



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

Ask STARBASE?



At this year's STARBASE Virtual Workshop, Ted Garner, from STARBASE Connecticut, shared an exciting new YouTube project his staff began during the pandemic to keep their students engaged called *Ask STARBASE*. *Ask STARBASE* is series of videos on YouTube that STARBASE CT has been producing for a little over a year. The goal of the series is to answer student STEM questions that they don't usually have an opportunity to dive into during regular STARBASE programs. The series has over 100 episodes starring, written, filmed, produced, and published by STARBASE CT staff in response to questions they have received from students and young people regarding STEM topics.

Shortly after the beginning of the COVID-19 pandemic, STARBASE CT was working remotely and trying to figure out how to connect to students when they could not have direct interactions and schools were still scrambling to figure out how to adapt to the new normal. They had been trying to figure out how to utilize YouTube for quite a while and had not found the right thing to produce for the media. Then after some brainstorming, *Ask STARBASE* was born as a way to connect directly to students and answer their questions.

As a result of this breakout conversation at the workshop, an idea was born when other STARBASE locations began to inquire about how they could create their own YouTube channel similar to *Ask STARBASE*. It was quickly apparent that the best way forward was to open the *Ask STARBASE* series to interested sites! To help determine who that might be, Ted developed the following list of FAQs about the venture:

Why use YouTube?

While there are not hard numbers on the amount of young people on YouTube, it is pretty clear that it is the social media platform most used by our students from anecdotal evidence. How many students come in with call signs taken from their favorite YouTuber? How many students tell us they want to be a YouTuber when

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"Ask what do you want now, to free yourself from thinking about the limitations of the technology and let your imagination take you to what things do you want to have done, what problems do you want to solve."

--Andra Keay, managing director, Silicon Valley Robotics



CURRICULUM SCHEDULES

Information about the FY22 Curriculum Schedule submission was sent to Program Directors on September 21st. Your schedule is due back on October 15th. Please refer to your email for details, and submit questions to email@dod.starbase.org!

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they grow up? How is the highest paid YouTuber a 9-year-old toy reviewer/home experimenter (Ryan Kaji made \$30 Million in 2020)? They knew that it was a platform where they could connect directly with students unlike other social media where they connect with adults who make up our Fan Clubs.

How long does an episode take to produce?

Each episode is pretty short. STARBASE CT's current goal is to have a runtime of between 3-5 minutes max. To produce that takes on average about 2 hours of work to get ready for publishing. It can be as quick as an hour. When they first started it would take upward of 4-5 hours, but that came down very quickly as they found their stride. They developed a simple format to follow and worked to use that to make production time as short as possible.

Does it take special skills to learn to produce a video for YouTube?

Yes and no. STARBASE CT is using WeVideo, an online video-editing software that is VERY USER FRIENDLY. In fact, they were teaching it to students in the Spring of 2021 remotely to enhance STEM learning in their classrooms. So, while you must learn some software, it is very user friendly and straightforward. It can be managed VERY easily.

What kind of things are covered in Ask STARBASE?

Anything really can be covered. We are using student generated questions and others that are submitted by young people they know. Topics covered include the multiverse, can animals smell fear, life cycle of a fly, cryptocurrencies, and more. If it is STEM-related (and as we know that's pretty much everything), it can be covered in an Ask STARBASE episode. Here is the link to our channel so you can see for yourself: <https://tinyurl.com/AskSTARBASE>

Do students have some favorite episodes?

Yes, they do. Some of their favorites include *Can Animals Get a Sunburn?*, *Sunny Shines Some Light on Chocolate*, *Chickens are descendants of the Dinosaurs?*, and many more. STARBASE CT has truly enjoyed the process of creating Ask STARBASE and sees it as a valuable extension of what they are doing in their regular program.

This sounds awesome! Can I get involved?

YES! Please do! STARBASE CT is working with The SPECTRUM Group to make this a national initiative. Contact Ted Garner (tgarner@starbase-ct.com) or Sandy Anderson (sanderson@spectrumgroup.com) to learn more about joining in on the excitement of becoming a YouTube sensation! Once it is determined that there is more interest in this endeavor, there will be an informational meeting set-up, so the group can determine the best way forward!



STEM Camp: STARBASE Peterson Pilots New Teacher Camp



This past month, STARBASE Peterson at Peterson Space Force Base hosted its first ever STEM Camp for teachers! All throughout our community, teachers were invited to partake in a two-day professional development event to familiarize themselves with the STARBASE curriculum. The teachers also earned ten credit hours of Professional Development in STEM!

The overall goal was to expose teachers to the exciting STARBASE experience that their students will experience and how they can extend that experience into their own classrooms. Without a doubt, the teachers had a blast as STARBASE Peterson immersed them into some of STARBASE's most exciting activities such as "Pop Goes the Fizz" and "Eggbert"!

They also used this opportunity with teachers to test lessons being introduced this year and received great feedback for "What's the Solution?," "Fly on the Ceiling," and "Marble Float." Finally, they taught our first OnShape class! While it was a little challenging, it offered live practice for troubleshooting various problems future students may encounter!



Overall, their Teacher STEM Camp was a success, and one STARBASE Peterson hopes to repeat annually!

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.



Please don't forget that your photo submissions for both the annual report and your site's one page spread are due! Questions or problems getting your photos submitted? Let us know at email@dod.starbase.org!

Updates to the COVID Operational Status Tracker spreadsheet are due no later than September 30th (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.

The STARBASE Los Alamitos TARC Team Does It Again!

A group of teenage rocket scientists from STARBASE Los Alamitos made their second successive appearance in The American Rocketry Challenge National Finals as they traveled to Lucerne Dry Lake in June of this year to launch a rocket they've spent nearly two years designing and testing.

The team, made up of middle and high school students who live near Joint Forces Training Base, Los Alamitos, and practice on the installation, earned a place in the finals by scoring among the top 100 teams nationwide with their qualifying launches in early May.

"I'm so proud of these guys," said STARBASE teacher and rocketry coach Tim Ziesmer, after the team launched two rockets within the competition's targeted time duration and each within 10 feet of a specified launch altitude.

"They're more organized, tighter, and more focused," Ziesmer said, comparing this year's team to previous years. "We have a lot more practice and more experience under our belts."

The challenge tests a team's ability to meet particular engineering requirements along with specific launch parameters while assessing points for going over or under a targeted flight time and launch height. The lowest score wins.

"I'm pretty happy with today. I'm really happy with our score," said fourth year team member and high school freshman Emily Rodeghiero after the team submitted two 10-point qualifying launches.

"We definitely have to work on our parachute," she said, after tangled parachute lines caused one practice launch to fly outside of the competition's zero-point time window.

The rocketry program at STARBASE Los Alamitos began four years ago, and each year the team makes technological improvements in its design and build. This year is no different.

"They found a place to get carbon fiber fabric [for the body], and we figured we could do it," Ziesmer said. "It's a commitment, though, because you have to make everything. There are no more off-the-shelf parts."

The teens used simulation software to design a rocket with a carbon fiber body and laser cut fins and other parts from aircraft-grade wood. They used a 3-D printer to create a nose cone and other parts, as needed.

The new design is a lightweight rocket that gives the team a wider latitude to add or subtract weight depending on launch day weather conditions.

Each launch also includes the weight of one egg, which must return intact with no visible cracks.

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The American Rocketry Challenge is the world's largest rocket contest with nearly 5,000 students nationwide competing each year. The contest gives middle and high school students the opportunity to design, build and launch model rockets and hands-on experience solving engineering problems.

The competition's top team will receive \$20,000 in prize money with an additional \$1,000 presented to the team's school site. Additional prize money will be awarded to the 2nd-5th place teams, nationally, along with \$1,000 presented to the lowest scoring team at each national finals launch location.

STARBASE Los Alamitos earned its first national finals appearance in 2019, traveled to Virginia and placed 51st overall. The team flew practice launches in 2020, however the national finals were suspended due to the COVID-19 pandemic.

This year they placed in the top fifty and won the most creative photo submission. Prizes included a \$500 prize, and the team is so excited to compete again next year!



(Article and photos adapted from

<https://grizzly.shorthandstories.com/rocketry-team-earns-national-finals-berth/index.html>.)

Curriculum Abstract Data Call

The STARBASE Curriculum Advisory Group (SCAG) is soliciting your input for new lesson plans to be included in the approved curriculum for the DoD STARBASE Program.

This is also an opportunity for you to showcase lessons that you may have utilized in summer programs, and that you would like to see become part of the approved curriculum of the STARBASE Program.

Using the form available on STARBASE-U in the STARBASE News course, please submit your proposed abstract no later than **Friday, October 29, 2021** to email@dodstarbase.org. The SCAG will review your abstract submission and notify you that your idea has been accepted to be developed into an approved lesson plan in early December 2021. Further dates will be provided throughout the process.

The SCAG is excited to review your ideas. Thank you in advance for your work on this endeavor to expand and keep the STARBASE Curriculum fresh.