



# Aerospace Education

Summer 2009

# News

Inspiring Students To Excel

## AIR TRAVEL REVOLUTION



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### Aerospace Education News

Aerospace Education News is the official aerospace education quarterly publication of the Civil Air Patrol at CAP National Headquarters, Maxwell Air Force Base, Ala.

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If you have news, events, or ideas we might consider for the newsletter, please submit them electronically to [jstone@capnhq.gov](mailto:jstone@capnhq.gov).

One of the exhibits at the Sun N Fun Air Show in Lakeland, FL this past April was the Terrafugia Transition (part airplane and part automobile). This seems like a page out of the Jetsons© cartoon, but it is actually on the way to becoming a reality. There are many innovations and new concepts being tested in the aviation industry which are not restricted to military and government any more. Private industry and commercial ventures are stepping up the excitement and competitiveness in air travel.

Since 9/11 and the high cost of fuel have entered into the equation of air travel, many airlines and aviation companies have started looking at ways to improve and keep their customers flying. The main problems facing the industry are fuel costs, security issues, competition, and consumer behavior. The airline and general aviation industries are seeking solutions to these problems, as well as thinking "outside the box" when it comes to future air travel.

With experimental aircraft, like the SAX 40 and the Transition, we are finding a whole new approach to air travel. The SAX 40 is a blended-wing body aircraft that engineers are finding is not only quieter, but also more fuel efficient than previous airplanes. One technology leads to another bringing us to such innovations as the Transition concept.

The Transition simply lands at the airport, folds up the wings, and drives home like an automobile.

Many other solutions to the problems of air travel are on the drawing board. Such ideas as silent, carbonless airplanes and nonpetroleum-based jet fuels are being tested at NASA. Lower speeds and altitudes may also reduce emissions and, thus, make air travel more environmentally friendly. As in any revolution, we have to make compromises in order to achieve success. In the case of the low speeds and altitudes, we may have to sacrifice time to reach our destination. We would find that only business travel or emergency travel would use supersonic craft that could seat only 8-10 passengers.

The prediction is that air travel may double or triple by 2030, and the industry is poised to make drastic changes to customer service, aeronautical designs and even the air traffic control system. It may not be the Jetsons© yet, but we are heading in the direction of change. Careers have never been more appealing for young people as the excitement and opportunities grow within the industry.

### Questions:

**1. What is one of the main problems facing the aviation industry? How is this problem being addressed by the industry?**

**2. What is the prediction for the future of the air travel industry?**

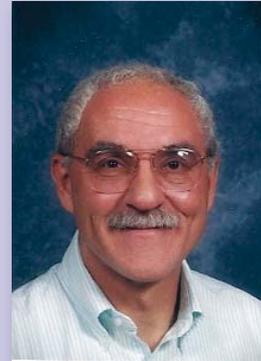
**3. What new prospects do you predict for careers in the aviation industry? Research aviation careers and see how these careers are changing.**



## Aerospace Education Member (AEM) Spotlight ...

### Stuart J. Sharack

2009 CAP Aerospace Teacher of the Year



Being the first to win any award sets the standard for future nominees, and Stuart J. Sharack epitomizes the foundation of the CAP Teacher of the Year Award. Through his after-school "Aerospace Adventurers" club, he is sparking the imaginations of students and providing them resources and opportunities to which they may not have otherwise been exposed. Stuart says of this experience for his students, "Our world offers so many wonders; there is no reason for youngsters to be bored or turn to crutches like drugs. Achievement through cooperation builds self-confidence. I hope I am providing role models and opportunities that these students may not have considered."

Being a Connecticut public school teacher for 38 years is amazing enough, but add to that all the mentoring and professional development that keeps Stuart Sharack "at the top of his game" and you have the picture of the ultimate

educator. His fifth-grade students are always challenged to "rise above" and "understand the world" as the quote by Socrates suggests...."Man must rise above the Earth - to the top of the atmosphere and beyond - for only thus will he fully understand the world in which he lives." He carries the same message to his after-school aerospace club of 4th through 6th grade students. His club meets twice a month and some weekends showing quite a commitment of this seasoned teacher.

Stuart Sharack mentors teachers in other nearby schools and has conducted joint Aerospace Festivals on Friday nights with families of students in attendance. He coordinates with local CAP units and businesses, as well as other aerospace volunteers, to make this experience one to remember.

Professional development is also a top priority for Stuart Sharack. He takes the STEM (science, technology, engineering and mathematics) subjects seriously and proves this by attending workshops, such as MIT's summer Science and Engineering Program for Teachers (SEPT). He has also shared his expertise and love of aerospace with others as presenter at NASA's S'COOL program at Langley and NASA's Airspace Systems Education Cohort at Ames. Stuart has also evaluated web-based materials for teachers through the National Science Teachers Association's Webwatchers Program.

The hands-on, minds-on activities that Stuart Sharack designs for his after-school club includes building and testing bottle rockets, flying ring-wing glid-

ers, testing propeller motors, and constructing tissue paper tube radios, as well as Estes rockets and model hovercraft. He also invites speakers and arranges field trips to such locations as Groton Airport, Vintage Radio and Communication Museum, and the New England Air Museum. He has even had an astronaut, Dan Burbank, as a guest speaker at his after-school club.

Stuart Sharack has dedicated his career to being a first-class educator and sharing that special calling with others. We congratulate Stuart on being the inaugural 2009 CAP Aerospace Teacher of the Year and hope that he continues to inspire the next generation for years to come.

*" He (Stuart) loves his students and the subjects that he teaches; maintains his knowledge of the field by reading and attending conferences; shares his ideas with the community of teachers by offering workshops; and generates an enthusiasm about aerospace to each and every person who enters into a relationship with him."*

*---Stephen Rocketto,  
Director of Aerospace  
Education , CT Wing*



Stuart works with students to excite them about aerospace.





## Aerospace Education Officer (AEO) Spotlight..... **Lt Col Richard Edgerton, WA 018**

*2009 CAP Aerospace Education Officer of the Year*

For the past seven years, Lt Col Richard Edgerton has been a dedicated and imminently qualified professional in Civil Air Patrol and the aerospace education mission. His qualifications make him a valuable asset to the Washington Wing of CAP. Richard holds a Ph.D. in mathematics education, has been nominated three times for the Who's Who Among America's Teachers, and is currently an instructor at the Aviation High School in Tacoma, Washington. His 30 years of teaching excellence provides Washington Wing with a resource beyond compare.

In 2008 alone, Lt Col Edgerton served as advisor to the Education Leaders Advisory Board (ELAB) at the Museum of Flight in Seattle; taught Module 2 of CAP's Aerospace Dimensions to cadets at Washington Training Academy; assisted with the CAP presentation at the 2008 Aviation Conference and Trade Show in Puyallup, Washington; participated in the CAP Fly-a-Teacher Program; acted as instructor for the 2008 Washington Wing Flight Academy; coordinated and conducted the 2008 Pacific Region

AEO School; assisted with the CAP booth at the National Science Teachers Association Conference in Oregon; and maintained the Washington Wing Aerospace Education website. He did all of these activities, and more, in addition to his many squadron AEO duties.

The awards received by Lt Col Edgerton are many and well deserved. He has been awarded the prestigious Frank G. Brewer Memorial Aerospace Award, the A. Scott Crossfield Aerospace Education Master Educator Award, the Lt Col Wesley Crum Memorial Aerospace Award in Washington Wing and the Region Commanders Commendation Award for Regional AEO School. He also holds a Certified Flight Instructor rating (since 2004 with 1000+ hours of flight instruction).

Lt Col Russell Garlow, Washington Wing Director of Aerospace Education, has high regard for Lt Col Edgerton and his value to CAP. According to Lt Col Garlow, "Richard Edgerton is one of those rare individuals who is not only knowledgeable, but also has a passion for teaching the CAP program. His commitment and skills in teaching young people and adults is stunning to observe. Richard's infectious enthusi-

asm for aerospace shows in every class he teaches and in every presentation he gives."

Lt Col Richard Edgerton has the qualities that make him the perfect choice for the inaugural CAP Aerospace Education Officer of the Year Award. We applaud his initiative and efforts and look for great achievements in the future.



Richard Edgerton shares his love of aviation with elementary children and cadets.



Richard Edgerton assisted at the CAP booth for the National Science Teachers Association Conference in Oregon

*"He (Richard Edgerton) understands mathematical and physical concepts that the average person can hardly grasp, and yet he can communicate that teaching in ways we all can connect to common experiences."*

*--Lt Col Russell Garlow, WA WG DAE*



## ACE Program Review



The ACE Program, or the Aerospace Connections in Education Program for grades K-6, has completed its second year as a

prototype program for the Civil Air Patrol. Thirty schools and approximately 300 teachers and 7000 students across the nation have participated in this pilot program that uses the aerospace theme to enrich and promote science, technology, engineering and math (STEM) curricula and related career options. The program has grade-level specific curricula which is aligned with national academic standards of learning, and promotes good character and physical fitness, to live a healthy and drug-free lifestyle.



Frances Miller's Class in Boaz, AL proudly displays their ACE completion certificates

### National ACE Awards

Upon completion of the ACE program, all 30 schools were invited to submit award nominations for superior performance in the ACE Program. The winning entries for these awards are listed as follows:

### ACE Teacher of the Year, Mary Gurley



Mary Gurley, ACE Teacher of the Year, (center) receives ACE Teacher of the Year Award from CAP representatives Angie St. John (left) and Susan Mallett (right)

Mary Gurley, kindergarten teacher at Taylor Road Academy in Montgomery, AL, may be small in size, but she is a giant amongst her peers and her students. Mary Gurley has earned the recognition of National ACE Teacher of the Year for the second consecutive year. In addition to ensuring her students were taught every kindergarten ACE lesson, she coordinated her school's lift-off ceremony, submitted and received grants to supplement the implementation of the ACE Program for her school, organized the CAP Fly-a-Teacher program for the teachers, and utilized human resources to enhance and support the program. Ultimately, she implemented every aspect of the program in phenomenal ways.

One of the major components of the ACE program is to involve parents and community volunteers in the instruction of the ACE lessons, and Mary Gurley embraced this aspect of the program by inviting school administrators, fellow staff members, parents of her students, older students, CAP

members, AFA members, and even a Brigadier General to act as role models to her students in the implementation of the ACE program. Additionally, her students presented two special ACE character programs to parents and the community. For one program, Mary enlisted the music teacher to help classes learn and sing the "Boomerang" song (an aerospace-themed character song performed by musician, Charlotte Ritchie), and performed this at a PTA meeting. Mary submitted over 15 published media entries which publicized the exciting ACE-related events taking place in her classroom and at her school.

Yes, she may be small in size, but she is a powerful little lady who has assisted all those around her in the world of discovery. CAP salutes Mary Gurley!!

### ACE Student of the Year, Macy McIntosh

Macy McIntosh, a sixth grade student at Zion Chapel Elementary School in Jack, AL, has been named the ACE Student of the Year. Macy excels in science and demonstrates excellence in her efforts in aerospace activities. She consistently goes beyond the basic requirements of the classroom activities by doing more than what is asked. Not only is Macy an exemplary student and participant in the ACE Program, she is also a civic-minded young lady who works to raise money for the American Cancer Society (ACS), raising over \$2000 herself this year during an ACS Relay for Life event. This, and numerous other accounts of her selfless efforts to help others, made her stand out as a stellar representative of all ACE students. "Like the flight of the boomerang, what you do today will come back to you tomorrow," and without doubt, Macy has a bright future.



## ACE Program Review (cont.)

### ACE School of the Year, Hayneville Road Elementary

Another small, but powerful ACE winner also emerged from Montgomery, AL. **Hayneville Road Elementary** staff completed the ACE Program with a high level of enthusiasm, earning the school the National ACE School of the Year Award. Hayneville Road began planning the implementation of their program in late fall and began an organized, team effort after the winter holidays to implement the program. To kick things off, they had an awesome lift-off event involving the entire school. The school's planned, organized, and committed effort resulted in the program being completed in April, and the teachers providing valuable evaluative feedback to CAP. A group of teachers enriched their experience by participating together in a Fly-a-Teacher event. In May, all of the fourth grade students were able to take a field trip to an aviation and space museum. Because of the aerospace instruction through the ACE Program, the museum visit reinforced the aerospace enthusiasm and learning that was taking place at school. Ultimately, the administration and homeroom teachers joined hands with the counselor and physical education teacher to complete all aspects of the ACE Program in an exemplary manner for the entire school.



Hayneville Road receives the ACE Award for School of the Year

### ACE Coordinator of the Year, Carla Chin



Carla Chin with some of her ACE students

Sixth grade teacher, **Carla Chin**, from Jacksonville, FL, has been recognized as the ACE Coordinator of the Year. Carla enthusiastically introduced the ACE Program to her principal and coworkers at San Jose Catholic School this year and inspired the faculty to try something new and potentially challenging. Carla worked with her school to conduct the National ACE Lift-off Celebration. In addition, she worked to ensure program participation at her school was completed in an efficient manner. Carla serves as a wonderful aerospace enthusiast and resource for her school.

### ACE Service Project of the Year, Bear Exploration Center

A service project component of the ACE program provides an opportunity for students to contribute in service to their community. The fifth grade classes at **Bear Exploration Center** in Montgomery, AL, won the ACE Service Project of the Year Award for their efforts to brighten the lives of the residents at a local Assisted Living Home. The fifth grade classes made about 100 cards and 100 door hangers for

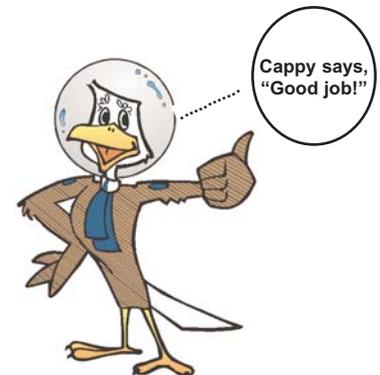
the elderly residents. Additionally, some of the students were able to participate in a Saturday visit to deliver the items and spend time with the residents. Beyond every student's efforts to make the items and the ability of some to visit, their caring and joyfully giving spirits were most impressive. They were excited about making a difference in someone else's life.



Bear Exploration Center receives the ACE award for their Service Project

### ACE for 2009-2010

The ACE Program is now being offered to any K-6 teacher or school for the 2009-2010 school year. For more information on how your classroom or school can be involved in the program, go to the ACE link at <http://www.capmembers.com/ae>.





## CURRICULUM CORNER (Grades 6-12).....

### Geobat Flying Saucer Aviation

Credit: Jack Jones, Randy Pollard, and Mark Murdock - the Geobat team

For more information go to the Geobat website at <http://www.geobat.com/>



**Objective:** Students will build and fly a Geobat model while learning about flight surfaces and experimenting with the flight of the Geobat.

**National Science Standards:**

Content Standard A: Science as Inquiry

- Abilities necessary to do scientific inquiry
- Understanding about scientific inquiry

Content Standard B: Physical Science

- Motions and forces

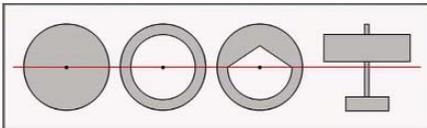
Content Standard E: Science and Technology

- Abilities of technological design
- Unifying Concepts and Processes
  - Form and function

**Grade Level: 6-12**

**Background Information:**

Of the two types of disc-shaped flying designs, ring-wing and solid, the Geobat configuration is more stable and provides more payload and passenger area.



**Some of the advantages of the Geobat design are:**

The diameter is slightly increased which translates into longer lateral extension of the wing, thereby enhancing **aileron (hinged control surfaces attached to the outside edge of the wing) control**. This slightly larger diameter also provides more longitudinal length which allows for a cockpit with a pusher/propeller configuration, such that the propeller thrust is in close proximity to and is forced directly over the **rudder**

(a movable surface hinged to the fixed surface that is located at the rear of the aircraft called the **vertical stabilizer, or fin**) and **elevator (usually at the rear of an aircraft, which controls the aircraft's orientation by changing the pitch of the aircraft, and so also the angle of attack of the wing control surfaces)**. The **vertical stabilizers (usually found on the back end of the body of the aircraft)** help direct the propeller thrust over these trailing edge control surfaces while simultaneously preventing the propeller thrust from disturbing the air flow over the outside areas of the rear wing. The inside areas of the wing tip sections, which are the longest longitudinal wing **cambers (the slightly arched surfaces of an airfoil)**, are located about the lateral extremities of the design. This configuration enhances stability because a substantial amount of lift is produced about the wing tips. The large central opening allows ailerons to be positioned both fore and aft of the lateral axis, thereby maximizing the air deflection possible. This configuration produces an impressive roll rate because the angle of the forward ailerons directs and compresses the air that is received by the rear ailerons, thereby enhancing their effectiveness. In that the model version requires no cockpit, the forward ailerons are easily extended centrally, such that they are directly behind the propeller, thus creating additional aileron control. Geobat also presents a perfectly circular edge. While this is considered to be an aesthetic feature (this also is a naturally stealthy shape), Geobat is the first perfectly circular aircraft capable of performing the same aerobatic maneuvers typically associated with high performance aircraft!!

**Materials:**

- Copy of Geobat pattern (run on colored cardstock)
- Scissors
- Double stick tape
- Pennies or other suitable weights

**Procedure:**

1. Follow instructions on the template for cutting and folding.



Step 1 - cut pieces

2. Apply double-stick tape to fuselage, as shown in the diagram on the template, and press fuselage sides together.



Step 2 - Pieces attached

3. After applying tape to fuselage, mount to underside of wing.



Step 3 - Side view

4. Add weights (pennies) to the front of the Geobat.

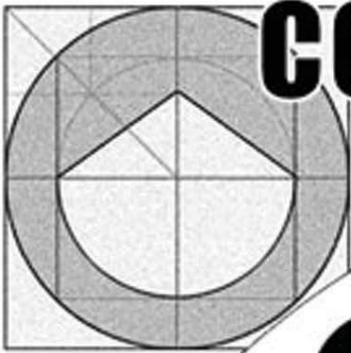
5. Test the Geobat and adjust the elevators to see how they affect the flight of the Geobat.

6. Record 10 trials and average the distance the geobat traveled.

**Extension:**

You may also get students involved in radio-controlled models of the Geobat. The website ([www.geobat.com](http://www.geobat.com)) is a helpful resource for other possibilities.

# CONCEPT TO REALITY



Penny

Penny

# GEOBAT

**Like No Other Aircraft In the History Of Aviation!**

[www.geobat.com](http://www.geobat.com)

AirshowUnlimited.com

United States Military Visits Inventor!

Developing Robotic Geobat Aircraft!  
www.C60WORLD.com  
Japanese Gov. Is Now

SouthWind-Aviation.com  
The Future Of Personal Aircraft Utility

Apply glue or double stick tape.  
Press fuselage sides together.

After applying adhesive to fuselage, mount to underside of wing.

Fold

Fold

Fold

## Geobat Flying Saucer Aviation

Elevator Hinge Line

Cut

Cut

Fold On Dotted Lines

Inventor: Jack M. Jones

**Full-Scale Flying Saucers  
Are Coming To America!**

Fuselage

Rudder Hinge Line



## CURRICULUM CORNER (Grades K-12).....

### Flying Wing.....From a design by NASA Langley Research Center

**Objective:**

The students will build a flying wing and learn about the future of new aircraft design.

**National Science Standards:**

Standard A: Science as Inquiry

Standard B: Physical Science

- Motion and forces

Standard E: Science and Technology

- Abilities of technological design
- Understanding about science and technology

Unifying Concepts and Processes

- Form and function

**Background Information:**

NASA's Aerospace Research and Technology Base Program is developing technologies for a new type of aircraft that would be more economical and efficient than today's airliners. This revolutionary flying wing configuration, called the Blended Wing Body (BWB), has a thick airfoil-shaped fuselage section that combines the engines, wings, and body into a single lifting surface.

The BWB could carry as many as 800 passengers over 7,000 miles at a cruise speed of 560 miles per hour. Compared to today's airliners, it would reduce fuel consumption, harmful emissions, operating costs, and noise levels. NASA is developing high payoff technologies for a new generation of safe, environmentally compatible, and highly productive aircraft.

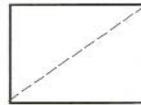
Aircraft of the future may look very different from those of today. In this lesson, students can become engineers and experiment with a "flying wing," an aircraft of the future.

**Materials:**

- Sheet of paper (8.5 inches by 11 inches)

**Procedure:**

1. Fold the paper diagonally from corner to corner.



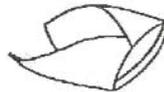
2. Fold the bottom (long) edge up about half an inch all the way across.



3. Fold this bottom section up again.

4. With the folded parts face down, run the paper through your fingers or over the edge of a table until the paper curves.

5. Form the paper into a circle with the folded parts inside. Hold it together by slipping one end of the bottom edge inside the other. A small piece of tape might help hold this together.



6. To fly the Flying Wing, hold it from the back (unfolded) edge, with first two fingers inside and thumb underneath. Toss it overhand with a smooth follow-through. This might take some practice.

**Extensions:**

- Students can draw / design a picture of an airplane of the future and explain functions.
- Students can experiment with different types of wing shapes to change flight direction (i.e., fold pointed ends both up; both down; and/or alternating up and down.)
- Students can write a journal entry about a flying wing flight.



NASA's Blended Wing Body aircraft....

Can you create a new wing design for a future aircraft?

**Questions for Inquiry:**

1. How do you think the "ring design" makes the aircraft more stable? (Suggestion: solid surface stronger than attached wings.)
2. How does the "ring design" make the aircraft more efficient? (Suggestion: Weighs less due to design, and, thus, uses less fuel.)



Thank You



Air Force Association!

## AFA Update



### The Air Force Association (AFA)

continues their outstanding support of CAP and aerospace education since the AFA has now contributed over \$270,000 in aerospace grants for our CAP units and CAP teachers who are promoting aerospace in their squadrons and classrooms. The application for these \$250 grants can be found at <http://members.gocivilairpatrol.com/ae>. The summer CAP unit grant cycle ended June 30, and the next educator deadline is September 30.

The winners for our Spring Educator grant cycle were:

Ann Autrey	WA
Jim Bouscher	OH
William Branson	AL
Russell Burwen	MA
Carla Chin	FL
Brandi DeSandro	AL
Susan Dunn	OH
Gina Eagerton	AL

Terri Frost	AR
Vonda Fruhwirth	OH
Reba Godfrey	LA
Richard Godman	CO
Mary Gurley	AL
John Heasley	WI
Melissa Kissler	MO
Rick Krepps	OH
Mary Leusink	NC
Jason Marcks	WI
Jessica McDaniel	OH
Jeffrey Rodriguez	OH
Norman Smith	NY
Teresa Toney	AL
Jean Trusedell	IN

Winners of the summer unit grant cycle will be announced in the fall issue of AE News. Congratulations to all!

Some educator grant recipients' programs included:

- Engineering Competition for 5th-11th grade students at the **DeQueen Mena Educational Coop in Gillham, AR**
- **West Lafayette, OH's Ridgewood Middle School 5th Grade Flight Club**

trip to National Museum of the US Air Force

• **Decatur Intermediate Learning Center's** BOT Madness Club robotics program and presentation to the Decatur Education Foundation in **Indianapolis, IN**

• **Northeast Nodaway School District's** NASA Family Science Night for grades K-12 in **Ravenwood, MO**

• **Curtis Inge Middle School** Special Needs Rocketry Class in **Noble, OK**

• **Cincinnati, OH Anderson High School's** Model Rocketry and Flight Analysis Program for Honors Physics Students

• Hydrogen-powered rocket cars for 3rd-6th graders at **G.W. Carver Elementary in Karnack, TX**

• **Springfield OH High School's** "October Sky" aircraft and rocketry unit

• **Broomfield, CO's Legacy High School** flight planning and simulator flight execution trip to United Airlines Training Center

• Remote Sensing Technology Unit for 5th-12th graders at **Space Education Initiatives in DePere, WI**

### Local AFA Chapter Sponsors ACE Schools

The Montgomery, AL AFA Chapter 102 partnered with the Civil Air Patrol to support 10 area schools in the Aerospace Connections in Education (ACE) Program for the second year. Their support included AFA chapter members as resource persons at schools, ACE t-shirts, an AE Day at Maxwell Air Force Base, and an Aerospace Legacy Essay Contest which concluded with orientation airplane flights for winning teachers and students. The chapter is also sponsoring six teachers from the winning national "ACE School of the Year" from Hayneville Road Elementary in Montgomery to attend a special AE workshop for Educators in Dayton, OH in July. If any school and AFA chapter is interested in a similar partnership, contact Susan Mallett at [smallett@capnhq.gov](mailto:smallett@capnhq.gov).

### AFA Grant Program Photos



Fifth grade students from Ridgewood Middle School visit the National Museum of the Air Force as a culminating activity for their Fifth Grade Flight Club.



Curtis Inge Middle School special needs student building a rocket

### FREE CAP Aerospace Education Membership for AFA Teachers of the Year

In an effort to support the AFA's AE Mission, Civil Air Patrol provides each AFA Chapter and State Teacher of the Year a free CAP Aerospace Education Membership. This gives these outstanding teachers the opportunity to expand their aerospace instruction to young people through CAP's AEX and ACE programs for the classroom. The AFA State Teachers of the Year are:

- Johnna Elms, Garden City, KS
- Barbara Solberg, Minot, ND
- Thomas Jenkins, Enon, OH
- William Austin, Sumter, SC
- Bonnie Bourgeois, Clearfield, UT
- Kathryn Zottnick, Albuquerque, NM
- Lynn Toney, Boaz, AL
- Thomas Thompson, Belle Vernon, PA
- Marilou Edwards, Lincoln, CA
- Joseph Barry, Las Vega, NV
- Kris Musson, Loudon, TN



## Chief's Corner.....

*From the desk of Dr. Jeff Montgomery,  
HQ Chief of Aerospace Education*



As the Chief of AE, I want to share a few thoughts, opinions, comments, and information with you from time to time, and I think the

newsletter will be a great place to do that. I hope you find the comments in this section worthwhile.

I'd like to start by saying thanks. It's the obvious place to begin, and I certainly want to do that. I want you all to know how much we appreciate all that you do for aerospace. Starting at the top; we have a national commander

who has made aerospace one of her top priorities, and she backs that up with words and deeds. And, it doesn't stop there. It filters down through the organization. We have noticed more commander involvement at all levels lately, and that is fantastic. Commanders mean so much to the success of the aerospace programs, and their support greatly enhances the opportunities for successfully accomplishing our aerospace mission.

I also want to say thanks to the AEOs at all levels. We now have more AEOs committed to aerospace than ever. We have over 1800 AEOs, including internal, external and assistant positions, at

the squadrons, groups, wings, and regions working hard to promote aerospace to our members and the general public. These AEOs ensure that we accomplish our Congressionally-mandated mission. To all the AEOs, as well as our AE teacher members (AEMs), we applaud your time, efforts, and money, to make sure that our members and students receive the instruction, the materials, and the knowledge to spark an interest in aerospace that can pay huge dividends for our organization and our country. Thank you for your dedication. We are here to serve you.

Call or email us if we can help you. Contact us at [ae@capnhq.gov](mailto:ae@capnhq.gov).

## 2009 National AEO School- Mission Complete!

The 2009 National AEO School was held at the Naval Air Station in Pensacola, FL, June 23-27. Thirty-seven persons registered for the school and included a diverse selection of attendees: two Group Commanders; DAEs from several states; and newly-appointed AEOs. School leaders included Chief of Staff, Lt Col Clarence Hauck, and Instructors: NV Wing V/CC, Lt Col E J Smith; WI DCS/AE, Lt Col Mike McArdle; and WI DAE, Lt Col Sherwood Williams. The National Vice Commander, Brig General Reggie Chitwood, and National AE Advisor, Col Mike Murrell were also in attendance.

Course attendees participated in a variety of hands-on AE activities that can be conducted in unit meetings or in schools or other community outreach programs. Attendees also learned ten important steps in being an active and productive AEO to include how to prepare for a Compliance Inspection, tips on recruiting and retaining teacher members of CAP, suggestions for conducting interesting and meaningful AE unit sessions, guidance on application for grants and awards, and sharing of

other opportunities to promote AE to the cadets and senior members, as well as to young people in the community. At the conclusion of the course, several AEOs took the opportunity to complete Specialty Track Tests with the successful completion of 3 Technician, 3 Senior and 2 Master ratings.

Brig General Chitwood joined the attendees in several sessions of the course and projected to the AEOs the importance of being prepared to conduct their special duty assignment in CAP. "The AE mission is the foundation of everything we do in CAP. We applaud your efforts to continue educating our members and the public about the importance of aerospace to the future of our country. Please know that you have our support as you work to prepare the young people in our organization to become aerospace leaders of tomorrow."

From observing a Blue Angels Aerial Team practice session, launching air rockets and Fun Shuttles, and preparing their annual AE Plans of Action to touring the Naval Air Museum and aircraft restoration center, the participants of the 2009 AEO School are energized and empowered to move "above and beyond" in the AE mission.

To find out about the two Regional AEO Schools to be held in 2009, go to the AE website at <http://capmembers.com/ae> and click on the Announcements link.



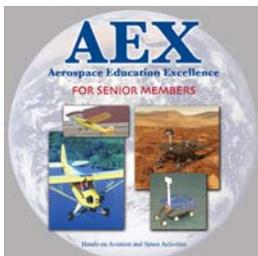
**Top left: Brig Gen Chitwood participates in hands-on AE activities.**  
**Bottom right: Lt Col Sherwood Williams leads a discussion with some AE Officers**



## Items Of Interest.....

### **AEX (Aerospace Education Excellence) Award Program - Mission Possible!**

The AEX Application and Completion Reports are now online, and it is easier than ever to participate in the CAP Aerospace Excellence Award (AEX) Program. If you have not registered, you can apply electronically at CAP's e-services site. When you apply, you will receive an email confirmation and soon after will receive your requested AEX books in the mail. Once you have completed at least six aerospace lessons from our curriculum (or yours), as well as an additional two-hour aerospace education-related activity, you may submit your completion report electronically. Simply fill out the electronic awards report online to receive your plaque and certificates in the mail in about 2 weeks. If you need to find out more information about AEX please go to <http://members.gocivilairpatrol.com/ae>. If you have further questions, contact Debbie Dahl at [ddahl@capnhq.gov](mailto:ddahl@capnhq.gov).



### **US Space and Rocket Center Teachers Take to the Skies with Civil Air Patrol's Fly-a-Teacher Program**



Dodging downpours of rain and intermittent low cloud cover, twenty-three US Space and Rocket Center (USSRC) Space Camp educator attendees took to the skies Saturday, June 13, from Madison County Executive Air Field, in Huntsville, Alabama. Civil Air Patrol (CAP) pilots flew in from all parts of Alabama to provide the teachers a small aircraft orientation flight experience.

This aviation experience lifted off the teachers' week-long attendance at "Space Academy for Educators." The teachers came from all parts of the country to attend. This event was the first such partnership initiative between CAP and the USSRC to provide this added opportunity for Space Camp teachers.

Teachers were given a pre-flight orientation to the airplane, a chance to try out the controls in-flight, and the opportunity to take aerial photographs to share with their students. CAP Lt Ron Harlan flew three sets of teachers. "Flying these teachers brings a special

reward in seeing their new enthusiasm about aviation. Each teacher has a unique perspective on how the experience can be transferred into classroom instruction. There is never a dull moment when teachers are in the air!"

In addition to the orientation airplane flight, the teachers were also given a day of aeronautical instruction by CAP National Headquarters staff. Angie St John, National Headquarters AE Program Manager, explained that the workshop provided the teachers a variety of inquiry-based activities to supplement and enrich their core curriculum in science, technology, engineering and math (STEM). "The ultimate goal in sharing CAP's AE mission with teachers is to provide teachers with aerospace-themed programs and products to inspire young people toward STEM-related careers." Another hopeful outcome of the program is the introduction of the CAP cadet program to the teachers' students.

Special thanks to all the AL Wing members who participated in the event: Lt Col Gene Mitcham, Maj Pat Mitcham, Capt Andy Boyer, 1Lt Kim Miller, Maj Ants Beresford, Capt Mark Adam, Maj Ray Hara, 1Lt Harvey Yarborough, Capt Carlton Foster, 1Lt Joe Robbins, and Capt Don Hunnicutt. AL Wing Commander, Col Mike Oakman, Vice Commander, Lt Col David Boswell, and Maj John Neil were not able to fly in due to the weather all around the area, but lent their support in planning the event.

Finally, gratitude is extended to USSRC staff who assisted in the event: Katrine Balch, CAP Maj Rhonda Cox, and Ruth Marie Oliver.



Teachers receive pre-flight from pilot Lt Ron Harlan



## REGION TO REGION

For information on other pertinent dates for CAP Members and Educators, go to our calendar at <http://members.gocivilairpatrol.com/ae>

### NORTHEAST REGION

#### October 13-14

The 33rd annual New Jersey Science Convention will be held at the Garden State Exhibit Center in Somerset, New Jersey.

<http://www.njsc-online.com/>

#### October 17

Connecticut Science Teachers Association will hold its conference at Hamden Middle School in Hamden, Connecticut.

[http://www.csta\\_us.org/](http://www.csta_us.org/)

#### October 25-26

The New Hampshire Science Teachers Association will hold its Fall Conference at Attitash Resort in Attitash, New Hampshire.

<http://www.nhsta.net/>

### MIDDLE EAST REGION

#### August 18-19

2009 AGI Satellite Tool Kit (STK) Users' Conference will be held in Washington, DC.

<http://uc.agi.com/>

### GREAT LAKES REGION

#### July 16-17

Teacher conference in conjunction with National Aviation Hall of Fame induction and 2009 A. Scott Crossfield Aerospace Education Teacher of the Year Award will be held at Wright-Patterson National Museum of the U.S. Air Force in Dayton, Ohio.

<http://www.nationalaviation.org/>

#### August 5-8

The Great Lakes Region will conduct an AEO School at Wright-Patterson AFB, Ohio. For more information, contact Yvonne Demyan at [yrcal11@aol.com](mailto:yrcal11@aol.com).

#### October 24

The 2009 Metropolitan Detroit Science Teachers Association will present their fall science conference at Lawrenceville

Technological University in Southfield, Michigan.

<http://www.mdsta.org/mc/page.do?sitePageID=69530&orgID=mdsta>

### SOUTHEAST REGION

#### August 3-5

NSTA (National Science Teachers Association) Summer Institute for science educators will be held at Buena Vista Palace in Orlando, Florida.

<http://www.nsta.org/conferences/2009/summerinstitute.aspx>

### NORTH CENTRAL REGION

#### October 2-3

Science Teachers of Missouri will hold its 2009 Conference at the Capitol Plaza in Jefferson City, Missouri.

<http://www.stom.org/>

#### October 29-31

NSTA is holding a 2009 Area Conference at the Minneapolis Convention Center in Minneapolis, Minnesota.

<http://www.nsta.org/conferences/2009min/>

### SOUTHWEST REGION

#### July 30-31

Arkansas Science Teachers Association presents the 2009 Educators' Technology Conference at John Q. Hammons Convention Center in Rogers, Arkansas.

<http://www.arkscience.org/ETChome.htm>

#### September 2-5

CAP Summer National Board will take place in San Antonio, Texas. Aerospace Education sessions of interest will be conducted. Hope to see you there!



<http://capmembers.com>

#### October 23-24

The 2009 New Mexico Science Teachers Conference will be held in Ruidoso, New Mexico.

<http://www.nmsta.org/>

### ROCKY MOUNTAIN REGION

#### October 1-2

Idaho Science Teachers Association and the Idaho Council of Teachers of Mathematics will hold its fall conference in Borah High School in Boise, Idaho.

<http://www.idscienceteachers.org/>

### PACIFIC REGION

#### July 15-18

Pacific Region AEO School will be held in McMinnville, Oregon.

<http://capmembers.com/ae> (click on the Announcements link)

#### September 12-16

The Astronomical Society of the Pacific will hold its national meeting at the Westin SFO in Millbrae, California.

<http://www.astro society.org/>

#### October 3

Hawaii Science Teachers Association will hold its fall conference at the Science Center at Punahou School in Honolulu, Hawaii.

<http://www.hasta.us/>

#### October 9

Oregon Science Teachers Association hosts its annual conference at McKay High School in Salem, Oregon.

<http://www.oregonscience.org/conference.htm>

#### October 14-17

Alaska Math Science Conference will be held at Juneau Douglas High School in Juneau, Alaska.

<http://www.aksta.org>

#### October 22-25

California Science Teachers Association will hold its annual conference in Palm Springs, California.

[http://www.cascience.org/csta/conf\\_home09.asp](http://www.cascience.org/csta/conf_home09.asp)