



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

STARBASE Jackson Barracks Advanced Program Participated in State Robotics Competition

"I made friends with people I may have never talked to before joining the robotics team. We all learned how to be a part of a team and help each other," said Nay, a middle school student with STARBASE Jackson Barrack's Advanced program. The program recently participated in FIRST LEGO League Challenge competition in New Orleans as the "Cosmic Colonels." Advanced Program coordinator and team coach, Blake Farmer, said what he enjoyed most was watching a group of kids from different grade levels and walks of life, learn to not only work together, but become friends. "The STARBASE Advanced Program robotics club gives the kids that maybe aren't into sports or drama a place to grow," Farmer said.

The students in the group joined for different reasons, some didn't even know anything about robotics. Nay was one such student that said she joined on a whim to hang with a friend, but now is interested in pursuing a career in STEM. Farmer starts every program off with cooperative team building activities to build a sense of comradery. "Our motto going into this competition was 'We don't have to win to be successful, we are not here to win but to learn,'" he said.

The STARBASE mission is to inspire young people to pursue STEM career opportunities and learn from hands-on experiences, which works hand in hand with the mission of FIRST LEGO League robotics. The program promotes "real-world problem-solving experience through a guided, global robotics program," (FIRST LEGO League Organization).

The team participated in the Robotics Challenge for ages 9-14 years old. The challenge consisted of four equally weighted parts (25%) for the total performance at the event: Robot Design, Robot Game, Innovation Project, and Core Values. The Cosmic Colonels had to design their robot based on the missions they decided to carry out. "There were quite a few iterations of the robot during practice," Farmer said. "But they came together to combine ideas from each of their teammates."

"Technology in the Arts," was this year's theme, and the team also developed an innovation project with a presentation piece. The idea was sparked from the

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"You can't solve a problem on the same level that it was created. You have to rise above it to the next level." –Albert Einstein

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students thinking of the lack of things to do in their community that can specifically appeal to middle school students.

Also of concern, was the lack of transportation for students. “We thought of a transportable skating rink that has middle school age nights reserved,” Aiden, Cosmic Colonels team member, said. They designed a skating rink that would be transported on an 18-wheeler and would fold down when in use. The students shared their ideas, collected feedback from classmates, and had to illustrate the solution. “We went through a few different ways to create this rink,” Aiden said.

The team passed the Qualifying event in December and participated in the State Competition event in January. While they didn’t come in first in any category, the team improved over their 3 competition slots and finished strong with a good score, and they felt successful after their innovation presentation. Coach Farmer said he was impressed with the team’s collaboration, and positive attitudes under pressure. “If they can learn to work collaboratively on a project, then this gives them a head start in life.”

STARBASE Jackson Barracks team is so proud of the participating students, the coach and school sponsor, Estelle Ledesma.



STARBASE Swamp Fox Receives the Arbour Award

STARBASE Swamp Fox is the first recipient of the Arbour Award for their Annual Report support during FY 2023. This recognition was established in memory of Cheryl Arbour, STARBASE SPECTRUM Group Team member and former Louisiana STARBASE Director who passed away in July 2023.

The Arbour Award, established in FY 2023, will now be presented each year to recognize the STARBASE location for their contributions to the STARBASE Annual Report and the timely submission of the Director’s Questionnaire – which is the basis of information for each STARBASE Annual Report.

STARBASE Swamp Fox was ready with needed data and was in the top five of all nine data submission categories for FY 2023 which is a notable achievement. Congratulations to Director Shelia Phillips-Hicks and the Swamp Fox staff as the first recipient of this award.



STARBASE Porterville Has Launched!

On January 16, STARBASE Porterville (SBPO) hosted their first two classes of aspiring Scientists, Technicians, Engineers, Architects, and Mathematicians from Roche Elementary School in Porterville California. SBPO is directed by Capt. Rene Martin, 27-year veteran of the California Air National Guard. SBPO is unique in that it is a stand-alone tenant at a complex that is adjacent to Porterville Military Academy. In partnership with Porterville Unified School District (PUSD) and the community, STARBASE Porterville provides an essential experience in the STEAM education of fifth graders in the region.

All available STARBASE classes have been filled, resulting in 36 classes and nearly 1,050 STEAM students this semester. By partnering directly with PUSD, STARBASE fills a critical role in the regional strategy to provide targeted STEAM programming, focusing on the gap in STEAM education that typically occurs when kids are the most receptive.

SBPO is happy to announce STARBASE Porterville! Launch is complete, and the mission is underway.

Just a quick reminder that the answers to many of your questions are available in the Targeted DoDI Learning Guide on STARBASE-U in the *STARBASE News* course! Please contact email@dodstarbase.org with questions.



The STEM Behind F-15 Engines



STARBASE Kingsley students use Global Positioning Systems (GPS units) to navigate different waypoints/locations around Kingsley Field Air National Guard Base in Klamath Falls, Oregon. At one of the waypoints, the students reach the F-15 Engine Shop and are met by Airman Frost, or one of many engine shop mechanics.

The STARBASE Kingsley students have the opportunity to learn the inner workings of the engine, such as how every part of the engine works in sequence with the next, enabling maximum thrust, amazing top speed of 1,650 miles per hour, and its incredible maneuverability.

Airman Frost and his team do an outstanding job of explaining the inner and outer workings of the F-15 engine and how it pertains to STEM. This static display gives a visual learning experience of the many different components inside the engine and how they all work together to power the F-15. Students have the opportunity to ask questions like "How much fuel does the F-15 use?" Or "What creates the fire shooting behind the engine?" The engine shop always goes above and beyond with putting these questions into a perspective the students can understand. For example, the F-15 at max power uses 385 gallons of fuel per minute, which is the equivalent of fueling a semi-truck or 20 mini vans every minute.



With hands-on exposure like this, students are inspired by the many career paths that involve science, technology, engineering, and mathematics!

HEY BATTER BATTER, SWING!



DoD STARBASE Pensacola Summer STEM Academy is set to return to Admiral Fetterman Field, home of the Blue Wahoos, to STEM Like a Wahoo.

During the summer of 2023, STARBASE Pensacola brought 4th-6th graders to their STEM Like a Wahoo – 1st Inning camp, and it was a true success in every way. The training (camp) was held the last week of July, but the Florida heat did not deter the energy and excitement of the campers or the STARBASE staff! It was GAME ON!

The days consisted of activities that had the campers thinking about baseball and how STEM is involved in each part of the game. The STARBASE players built a baseball stadium (complete with a paper airplane Blue Angels flyover), programming Dash robots to run the bases, designing and engineering a robotic hand to hold and catch a baseball, predicting and measuring the distance of a frozen baseball vs. a normal baseball, launching rockets over the Wahoo Stadium, and even had the honor of having the Commanding Officer of NAS Pensacola, CAPT Shashaty, join them on the field for a game of kickball and pictures with Kazoo, the mascot of the Blue Wahoos.

The campers also received a very special tour of the Blue Wahoo's facilities from Mr. Bill Vilona, a local sports writer and Blue Wahoo fan! Campers got a behind the scenes look at the dugout, player lounge, locker room, hitting machine and the press box – with some of the campers getting to announce over the loud speaker "Play Ball!" STARBASE Pensacola thanks Mr. Vilona for sharing the history and all his knowledge of the facility. It was truly an outstanding part of the day and an experience the students will never forget.

The program also wanted to thank the CEO of the Blue Wahoo Baseball team, Mr. Jonathan Griffith; Ms. Shannon Hannah, Events Sales Manager -Studer Events; and intern Rachel Bethea for all the fantastic support during their time at the stadium. Special thanks for the support from the parents getting the campers up and to the stadium each morning of camp, too.

STEM Like a Wahoo -the Second Inning is in the works and planned for the first week of June 2024, and it is expected to be even better than the first. This could not happen without the ongoing support of our community collaborators and partners from the Blue Wahoo Baseball organization.



Congratulations to STARBASE Kansas City and the Kansas City Chiefs for their win at Super Bowl LVIII!



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.

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, March 21st @ 1pm ET

Outreach & Supplemental Programming

Thursday, May 9th @ 1pm ET

An Update from LEGO with Lauren Russell

Thursday, June 13th @ 1pm ET

Curriculum Implementation, Instruction and Scheduling Q&A

