



News from the field of the premiere DoD Youth STEAM education program.

First Lady Dr. Jill Biden and Secretary of Defense Lloyd Austin Visit STARBASE Maxwell

In an unprecedented visit to STARBASE Maxwell, First Lady Dr. Jill Biden and Secretary of Defense Lloyd Austin highlighted the importance of hands-on, minds-on STEAM (Science, Technology, Engineering, Arts, and Mathematics) education. STARBASE Maxwell, renowned as Alabama's premiere youth STEAM education program, welcomed the distinguished guests with a showcase of its inspirational instructors, innovative facilities, and exciting curriculum.

During their visit, Dr. Biden and Secretary Austin engaged with students participating in hands-on activities. A small group of students showcased their expertise in LEGO robotics, demonstrating how they build and program robots to complete specific tasks. This interactive session allowed them to see firsthand the creativity and problem-solving abilities fostered by the lesson, which underscored the program's success in cultivating a love for STEAM subjects.

A special highlight of the visit was STARBASE Maxwell's Mars mission simulation. In the spirit of space exploration, Dr. Biden and Secretary Austin were "transported" to a special Mars simulation room where they witnessed a successful robotic exploration mission being completed by the students. Our guests were fascinated with the Mars mission and how the lesson emphasized the importance of preparing the next generation of youth for careers in space and technology.

Dr. Biden and Secretary Austin praised STARBASE Maxwell for its commitment to providing high-quality STEAM education and for inspiring young minds to pursue careers in these critical fields. Their visit underscored the vital role of educational programs like STARBASE Maxwell in shaping the future of innovation and national security.



(Continued on page 2.)

"The future belongs to the curious. The ones who are not afraid to try it, explore it, poke at it, question it, and turn it inside out." -- John C. Maxwell



(Continued from page 1.)

The event concluded with a message of encouragement from both leaders, urging students to continue their pursuit of knowledge and to dream big. Their visit to STARBASE Maxwell was a testament to the power of education in transforming lives and preparing young people for the challenges of tomorrow.



Children's Museum STEM Event



STARBASE Vermont's Rutland site partnered with their local children's museum, Wonderfeet, for a free STEM outreach event. The event took place during school vacation week and drew quite the crowd. Throughout the day STARBASE Rutland instructors offered drop-in robotics programming. Approximately 50 students of varying ages worked with Sphero Indi-cars and Sphero Bolt gyrospheres. Kids explored block based and color-based programming. These little coders were able to customize their own codes by the time they left.

At the same time other STARBASE instructors were running classroom chemistry sessions. The day started with a chemistry class that was filled beyond capacity with 21 kids ages 4-8. They activated glow sticks, observed flash paper burning, set off 'magic' balloons, and created large chromatography papers to bring home. This was followed by two chemistry sessions for 33 older students ages 9 and up who did the Pop Goes the Fizz lesson. Students were enthusiastic to spend their vacation time donning safety goggles, massing chemicals, and setting off little explosions.

STEM Olympics at STARBASE Puerto Rico!

STARBASE Puerto Rico (PR) held their first STEM Olympics in a partnership with InGenius STEAM PR, a non-profit volunteer educational group in the island that works with homeschooled students of all grade levels. As part of the two group's collaborative agreement, they decided to arrange a "STEM Day" together. Thinking about possible themes for the activity, STARBASE PR staff came up with the idea to do a STEM-centered day inspired by the Olympic Games. With this theme, they related the principles of Olympic sports with all STEM disciplines: Science, Technology, Engineering, and Mathematics. It was a day of lots of fun and learning not only for the students, but also for the volunteers and STARBASE PR staff!



Students were first divided into teams and assigned a country. After this took place, they were given time to research fun facts about their assigned countries and share their findings with the rest of the group. As part of their research, students had to look up their country's flag and recreate it. These flags were then used in a parade to officially initiate the STEM Olympics events.

For each event that was held, one of the STARBASE PR instructors gave an introduction to the principles of that sport, and how each event related to STEM. The first event in which the students participated was sailing. With this activity, they first learned about Bernoulli's Principle, cardinal points, and kinetic energy. They were then given recyclable materials so they could assemble their own sailboats, which were put to the test with a boat race in an inflatable pool.

The second event was the javelin throw. For this event, students learned about principles of aerodynamics, distance measurements, and engineering. The challenge of this activity was for students to make correct use of the learned concept of "center of gravity" to build an efficient javelin that would go as far as possible when thrown. Once the students finished the building and testing process, they moved to a designated area where they threw their javelins and measured how far each of them went.



(Continued on page 4.)

(Continued from page 3.)

The third and final event was archery. With this event, students learned about engineering, potential and kinetic energy. For this activity, students were given plastic clothes hangers and rubber bands of different sizes and elasticity. The challenge was for them to determine which type of rubber band they believed would be most appropriate to launch the arrow with enough force to hit the target. Once they assembled their bows, they moved to the shooting area where they shot the arrows at the targets and accumulated points.

The STEM Olympics at STARBASE PR then concluded with an awards ceremony. Everyone received a certificate of participation and medals were awarded to the top three winning countries for each event. This was, without a doubt, a memorable day in STARBASE Puerto Rico, and they look forward to future STEM days filled with exciting hand-on and minds-on activities for their students!

STARBASE Louisiana Achieves Another Milestone

Easton Verheyden was more than a little stunned. The Princeton Elementary student had no idea he was the 40,000th fifth-grader to enter the STARBASE Louisiana program when he stepped off the bus on September 17, 2024.

“I didn’t know what to think,” said Verheyden. “I was just wondering, ‘Are they talking to me or someone else?’”

There was no doubt among the large gathering of 307th Bomb Wing Airmen, STARBASE Louisiana officials, and Bossier Parish School Board employees who they were here to see.

“We’ve got a master spreadsheet of fifth grade students that’s 25 years old,” said Richard Scott, STARBASE Louisiana director. “So, we’ve been tracking this for a long time, and it’s great that it happened during our 25th Anniversary.”

In the quarter century since its inception, STARBASE Louisiana has built a reputation as one of the premier programs in the Department of Defense, winning multiple awards and partnering with several local and military entities to promote STEM education.

STARBASE Louisiana’s school house on Barksdale Air Force Base teaches primarily fifth graders. However, the program also has on-site middle and high school programs with advanced programs in areas like robotics and rocketry.

Verheyden and other Bossier Parish students have so much STARBASE to look forward to as they progress through school. However, Verheyden seemed to be simply soaking up the current moment. “This is pretty neat, especially since my birthday is Monday,” he said.



Article adapted from (<https://www.307bw.afrc.af.mil/News/Article-Display/Article/3909959/>)

STARBASE Battle Creek: Be Our Guest



Students from STARBASE Battle Creek's Phase Two summer academy were given a unique opportunity to celebrate Independence Day 2024. Colonel Frank Walker, a retired ANG Colonel, asked students and their families to meet the United States Air Force Thunderbird pilots while they were in town for the Battle Creek Field of Flight Air Show and Balloon Festival. This allowed students and their guests to take pictures, meet and talk with the pilots and crew, as well as get up close and personal with the aircraft. Western Michigan University College of Aviation hosted this event known as "Pet a Jet" on their ramp. Pilots encouraged their audience to identify their passion and find a way to incorporate it into their profession. They also reminded listeners to do something larger than themselves.

As described on the official website, the Thunderbirds perform for people all around the world to display the pride, precision and professionalism the U.S. Air Force represents. Through air shows and flyovers, they aim to excite and inspire. In addition to showcasing the elite skills all pilots must possess, the Thunderbirds demonstrate the incredible capabilities of the Air Force's premier multi-role fighter jet, the F-16 Fighting Falcon.

In addition to the Thunderbird F-16's, there were several A-10's on display. One of them had a staircase leading up to the cockpit where students and their families could look closely at the controls while talking to the pilots.

It is an Independence Day STARBASE Battle Creek staff, students and families won't forget!





The 2024 Teacher Survey is available now in STARBASE-U in the *SB Program Directors Course* under the Academy Management section. Please contact email@dodstarbase.org with questions.

STARBASE Arizona: The Importance of Civic Responsibility



There is no doubt our volunteers contribute to the success of STARBASE. Their selfless dedication and hours invested not only enhance our organization's ability to serve but is a true testament of their outstanding character. Each moment they spend with our students leaves a profound and positive footprint for these future STEAM leaders. These military volunteers provide opportunities for our students to learn about so many extraordinary careers and make real world connections to each of the STEAM fields. Together, we are part of their journey, inspiring and opening the doors to future possibilities. This in itself, is so powerful.

The team at STARBASE Arizona is beyond grateful to be surrounded by the mighty military community of Davis Monthan Air Force Base. The importance of service is acknowledged and discussed with each group of students that attend the program. They are tasked with thinking of ways they can give back to their community and therefore, continue to pay it forward. Developing a sense of civic responsibility.

Recently, the 5th graders at Francis J Warren Elementary in the Tucson Unified School District were motivated to give back to their community by raising money to purchase gear for Davis Monthan's K9 unit. This process furthered their understanding of a K9 handler's career and truly showed the relevancy of each component of STEAM. These students raised \$1000. Their mathematical challenge was seeing how much could be purchased from the handler's wish list. They definitely made every dollar count!



The STARBASE Arizona team is not only proud of these students' accomplishments in the STARBASE classroom, but in awe of the rich connections they made to each of the STEAM fields. The team is equally grateful for the volunteers who invest in our students by exposing them to the different facets of their careers and always providing unforgettable experiences. We appreciate the time they invest in STARBASE Arizona. It truly makes a difference in the lives of the youth we serve.



It's Time for New Curriculum

The STARBASE Curriculum Advisory Group met in September 2024 and approved a number of new lesson plans! You can find them in the *STARBASE Approved Curriculum* course on STARBASE-U in the appropriate section.

Science: A. Science Fundamentals	Physical and Chemical Changes Experiments New Activity: Stopped Up Sink
Technology: A. Applying Technology	Introduction to Simulation New Activity: The PhET Interactive
Technology: A. Applying Technology	Simulation Appendix Appendix B: GIS: Apps with Maps
Engineering & Art/Design: A. Engineering Design Process	Engineering Design Process Appendix Appendix E: Air Rocket Fin Design
Engineering & Art/Design: A. Engineering Design Process	Engineering Design Process Appendix Appendix F: Vacuum of Space
Mathematics: B. Measurement	Pop Goes the Fizz New Hands-on Graphing Component
Mathematics: B. Measurement	Metric Measurement
Mathematics: D. Data Analysis	Ozobots 3D Printing

In addition, by October 1st, there will be a new Standards, Objectives, and Activities (known as the SOA) and Key Vocabulary list. These foundational documents for the STARBASE curriculum will also be available in the *STARBASE Approved Curriculum* course on STARBASE-U under "General Curriculum Information."

A Call for Participation

Throughout the year, this newsletter will continue to spotlight the achievements, partnerships, and tips of the participants of the DoD STARBASE program. Please share your achievements, success stories, and helpful tips with us at email@dodstarbase.org.



Curriculum Schedules

Check your "Shared with TSG" folder in your Google Drive to see if your 2024-2025 school year curriculum schedule has been verified.

If you do not have a letter from The SPECTRUM Group, you may have necessary corrections. Someone will be in touch soon!