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.

Putting A Little "Spark" in Your Saturday at STARBASE Robins

Saturday Spark provides rising 6th – 8th grade students an immersive informal learning opportunity that supports students' ability to think creatively and work collaboratively using a series of STEM hands-on activities. STARBASE Robins offered a fall and spring Saturday Spark to create a safe space for students to extend their knowledge of STEM concepts. The fall Saturday Spark included lessons and activities using fractals with math, little bits (circuitry), Ag STEM, and team-building exercises. Students had the opportunity to test their knowledge gained with a round of Kahoot as a ticket out of the door to conclude their experience.

Students who returned for our spring Saturday Spark dived into more STEM experiments and activities. The focus provided opportunities for students to work as scientists and engineers. STARBASE Robins Program Instructor, Anikitia Abram, is an entrepreneur with her scented candle and hair care product line. She used her knowledge to develop a lesson to teach students the science behind making aromatic candles. Students created their scented candles that they were able to take home. Our Executive Director, Wesley Fondal Jr., and Program Instructor, Kylie Youmans, taught a lesson where students had the opportunity to learn the science behind DNA. Students had the chance to perform their DNA analysis by extracting and observing DNA strands from strawberries. Students could keep their DNA samples extracted from the strawberries to take home.

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"Always bear in mind that your own resolution to succeed is more important than any other." -- Abraham Lincoln

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Students became engineers during our next activity. The task was to create a safety restraint device to protect their real "egg" during the two-story drop. STARBASE Robins 2.0 Facilitator, Donnie Howard, paired students in groups, gave them a budget, and provided the opportunity for each group to determine which materials to purchase to build a safety restraint device that would be designed to protect the egg during the two-story drop. Unfortunately, none of our group's eggs survived the two-story fall. However, students learn the importance of working together and how to utilize their resources best to solve problems.

During our final activity, students had the opportunity to work as scientists to explore the impact of Cell Motility in animals, plants, and single-celled organisms. STARBASE Robins Program Instructor, James Warren, led this activity. Mr. Warren discussed the science behind how cells use unique organelles (Cilia and Flagella) to spark the direction of movement. Students built a tiny autonomous robot to represent a cell and the cilia organelles using a toothbrush head, small button battery, small pager motor, two pipe cleaners, googly eyes, and tape. Students could play games with their bristle bots at the end of the Cell Motility lesson. The mini game was staged like an arena. One side represented the positive chemotaxis (bacteria will survive and replicate), and the other represented negative chemotaxis (ex, antibiotics). The bristle bots started in the middle of the arena. The goal was for the bristle bot to move to the positive side.

The biggest takeaway the staff learned from the Saturday Sparks is the importance of giving students a safe space to think creatively and to work collaboratively to become the next generation of STEM inventors and entrepreneurs. STARBASE Robins looks forward to continuing their Saturday Sparks series in the fall and spring of the 2023-2024 school year. The Saturday Sparks is an effort to have continuity with the students participating in their STARBASE ROBINS STEM Adventures Summer Academies. Students accepted to the STARBASE ROBINS Summer Academies are automatically enrolled in the Saturday Sparks.

STARBASE Directors Brown Bag Series

As you may already know, a Directors Launch Training was developed for new STARBASE directors in 2022. After conducting two sessions of this in-person training, it is clear from the feedback that this information would be beneficial for all directors! To reach the widest audience possible, please consider joining us at one or all of the remaining virtual brown bag sessions below. Look for an email with registration information for upcoming sessions!

Thursday, May 25th @ 1pm ET

Resource Management Part 2: Fiscal

Thursday, June 22nd @ 1pm ET

Reporting and Data Collection Requirements

Pre-K Students Explore STEM in Gary, Indiana!

STARBASE Indiana-Gary celebrated the National Association for the Education of Young Children (NAEYC) Week of the Young Child with Bethune Early Childhood Center. STARBASE Gary Program Director, Office Manager, and instructional staff collaborated to teach 36 outreach STEM classes to approximately 240 students ages 4-5 years over a period of three days.

On day one, 14 classes were taught on the STARBASE site, where students and their parents entered the "Enchanted Forest" and experienced life inside the plant kingdom. They learned about photosynthesis, gardening, soil science, and osmosis. Students transitioned to "Rocket World," where they learned all things rockets. Activities included hands on STEM exploration, rocket construction, STEM literacy, and STEM themed songs and games.

During the remaining days, the team taught 22 classes to the entire school. Two themes were covered. Half of the STARBASE team taught coding and the other half taught a thematic unit called "Wiggly Worms." Each class made their own secret handshake to enter Worm World, where students got to explore the life of worms, worm body parts, and composting. They sang along with Herman the Worm, learned how worms help in fishing, practiced one to one correspondence with worms, made a yummy dirt and worm snack, and explored worm habitats with dirt, leaves, orange and banana peels, magnifying glasses, and 900 live worms.

The students, who mostly had never seen a worm in real life, were excited and scared, as they searched the habitat with magnifying glasses and their hands to find and, sometimes, hold the worms. Even the teachers enjoyed the Wiggly Worm experience. The students found out that worms really like banana peels. The experience was encouraging to the students, parents, and teachers and forged meaningful, lasting relationships through a strong partnership with Bethune Early Childhood Center and the Gary School Corporation.

The Week of the Young Child was held April 1-7, 2023 and is the annual celebration sponsored by the National Association for the Education of Young Children (NAEYC), the world's largest early childhood education association. Established in 1971, The Week of the Young Child® focuses public attention on the early childhood years (through age 8) and the needs of young children and their families. It is a great time for community partners to support the educational needs of young children.

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. Specific details will be provided as soon as they are available.

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 Salina Robotics Competition 2023

STARBASE Salina had 27 middle school students that attended the Fort Hays Robotics competition in Hays on April 3rd, 2023. This was the 6th year STARBASE Salina 2.0 clubs participated in the Lego Robotics competition. A total of 314 students competed from 25 different schools.

STARBASE club members were encouraged to enter at least two of the five challenges at the competition. Six of the STARBASE teams completed the maze challenge successfully. The "Y" Challenge and Whoops challenge also had success from some of the STARBASE teams. The Sumo Bot battle was among the most popular event with 92 teams entering that category.

STARBASE Salina had one Sumo Bot team make it three full rounds before being eliminated. The overall experience fostered perseverance and teamwork among the students. Many of the students were also exposed to a college campus for the first time at this competition.

Both Mr. Michael Beeson, coach for the Sacred Heart team, and Mrs. Jennifer Griffin, coach for the Lakewood Middle School team, enjoyed the experience of working with STARBASE Salina during the after-school robotics clubs. They look forward to partnering with STARBASE Salina again next year.

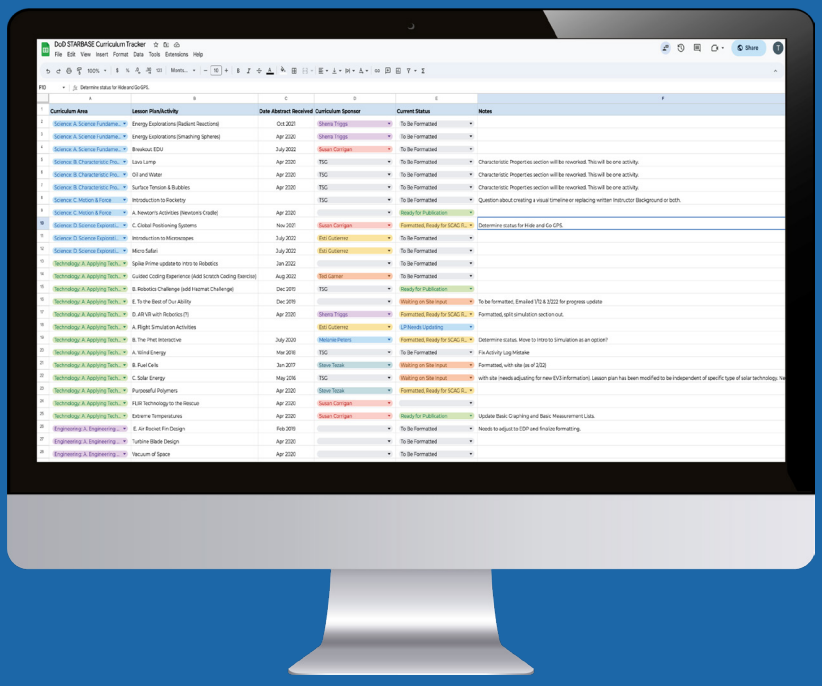
STARBASE Sioux Falls Celebrates Reading

Every March the National Education Association observes Read Across America to "create and celebrate a nation of diverse readers." STARBASE Sioux Falls embraced the event to support students making the connection between reading and STEM learning. STARBASE instructors visited 22 fifth grade classes from 11 elementary schools as guest readers to share STEM inspired literature.

Books including *If I Built a Car* and *If I Built a School* by Chris Van Dusen as well as Andrea Beaty's collection of stories *Ada Twist, Scientist*; *Rosie Revere, Engineer*; and *Iggy Peck, Architect* communicate STEM concepts through rhythmic verse which also encourage students to think creatively and persevere to reach future goals and dreams.

STARBASE Curriculum Tracker

The STARBASE Curriculum Advisory Group (SCAG) has created a new STARBASE Curriculum Tracker to increase visibility of where each curriculum submission is in the development process. This will allow visibility of both new lesson plans in the works and where your submissions are in the process! We are excited to have a bunch of new lesson plans published soon!



You can visit the Curriculum Tracker here! It will also be linked in STARBASE-U under in the STARBASE Approved Curriculum course.