



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

A Day in the Life of a STARBASE Instructor

- by Jill Englund, STARBASE Minnesota-St. Paul

It's not every day you get to feel like a rocket scientist, unless you're an instructor at DoD STARBASE. For the past five years, I have been known as "Luna," part of the instructor team here at STARBASE Minnesota, and I love my job. Our teaching days are jam packed with inspiring moments where I get to see students' eyes light up time and time again. Outside the teaching day, I work with scientists and engineers who come to teach us about real careers in STEM. I am constantly learning!

I first came to STARBASE Minnesota for the five-day experience as a classroom teacher with my 5th grade students. As soon as we dove into the first engineering task on day 1, I saw my students soar to new heights, overcome challenges in teamwork, dig deep into their skills of perseverance and creativity; the research-based lenses we have students look through in order to increase students' self-identity with STEM. It was truly an inspiring week, and I knew I wanted to be part of this program long term. My teaching experience ranged from two years subbing in Minneapolis to five years teaching K-6 Spanish, and I just wasn't sure I was the right fit for a STEM program. One of the lightbulb moments I had while watching my students at STARBASE is that truly everyone can find their place in STEM, so I decided to apply!

Now that I get to be Luna in STARBASE classrooms every day, I love experimenting with the latest technologies and developing curriculum to meet the wide range of needs of students we serve. It is an honor to work with so many different schools each year! Hearing from students that they might pursue a future in STEM after their week at STARBASE makes me feel like the future of the world is in good hands.



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"Innovation is the ability to see change as an opportunity – not a threat."

-- Steve Jobs



Budget Books are Due no later than July 01, 2023!

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Beyond the classroom, I focus on engaging corporate STEM industry partners like 3M, BAE Systems, Ecolab, Boston Scientific, Medtronic, Delta Air Lines, Cummins, Pentair, Xcel Energy, and many others. Interacting with these professionals helps our instructor team stay informed on the real world our students will encounter as they grow

up and pursue careers and bring that into our teaching and learning. We are lucky to be partners with such dynamic and influential groups, and I get to coordinate our scientist/engineer events at STARBASE as well as visits to various corporate campuses where we get sneak peeks into their fascinating research and development.

At STARBASE Minnesota, students receive a set of careers and explore STEM career videos as research for their bright futures! One of my favorite projects over the past few years has been identifying local STEM professionals at our corporate partners to

feature in our career video collection, (check it out here at www.starbasemn.org/career). It is crucial for students to see people who look like them represented in STEM fields, and I love finding people who are passionate about their careers and willing to share that with our students!

Most of all, I love working with students in this unique environment. Being able to give kids an unforgettable experience is a privilege, and we strive for continuous improvement. Our team at STARBASE is small but mighty and I am grateful to be part of our mission of educating and inspiring Minnesota youth!



STARBASE Directors Brown Bag Series

Thank you to everyone who participated in this spring's Brown Bag Series. The feedback was overwhelmingly positive, and the next round of trainings are already in the works!



Botball in Boise

STARBASE Idaho 2.0's Middleton Middle School Botball Team, The Rebel Alliance, competed in the Idaho Botball Tournament on April 22, 2023. The tournament was hosted by Galileo STEM Academy and featured 16 middle and high school teams from across southwestern Idaho.

Botball is a robotics competition in which middle and high school teams are asked to build and program autonomous robots to complete a series of intricate tasks. Teams prepare for approximately 8 weeks to compete. During this time, participants learn to program in C-coding while utilizing various sensors, engineer and design their own robots from a limited list of parts, and even practice a little carpentry as they were also required to build the practice game board from a parts list and blueprints. Each of the two robots work simultaneously on the competition table, so programming must be precise in order to get the job done.

This year marks the first year STARBASE Idaho has participated in the tournament. The team consisted of 7th and 8th grade students who had previously participated on the Rebel Alliance First Lego League team along with a few new students. Botball served as a perfect stepping stone from the engineering, design, and programming of Lego robots using block coding to the more complex, written C-code.

The team encountered some initial difficulties when they discovered they had used too many brackets on their builds to qualify to compete and had to quickly redesign and adjust their program before competition began. It was truly an amazing sight to see the teamwork, grit, and ingenuity they displayed when faced with this problem. Assigning roles for each robot, the team worked to restructure their apparatuses and reprogram for the differences in power, speed, and sensor parameters needed to accommodate the new robots' designs.



All of the programming bugs were not quite worked out by the time the competition began and the Rebels' first few seeding rounds did not go as well as they expected, with the robots running into other objects on the table or, at times, each other. This did not deter the team, nor dampen their spirits. They kept their focus on consistent improvement and made an incredible comeback during the double elimination rounds, making it to the final round before being eliminated.

During the awards ceremony, the Rebel Alliance was honored three times. First, for best T-shirts, which was pretty exciting for the coaches, as they had designed and made the shirts. Second for outstanding



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documentation; throughout the programming and design process, each team was required to keep an engineering notebook filled with timelines, deadlines, goals, difficulties, and solutions. The Rebel Alliance shined in this category, keeping meticulous records of the entire 8-week process. The final award, and the one the team is most proud of, was the Judges Choice Engineering Award. During their presentation judging session, the team demonstrated their growth and skill in design, redesign, and teamwork. The Engineering Award was well earned by this group of dedicated students who persevered through adversity as a cohesive team.

STARBASE Idaho and Middleton Middle School would like to thank their 2022/2023 sponsors, STEM Action Center and Sunrise Boise Rotary Club. Their support of both STARBASE 2.0 First Lego League and Botball teams has created a space for STEM-minded students to expand their content knowledge and hone skills required of all learners such as grit, flexibility, and teamwork.

Way to go Rebel Alliance!



2023 STARBASE Workshop | Aug 2nd-3rd

The STARBASE Program Director & Instructor workshop will be held virtually again this year on Wednesday, August 2nd and Thursday, August 3rd from 1300-1600 EDT. The schedule is almost ready, so look for an e-mail with all the details soon!



“Show Us the Summer!” - A Call for Participation

We would love to highlight some of the field’s summer activities in the next few editions of *The Circuit*. Please share your summer camps and activities with us at email@dodstarbase.org. Be sure to include a little blurb about the experience and pictures!!!

General Raymond Visits STARBASE Patrick

STARBASE Patrick was honored to welcome Four-Star General, John William “Jay” Raymond (Ret.), and his team to tour their facility and participate in a few of the activities STARBASE students experience! General Raymond was joined by several members of Patrick Space Force Base including Space Launch Delta 45th Commander Brigadier General Stephen G. Purdy, Jr.; Chief of Child and Youth Services, Pamela Jordan; Chief of Force Development Flight, Glenn Smith III; and School Liaison Program Manager, Susan Clark.

General Raymond is a Retired United States Space Force General who served as the first Chief of Space Operations, from 2019 until his retirement in 2022. As the Space Force’s highest-ranking uniformed officer at the time, he oversaw the organizational stand-up and the transfer of officers and enlisted personnel into the newest service branch (www.spaceforce.mil). Prior to that, General Raymond served concurrently as both the commander of the United States Command and commander of Joint Force Space Component. His extensive resume includes serving in the war in Afghanistan and Iraq war as the Deputy Chief of Staff of Operations, Headquarters of the United States Air Force at the Pentagon.

General Raymond was accompanied by Chief Master Sergeant of the Space Force, Roger A. Towber. Chief Towber serves at the highest enlisted level of leadership, providing support and direction for enlisted forces and represents their interests to the American public and to those in all levels of government. He acts as the personal adviser to the Chief of Space Operations and the Secretary of the Air Force on all issues regarding the welfare, readiness, morale, proper utilization and development of the U.S. Space Force. Chief Towber is the first chief master sergeant appointed to the highest noncommissioned officer position (www.spaceforce.mil).

Patrick Space Force Base and STARBASE Patrick staff were also treated to a General’s “Challenge Coin.” This “Challenge Coin” is a specially designed coin given to honor a person or group for a special achievement. The staff was honored to have received this coin from such an achieved and respected member of our military.

STARBASE Patrick was privileged to have had the opportunity to ‘wow’ the leaders of the United States Space Force with their example of a DoD STARBASE program. They all feel grateful for meeting these accomplished military members and their staff, while being able to demonstrate the hands-on, minds-on approach to learning science, technology, engineering, and mathematics that makes STARBASE such an amazing program.



STARBASE Louisiana is Gearing Up for Rocketry!

STARBASE Louisiana has had a team qualify for The American Rocketry Challenge (TARC) nationals, for the third year in a row! This year, the team is made up of 100% JROTC cadets from Haughton High School. Because of the JROTC rocketry's team success, STARBASE Louisiana has been invited to travel to Maxwell Air Force Base and share their experience about starting a rocketry team to Commanders from all over the country at the Air Force JROTC workshop.



STARBASE U

STARBASE U is a great resource for program staff! You will find training opportunities, sample documents, annual reports, program guidance, everything you need to know about operational and resource management site visits, and so much more! If you haven't explored STARBASE U, we invite you to take the summer to do so!

Please remember that your site's @dodstarbase.org account is to be utilized solely as the administrative account. This is the account that you will log-in with in order to enroll users to the platform and into courses. This is not the account staff should be using to complete courses and or access the platform on a regular basis. All program staff (including the director), will need to have a separate account apart from this one.

This can be done by logging in with your administrator account (@dodstarbase.org), and enrolling all of your staff into the learning management system. There is a course called "STARBASE Account Administrator Training" where videos are provided to walk you through the entire enrollment and/or removal process.

This is also a great time to do some "Spring Cleaning" in your program's account. Please ensure that all current staff are enrolled and active and remove those who may have moved on and away from your program. Any questions regarding STARBASE U can be directed to Sandy Anderson (sanderson@spectrumgrp.com) or Mikelle Cronk (mcronk@spectrumgrp.com).

