David Tyrel “Ty” White, a high school chemistry teacher at Willcox High School in Willcox, Ariz., guides his students toward their own authentic STEM experiences. As a rural teacher, he believes there are opportunities for students to be engaged in STEM learning experiences wherever they live, and he continuously identifies and provides myriad opportunities to expand student possibilities.

Due to his extraordinary work for students in his rural school and community, as well as students across the country, White was named the 2023 National Rural Teacher of the Year, the 2023 AZ State Teacher of the Year, and the 2023 National 2nd Place AFA Teacher of the Year. Additionally, in 2023, he received an Honorary Doctoral Degree in Humane Letters from Northern Arizona University.

In 2019, White became the Southwestern Space Settlement Design Competition regional coordinator and continues running the qualifying program today in the University of Arizona’s research facility in Oracle, Ariz., *Biosphere 2*—a significant upgrade from the Willcox High School gymnasium where it was previously held.

White was selected as a Borderlands Master Teacher Fellow in 2021 and continues to support and mentor fellow teachers.

“He has continued his leadership role in the Borderlands Rural Teachers Caucus where he works with rural teachers across Arizona to collect data from a variety of educators (including administration and support staff) to identify the most pressing rural challenges. He developed a white paper to share with state legislators and educational leaders based on his research on those challenges. The goal of the initiative is to develop content and training to both support and grow young teachers while creating a stronger support network and resources across the southeastern Arizona region,” said Wally Saeger, Arizona AFA president.

“He has worked with the Arizona Science Center, the Arizona STEM Acceleration Project, the Society for Science, and Arizona Game & Fish to raise awareness of local resources and develop PD for isolated rural and small school teachers. Ty co-hosts a podcast with Dr. Melissa Sadorf from the Arizona Rural Schools Association, highlighting some of the amazing things rural teachers do to help their schools flourish,” added Saeger.

Congratulations to Ty White, AFA’s National Teacher of the Year. Ty is dedicated to fostering his students’ ambitions and creating new STEM opportunities for them regardless of where they live. He has not only touched the lives of his students, but played an important role in shaping the next generation of leaders in aerospace,” said John Shade, Executive Vice President for Business Development and Future Programs at Rolls-Royce Defense. “At Rolls-Royce, we are proud to sponsor AFA’s Aerospace Education program and support all the excellent educators recognized across the country in the Teacher of the Year Program.”
White’s students perform authentic research during the Biosphere experience in his classroom and in extracurricular STEM clubs. He sponsored the Racing the Sun Solar Go-Kart challenge, Rocketry camp, and other initiatives above and beyond his chemistry classroom.

White co-founded the nonprofit, Industry Simulation Education (InSimEd), which brings in aerospace engineers to work directly with students at engineering hackathon competitions across North America.

“When asked about my proudest moments as a teacher, there are several that come to mind. Laura D., as a freshman, was not interested in science – it didn’t relate to her life. However, when she was a junior, I was able to connect her love for cosmetology to chemistry. By her senior year, she created a successful research project, building and coding an Arduino-powered calorimeter.”

White’s former student, Laura Dunham, graduated with a chemical engineering degree and now works at the National Renewable Energy Lab.

“... What truly left a lasting impression on me was Ty’s ability to make lectures not only educational but also captivating. He instilled our learning with a sense of excitement by exploring captivating scientific occurrences, such as the intriguing double-slit experiment. His approach to teaching not only engaged us but also fostered a genuine appreciation for the wonders of science,” Dunham said. “I have observed his students involved in his programs today, and they are enthusiastic about sharing their projects with others and readily seek out Ty White for guidance whenever they encounter obstacles. The growth I have seen in WHS due to Ty’s significant role as an educator has been inspiring. His commitment to becoming an engaged and knowledgeable individual extends far beyond the classroom, making him a prime example of motivation and dedication.”

White is involved in numerous professional organizations as a leader, mentor, and presenter, including:

- Data Science Planning Committee and Teacher Recruitment and Retention Task Force for the Arizona Department of Education
- Co-planner for the first (2024) AFA Teacher Air STEM Camp; partnering with the AFA and Davis Monthan Air Force Base
- Lead team member in creating Professional Development models for STEM teachers, developing Rural Community of Practice for STEM teachers, working with the launch team to start a STEM Ecosystem in Cochise County, and collaborating with rural teachers to identify and address pressing rural challenges
- Lead team member to collect data, analyze challenges, research solutions, and prepare a white paper of suggestions for state leaders, on behalf of the Arizona Rural Schools Association

“He possesses a rare blend of passion, creativity, and expertise that has profoundly impacted the educational experiences of his students,” said Kevin Davis, Superintendent, Willcox Unified School District #13. “Ty’s approach to teaching and integrating aerospace-related STEM topics into his lessons is nothing short of exemplary. He has developed innovative curricula and hands-on learning experiences that not only engage students but also empower them to explore and apply STEM concepts in meaningful ways. Whether delivering lessons virtually, in a hybrid environment, or in-person, he consistently strives to inspire curiosity, critical thinking, and a love for learning.”
President George Castle said White is “one of the most consequential teachers” he’s met, noting he regularly collaborates with other teachers, local businesses, and industry leaders to prepare students to join the future workforce.

“Ty can identify with and understand the students’ different abilities, likes, and dreams. He helps them understand concepts in science and how they relate to the students’ everyday lives by being involved in and consistently improving many of the extracurricular science activities for the students,” Castle said. “The students are very motivated to do well and continue their studies due to Mr. White’s ability to instill a love of learning science.”