

# DISCOVER

DoD

# STARBASE

A Department of Defense Youth Program

# TODAY



## North Carolina STARBASE

From past to present. >>> [page 2](#)

## Curriculum Questions Answered

Answers to frequently asked Curriculum questions. >>> [page 4](#)

## STARBASE in the News

Sharing more about STARBASE's nationwide impact. >>> [page 7](#)



LOOKING AT STARBASE THEN & NOW

# NORTH CAROLINA STARBASE

From past to present.



## TABLE OF CONTENTS

North Carolina STARBASE: From past to present.	2
Curriculum Questions Answered: Answers to frequently asked Curriculum questions.	4
STARBASE in the News: Sharing more about STARBASE's nationwide impact.	7
STARBASE Savannah: Celebrating their first year.	10

On August 1, 1993 an agreement between The National Guard Bureau and the state of North Carolina officially marked the beginning of the North Carolina STARBASE Program.

Brigadier General James Emerson, North Carolina Army National Guard, a former high-school principal, and Charlotte-Mecklenburg School Area Superintendent, became the first Director of the North Carolina program. The expertise BG Emerson brought to STARBASE from his background in both the educational community and the military arena proved invaluable in developing a stellar program.

The Charlotte site held its first class of 22 students in late September 1993. Only three schools participated through July 1994 as a tornado heavily damaged the temporary classroom location, a Quonset hut at the Army National Guard. Fortunately, plans were already underway to acquire four modular units for classroom and office space. The location was moved to the 145th Airlift Wing, North



To date, the North Carolina STARBASE program has reached over 55,000 students in 97 of the 100 counties in the state.



Carolina Air National Guard, where it is still located today. The program is now housed in a permanent facility on the Guard base which consists of three classrooms and a large computer lab.

In October 1994, North Carolina began an outreach program to be sure that students in remote counties could still participate in STARBASE. STARBASE instructors and military personnel travelled to these rural schools and delivered a four-day program to all fifth grade students in each school.

Brigadier Emerson returned to active duty but kept close ties with the STARBASE program. In December 2000, Barbara Miller, Deputy Director, was appointed Director of the North Carolina program by The Adjutant General of North Carolina.

The second North Carolina STARBASE site received funding in December 2004. Classes began that year at the current location, the North Carolina National Guard Training Site, Ft. Fisher, North Carolina. This opened opportunities for students from the eastern part of the state to participate in the program.

The dedication of the North Carolina STARBASE staff to create an excitement and interest in STEM curriculum for both students and educators is evident in the number of schools on the waiting list.

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# CURRICULUM QUESTIONS ANSWERED

Answers to frequently asked Curriculum questions.

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Several reoccurring questions related to the implementation of the STARBASE curriculum have been noted. In an effort to eliminate confusion, these questions and their answers have been compiled here.

**If there is a parent lesson plan, do the parent and appendix need to be taught or just the parent?**

**Simple Answer:** If there is an appendix you would like to incorporate into your schedule, then yes, you must also complete the parent lesson.

**Explanation:** The Curriculum Committee adopted the parent lesson plan model when they noted that there was a significant amount of introductory background information that was being duplicated at the start of lesson plans in the same core curriculum area. This revealed that some topics, like Engineering Design Process, have background information that needs to be presented to students in order for them to understand the hands-on activities. The parent lesson was adopted to standardize and simplify this information for students.

Therefore, if you were to just complete the parent lesson, the students would only receive this background information without an opportunity for hands-on exploration of the concept. And, if you only completed the appendix, the students would not have the background information they need to fully understand the objectives. Both of these curriculum components work together to provide the best learning opportunity possible for our students.

**What if you want to teach something other than an approved lesson plan?**

**Simple Answer:** A lesson plan must be approved in order for it to be incorporated into your standard curriculum schedule.

**Explanation:** While it is true that you must create your schedule solely with approved curriculum, if you have another idea that you would rather use, you have the opportunity to help expand the STARBASE curriculum for the nationwide program.

## CURRICULUM UPDATE

To start this process, you will need to complete a Lesson Plan Abstract Submission Form that includes all the core information about your idea, whether it tweaks a current lesson plan or is a brand new idea. This abstract will be reviewed by the Curriculum Committee, and if it is accepted for development, you will be asked to submit a worksheet that outlines all the details of your idea.

As you compile the information for your lesson worksheet for submission, you are encouraged to try out your idea with anywhere from three to five classes. These trial runs are meant to give you the opportunity to fine-tune your idea before you submit it for final approval, but the lesson should not be incorporated into your normal schedule until the lesson has been formatted and published on the STARBASE website.

This process can take some time, but the feedback has been that the final product is very rewarding to see! More importantly, this is what keeps our curriculum current, correct, and consistent across the country.

### Do we have to cover all the objectives or can we pick and choose the ones we like?

**Simple Answer:** In order to be in compliance, your schedule must include approved lesson plans that incorporate all the objectives outlined in the Standards, Objectives, and Approved Lesson Plans (SOA).

**Explanation:** The curriculum objectives outlined in our SOA were founded on national standards. These objectives are the core of our program and what allow us to maintain the advanced hands-on, minds-on model essential to our success. All of the objectives work together to offer our students the fundamental STEM concepts that are the first step toward positive STEM interactions and potential career paths that secure help to secure our nation's future security.

Eliminating particular objectives from your schedule hurts our overall mission as a program and deprives your students of the opportunity for a strong start in their STEM education pipeline.

### Is the curriculum more objective-based or time-based?

**Simple Answer:** Our curriculum is objective-based and must be carried out with approved lesson plans.

## CURRICULUM UPDATE

**Explanation:** This is another fairly recent change to the implementation of our curriculum. When the curriculum was first standardized across the STARBASE program, the emphasis was on a specific amount of time per core curriculum area. However, after significant feedback from the sites illustrated that some classes were moving through particular lesson plans faster than the time provided, the emphasis shifted to the objectives instead of time.

Times are still provided on each lesson plan to get give you an idea of how much time you should allow for each activity; however, if you find that your class can complete the lesson faster while still completing the activity as written, then you can choose other approved lesson plans to round out your schedule. You just need to make sure you are conducting approved activities and meeting all the objectives.

There are two exceptions to this policy:

1. You must complete at least three hours of 3-D Computer Aided Design time with each class.
2. You cannot spend more than two hours of time on E3.1.1.6: STEM Careers.

The Curriculum Committee hopes the responses above provide not only a simple answer to important implementation questions, but also provide some further explanation as to why the guidelines outlined in the STARBASE policy documents were implemented.

If you have a question about curriculum implementation, you are encouraged to share them at [starbasenewletters@gmail.com](mailto:starbasenewletters@gmail.com). As we all tell our students, the question you ask may help someone else.

## SEEKING STARBASE ALUMNI

To commemorate the 20th anniversary of the DoD STARBASE Program, we are looking for STARBASE graduates who have gone on to STEM careers, hopefully in part from the influence of their STARBASE experience. We are happy to showcase any STARBASE alumni, but we are especially interested in finding graduates from the original 1993/94 classes. Please send any information about a STARBASE alumnus to Ernie Gonzales, at [ernie.gonzales@osd.mil](mailto:ernie.gonzales@osd.mil).

# STARBASE IN THE NEWS

Sharing more about STARBASE's nationwide impact.

## “HELO SQUADRON EDUCATES THROUGH REAL-WORLD EXPERIENCE”

From STARBASE North Dakota (full story at <http://tinyurl.com/cc4w4ov>)

During a recent visit by the students to the 54th Helicopter Squadron, they learned about the work aircrew members conduct and how it relates to the STEM topic of Bernoulli's Principle, which the students focused on prior to their visit.

“During the tour the students are able to talk to the pilots and hear them explain how Bernoulli's Principle affects their aircraft,” said Lisa Murphy, Director of STARBASE North Dakota.



According to 1st Lt. William T. Yetman, 54th HS chief of scheduling and tour leader, the students all enjoyed their experience around the helicopters, including the opportunity for them to try on equipment.

“We show the kids a helicopter in the hangar, as well as most of the gear we wear in flight like night vision goggles, helmet, survival vest, emergency radios and more,” explained Yetman. “I talk to the students about each aircrew member's job and how the helicopter flies.”

For the lieutenant, the most enjoyable part of conducting the tours is seeing the kids' reactions because it reminds him that even if he's been having a bad day, how great his job can be. “It makes me appreciate what I do, and also makes me want to live up to their expectations,” said Yetman.

Murphy explained the lieutenant and his team do an amazing job of relating the STEM content to their careers and make a visible connection between what the students are learning and how they apply that STEM content in their careers. The same could be said for the other agencies that help support the STEM tours, she added.

Regardless of whether the students get a chance to sit in the cockpit of a helicopter, stand next to a B-52, view a missile, witness a military working dog demonstration,

explore the technology and tools used by explosive ordnance disposal, or tour the fire station, they are always blown away at the experience, said Murphy.

“The STEM tour is a highlight of their STARBASE experience, and one they remember long after the program has ended,” Murphy said. She is grateful members of the 54th HS have been able to support the tours for the past two years now by lending their time, as allowed, and willing to invest in the local youth.

“The STEM volunteers and tours are crucial in the students’ understanding that what they are learning in their classrooms and at STARBASE is for a purpose and the STEM content and skills can be applied in many amazing careers as they become adults,” said Murphy.

## “DOD PROGRAM GIVES KIDS HANDS-ON SCIENCE EXPERIENCE”

From STARBASE Hill Screaming Eagles (Full Story at <http://tinyurl.com/clagzsl>)

There are 76 STARBASE programs in the country, and Hill’s is the first in Utah. Judith Maughan, Hill’s educational outreach director, began working three years ago to get the program into Utah.

“STEM is where we are really lagging in America. When we started looking at our situation in the Department of Defense, even if we hired every science, engineer or math graduate from colleges in Utah, we still wouldn’t have enough to replace those retiring, so we really have a problem,” Maughan said.

The program’s main focus is to get students excited about working in those fields, without being intimidated and consider taking higher-level STEM courses.

“We’d like to get the kids hooked and keep the momentum going,” said Frances Bradshaw, director of Hill’s STARBASE program.



Sixth-graders from Meadowbrook Elementary in Bountiful received a good dose of hands-on learning this week during their first day of the course. For Meadowbrook sixth-grade teacher Meghan Fe’iloaki, the program opens up avenues of opportunities for her students. “Being from a Title 1 school, this is critical for the students because it exposes them to see what careers they have never considered before, and could change their future,” Fe’iloaki said.

## “HANSCOM CUTS RIBBON FOR STARBASE PROGRAM”

From STARBASE Hanscom (Partial transcript - full video at <http://tinyurl.com/dxedva6>)

Local community leaders, including the Lt Governor of Massachusetts, Timothy Murray, and Air Force Life Cycle Management Center commander, Lt. Gen. C.D. Moore, were on hand for a ribbon cutting ceremony for a new STARBASE installation here on the installation [Hanscom Air Force Base] on February 13th.

From Lt. Governor Timothy Murray: “We brought as many of our state leaders here as we could to make sure that we joined you in the celebration, as Gen. Moore talked about. A celebration that’s about empowering young people with an excitement around knowledge and STEM, but really preparing them with the skill sets that are absolutely vital for fruitful productive lives, for the economic well-being of our commonwealth and our country, and, yes, for our own defense as well.”



(left to right) Lt. Gen. C.D. Moore II, Air Force Life Cycle Management Center commander; Massachusetts Lt. Gov. Tim Murray; Col. Lester A. Weilacher, 66th Air Base Group commander; Dr. Peter Holden, Hanscom STARBASE director; and Vic Hayes, 66th Force Support Squadron director, along with Hanscom Middle School fifth graders cut a ribbon signifying the official opening of the Hanscom STARBASE program Feb. 13.

# STARBASE SAVANNAH

Celebrating their first anniversary.



STARBASE Savannah celebrated their first anniversary March 20th. Under the leadership of Director Betty Morgan and her staff of Stacy Henle, Tonya Troup, and Ginger Brinkley, the program has graduated more than 425 public and private school fifth graders.

The program reports that the U.S. Army at Ft. Stewart and Hunter AAF have been generous hosts and partners. STARBASE Savannah also has a strong partner in the Savannah Chatham County Public School

System (SCCPSS) who send their students to the program. During the next school year, SCCPSS plans to have a Science and Technology Middle School that will hopefully be the next step for these STARBASE students.

The program would also like to express a great deal of gratitude to their Community Partners. These are individuals, businesses, and foundations who have recognized the impact of STARBASE Savannah on their community and have given their support.

- » Gulfstream Aerospace Corporation
- » SunTrust Bank
- » J. C. Lewis Ford
- » Wells Fargo Bank
- » The Hammond Family Foundation
- » The Savannah Bank.
- » Georgia Power

With the help of these Community Partners, STARBASE graduates can pursue productive futures.

