assistance from knowledgeable members.

## **Partner with local Observatories and Astronomy Groups/Organizations...**

Clubs offer training and guidance from experienced observers and may even provide help conduct "Star Parties!"

## **Promote CAP Emergency Service Capabilities to Local Airport Flying Clubs/FBOs**

Don't neglect your various local first responder organizations.

## **Take Part in Local Airport Emergency Disaster Drills**

## **Promote CAP Activities/Programs to State Aviation Hall of Fame and Aviation/Science Related Museums**

## **Reach Out to Your State's Inner City Youth Organizations**

These young people are the ones most often overlooked. Bring your STEM Kits!

## **Promote CAP Within Veteran Service Organizations**

VFW

American Legion

## **Work with Military Installations**

Bring STEM programs to the children of our active duty military personnel via Saturday morning base library STEM workshops. You might find that the facility library may be willing to supply the STEM kits.

## **Join in on Local Airport and Military Bases Open Houses, Air Shows or Aviation Days**

CAP displays of static aircraft go a long way to attract interest.

Arrange to have a CAP Booth to promote aviation

Bring your STEM Kits

## **Work with Local Airports & Flight Schools' Summer Aero Camps**

Offer to lend a hand and participate alongside them.

## **Reach Out to Community-Based Youth Groups**

Become a BSA Aviation Merit Badge Counselor as it opens the door to CAP programs. Show how CAP can complement their organization.

Cub Scouts

BSA Troops

Girl Scout Councils

4-H Organizations

Church/Religious Based Youth Groups

Police Athletic Leagues

## **Reach Out to Local Civic Organizations**

Rotary Club

Businessmen's Association

Lions Club

Chamber of Commerce

## **Team Up with Local Libraries in Their Free Community Programs**

Bring your STEM Kits

**CAP Aerospace Education Programs and assets need to be visible... Advertise!!! The more External Aerospace Education Outreach we can provide, the better. Let's stop being "the best kept secret!" We have a great deal to offer any educational and/or youth organization; so let's get the word out there! Be visible! Be professional! Be prepared!**

For more assistance, contact Lt Col Michael Castania at [michael.castania@njwg.cap.gov](mailto:michael.castania@njwg.cap.gov).

Please share other ideas with Lt Col Castania, as well!

***Together Each Achieves More!***

