



# Civil Air Patrol's Aerospace/STEM Education Program

## *Investing in the Future*

***Empowering members with opportunities and resources to promote aerospace-related STEM education and careers.***

**Civil Air Patrol**, the Auxiliary of the United States Air Force, and, a non-profit, humanitarian organization, has three major missions: Emergency Services/Disaster Relief/Homeland Security; Cadet Programs for youth ages 12 and up; and Aerospace/STEM Education for youth and formal/informal educators nationwide.

**CAP's efforts to support future STEM workforce needs:** Estimated that more than 2 million STEM-related jobs will go unfilled in the next five years, CAP is working to illuminate, motivate, and educate disinterested and uninformed youth about pathways toward aerospace-related STEM career fields.

**CAP provides free aerospace/STEM education products and programs to youth via two avenues:**

- 1- **CAP Squadrons:** CAP has 1000+ cadet squadrons across the nation which work with 25,000+ CAP cadets- most located on or near a USAF installation. Each squadron has Aerospace Education Officers (AEOs) who work with the cadets to promote the Aerospace/STEM Education mission. The [CAP Cadet Program](#) offers varied [aerospace education activities](#) and aviation opportunities, to include [flight scholarships](#) and aviation training through the [Youth Aviation Initiative](#), which can lead to earning a Private Pilot Certificate.
- 2- **CAP Educator Members:** CAP has 4,000+ educator members- most in a special category called the [Aerospace Education Member \(AEM\)](#). These educator members work with and impact over 400,000 K-12 youth annually across the nation in public (50% Title I), private, parochial, charter, and home schools; after-school programs; youth organizations (scouts, 4-H, Boys/Girls clubs, etc.); libraries; community centers; and museums.

Youth outcomes from [educator member programs](#) include:

83% more interested in STEM      65% better teamwork  
44% improved behavior      17% improved classroom scores      14% better attendance

CAP's unique free aerospace/STEM education products and programs for educator members include:

- 1- Over [40 educational products](#) offered in print and online. These K-12 products are aligned with national academic standards and include topics in the areas of aviation, space, and cyber.
  - 2- [K-12 STEM Kits](#) are provided to use and keep. There are 20 available kits in the areas of aviation/space/cyber, with associated curriculum and career connections. Over two million students have been impacted.
  - 3- The [K-6 Aerospace Connections in Education \(ACE\) program](#) includes grade-level specific, sequenced curriculum guides aligned to Next Gen Science and other national academic standards. The [ACE program](#) involved 76,600 students (61% Title I) in the 2019-2020 academic year representing every state in the U.S. During AY 20-21, during COVID, 67,500 students participating! Almost half a million youth have been impacted.
  - 4- [Teacher Orientation Program \(TOP\) flights](#) enable K-12 teachers to take to the skies in CAP powered and non-powered aircraft at local airports across the nation, an experience that is shared with their students. (500 teachers annually impact about 50,000 youth) [Cadet orientation flights](#) are also provided to CAP cadets. Both teacher and cadet orientation flight programs include detailed pre-flight instruction and safety briefings as well as in-flight experiential learning using the controls and glass cockpit. All areas of STEM are relevantly connected during these flight instructions and experiences.
- CAP has 30,000+ adult members to mentor youth. CAP squadrons connect with educator members and other organizations in collaborative programs that increase potential youth impact exponentially.