

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

Budget Reporting Reminder

All DoD STARBASE programs (Active, Guard, and Reserve) are reminded that, in addition to your annual budget request submission, all programs are required to track and maintain records of your budget execution on a quarterly basis.

DoD STARBASE programs that are sponsored by the National Guard are reminded of their additional budget reporting requirements. The initial budget request and quarterly budget reports must be submitted through NG-J1-Y to OASD M&RA. These requirements are defined in the DoD STARBASE Cooperative Agreement (Section 402 below). It has been noted during recent program evaluations that some DoD STARBASE programs (sponsored by the National Guard) are not routing their Quarterly Budget Reports through their respective USPFO to the NG-J1-Y (Attn: Patrick Johnson). Programs that fail to submit the required Quarterly Budget Reports through the USPFO to NG-J1-Y are likely to see this as a finding on their USPFO fiscal and real property audit.

Section 402. Budget Reports

- a. The STARBASE Program uses three Microsoft Excel spreadsheets for required Budget Reports. Questions regarding report preparation and submission may be addressed to NG-J1-Y.
 - (1) Initial Budget Report -- used to submit initial Fiscal Year operating Budget.
 - (2) Budget Modification Report -- used when modifying the approved initial Fiscal Year (FFY) operating Budget.
 - (3) Quarterly Budget Report -- tracks operating Budget obligations/expenditures by calendar quarter. Quarterly Budget Reports shall be sent to NG-J1-Y not later than 90 days following the execution date of the operating Budget.
- b. Updated annual Goal-Focused State Plans will be submitted simultaneously with each proposed budget submission.
- c. A revised budget is required when additional funds are requested above the initial approved budget amount.



"Imagination is everything. It is the preview of life's coming attractions."
-- Albert Einstein

Curriculum Crosswalk

Explicit curriculum alignment reinforces the strength of our program’s curriculum and becomes an amazing marketing tool for those trying to expand the reach of individual STARBASE programs. If you haven’t taken a moment to visually demonstrate the alignment between the STARBASE curriculum and your unique state standards for the grades you serve, this would be a worthwhile exercise for not only Program Directors, but also staff members that interact with visiting teachers and students.

This concept of curriculum alignment has been discussed at many points throughout the last few years, including the presentation at the 2019 STARBASE Directors Workshop in Columbus, OH. Examples of Curriculum Crosswalks will be available in the Strategic Pause area on STARBASE-U.

5 th Grade Crosswalk: Mathematics	
Oklahoma Academic Standards and Objectives	DoD STARBASE Lessons
Numbers and Operations (N)	
5.N.1 Divide multi-digit numbers and solve real-world and mathematical problems using arithmetic.	
5.N.1.1 Estimate solutions to division problems in order to assess the reasonableness of results.	Basic Measurement - Length, Liquid Volume, and Mass
5.N.1.2 Divide multi-digit numbers, by one- and two-digit divisors, using efficient and generalizable procedures, based on knowledge of place value, including standard algorithms.	Numbers and Number Relationships: Eggbert Extension Activity
5.N.1.3 Recognize that quotients can be represented in a variety of ways, including a whole number with a remainder, a fraction or mixed number, or a decimal and consider the context in which a problem is situated to select and interpret the most useful form of the quotient for the solution.	Basic Measurement - Length, Liquid Volume, and Mass Numbers and Number Relationships: Eggbert Extension Activity
5.N.1.4 Solve real-world and mathematical problems requiring addition, subtraction, multiplication, and division of multi-digit whole numbers. Use various strategies, including the inverse relationships between operations, the use of technology, and the context of the problem to assess the reasonableness of results.	Basic Measurement - Length, Liquid Volume, and Mass Engineering Design Process: Eggbert Numbers and Number Relationships: Eggbert Extension Activity
5.N.2 Read, write, represent, and compare fractions and decimals; recognize and write equivalent fractions; convert between fractions and decimals; use fractions and decimals in real-world and mathematical situations.	
5.N.2.1 Represent decimal fractions (e.g., $\frac{1}{10}$, $\frac{1}{100}$) using a variety of models (e.g., 10 by 10 grids, rational number wheel, base-ten blocks, meter stick) and make connections between fractions and decimals.	Basic Measurement - Length, Liquid Volume, and Mass Data Analysis: Rocket Launch Numbers & Number Relationships: Eggbert Extension Activity

March 2019

The 2020 Call for Participation

Throughout 2020, 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.

Top Level Programs

Five DoD STARBASE Locations Receive Top Level Program Designation in 2019

During FY19, select DoD STARBASE locations were evaluated for designation as a “Level III - High Performing DoD STARBASE Academy”. To be eligible for consideration, the location must have maintained a fully compliant Basic Level I and Advanced Level II program for the past six consecutive years, which included having a sustainable STARBASE 2.0 program. In addition, they must have developed an activity or set of activities that significantly advanced the DoD STARBASE program mission and vision.

This is the third of a five-part series to introduce you to the new Level III programs. This month, we highlight STARBASE Robins. Congratulations to all of these exemplary locations who are now officially designated as a “Level III - High Performing DoD STARBASE Academy.”

STARBASE Robins

Robins Air Force Base, Warner Robins, Georgia
– Air Force Reserve



STARBASE Robins has become a key player in central Georgia FIRST LEGO League (FLL) through their STARBASE 2.0 program. They also actively use pre-service teaching candidates to supplement STARBASE teaching staff.

During FY19, STARBASE Robins coordinated 2.0 clubs at 12 schools and four counties in Central Georgia. Money from the AF STEM program pays for team FLL registration, so the program is provided at no cost to students. Clubs meet for two hours for 12 weeks for FLL in the fall and two hours for 12 weeks in the spring for robotics extension activities. In addition, STARBASE Robins hosts the Central Georgia Super Regional FLL Tournament at the Museum of Aviation with all STARBASE Robins staff members playing an operational role.

STARBASE Robins also supplements DoD program funds for staffing though the use of pre-service teacher candidates from Ft Valley State University in the STARBASE classroom. Since 2012, STEM Methods course students observe in the STARBASE classroom, assisting STARBASE personnel while learning in a non-traditional classroom setting. These teacher candidates benefit from exposure to real-life inquiry-based STEM teaching methods along with actual classroom experience in a monitored environment. Candidates are observed and graded by university and STARBASE personnel. Their final project involves teaching an actual STARBASE lesson to participating students. STARBASE Robins benefits from extra hands in the classroom as well as the fresh ideas and feedback from teacher candidates. A similar relationship is in development with Middle Georgia State University.



Curriculum Updates

Upcoming Publications

The Curriculum Committee has been hard at work to put the finishing touches on some exciting new pieces of curriculum. Below is just a taste of what's coming:

1. **Physics and Chemistry:** New activities for Newton's Third Law in the *Newton's Activities* appendix.
2. **Energy:** A new appendix called *Fluid Characteristics* that will give you a fun way to explore fluids with your students!
3. **Technology:** A new activity about coding for Technology A. called *Coding the Road*, as well as, several new activities in Technology B. exploring whole new areas of instruction including simulation and renewable resources.
4. **Engineering:** Several exciting new Engineering Design Process lesson plans are in the earlier stages of development.
5. **Mathematics:** And, there are lots of new math opportunities in the works that will further reinforce core concepts!

More information to follow about these lesson plans as they move through the publication process!

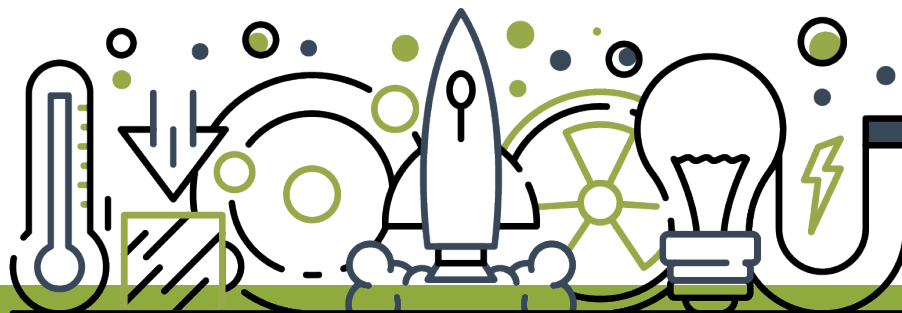
Curriculum Abstracts: FY20 Round Two

Recently, the Curriculum Committee (CC) requested new ideas from you in the 2020 Round Two Abstract Data Call. We received an amazing number of new ideas -- 36 abstracts.

The CC is meeting virtually to review these ideas, and you will receive feedback on whether your abstract has been approved for further development in mid-May. All approved abstracts will be moved to the next phase of full development, while we are in this strategic pause, missing our kids!

While it is wonderful to have such a large amount of new curriculum, it will take the CC time to work through them all. When we send you the response on the CC review of your abstract, you will also be given an indication of whether your new lesson plan (LP) or activity will be further developed during the remainder of FY 2020, or whether it will be further developed the first half of FY 2021.

Priority will be given to those LPs that cover areas where there are fewer curriculum choices and those that significantly advance new ideas, new technologies, and creative approaches to STEM learning. We appreciate your patience as we work through the wonderful list of new curriculum ideas. We will keep you updated about what is on the horizon for curriculum.



Kahoot!

By: Esti Gutierrez, Director at DoD STARBASE NM

Kahoot! is a free interactive app that can be used with iPads, tablets, phones, or computers. It is very easy to use and the students really get into it.

"Create fun learning games for your class in minutes, or choose from millions of existing games to introduce a topic, review and reinforce knowledge, and run formative assessment. Kahoot!" - Kahoot.com

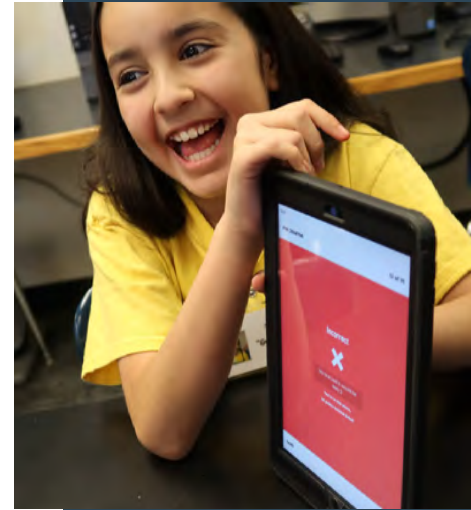
At STARBASE NM, we use Kahoot! as a competitive game with our students before the post test. Students work in table groups or as elbow buddies to answer multiple choice questions and earn points. Teams earn points by answering questions correctly and the game also gives more points for how quickly a team answers. This eliminates ties.

To begin the instructor will need to log in or set-up a free account at www.kahoot.com. Once members login they can either create a new game or set of questions or search for existing games. This is the link to our review game: <https://create.kahoot.it/details/starbase-quiz-game/8752ee7f-a665-49d0-a18c-fa15517e68d9>

The games, or series of review questions, can be hyperlinked into a ppt presentation for ease of access. Once the instructor pulls up the link, starts the game, a game code is projected on the screen, and students enter this code after accessing the Kahoot! app or going to the website. This starts the game. We have students enter their team name (alpha, bravo, charlie, etc.), and when using this game, we allow points as an option. Once the game starts, the instructor is able to pause the game to discuss any answers that they feel need further clarification and review. At the end of the game, a winner is declared.

Another way we have found to use the app is as review from a prior visit or at the end of the day. We have found that a five question quiz, hyperlinked at the beginning and/or end of the day is the most time efficient. When we set up this portion, we do not assign points, and the students are given a random name. This is easily set up in the create portion of the quiz. Each student participates as an individual instead of as a team. This creates anonymity and a safe space to be incorrect. We use this as a check for understanding on our part, as well. A bar graph comes up and reports what percentage of students answered each question. It also displays the correct answer, so instructors can have a minute to discuss, if need be.

The only drawback is that you do need a good wifi connection, but the kids love it!



Celebrating 25 Years in Sioux Falls



On January 28th, 2020, STARBASE Sioux Falls held a typical ceremony for a graduating class or recent STARBASE graduates. However, this particular graduation doubled as an opportunity for STARBASE Sioux Falls to celebrate its 25th anniversary and recognize some key supporters, including, long-time partners, SDN Communications and Schulte Subaru.

The whole STARBASE family would like to congratulate STARBASE Sioux Falls on their continued success!

