DoD STARBASE
A Department of Defense Youth Program

CIRCUIT

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

Welcome Aboard, DoD STARBASE Pensacola!

The ship's doors opened on March 01, 2022 welcoming 46 STARBASE students and their classroom teachers! The cadets arrived with smiles and excitement on their faces as they stepped off the bus. After boarding the ship and walking up the ladder to their ready rooms, they received the very first STARBASE Pensacola morning briefing and geared up for the mission of the day. Once they stated the DoD STARBASE Pensacola pledge, they embarked on the maiden voyage of the STARBASE journey.

The cadets and teachers then reported to their respective JIC (Joint Intelligence Center) where cadets completed the hands on, minds on intelligence "research" in all aspects of STEM. A separate and the third room, known as the "CAD Lab," will be where they reported to carry out the Onshape missions and activities.

STARBASE Pensacola is excited for STEM career explorations as several military services and industries are represented on base and in the community, which provides a large sample of career speakers for the young cadets of STARBASE Pensacola. Even the Blue Angels are on the list of career exploration as they deploy the cadets to the simulators for some insight into flight and careers.

STARBASE Pensacola thanks everyone who assisted with this endeavor, and they are forever grateful to be on the ship making a difference in the lives of the children in Escambia County Florida.

Cutting the ribbon were Superintendent, Escambia County, Dr. Timothy Smith; Rita Miller, Director, DoD STARBASE Pensacola; CAPT Shashaty, Commanding Officer of the Naval Air Station, Pensacola, Florida; Mr. O'Toole, Office of Assistant Secretary of Defense; and Admiral Kyle Cozad, retired Navy and CEO of Naval Aviation Museum Foundation. Several local dignitaries and supporters were also present.

"Science is fun. Science is curiosity. We all have natural curiosity. Science is a process of investigating. It's posing questions and coming up with a method. It's delving in." -- Sally Ride

STARBASE Kelly Hosts First All-Female Empowerment Day

Riding on the sturdy wings of Bessie Coleman and Amelia Earhart, the team of STARBASE Kelly in San Antonio ushered in a power-packed day of aviation inspiration for the students of Providence Catholic Girls School.

The day began with a C5 tour guided by the STARBASE staff and two female Loadmasters from the Lackland AFB 433rd Airlift Wing. COVID precautions have finally loosened enough in South Texas that the students are able to tour inside the planes again, and the crew was happy to accommodate! From nose to tail and every inch in between, the girls were able to climb, sit, lift, pull, and experience the day-to-day operations of the largest aircraft in our nation's Air Force! One lucky young girl was even able to look out of the escape hatch. The crew members graciously answered questions and shared their experiences with the girls and truly displayed the core value of service before self.

After the C5 tour, the girls arrived back to the center to some special guests waiting for them. Three very special women, Lt Col Olga Custodio (USAF Ret), the first Latina US military pilot and instructor; Lt Col Aimee Tullis, Commander of the 356th Airlift Squadron; and Andrea McGilvray, Aircraft Mechanic and Aerobatic Pilot, stopped in to share their stories with the girls.

Lt Col Custodio told the girls, "Querer es poder" which translates to "Where there is a will, there is power." She talked about how she was able to have an extremely successful career while also being able to build her family. Lt Col Tullis talked to the girls about the unique path her career has taken and how they should never say no to an opportunity that doesn't quite fit into the life they envision for themselves and to keep their options open. Ms. McGilvray wowed the girls with videos of her daring flight maneuvers and told the girls not to let the 'lack of' anything hold them back. Not having money or resources or the same opportunities as others shouldn't be a deterrent to their success. "Go out and make your own way." She shared her story of doing just that!

STARBASE Kelly's first All-Women day of empowerment was a HUGE success and everyone left feeling lifted. And, for the one and only gentleman working at STARBASE that day? "I cannot be more proud to be in this room right now!" said Erving Charles, TSgt USAF, (Ret) and current STARBASE Kelly Office Manager. The rest of the staff couldn't agree more!

STARBASE Salina 2.0 Robotics Competition 2022

STARBASE Salina partnered with two local middle schools sponsoring after-school robotics clubs. Lakewood Middle School and students from Sacred Heart Junior High began working with EV3 robots in January of this year to prepare for the Western Kansas Lego Robotics Competition which was held on April 4, 2022 at Fort Hays University in Hays, Kansas. Eighteen schools were present with 204 participants competing. STARBASE students worked in pairs to complete at least two of the competition's events.

The events involved higher level thinking and coding skills using sensors, measurement, and various robotic configurations. Students could choose to compete in the Minesweeper Challenge, where the bot had to locate a 3-inch red circle on a white playing field that was placed in an unknown area where the fastest time would win the challenge. The Roadblock Challenge proved to be one of the most difficult events as the bots were required to navigate through a maze containing three roadblocks at unknown locations. Even though this challenge was solved at each school's location, the variables between the practice boards and the ones at the competition provided too much variance for a successful mission.

A line following challenge called Time Trial Retriever involved not only programming the bot to follow a black line but to also capture a plastic cup at the end of the curved line and return it to the starting location with the fastest time. The Mountain Climber challenged bots to climb a 48-inch ramp set at a 45-degree angle and descend the ramp on the other side to the bottom of the mountain.

One STARBASE team successfully made it up the ramp and over the top but failed to land in the red zone at the bottom. The highlight of the day was the Sumo Bot Battle which was conducted using single elimination brackets. Many STARBASE teams made it past the first elimination bracket with two teams continuing into the semi-finals. Students from both schools expressed that the after-school robotics club was a positive experience enabling them to learn a variety of new skills using teamwork. From configuring the robot to gear ratios and advanced coding details, students learned that perseverance pays off.

STEM in STARBASE Peterson

STARBASE Peterson offers students the opportunity to supplement their science and math curriculum through 25 hours of science, technology, engineering, and mathematics at Peterson Space Force Base (SFB). The academy was founded in 2014 and is one of 70 STARBASE sites and the only one in Colorado.

"The developmentally based curriculum is standardized, cutting-edge, research-based instruction that meets math and science standards," said Sarah Knox, STARBASE Peterson director. "The combined classes offer 'hands-on' experience with the program open to students in public, private, charter, and homeschool settings."

Airmen and Guardians stationed at Peterson SFB or Schriever SFB are able to volunteer at STARBASE Peterson and interact with the students.

"We have guest speakers talk with each class of students to provide direct contact and mentorship for students," said Knox. "In addition, STARBASE Peterson is looking to expand with a STARBASE 2.0 program, which will depend heavily on dedicated Airmen and Guardians willing to contribute 20 plus hours as middle school students engage in an after-school, STEM-project-based learning environment."

Christopher Texler, STARBASE Peterson instructor, poses with one of his models that hang in his classroom at STARBASE Peterson, Peterson Space Force Base, Colorado, March 8, 2022. The goal of STARBASE is to provide an outstanding, STEM educational experience for students and teachers in a hands-on, high-tech, discovery and inquiry-based environment on a military installation. (U.S. Space Force photo by Airman 1st Class Ryan Prince)

According to the DoD STARBASE Annual Report for 2020, military volunteers provide students with additional linkages between education and application. They may serve as guest lecturers to explain the use of STEM in different careers or act as base tour guides highlighting the use of STEM concepts in their missions and giving students access to military facilities and operations.

The academy's primary mission is fifth grade classes; public, private, charter, and homeschools all participate in the program. The program is a year-round program where classes of 20 to 35 students attend a five-day program for five hours a day totaling 25 hours of instruction.

STARBASE Academies are not exclusive to one branch, academies can be found at National Guard, Air Force Reserve, Army, Air Force, and Space Force bases across the nation.

The goal of the program is to provide an outstanding, STEM educational experience for students and teachers in a hands-on, high-tech, discovery and inquiry-based environment on a military installation.

Article Source: https://www.peterson.spaceforce.mil/DesktopModules/ArticleCS/Print.aspx?PortalId=15&ModuleId=47453&Article=2973205 1/3

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.

West Virginia STARBASE 2.0 Student Drone Team Advances to World Championship

On February 13, 2022, West Virginia STARBASE Academy's STARBASE 2.0 students from Hayes Middle School in Kanawha County competed along with other West Virginia high-flying drone teams at a qualifying tournament hosted by the Robert C. Byrd Institute (RCBI) at Marshall University.

By performing a series of tasks with their drones while maneuvering obstacles on a playing field, the STARBASE 2.0 students were Tournament Finalists and will advance to the World Championship along with five other teams.

The RCBI-sponsored event was part of the REC Foundation Aerial Drones Competition (RAD), a nationwide initiative to provide students a fun, hands-on and affordable way to engage in the STEM fields of science, technology, engineering and mathematics by learning to program and safely operate drones, work as teams, and research real-world applications of drone technology.

One of the fastest-growing STEM-focused activities for students, RAD has expanded to more than 300 teams across the United States, including 32 in West Virginia.

Source: https://www.marshall.edu/wamnewsletter/2022/02/west-virginia-student-drone-teams-advance-to-world-championship/

COVID TRACKER

For those programs that have not resumed normal operations, updates to the COVID Operational Status Tracker spreadsheet are due no later than April 30th (last day of the month).

These updates are provided to OSD/M&RA as a report monthly.

The link to the spreadsheet is available in STARBASE-U. If you are having trouble accessing the tracker, please contact email@dodstarbase.org for assistance.

Save the Date - 2022 STARBASE Virtual Workshop

Monday, July 25th and Tuesday, July 26th 1300-1600 EDT

Specific details about the schedule will be released as soon as they are available. At this time, please protect these dates in your schedule. Thank you!