

National ACE Teacher:

Kelli Jo Wilson

**5th Grade Science Teacher, Holtville Middle School
Holtville, AL**

Six years is the charm for Mrs. Kelli Jo Wilson who has been an energized ACE teacher since 2015 at [Holtville Middle School](#). Mrs. Wilson begins each year with the ACE pre test and then starts her lessons, striving to teach all lessons to her students. She feels that CAP's ACE and other STEM programs allow her to excite her students in her Title I school to learn through fun and engaging hands-on activities. Even though the last couple years have been challenging due to COVID, Mrs. Wilson's ACE lessons have been conducted once a week. The students look forward to ACE Day and the activities involved, thus improved attendance has been a very nice result of the program. Her post-test results consistently show a 65% or higher increase in learning aerospace concepts.

The 5th grade ACE balsa power plane kits are a hit with the students and Mrs. Wilson uses this activity to start the year--- for a reason. This is more than just a build and fly event, but, rather, a way for the students to start asking anticipatory questions and making predictions about the distance and height of their plane's flights- in a fun and non-threatening environment. These intermediate students need time to feel comfortable in front of their peers making predictions that could possibly be wrong. Since most of these students have never flown a model prop plane, everyone feels on an even playing field and begins feeling more confident in the process.



This year, the balsa planes took on a new meaning when an actual United States Air Force retired Lt Col adopted Mrs. Wilson's science classes. Lt. Col. Dave Howard, the Aerospace Education Officer from CAP's SER-AL-032 Maxwell Composite Squadron, came to Holtville Middle School on several occasions and spent the entire day- with all of the 5th grade science classrooms. He taught the students how the airplane actually flies- with Bernoulli's Principle activities that extended the ACE lessons. As this is the plan for the ACE program, to have guest instructors help teach the lessons, Mrs. Wilson felt this year's program was especially meaningful to both her and her students.

Mrs. Wilson's favorite ACE lesson is [Academic Lesson #6, Astrospud Spacesuit Design Challenge](#). She uses this lesson to help teach the Engineering Design Process as it fits perfectly for that process instruction. This lesson lasts several days and the students have a wonderful time being innovative and collaborating together.



Mrs. Wilson has sent photos and write ups of her program to the Wetumpka Herald newspaper to let the community know about the ACE program and how much it enables her students to have inquiry-based learning with a true relevance to real-life experiences.

Although this year has been challenging it has also been great as she has met a new person who can help keep her students engaged with relevant instruction geared toward an aviation theme. Not only did the Maxwell CAP Composite Squadron adopt her class, but the Montgomery Chapter 102 of the Air Force Association sponsored her students for the cool purple ACE shirts. Both CAP and the AFA chapter members joined in to present the ACE certificates to the students for the end-of-program event. During that day, Lt Col Howard also demonstrated drone flying for the students and allowed the students to experiment with paper airplane design and control to manipulate how the glider flies. Not only did the students look forward to the weekly ACE lessons, they began looking forward to having “Mr. Dave” share his knowledge and experiences with them.

Said Mrs. Wilson, “I am so glad I found CAP. The STEM Kits and the ACE program have provided me with lessons that are adaptable and such an innovative approach to teaching. Now that I have found that CAP squadron members will help to mentor my students, this is just an added positive of the entire CAP experience.”

Said her assistant principal, Ms Shannon Duer, “Mrs. Wilson is talented in connecting her students and educating them with engaging and creative lessons. Her classroom is an environment that encourages questioning, cooperation, and independence.”

Said the STEM Director of Elmore County School District, Mr. Tracy Wright, “Mrs. Wilson has mastered the qualities of using the engineering design process to enable her students to work in a non-threatening environment.”

**For her dedication and commitment in preparing her students for the future through the engineering design process,
*CONGRATULATIONS, Mrs. Kelli Jo Wilson!***



Teamwork makes the dreams work. Mrs. Wilson appreciates the Maxwell CAP Composite Squadron for the enhanced instruction and aviation experiences and the Air Force Association Montgomery Chapter 102 for their sponsorship of the special ACE shirts!

