



AHA by 1st Lt Jack D. Marty, Georgia Wing, Group 2, Public Affairs Officer

That’s what students in Conyers, Georgia say when they enter the Conyers Middle School Aerospace Education program. They will have studied math and science but once they enter Lt. Col. Stephen Williams’ Aerospace class, it all suddenly comes together in that “AHA moment”. They immediately see how all that ties into real life opportunities.

The Center for Technology and Engineering (CTE) offers a three-year program for middle school students with advanced abilities and outcomes in science, technology, engineering, arts, and mathematics. Their specialty focus is Aerospace Engineering. This is a natural fit as Conyers Middle School has been recognized in the past for being a NASA Explorer School. They began several years ago with innovative programs involving students and faculty engaging in NASA science activities and even live communication with astronauts on the International Space Station in space!



Students learning flight controls and techniques on the Redbird TD2 simulators. Students also cross train in Robotics and the other specialty subjects all with a hands on, collaborative approach.

The AE program at CMS started in 2014 with Superintendent Rich Autry asking each Rockdale County school to come up with a specialty of study. Assistant Principal Anterro Graham immediately responded by selecting Aerospace Education. You see, Mr. Graham is a former United Air Force Academy graduate, Air Force pilot, mechanical engineer, and computer science engineer with companies like IBM and GE. Lt. Col. Steven Williams was an Air Force fighter pilot and captain for Northwest Airlines. One day both pilots had a conversation about how to bring Aerospace Education into Rockdale County Schools and the CME AE program was born. A course curriculum was written using Civil Air Patrol STEM guidelines and materials.

The county recently completed a 15,000 square foot wing, funded by more than \$6.8 million in SPLOST (Special Purpose Local Option Sales Tax) for classrooms, computer labs, manufacturing and design labs. There are also plans for a possible hanger and video studio space in the future. This addition houses not only Aerospace Education classes with 2 simulators and a real life, working wind tunnel but a Computer Lab that teaches students how to code, an Audio Visual production lab, Visual Arts Lab, Video Gaming Lab, Robotics and Engineering Lab, and an AVID program that prepares students for four year universities.



In 6th grade design/build classes Lt.Col. Williams breaks students up into teams simulating a real life manufacturing company of 4-5 students with each assuming a responsibility. Those positions would include a Team Leader, Engineer, Test Pilot, Accountant, etc. The team is given a budget to operate on. When a question is asked of Lt. Col. Williams he charges a \$20 fee as a consultant. One student was “injured” by another company “employee” during a test flight and threatened to take legal action. Lt. Col. Williams was asked to be the attorney in the suit until that team realized that he wanted a retainer fee. Real life experiences in a simulated world will be remembered much more than reading from a textbook.

Now, you are asking, how does Civil Air Patrol come into the picture. Prior to the start of the 2015 school year Mr. Graham contacted Lt. Col Charles Cayce, Georgia Wing Group 2 Commander and discovered David Hamby, a 21 year, retired Air Force Master Sergeant who was substituting in another school system. Mr. Hamby was offered a position not only as a teacher at CMS but was asked to start up a CAP squadron. That squadron was chartered this year and has over 73 members and is still growing. With the extremely capable help from paraprofessional, 1st Lt. Natalie Hannans this program is expecting to total over 100 members by the middle of the 2016 school year. The school’s facilities are open to Civil Air Patrol functions from a large auditorium to a gymnasium and various classrooms.



Chartering ceremony from left to right; Georgia Wing Group 2 Commander Lt. Col. James Crone, Georgia Wing Group 2 Consultant Lt. Col. Charles Cayce, Principal Allison Barbour, GA-815 Squadron Leader, Maj. David Hamby, and Georgia Wing Vice Commander Lt. Col. Andrea Van Buren.



USAFA graduate & Assistant Principal, Anterro Graham



USAF & CAP Lt. Col and AE Instructor Steven Williams

Applicants for the 3 year program are personally interviewed by Assistant Principal and Project Leader Graham to determine interests, abilities to succeed, academic performance and many other factors. The program currently has space for 90 students with aggressive plans to expand that into the 2016-2017 school year.

Students graduating CMS’s AE program will have earned full Ground School certification in preparation for their next phase of education. By 9th grade they could have their single engine pilot license.

Of course, the story doesn’t stop there. It takes a communities’ support to make any fledgling program a success. Covington Airport (KCVC) Manager, Anthony Passariello was contacted to see what support he could give. The result was the use of a 3,000 square foot facility to support Civil Air Patrol. There cadets are able to handle parts used on a daily basis and to get a hands on experience at the careers available in the aerospace industry from mechanics to piloting all different types of aircraft. CAP Cadets receive Orientation flights in CAP aircraft from this airport. Many Cadets have never left the county they live in so this part of the program proves to be exhilarating aside from promoting recruiting and retention.

Again, the story does not end there. CMS now has an arrangement with Middle Georgia State University in Cochran, Georgia for support in their program. Once students are introduced into the CMS AE program and follow it through into high school, MGSU offers a program called 2 PLUS 2. In this program students who apply can begin studies in their junior year paid for by public education funds. They earn not only a high school diploma but also a 2 year Associate Degree at the same time upon graduation! MGSU has a fleet of aircraft including; Warriors, Archers, Arrows, Seminoles in addition to rotorcraft such as Sikorsky Schweizer 300 CBI helicopters and Robinson R44. They earn pilot and mechanic certificates and licenses up to a Bachelors’ Degree in Aviation Science and Management.

You may be wondering about the background of CMS students. CMS is a Title 1 school which is defined by the federal government as “a school with high numbers or high percentages of children from low-income families”. The Title 1 federal program is designed “to help ensure that all children meet challenging state academic standards”. CMS began a mentoring

program that has brought in the likes of Delta Airlines (now an official CMS sponsor), the Lions Club, Tuskegee Airmen, VFW, and NASA. Through the efforts of Principal Allison Barbour, all elective teachers have real life business experiences in the fields in which they teach. Principal Barbour's claim to fame is that she allows the freedom to create with a concept that all stakeholders need to be involved or as she states-"All means All".

Lastly, what makes this school so different from others? In my experience as a former educator and business leader I can say that I have never seen a school with so many terrifically excited leaders and educators. In all my visits I encountered respectful students who were on task and being where and what they were supposed to be. Civil Air Patrol teaches the leadership, the confidence in oneself and the respect of others and most importantly of all, the hope for a future beyond personal expectations. These skills are contagious when mixed with the excitement of Aerospace Education. The greatest part of this is that Rockdale County Schools realizes the tremendous value that Civil Air Patrol and Aerospace Education provides and supports the program wholeheartedly with positive results that have been noted within only 6 months.



GA-815 Leadership staff; (l to r) 1st Lt. Natalie Hannans, ---, ---, Georgia Wing Vice Commander Lt. Col. Andrea Van Buren, ---, ---, Squadron Commander Maj. David Hamby

For more information on this program go to- <http://portal.rockdale.k12.ga.us/schools/cms/Pages/default.aspx> and click on "Specialty Programs".