

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

Updates from the 2021 STARBASE Directors' Virtual Workshop

On July 27th, 28th, and 29th STARBASE Directors from across the continental United States, Hawaii, Puerto Rico, and Guam gathered together on Zoom to participate in the first ever STARBASE Virtual Conference! Over the course of three days, program directors and staff heard presentations from OASD, DoD STEM, PTC, The Spectrum Group, fellow directors, and our Keynote Speaker, Justin Shaifer (aka Mr. Fascinate). Below are a few highlights from the event, but please don't forget that all the presentations and breakouts from the three days were recorded and are available on STARBASE-U!



The conference opened up with a welcome greeting from Mr. Judd Lyons, Deputy Assistant Secretary of Defense for Reserve Integration. Mr. Lyons recognized the vital mission that STARBASE pursues in building relationships with the positive role models in the Military, and reassured all that the program has the full support of the Department of Defense. Mr. Lyons paid tribute to new STARBASE programs from FY 21, new program directors that joined the team and Level III program award recipients.

Mr. Louie Lopez, Director of DoD STEM, took the Zoom stage later on that day. Mr. Lopez is responsible for the development, coordination, and execution of the department's STEM programs for K-Graduate Level students. The DoD STARBASE mission aligns with his overall goals and larger purview. Although funded differently, the two offices and programs work closely to develop, inspire, and cultivate a future work force to serve our Nation in STEM.



If you missed it, you will be sure to want to check out Mr. Lopez's presentation for so many great STARBASE 2.0 curriculum ideas!

(Continued on Page 2.)



"Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young." – Henry Ford, American Industrialist



Director's Questionnaire Update

A huge THANK YOU to all the sites that have submitted all the components of your FY21 Director's Questionnaire! To those that still have some pieces left, please get them submitted as quickly as possible.

Information about the FY22 Curriculum Schedule submission will be sent out on or about September 1st, and your schedule will be due back September 20th.

Please make note of these dates!

(Continued from Page 1.)

Dr. Jordan Cox and the PTC Educational/STARBASE Team attended the conference and spoke to the changes DoD STARBASE will be making to the CAD pieces of the curriculum. OnShape, the only fully cloud-based CAD system available, is here!! OnShape allows for not only collaboration among students on 3D models, but also brings equity to CAD software and capability due to its internet-based operating system.

As Dr. Cox explained, no new CREO licenses are being issued, so once licenses expire, sites will be required to move to OnShape. CREO is retiring for STARBASE, and all sites will be converted to OnShape by the end of this school year. Many virtual trainings have happened over the course of the past year, and there will be more to come in FY22. Be on the look-out, but until then don't forget that there are tons of online resources at <https://learn.onshape.com/>



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STARBASE Alumni - Drew Bennett



Making a special appearance at the Director's Conference was a young man recently brought aboard the PTC Education Team. Drew Bennett, a recent graduate from University of Maine with a degree in Mechanical engineering, attended DoD STARBASE in 2008 at the former STARBASE program in Maine. Even though, the specific STARBASE site that Drew attended is no longer in operation, he still has the dog tags he earned during his time there. We are so excited to work with Drew, and we certainly hope that STARBASE was part of the reason that Drew has pursued not only a STEM field, but a career in 3D Computer Aided Design...a staple of STARBASE instruction.

Justin Shaifer, aka Mr. Fascinate was the keynote speaker for this year's conference. With a goal of becoming to STEM what ESPN is to sports, Justin has embraced his "inner nerd" and now fills his time speaking to students and STEM programs across the nation and encouraging equity in STEM instruction and careers. After sharing his story that echoes so many of our own students' journeys, he provided some helpful tips to our STARBASE staff about how we can best serve our students.

One standout among many during his talk that resonated with a large section of his audience was his resistance to traditional labels of students like him that are traditionally referred to as underrepresented, underresourced, or underserved. He always preferred to consider himself UNDERESTIMATED instead!

Justin's talk is available for all STARBASE employees through STARBASE-U in the STARBASE News course! We hope to work with Justin again soon!



Workshop Accolades

New Programs This Year

- STARBASE Guam
- STARBASE Central Florida
- STARBASE High Sierra
- STARBASE McGuire-Dix Lakehurst
- STARBASE Fort Polk
- STARBASE Pensacola
- STARBASE Henderson
- STARBASE Fort Drum



New STARBASE Directors

- STARBASE Arizona - Kristine Impellezzeri
- STARBASE Vandenburg - Tonya Troup Spurlock
- STARBASE Patrick - Carol Sluzky
- STARBASE Montana Great Falls - Kara Bates Tangedal
- STARBASE Idaho - Courtney Taylor
- STARBASE Manhattan - Melissa Peat

Sites Awarded Level III

- STARBASE Fort Wayne, Indiana - Evan Smith
- STARBASE Minnesota St. Paul - Kim Van Wie

FY20 Director's Questionnaire Accolades

- First Completed FY20 Director's Questionnaire:** STARBASE Martinsburg
- Best Photo Submission:** STARBASE Louisiana (See Pictured)
- Best Quote Submission:** STARBASE Rapid City (See Side Column)

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 has the ability to inspire our children in the classroom, and then show them how the lessons apply to real, fun, and exciting careers. This bridge, coupled with the amazing skills and enthusiasm of the instructors, provides kids with hope and direction for their futures."

CW2 Nick Hemen

Updates to the COVID Operational Status Tracker spreadsheet are due no later than August 31st (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.

STARBASE Minnesota-Duluth Instructor Honored with Blue Angels Flight

On June 23, 2021, STARBASE Minnesota-Duluth instructor Katie Lassi received the experience of a lifetime – an F18 flight with the U.S. Navy Blue Angels team.

Last month, STARBASE instructor, Katie Lassi, was nominated by members of the Duluth Air Show committee for the Key Influencer flight with the U.S. Navy Blue Angels. The role of the Key Influencer for this ride was very specific this year; the recipient was targeted as a STEM educator who has positively impacted their community by their role and passion for educational outreach. Charity Johnson, STARBASE director stated, “When I was contacted about Katie’s nomination, it was immediately evident to me that Katie fit all the criteria the Blue Angels were looking for and so much more. Katie is such a profound STEM educator who has a lasting impact on the students we serve. She is also incredibly passionate about community outreach. It is no surprise she was selected to carry out such an honor.”

When asked about the flight, STARBASE instructor Katie Lassi said, “I am so excited to share my jet flight story with my future students. It was truly an amazing way for me to relate STEM to what students will be learning about at STARBASE. It is so impactful for students to hear stories and personal experiences while learning about abstract science concepts like Newton’s Laws of Motion or changes to body physiology due to differing levels of gravity.”

Katie started out her professional career as a molecular biologist at the University of Minnesota-Duluth and quickly decided that education was her pathway to happiness. Katie has been an educator at STARBASE Minnesota-Duluth since 2017. Katie is an innovator in the field of STEM education. As a constantly curious person, she encourages students to dig deep within themselves and find the perseverance and fortitude to be successful and think about how STEM is applicable in their everyday lives.

Lassi also says, “I will use my experience to lead discussions about the physics of flying, biological changes in flight or space and of course the engineering that is applicable to both of those topics. STEM can often be abstract for students as we teach the theories, concepts and ideas, but this experience was STEM applied and

100% in action! I was able to experience the science of my body changing from zero G’s to seven times the force of gravity. I can speak to the technology in the jet that not only keep us in the air but to tell us exactly where in the world we were. I saw the result of the engineering of a jet engine come to life. Lastly, math was evident in the calculations used by the pilot and for myself as I felt seven times the force of earth’s gravity. I was very honored to represent STARBASE and STEM educators in Northern Minnesota.”



STARBASE 3.0

A Collaborative Effort Between Virginia, Kansas, and West Virginia STARBASE Programs



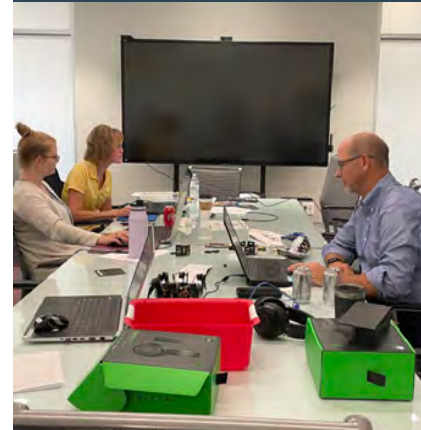
STARBASE's authority encompasses delivering exciting STEM activities to children from kindergarten through high school. STARBASE programs in Kansas, Virginia, and West Virginia collaborated in order to pilot the newest program, STARBASE 3.0. This program was designed to extend the impact of the hands-on, minds-on program delivered to elementary students and the after school, middle school STARBASE 2.0 program.

This initiative began over three years ago. Mike O'Toole, Director, Civil Military Programs, Office of the Assistant Secretary of Defense for Manpower & Reserve Affairs, had the opportunity to visit a summer Marine JROTC camp in Front Royal, Virginia that was organized and run by Paul Jornet, USMC 1st Sgt (ret). Mike immediately envisioned a collaboration between STARBASE and this MCJROTC program. He called a few STARBASE locations to help develop a pilot STARBASE 3.0 program at JROTC summer camps. This model of STARBASE 3.0 would involve providing hands-on, minds-on STEM projects at existing JROTC residential summer camps. Realizing that the scope and level of the project would necessitate a large number of instructors to be successful, led to the proposal of involving multiple STARBASE programs that would work together.

During the spring of 2020, California, Kansas, Virginia, and West Virginia STARBASE locations were making plans to support four weeks of STARBASE 3.0 that summer. The plan was to work with 200 MCJROTC cadets at each camp held in Los Alamitos, CA; Mexico, MO; Harlingen, TX; and Front Royal, VA. The project chosen would be an Engineering Design Process using hexapod robots. The students would build the robot and learn to program using C++ coding.

The high level of this project meant the STARBASE staff collectively was facing a steep learning curve with understanding the Arduino platform. The best course of action would be to pull from the strengths of the staff and collaborate together across STARBASE. A development team was formed that included one person from each participating STARBASE location and they became the driving force behind the project. They helped form the instructional teams, developed the curriculum,

(Continued on Page 6.)



Kudos to the Directors involved with the amazing start to the new STARBASE 3.0 adventure from the entire STARBASE community!

- » Susan Corrigan, Program Director of Winchester STARBASE Academy
- » Karen Whitacre, Executive Director for STARBASE Kansas
- » Melissa Peat, Program Director of STARBASE Manhattan
- » Sherra Triggs, Program Director of STARBASE Martinsburg

(Continued from Page 5.)

facilitated learning about the microprocessing board and programming in C++, and provided general oversight.

Then...COVID-19 hit, and the summer plans were cancelled.

Planning started again in early fall of 2020 with CA, KS, VA, and WV with the hopes that camps would be held during the summer of 2021. With the uncertainty of where COVID was heading, the leadership of MCJROTC soon made the decision that this camp would move forward, but would be a virtual camp. Paul Jornet organized a location in Stafford, VA where the STARBASE 3.0 instructional team would travel in order to teach the students virtually. Supporting one virtual camp required less staff than four on-site camps so the teaching team was adjusted accordingly.

Staff training took place during monthly Zoom meetings starting late in the fall of 2020, by January 2021 the meetings were bi-weekly training meetings, and then became weekly a few months before the July 2021 camp. In between these meetings, staff members practiced building the hexapod, learned how to code using C++, and became experts in the schematics of the circuit board.

In final preparation for the project, the staff was divided into three 3-person teams. This allowed each instructor to focus on their strengths (building, schematics, and coding), although each instructor became experts in all areas.

The over two-year period of hard work came to fruition July 19 – 27, 2021. A team of 14 STARBASE employees traveled to Stafford, VA and taught 149 JROTC cadets from 26 states, 56 high schools from the U.S., Japan, and Guam. These dedicated STARBASE instructors were truly phenomenal in their instruction and interactions with the students. Besides the rewards of teaching the students, one of the biggest take-aways was the collaboration between the staff from three states. The staff in the building where the camp took place remarked on several occasions that they were so impressed with the professionalism and comradery between the STARBASE instructors.

When asked what they enjoyed the most about the course, one student responded:

“The different personalities of each instructor brought a lot of life to the course. Everyone was so kind and patient, and it made sitting at the computer that much more bearable.” Hannah Arrivey, Quantico HS

When asked what they were telling their friends and family, one student responded:

“I’m so happy I decided to take this opportunity to do this cyber camp, although sometimes it was tough, I could always ask questions and I felt really included in this process. It was a very educational camp and I felt very accomplished building a robot with help from experts.” Jonah Vicent, Glynn Academy

As directors of our premier STEM program, we are very proud of the hard work, collaboration, positive student interactions, and willingness to go above and beyond exhibited by each STARBASE team member.

Brooklyn Noble - A Letter of Support for STARBASE Louisiana

I am Brooklynn Noble, currently enrolled at Louisiana State University, and a graduate from Parkway High School. During my academic career, I had the honor to be a part of the STARBASE program for eight years of my life. It made up a huge part of my development and understanding of engineering, leadership skills, and comprehending situations from a different perspective.

I grew up in Bossier City and was a part of the STARBASE program on Barksdale Air Force Base during 5th grade. STARBASE was one of the first exposures in my life within the STEM field. Before this, the only opportunities and experiences I was exposed to was the medical field, education, and the military through my family. Going to STARBASE at such a young age and getting exposed to all these activities and concepts started my spark in passion for engineering that I carry with me today. While in middle school, the STARBASE program expanded into the STARBASE 2.0 program, which gave me and other students a weekly exposure to projects and more long-term goal planning. This, in turn, gave me important skills and perspectives most people take decades to learn, such as concept design, forward thinking, problem solving skills, corporation, team building, and most importantly that it's okay to fail. By the time I learned these lessons I had enough knowledge that I could pass it down to people who joined the STARBASE program in high school, where I learned what it meant to be a leader, how to market and grow, and understood along with other peers that this is something I want to do for the rest of my life.

Though these reasons above aren't the only reasons why I stayed in STARBASE for so long. I stayed in STARBASE for so long because of the strong connection I had grown with the staff and my team mates. I stayed in STARBASE for so long because of how good it feels to work on something that finally leaves the design pages and becomes something physical. I stayed in STARBASE for so long because it meant so much to me to see the program grow and more people experience the same joy that I did for their first time. The STARBASE program is one of the rare programs that you can call a hidden gem, something that is so valuable and special that it is worth so much to be a part of.

Even now in college, I carry these memories and lessons with me so I can continue on course to be an engineer. While I am in the computer science field, I hope to work in the more design aspect due to my experience with STARBASE. Without STARBASE, I honestly do not know who I would be right now. I used to want to be a nurse, an artist, or even a Youtuber because that's really all I was exposed to in my life with my mother being a nurse and myself having exposure with art online. STARBASE exposed me to STEM and STEAM which greatly helped me see so many different career paths and fields that sparked my interests. I know it's the same for others because I haven't met a dedicated STARBASE kid who doesn't know what they want to be and isn't passionate about doing it.

Honestly the STARBASE program is such a huge part of my life, and I love everything it gave me. I wouldn't trade any of these experiences and opportunities that they gave me. My only regret is that I couldn't be in it longer.

