



APRIL/MAY
2024

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



STARBASE Maxwell Celebrates 20 Years!

In a dazzling celebration recognizing two decades of educational excellence, STARBASE Maxwell marked its 20th anniversary on February 23, 2024, highlighting a remarkable journey dedicated to inspiring young minds in the fields of science, technology, engineering, and mathematics (STEM). STARBASE Maxwell humbly began in 2004 as a one classroom program and has since grown into operating five classrooms serving all 5th grade students in the River Region!

STARBASE Maxwell hosted an Open House celebrating the milestone and inviting many prominent members of the community, including representatives from the Governor's Office, Air Force Generals, and local area Superintendents of Education to attend the celebration. Local news media covered the event and were able to capture a bit of the magic that the hands-on, mind-on STEM approach used at STARBASE that encourages students to not only learn on site, but also aims to create lifelong learners that hopefully pursue education at a higher level.

Treated to a tour of the STARBASE Maxwell facilities, guests witnessed over one hundred local 5th graders engaged in hands-on STEM experiments like launching rockets, building and coding robots, and having a shocking experience with static electricity. During the Key Event brief, Savannah Sanchez, a 2015 STARBASE Maxwell Alumni highlighted her STEM experience as a launch pad to her current pursuit of earning her degree in Astro Physics.

In addition to the community support and central to STARBASE Maxwell's two-decades of success are the dedicated teachers who have served as mentors, guides, and champions for River Region students. Through the years, they have been the catalysts for transformative experiences, guiding students through experiments and encouraging them to reach for the stars.



April is the Month of the Military Child. Just like dandelions, military children blossom wherever they land. We are in awe of your resiliency and determination, and thank you for your sacrifices.

STARBASE Kingsley Aims to help in Aviation Shortages!



The pilot shortage has been an ongoing concern for many years. Six years ago, STARBASE Kingsley decided to increase student awareness and interest in local aviation careers. The program has hosted Aviation Academies in the summer months and incorporated aviation lessons and activities into their STARBASE Advanced programs. Students have been able to see and/or tour a plethora of aircraft, from crop dusters to private airplanes and helicopters, medical air transporters, aerial firefighting aircraft, and fighter jets. During the 25-hour curriculum schedule, their students get to tour the military aircraft that are stationed on base and that come through for training missions.

The summer academy students have experienced take off and landings from the Tower, climbed inside of a Wildfire Tanker Helicopter that was converted from a military Black Hawk, sat in the AirLink Medical Transport fixed-wing and rotary-wing aircraft, and toured both civilian and military hangars. They have had the privilege to personally speak with pilots and see the variety of available careers that support aviation.

During their Aviation Academies, the students also learn the principles of flight, build and test gliders, fly and navigate using our flight simulators, maneuver drones through obstacle courses, and practice navigation using hand-held GPS units.



Community STEAM Night at STARBASE Vermont - South Burlington



STARBASE Vermont's South Burlington site joined St. Albans City School on a Tuesday night to celebrate all things STEAM. The school held their second-annual STEAM Festival where members of the community came together to provide exciting, hands-on activities. Eight local organizations were invited to support the event, and more than 300 students and families were in attendance. Attendees moved around the school to explore the many activities and stations that were set up and met with science, engineering, and educational professionals from their community.

STARBASE Vermont worked with students and families to code Lego Spike robots. A course was set up for students and families to practice free-coding through various obstacles. More structured challenges were also provided to scaffold students in their exploration of Lego block coding. These missions included coding a robot to follow a colored line, conducting a perimeter check of the obstacle course, having a robot race and stop at a finish line, and the fan-favorite of the night which was coding a robot to breakdance. This STEAM festival is one of the many ways STARBASE Vermont is involved in their local communities.



STARBASE Directors Brown Bag Series

The STARBASE Brown Bag Series is back again in FY24! Please consider joining us at one or all of the virtual brown bag sessions below. Look for an email with registration information soon!

Thursday, May 9th @ 1pm ET

An Update from LEGO with
Lauren Russell

Thursday, June 13th @ 1pm ET

Curriculum Implementation, Instruction and Scheduling
Q&A



This year, STARBASE will have regional workshops during the summer of 2024! More information to follow. Please protect these dates in your calendars:

Eastern Time Zone Sites & Puerto Rico:

31 July & 1 Aug @

STARBASE Peach State, GA

Central Time Zone Sites:

7-8 Aug @

STARBASE Kansas City, KS

Mountain, Pacific, Hawaii, & Guam Time Zone Sites:

25-26 June @

STARBASE High Sierra, NV

STARBASE Salina Shines at the 18th Annual Western Kansas Lego Robotics Competition

STARBASE Salina's Advanced Robotics Teams from Lakewood Middle School and Sacred Heart Junior High began meeting in January 2024. Students began by learning multiple ways to code Lego Spike Prime robots. They developed a new understanding of sensors, created complicated block combinations and developed interesting robotic designs. By March 25th both schools were ready for the 18th Annual Western Kansas Lego Robotics Competition held at Fort Hays State University. This event challenged students in programming and robot design. Seventy-nine student teams representing eighteen different schools competed in five challenging categories: Color Sorter, Line Follower, Catapult, Maze, and the most popular, Sumo Bot Battle.

Each event presented unique challenges. Line Follower, for example, required teams to follow a black line that was set in a "Y" pattern. At the judge's discretion, a box was randomly placed on one end of the Y. The robot had to choose the correct side, follow the black line to the box, turn without touching the box, and return to the starting line. Students found that their robot's wheelbase made a difference in how the robot reacted in this challenge, and they needed to adapt their program to make the robot respond correctly. This was a timed event with the fastest five times earning team points.



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The Catapult Challenge primarily focused on designing a robotic arm that could hurl a ping pong ball 100 cm into a pyramid of ten plastic cups. Teams were allowed two launch attempts to knock down as many cups as possible. This was a new event to the students this year, and they soon gained valuable insight by observing others' designs. They quickly began discussing and planning what they could do differently in the future.

The Maze, one of the more popular events at the competition with 58 entries, required students to program their bot to maneuver narrow alleyways and sharp corners as quickly as possible. Students learned that robot setup was a huge key to success. The top five teams that made it through the maze with the fastest times were awarded points.

The day ended with the popular Sumo Bot Battle! A student favorite, this challenge focused on both robot design and programming. Two single elimination brackets, Bracket A, made up of 32 teams and Bracket B, with 37 teams, provided spirited entertainment for the crowd. STARBASE Advanced students climbed to the upper level of each bracket topping out in the Elite 8.

In addition to the robotic skills, students gained many life skills. Ameerah, a first-year team member, stated, "I've learned to have more patience, problem solve, and trust myself more." For many of the students, this was their first time to visit a college campus. This event opened their eyes to STEM education possibilities and planted a seed for future STEM Careers.

STARBASE Salina would like to thank Great Plains Manufacturing for donating the STARBASE Advanced T-shirts for the students to wear during the competition. Companies like Great Plains Manufacturing recognize the importance of STEM education and work towards brightening the future for our community and beyond.

DoD STARBASE Guam presents The CONCH 2024: A CONtraption CHallenge



DoD STARBASE Guam would like to acknowledge and congratulate Daniel L. Perez Elementary School students and their accomplishments in the program's first annual CONCH competition, a contraption challenge. A contraption is a machine or device developed to complete a complicated task. Students were challenged to produce artwork demonstrating the workings of a gadget to solve a problem faced in their communities. Participants could choose one of five challenges themed to sustainability, including pushing trash into a bin to reduce litter, crushing a can for recycling, watering a small plant to promote agriculture and sustenance, and turning off a light switch to demonstrate energy conservation.

With the guidance of their advisor, Gifted and Talented Education (GATE) teacher Ms. Shannon Seleen, a combination of 35 4th and 5th-grade students submitted their artwork to illustrate their understanding of STEM-focused processes and concepts such as the Engineering Design Process, physics, the transfer of energy, potential and kinetic energy, and how to develop an eco-conscious mindset using 21st-century thinking. Over four weeks, students learned new knowledge and translated their learning into art with their creative and innovative ideas.

Students were given certificates on Friday, March 15, 2024, at their school site with rewards for the top-10-scoring submissions alongside their advisors, the school's administrator, Dr. Darlene Roberto, Senator Chris Barnett, Dr. Leah Beth Nahalowaa (STARBASE Guam Director), Sherylyn Tablan (STARBASE Instructor), and Frank Candaso (STARBASE Instructor). DoD STARBASE Guam would like to thank their friends and partners from the Bank of Guam, Guam Visitors Bureau, Wendy's Guam, and QuickBites, who supported The CONCH and all the participants' efforts. They hope to continue growing partnerships and expanding community reach to promote STEM through various mediums.



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.