

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

STARBASE Kansas City CyberPatriots

Ten Hocker Grove students are part of a group that forms the first Air Force Association (AFA) CyberPatriot STARBASE 2.0 program at a Shawnee Mission School District (SMSD) middle school. They formed two teams, Eagle 1 and Eagle 2

AFA CyberPatriot is a program developed by the United States Air Force to help solve security issues. The goal for the program is to introduce middle school students to this field as they begin planning for their future careers.

Students meet weekly and learn about cyber vulnerabilities, how to detect a virus, and how to troubleshoot both. They also work on team building, learn to support one another, and practice in a virtual setting. They are taught a series of lessons and then work through a virtual series of practice sessions to become adept in discovering security issues and correcting them.

The capstone of the program is competing virtually with teams across the country. STARBASE Kansas City was pleased with the outcome of the first year of the program and credits the success to the dedicated students, coach, community mentors, and the support of the school and district administration throughout the semester.

Eagle 1 team finished in fifth place out of eight teams in Kansas and 392/803 total middle school teams in the country. Eagle 2 team finished in sixth place!



(Source: <https://www.smsd.org/about/news-post/~board/district-news/post/hocker-grover-students-participate-as-cyberpatriots>)



"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." -- Buckminster Fuller

OnShape: CAD in the Cloud

Onshape
A PTC Business

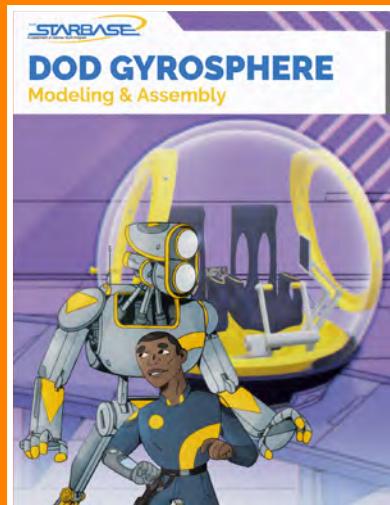


DoD STARBASE
A Department of Defense Youth Program

We are excited to bring the latest CAD technology to STARBASE with the introduction of Onshape - a completely online CAD system with many significant advantages!

- **NO DOWNLOAD & INSTALL**
Students simply register and are immediately in Onshape.
- **RUNS ON ANY DEVICE**
Windows, Mac, Chromebook, tablets, & mobile phones.
- **EASY TO LEARN**
Intuitive interface with many online learning resources available.
- **NO FILES**
Database driven so your work is automatically saved.
- **LIVE COLLABORATION**
Teachers and students can be in the same document at the same time, allowing teachers to guide learning.
- **CLOUD STORAGE**
All curriculum and files are stored in the cloud so that they are always accessible.
- **ALWAYS UP-TO-DATE**
All revisions of the software are managed in the cloud so no more upgrading to new versions of the software.

Our BRAND NEW,
role-based curriculum is
much more engaging and
useful for teaching STEM!



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.

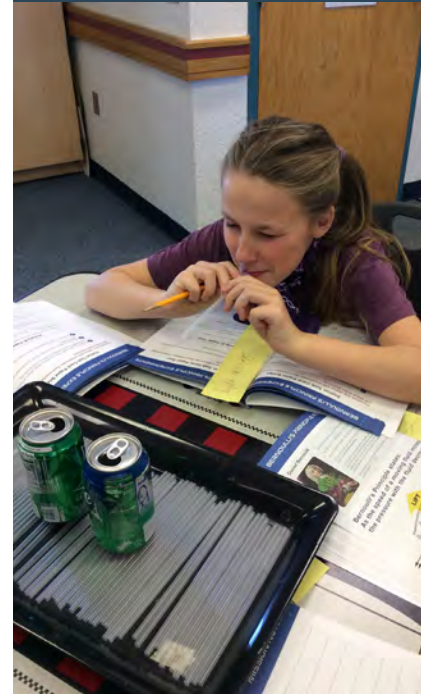
This is the fourth of a five-part series to introduce you to the new Level III programs. This month, we highlight STARBASE Oklahoma – Tulsa. Congratulations to all of these exemplary locations who are now officially designated as a “Level III - High Performing DoD STARBASE Academy.”

STARBASE Oklahoma-Tulsa Tulsa Air National Guard Base, Tulsa, Oklahoma – Air National Guard

STARBASE Oklahoma - Tulsa has added a STEM Career Day to their STARBASE class curriculum. Every quarter, students are invited back to the Tulsa Air National Guard base for a day where they can rotate through a variety of STEM career exploration presentations with base personnel. This is in addition to their five-day basic STARBASE program and the culminating event for the students and their teachers.

This event exposes students to the technological environments and positive civilian and military role models typically found on military bases and installations in an up-close and interactive environment. Students are inspired by the passion that military personnel have for their mission and the base personnel are excited and proud to share their work with students. The students leave inspired and excited by the experience.

The STEM Career Day has also proven to be a great way to build relationships with other community partners. Organizations like the Oklahoma Highway Patrol, local Cancer Survivors, the Rogers County Sheriff’s Department, the Tulsa Air and Space Museum, and the Tulsa International Airport also provide interactive experiences for the students which highlight their relationship with the Tulsa Air National Guard. It has proven to be a highlight of the DoD STARBASE experience in Tulsa, providing relevance for students and creating lasting memories of their neighbors in the military.



Checking in with STARBASE Kingsley

Not all of Kingsley Field is quiet on a “down day” after a busy drill weekend. The base’s science classrooms saw plenty of action on Monday, March 9, when Mrs. Dahm’s fifth-grade class at Pelican Elementary School began STARBASE – a Department of Defense program that engages youth with science, technology, engineering, and mathematics.

Kingsley’s STARBASE program has been running for the last 25 years. It hosts 1,000 students from across the Basin annually.

This year’s program began in the Starbase computer lab, where Pelican students used computer-aided design (CAD) software to draw rocket-shaped key chains emblazoned with “STARBASE” in block letters. Their designs were sent wirelessly to a 3-D printer at the back of the room to be printed in red plastic as a program takeaway.

A lunchtime movie also featured the use of 3-D technology, not for fun keepsakes but for practical application in diverse industries: sugary confections in baking, concrete buildings in construction, and plastic prosthetics in medicine.

Next, the class moved to worktables to learn the metric system of measurement that is used at the International Space Station and in most countries on earth.

They immediately applied the lesson by measuring liquid in milliliters, solids in grams, and distances in centimeters for an experiment called “Pop Goes the Fizz” that collected data related to how far they could launch rockets (film canisters) with different amounts of rocket fuel (Alka Seltzer tablets).

“I love it here. This is the best!” said Paxton Jensen at the “Bravo” table.

Lizzie Hitchcock from “Charlie” table agreed. “This is even more fun than the parties here!” she said, recalling multiple base visits with family.

The day’s finale was an experiment in which students designed protection for uncooked eggs before buckling them into spacecrafts and crash-landing them on the moon (a concrete block).

The activity required students to collaborate in groups and utilized the Engineering Design Process to negotiate design challenges and work within a budget to purchase packing peanuts, craft sticks, cotton balls, and other supplies.

There was lots of laughter and learning as the students observed repeated failed landings, including one that left half a shell in the cockpit and yolk on the floor.

“We just want them to be excited about science and math,” said Jennifer Cook, who co-taught the day’s curriculum with Laura Gibson.

Considering the smiles on day one of a five-day program, that mission already was accomplished.



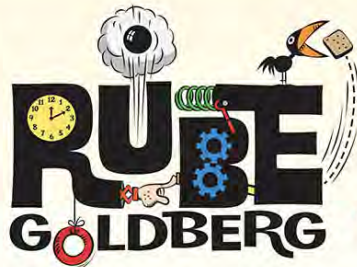
(Source: https://www.heraldandnews.com/news/local_news/kingsley-hosts-pelican-students-for-starbase-science/article_0402bba7-bc28-5e22-8e74-514a269aea67.html)

Up for the Challenge?

Looking for a fun challenge for your staff or students? Rube Goldberg, Inc. presents a contest which asks participants to “Drop a Bar of Soap into Someone’s Hands” using 10-20 steps. Open to participants of all ages, teams can consist of any number of shelter-in-place/quarantined family groups or singles. The machine must be filmed in a single pass video that shows each step of the unedited, working run of the machine. Additionally, all team members should be introduced on the video.

Video submissions must be uploaded to YouTube, marked “Not Private” and the link emailed to rubefamilychallenge@rubegoldberg.com. The deadline for submissions is midnight May 31, 2020.

Free!!!
Family
Fun!!!!



Video Challenge

- 1. Task:** Drop a bar of soap into someone's hand
- 2. Step count:** 10-20 transfers of energy
- 3. Team requirements:** All ages, anyone in your family or quarantined group -- no size limit
- 4. Submission Requirements:** Build and film a non-edited working run of your machine and introduce us to the people in your family group that helped build it. Make sure we can see all the transfers of energy -- (HINT: the larger the transfers of energy the more visible they will be when filmed)
- 5. Where to submit:** Upload your video to youtube, mark Not Private and email the link to rubefamilychallenge@rubegoldberg.com
- 6. Deadline:** We will be accepting rolling submissions from now through midnight, May 31, 2020.
- 7. Prizes:** 3 winning machines will be selected, winners notified and announced on our website by mid-June. Each winning team will receive a Rube Goldberg Family Swag Bag.
- 8. What's a Rube Goldberg Machine anyway?** [CLICK HERE](#)
- 9. Hashtags:**
 - #boredombustingrubemachine
 - #rubetothescue2020
 - #rubefamilyfun
 - #rubegoldbergmachine
 - #bettertogether



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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.

Looking Ahead to Reopening

6 Steps for Safe & Effective Disinfectant Use



Step 1: Check that your product is EPA-approved

Find the EPA registration number on the product. Then, check to see if it is on EPA's list of approved disinfectants at: [epa.gov/listn](https://www.epa.gov/listn)



Step 2: Read the directions

Follow the product's directions. Check "use sites" and "surface types" to see where you can use the product. Read the "precautionary statements."

Step 3: Pre-clean the surface

Make sure to wash the surface with soap and water if the directions mention pre-cleaning or if the surface is visibly dirty.



Step 4: Follow the contact time

You can find the contact time in the directions. The surface should remain wet the whole time to ensure the product is effective.

Step 5: Wear gloves and wash your hands

For disposable gloves, discard them after each cleaning. For reusable gloves, dedicate a pair to disinfecting COVID-19. Wash your hands after removing the gloves.



Step 6: Lock it up

Keep lids tightly closed and store out of reach of children.

[coronavirus.gov](https://www.coronavirus.gov)