

DoD STARBASE:
RAISING THE BAR IN
STEAM



2024
ANNUAL REPORT



DoD STARBASE

Vision & Mission

DoD STARBASE is a premier educational program, sponsored by the Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs. At DoD STARBASE, students participate in challenging “hands-on, minds-on” activities in Science, Technology, Engineering, Art & Design, and Mathematics (STEAM). They interact with military personnel to explore careers and observe STEAM applications in the “real world.” The program provides students with 25 hours of stimulating experiences at Air Force, Air Force Reserve, Army, Marine Corps, National Guard, Navy, and Space Force bases across the nation, Guam, and Puerto Rico.

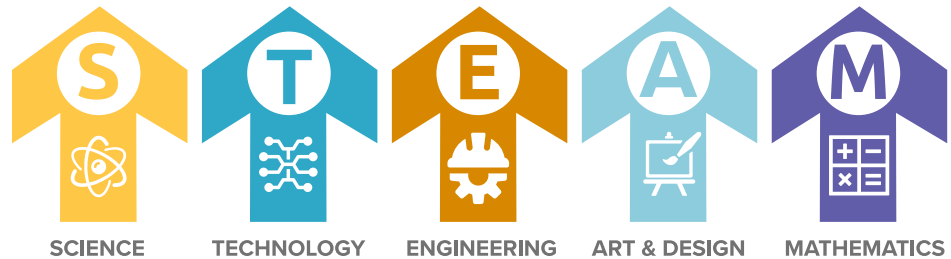
Vision Statement

To be the premier Department of Defense youth outreach program for raising the interest in learning and improving the knowledge and skills of our nation’s youth in STEAM education so that we may develop a highly educated and skilled American workforce who can meet the advanced technological requirements of the Department of Defense.

Mission Statement

To expose our nation’s youth to the technological environments and positive civilian and military role models found on Active, Guard, and Reserve military bases and installations, nurture a winning network of collaborators, and build mutual loyalty within our communities, by providing 25 hours of exemplary hands-on STEAM instruction and activities that meet or exceed the national standards.

DoD STARBASE Curriculum



Science

- A. Science Fundamentals
- B. Characteristic Properties
- C. Motion & Force
- D. Science Explorations

Technology

- A. Applying Technology

Engineering

- A. Engineering Design Process
- B. 3-D Computer-Aided Design

Art & Design

- A. Creative Design Using 3-D Software

Mathematics

- A. Number Relationships
- B. Measurement
- C. Geometry
- D. Data Analysis

Science, Technology, Engineering, Art & Design, and Mathematics (STEAM) Careers

- A. STEAM Careers on Military Facilities
- B. Personal Investigations


Table of Contents

Introduction

DoD STARBASE at a Glance	2
DoD STARBASE Locations List.....	3
Letter of Support from Major General Francis J. Evon, Jr.	4
Letter of Support from Colonel Lee R. Bouma	7
Letter of Support from Todd E. Farmer	8

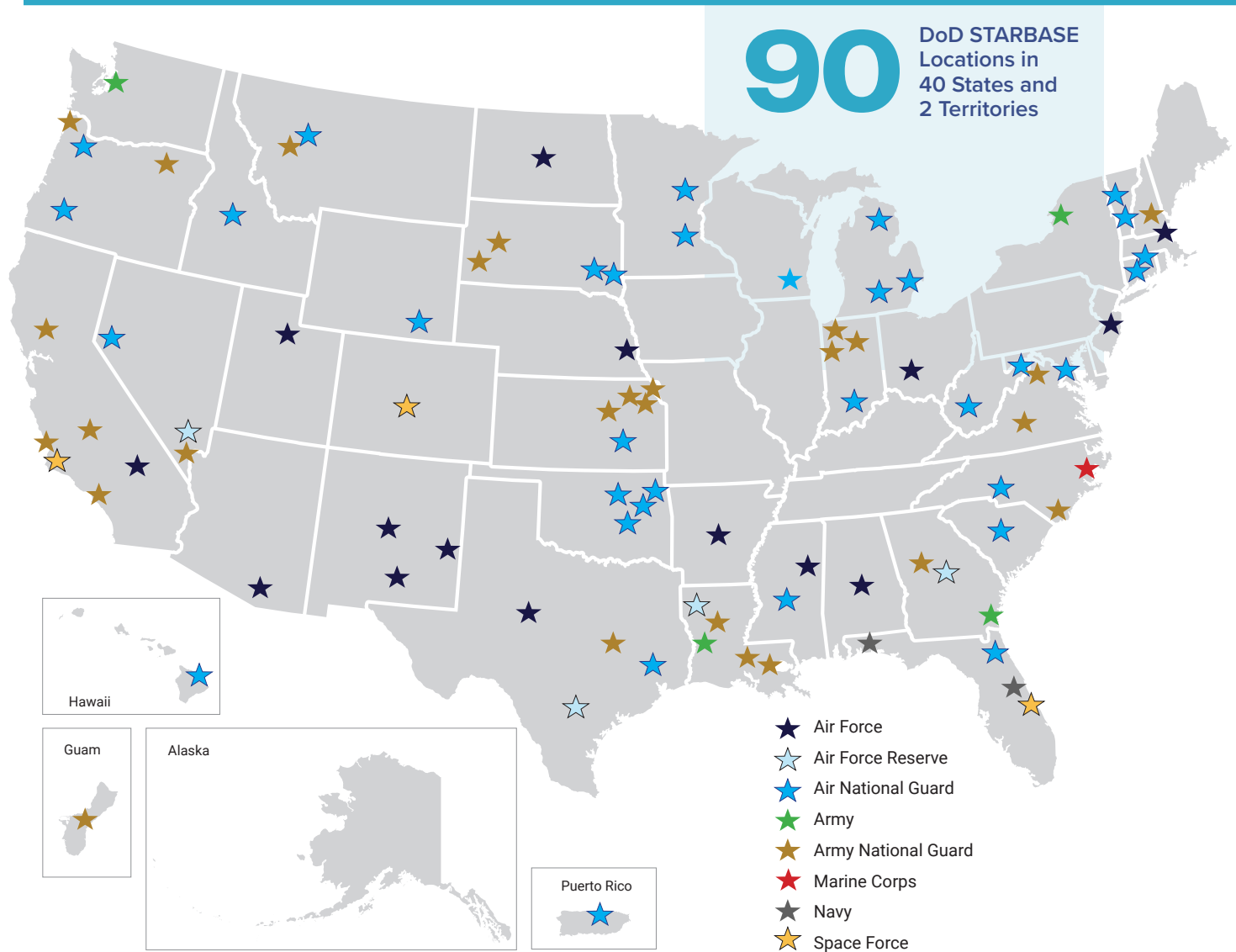
2024 Assessment

Executive Summary.....	10
Letter of Support from Adrienne Hester, Seagate Technology	14
DoD STARBASE Program Overview	16
DoD STARBASE Graduate Feature: A Tale of Two Generations: Father and Daughter Graduates	22
The Program Elements of DoD STARBASE	23
STARBASE “Center of Excellence” Concept Introduced to Recognize High Performing Programs	28
The DoD STARBASE Curriculum	30
Volunteers and Military Support	32
Program Support and Training	35
DoD STARBASE Advanced Program – STARBASE 2.0 and 3.0.....	38
DoD STARBASE Graduate Feature: Savanna Sanchez	43
Program Oversight	44
DoD STARBASE Graduate Feature: Full Circle: Shakeerryah and Jamal’s Journey with STARBASE Robins	48
Fiscal Analysis	50
DoD STARBASE Graduate Feature: Captain Maria Anderson	52
Student Assessment	54
Letter of Support from Educator Jason Parker, Cleveland County Schools.....	62
Participating Teacher Survey.....	64
DoD STARBASE Locations Directory.....	75
Appendix	167
Glossary	173


"What an awesome program to have for young people to experience! I had the privilege to speak about my career as a meteorologist and how that career led me to my present position as the Emergency Management Coordinator with Escambia County here in Pensacola. I had excellent questions from very interested students. They were studying clouds and cloud formation which was so exciting for me to explore with them. They asked what it was like to be a meteorologist on television, and I was happy to share my journey from that job to working with Emergency Management. It was a delight to have the opportunity to find out what STARBASE Advanced involved, and I look forward to returning to speak in the future!"

- MS. SCOTTLIN WILLIAMS,
 METEOROLOGIST, EMERGENCY
 MANAGEMENT COORDINATOR,
 DIVISION OF EMERGENCY
 MANAGEMENT, PUBLIC SAFETY
 DEPARTMENT, CENTRAL FLORIDA

DoD STARBASE | FY2024 at a Glance



Updated 23 August 2024

\$49,112,256

Program Operating Budget

\$583,409

Median Operating Cost per Location

114,087

Students Served in 2024 Basic and Required Supplemental Programs

1,795,687*

Students Served in all DoD STARBASE Programs Since 1993

*Basic, Required Supplemental and DoD STARBASE Advanced Programs

DoD STARBASE Advanced Program Locations

57

2.0 (Middle School)

17

3.0 (High School)

Students Served in DoD STARBASE Advanced Programs

2,690

2.0 (Middle School)

783

3.0 (High School)

TOTAL LOCATIONS—90

ST	Service Component Sponsor	Academy	ST	Service Component Sponsor	Academy
AL	Air Force	STARBASE Maxwell	MT	Army National Guard	STARBASE Fort Harrison
AR	Air Force	STARBASE Arkansas		Air National Guard	STARBASE Great Falls
AZ	Air Force	STARBASE Arizona	NC	Air National Guard	STARBASE Charlotte
CA	Space Force	STARBASE Vandenberg		Army National Guard	STARBASE Wilmington
	Air Force	STARBASE Edwards		Marine Corps	STARBASE Cherry Point
	Army National Guard	STARBASE Los Alamitos	ND	Air Force	STARBASE North Dakota
	Army National Guard	STARBASE Sacramento	NE	Air Force	STARBASE Offutt
	Army National Guard	STARBASE Porterville	NH	Army National Guard	STARBASE New Hampshire
	Army National Guard	STARBASE San Luis Obispo	NJ	Air Force	STARBASE JBMDL
CO	Space Force	STARBASE Peterson	NM	Air Force	STARBASE New Mexico
CT	Air National Guard	STARBASE Connecticut Windsor Locks		Air Force	STARBASE Holloman
	Air National Guard	STARBASE Connecticut Waterbury		Air Force	STARBASE Cannon
FL	Space Force	STARBASE Patrick	NV	Air Force Reserve	STARBASE Nellis
	Air National Guard	STARBASE Florida		Air National Guard	STARBASE High Sierra
	Navy	STARBASE Central Florida		Army National Guard	STARBASE Henderson
	Navy	STARBASE Pensacola	NY	Army	STARBASE Fort Drum
GA	Army National Guard	Peach State STARBASE	OH	Air Force	STARBASE Wright Patt
	Air Force Reserve	STARBASE Robins	OK	Air National Guard	STARBASE Oklahoma Oklahoma City
	Army	STARBASE Savannah		Air National Guard	STARBASE Oklahoma Tulsa
GU	Army National Guard	STARBASE Guam		Air National Guard	STARBASE Oklahoma Fort Sill
HI	Air National Guard	STARBASE Hawaii		Air National Guard	STARBASE Oklahoma Burns Flat
ID	Air National Guard	STARBASE Idaho	OR	Army National Guard	STARBASE Camp Rilea
IN	Army National Guard	STARBASE Indiana Gary		Army National Guard	STARBASE Rees
	Army National Guard	STARBASE Indiana South Bend		Air National Guard	STARBASE Kingsley
	Army National Guard	STARBASE Indiana Indianapolis		Air National Guard	STARBASE Portland
	Air National Guard	STARBASE Indiana Fort Wayne	PR	Air National Guard	STARBASE Puerto Rico
KS	Army National Guard	STARBASE Kansas City	SC	Air National Guard	STARBASE Swamp Fox
	Army National Guard	STARBASE Manhattan	SD	Air National Guard	STARBASE NOVA Courage
	Army National Guard	STARBASE Salina		Army National Guard	STARBASE NOVA Honor
	Army National Guard	STARBASE Topeka		Army National Guard	STARBASE Rapid City
	Air National Guard	STARBASE Wichita		Air National Guard	STARBASE Sioux Falls
LA	Army National Guard	Pelican State STARBASE		TX	Air Force
	Army National Guard	Bayou State STARBASE	Air Force Reserve		STARBASE Kelly
	Army National Guard	STARBASE Jackson Barracks	Army National Guard		Texas STARBASE Austin
	Air Force Reserve	STARBASE Louisiana	Air National Guard		Texas STARBASE Houston
	Army	STARBASE Fort Johnson	UT	Air Force	STARBASE Hill
MA	Air Force	STARBASE Hanscom	VA	Army National Guard	Winchester STARBASE Academy
MD	Air National Guard	STARBASE Maryland		Army National Guard	STARBASE Blackstone
MI	Air National Guard	STARBASE Alpena	VT	Air National Guard	STARBASE Vermont Rutland
	Air National Guard	STARBASE Battle Creek	Air National Guard	STARBASE Vermont South Burlington	
	Air National Guard	STARBASE One	WA	Army	STARBASE JBLM
MN	Air National Guard	STARBASE Minnesota St. Paul	WI	Air National Guard	STARBASE Wisconsin
	Air National Guard	STARBASE Minnesota Duluth	WV	Air National Guard	STARBASE Martinsburg
MS	Air National Guard	STARBASE Mississippi	WY	Air National Guard	West Virginia STARBASE Charleston
	Air Force	STARBASE Columbus		Air National Guard	Wyoming STARBASE Academy



Military Letter of Support

Major General Francis J. Evon, Jr. The Adjutant General, Connecticut National Guard

An integral element in the future defense of our country is the development and education of our children as intellectually strong, lifelong learners in our ever-advancing technological world. The Department of Defense STARBASE program has become an essential part of the Connecticut National Guard’s mission to engage young people through immersive, high quality, hands-on, rigorous STEAM programming. The DoD STARBASE program is an amazing opportunity for the youth of Connecticut to be exposed to high level science, technology, engineering, art & design, and mathematics experiences that push them to grow their knowledge as well as expand their world. Through the opportunity to work with our DoD STARBASE instructors, Connecticut National Guard members, and civilian volunteers, the students and schools that work with DoD STARBASE Connecticut are afforded the opportunity to have life-altering experiences that help securely set the foundations of the STEAM skills that are essential in this modern world and are pivotal in assuring our continued national prosperity and security.

The Connecticut DoD STARBASE program exemplifies the Department of Defense mission to deliver a premier STEAM program. Our state proudly boasts two active sites (Windsor Locks and Waterbury) and has begun the process of adding a third site in FY25 at Camp Nett in Niantic. The program consists of a 25-hour STEAM-focused curriculum that challenges students to see what they are capable of achieving beyond the traditional classroom. Annually, DoD STARBASE CT sees an average of 2,250 Connecticut students through the DoD STARBASE regular academies. As well as serving many more through the STARBASE Advanced after-school programming that we have developed and partnered with schools to implement, as well as annual summer camp programming. Serving Connecticut since 2000, DoD STARBASE CT has positively impacted more than 25,000 students through its academically rigorous and sound STEAM programming. We are excitedly looking forward to furthering the powerful impact on the southeastern portion of our state with the addition of DoD STARBASE Camp Nett in the coming year.

By providing high quality, comprehensive STEAM programming that meets and often exceeds national standards, DoD STARBASE has proven itself to be an amazing opportunity for students to have learning experiences that cannot be replicated by most school settings. DoD STARBASE has played a significant role in altering the lives of students all across our state and the entire country. The experiences that DoD STARBASE can provide show young people there is more to their world than they realize and that they can have a significant role in shaping their future and the future of our nation.

I am repeatedly impressed at the high level of professionalism and dedication of the Connecticut DoD STARBASE staff to the goal of encouraging students to become lifelong learners and insightful problem solvers. The success that the DoD STARBASE program has garnered is thanks to them. Because of their work, the impact of that success is something that has an amazing ripple effect throughout the lives of the students, schools, and families that participate in DoD STARBASE. I am proud of the work done by the DoD STARBASE program both in Connecticut and across our nation.

FRANCIS J. EVON, JR
Major General
The Adjutant General

“The experiences that DoD STARBASE can provide shows young people there is more to their world than they realize and that they can have a significant role in shaping their future and the future of our nation.”

- MAJOR GENERAL FRANCIS J. EVON, JR



“I truly enjoy the collaboration of STARBASE and Army aviation to provide a unique opportunity to showcase practical applications of STEAM. As they enter the hangar, you can see the impact on young minds and your ability to leave a positive impression. The best part I see in STARBASE is that it gets children out of the typical classroom, plants a seed about STEAM opportunities, and inspires our youth to reach higher.”

- LTC JON P. MURPHY, SD STATE ARMY AVIATION OFFICER, STARBASE RAPID CITY



“STARBASE is part of the foundation of America’s military. Our youth not only receive STEAM education, but also, they are exposed to the military, many for the first time. The seed that is planted in STARBASE explodes into our future military capabilities!”

- COL LEE BOUMA, 173 FW COMMANDER, KINGSLEY ANG BASE, OR



Military Letter of Support



DEPARTMENT OF THE AIR FORCE 173d FIGHTER WING KINGSLEY FIELD OREGON

FROM: 173 FW/CC

SUBJECT: Commander Support of Kingsley STARBASE Program

As Commander of the 173rd Fighter Wing at Kingsley Field, Oregon, I'm extremely proud that our unit hosts one of the original five DoD STARBASE programs established in 1993. After 31 years, the program is more relevant than ever as America once again enters an era of Great Power Competition.

STARBASE Kingsley is a positive influence on every fifth grade student in Klamath County, averaging 1,000 students annually. This STEAM-based program is essential to the development of the youth in our county. Not only does it teach STEAM and encourage our youth to AIM HIGH, but it is also usually their first exposure to the military, fighter aviation, the Air National Guard, and the opportunity to serve our nation. The seeds planted in this program bear fruit in the future of America. I can testify to the efficacy of the program as all three of my own children have participated, and I've witnessed the excitement and interest generated specifically in aerodynamics and robotics.

Thanks goes to the team of professionals leading the STARBASE Kingsley program. They are extremely invested women and mothers who deeply care about our community and the future of our country. They lead and influence by personal example, being the epitome of integrity, service, and excellence. STARBASE Kingsley has been designated as an Advanced STARBASE Program because of their many additional efforts which include community outreach events, summer programs, and middle-school STEAM clubs.

Again, Kingsley Field is proud to host STARBASE. Continued funding and support of this program is an investment in our youth and America's future leaders.

Lee R. Bouma
Colonel, ORANG
Commander, 173d Fighter Wing





Military Letter of Support



OREGON MILITARY DEPARTMENT
JOINT FORCE HEADQUARTERS, OREGON NATIONAL GUARD
INSTALLATIONS DIVISION
1776 MILITIA WAY SE.
P.O. BOX 14350
SALEM, OREGON 97309-5047

I am honored to be associated with our four STARBASE Academies in Oregon. Having been part of the creation of two academies on Army National Guard Training Centers, I have been able to watch how much impact the program has on children and our communities. It has also had a profound impact on how our installations are perceived by the communities they support with an increased appreciation and awareness.

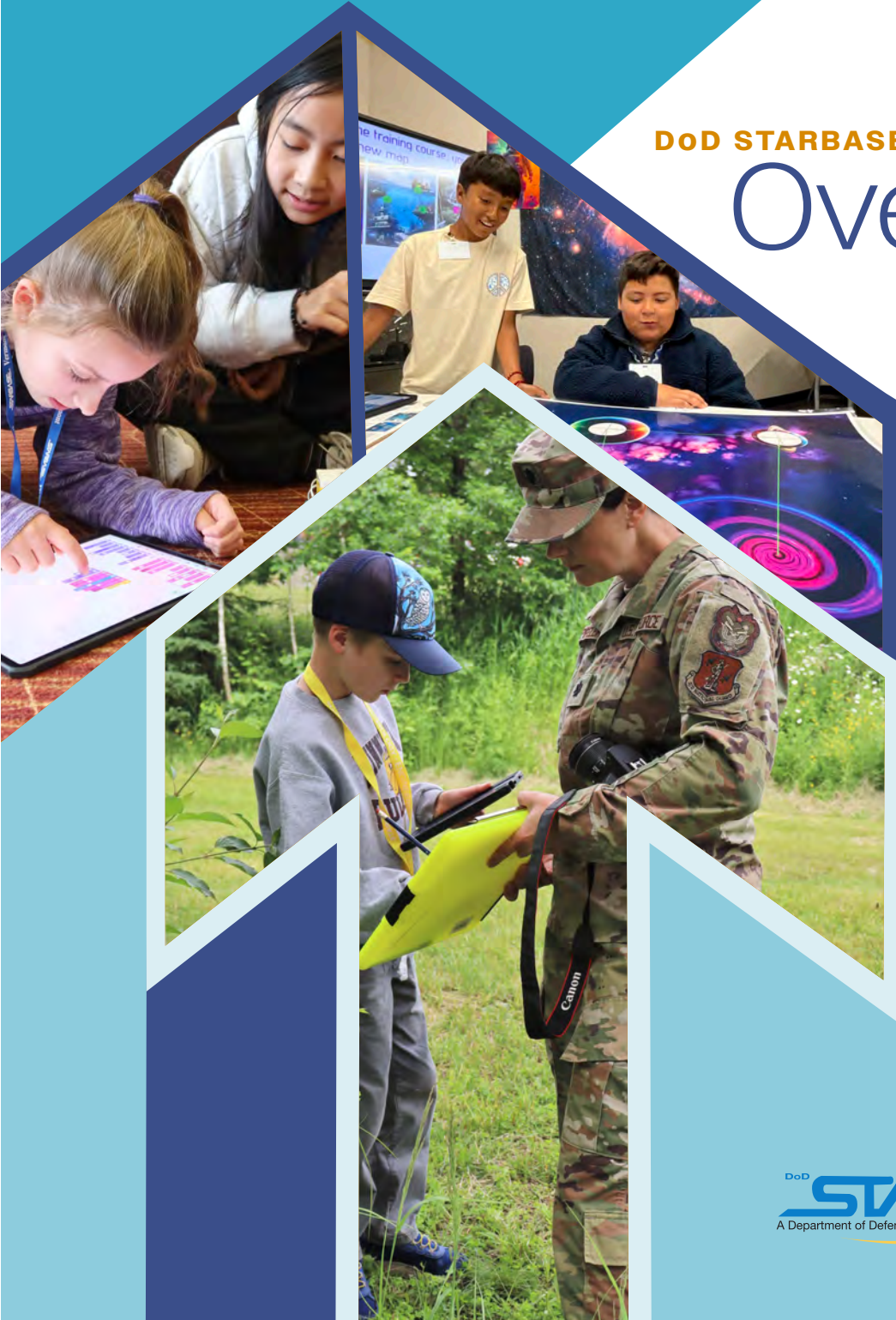
One school superintendent described to me how they always knew when it was a STARBASE day for their students because the class would not have a single student absent. They were motivated by the unique opportunities the academies present, and they love the way they are being taught. Our academies are bright and filled with fascinating experiences that most of the children would not be able to be a part of. Our instructors create an atmosphere of learning that is so hard to replicate in a traditional classroom, which is another reason why STARBASE is so successful.

I am often given the opportunity to speak with our elected officials at the local, state, and national levels, and when the discussion turns to community support, STARBASE is always part of the conversation. I wholeheartedly support this program and hope it continues in Oregon for years to come.

Sincerely,

Todd E. Farmer
Director, Installations Division
Oregon Military Department

DoD STARBASE: PROGRAM Overview



Executive Summary

The Department of Defense (DoD) STARBASE program, also referred to as “STARBASE,” provides Science, Technology, Engineering, Art & Design, and Mathematics (STEAM) learning and career awareness experiences to youth at 90 military installations across the United States, Puerto Rico, and Guam. Each year, the conduct and effectiveness of the DoD STARBASE program is evaluated in many ways, including structured interviews, questionnaires, operational evaluations, resource management evaluations, program visits, and conversations with program participants. The program is also evaluated annually in terms of measuring basic STEAM knowledge gained from program participation and improvements in student attitudes toward STEAM subjects in the contexts of school, the military, and career opportunities. Assessments, interviews, and/or questionnaires were received from 2,417 students, 3,570 teachers, and all DoD STARBASE directors. A brief overview of the assessment highlights is provided below.

FY 2024 Highlights

DoD STARBASE Operations

- During FY 2024, funding was provided for six new STARBASE programs: MD - STARBASE Maryland, NC - STARBASE Cherry Point, NE - STARBASE Offutt, NM - STARBASE Cannon, VA - STARBASE Blackstone, and WA - STARBASE Joint Base Lewis McChord (JBLM). This results in a total of 90 STARBASE programs across the United States, Guam, and Puerto Rico.
- STARBASE programs are located at a variety of military installations including Air Force (15 locations), Air Force Reserve (4 locations), Army (4 locations), Marine Corps (1 location), National Guard (61 locations), Navy (2 locations) and Space Force (3 locations).
- The median operating cost per location was \$583,409.

DoD STARBASE Basic Program

- During SY 2023-24, 106,033 students attended the Basic DoD STARBASE program through 4,418 traditional five-day academies.
- A total of 363 weeks of required Supplemental programs over school vacation breaks served an additional 8,054 students.
- A total of 1,948 schools from 612 school districts participated in the DoD STARBASE program during SY 2023-24.
- DoD STARBASE programs primarily served students from public schools (86 percent) in urban areas (75 percent). Most of the DoD STARBASE locations (91 percent) serve school districts within a 50-mile radius of their program site.
- The majority of DoD STARBASE students (98 percent) are fifth graders.
- The average class size for FY 2024 was 24 students. The average instructor to student ratio for FY 2024 was 1:12. The highest average class sizes were at LA - STARBASE Fort Johnson and KS - STARBASE Manhattan with 33 and 31 students, respectively. Two locations, OR - STARBASE Rees and SD - STARBASE NOVA Courage, were the only sites reporting an average of less than 20 students per class.
- DoD STARBASE locations documented a total of 16,695 volunteers from private industry and the community who contributed a total of 194,640 hours, at an estimated value of \$6,718,695¹ to their Basic program during FY 2024.
- Over 4,100 military personnel provided an additional 11,990 hours of program support at STARBASE locations. Also, 321 DoD Science and Engineering (DoD S&E) professionals provided 692 hours of program support during FY 2024.

¹ The value of volunteer time presented here is the average wage of non-management, non-agricultural workers by state found at: https://www.independentsector.org/volunteer_time.

DoD STARBASE Advanced Program (Middle School and High School)

- In FY 2024, 57 DoD STARBASE locations in 27 states and Puerto Rico reported coordinating a total of 112 DoD STARBASE Advanced 2.0 programs and 170 individual STARBASE 2.0 clubs for middle school students.
- There were 2,960 middle school student participants in STARBASE 2.0 Advanced clubs during FY 2024.
- The average student retention rate within the STARBASE 2.0 Advanced programs was 82 percent.
- Former DoD STARBASE students made up 61 percent of the DoD STARBASE 2.0 program participants.
- The STARBASE Advanced 3.0 program for high school students experienced 31 percent growth from the previous reporting year. Seventeen STARBASE locations reported initiating or continuing high-school level STARBASE Advanced 3.0 programs during FY 2024. There were 29 total STARBASE 3.0 initiatives reported impacting 783 students across the country compared to 535 students reported in FY 2023.
- Volunteer STEAM Coaches (636) from a variety of professions, including the military, participated in the DoD STARBASE 2.0 and 3.0 programs.
- DoD STARBASE Advanced programs operate through a combination of federal and private funds.² Of the 57 DoD STARBASE Advanced locations, 70 percent operate solely using their federal DoD STARBASE funds. The remaining 30 percent reported receiving additional funding from a combination of non-DoD and private organizations totaling over \$111,000.
- Partnerships involved in the STARBASE Advanced program include a wide variety of local and national outreach programs such as FIRST LEGO League, FIRST Robotics, Civil Air Patrol, The American Rocketry Challenge, Girl Scouts, and Scouts BSA.

Other DoD STARBASE Program Activities

- A total of 201 additional STARBASE STEAM educational activities were conducted for 155 schools/participant groups. A total of 7,823 students and 524 adults were reported as participants in these additional initiatives.
- A special instructional program developed by STARBASE MN - St. Paul during the pandemic continued in partnership with the State of Minnesota Department of Education. “Destination Mars STEAM Kits” were provided to 34,843 students and 870 teachers at 428 locations throughout the State of Minnesota during SY 2023-24.
- The Department of Defense Operating Instruction (DoDI) requirement to conduct at least four outreach activities per academy was met/exceeded at 78 of the 80 reporting STARBASE locations. Over 70 percent exceeded the requirement. These activities include, but are not limited to providing teacher training, judging science fairs, participating in local STEAM activities/conferences, and informational presentations for local organizations. FL - STARBASE Florida and CA - STARBASE Porterville did not meet the outreach requirement due to concentration on Basic programming.



“STARBASE provided an outstanding, hands-on experience for our students. While visiting the classes, students were engaged at a level that I have never seen before. The staff at STARBASE brought science, technology, engineering and math to life in a way that captured every students’ attention. I was so impressed with the learning and the alignment to state standards.”

- JULIE NIELSEN, SUPERINTENDENT OF SOUTH WASHINGTON COUNTY SCHOOLS, ATTENDING STARBASE MINNESOTA - ST. PAUL

² Private funds include not-for-profit, donations, grants, and host school contributions.



“At STARBASE Kelly, the impact goes beyond the classroom. The program sparks change for students and volunteers alike, driven by a team of top-tier professionals. This exceptional program opens doors to a future filled with limitless possibilities.”

- MSGT JOSHUA GREEN, C-5M FTU INSTRUCTOR LOADMASTER
356TH AIRLIFT SQUADRON, STARBASE KELLY

DoD STARBASE Staffing

- Contractor affiliations make up 57 percent of the employment relationships, followed by state and federal³ affiliations which are at 42 percent and one percent, respectively.
- In FY 2024, 53 percent of DoD STARBASE staff overall have more than three years of DoD STARBASE experience with 30 percent in the one to two-year range and 17 percent new to the STARBASE program with less than one year of experience. Directors and deputy directors/instructors have typically worked with DoD STARBASE for over five years at 57 percent and 42 percent experience, respectively. FY 2024 data indicates that 46 percent of instructors have over two years of STARBASE experience compared to 38 percent a year ago. Most instructors currently fall into the three to five-year range at 32 percent with the one to two-year range close behind at 31 percent indicating more staff stability than in the previous year. The experience level of office managers with more than three years with the STARBASE program is 54 percent. Instructional assistants have the least amount of DoD STARBASE experience with 70 percent in their first or second year.
- There were 81 staff departures in FY 2024. This is a 12 percent decrease in the number of employees who left the program in FY 2023 (92 employees). The majority (30 departures) were at the instructor level. Instructional Assistants were the next highest at 22 departures, followed by Office Manager at 13 positions, Director at nine positions, Deputy Director at four positions, and “other” positions with three departures. The overall turnover rate in FY 2024 was 16 percent, down from 19 percent a year ago.

DoD STARBASE Program Support and Training

- Director’s Launch Training (DLT), an orientation tool for new program directors at existing or newly established academies, was provided for 22 Program Directors in FY 2024.
- In FY 2024, three Brown Bag Training sessions were conducted by The SPECTRUM Group to provide additional information on high-interest topics.
- Specialized training and staff development was provided on PTC Onshape, Aerial Robotics, Rocketry, as well as Modeling and Simulation.
- For the first time since 2019, Program Directors were able to collaborate in-person through three regional workshops. Field experts presented a variety of program updates and strategies in a workshop format that also provided a rare opportunity for face-to-face interaction between participants.
- STARBASE U continued to expand course offerings as a dedicated internal online Learning Management System.

³ STARBASE Edwards is the only location with federal employment affiliations (four employees) in FY 2024.

DoD STARBASE Program Oversight and Compliance

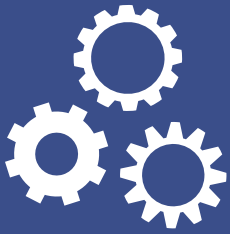
- Periodic Operational Compliance Evaluations were conducted at 25 locations during FY 2024. Three additional assistance visits were conducted to help guide new directors/new programs.
- During FY 2024, 24 existing and three new programs were visited by the Resource Management team. Visits to existing sites centered on their current Resource Management practices and how they could be improved. At new sites, directors and their staff were trained in proper procedures and related documentation.

Student Assessment FY 2024

- A student assessment was conducted in January-June 2024 at the 78 STARBASE active academies. Results were obtained from 2,417 mostly fifth-grade students who attended DoD STARBASE in person. As such, they anonymously answered questions about their understanding of STEAM concepts and their attitudes toward STEAM-related topics and careers. They also gave their opinions of STARBASE and military settings.
- Student performance on STEAM knowledge questions improved significantly from the pre- to post-program, with 17 percent more correct answers on average. The gain was particularly evidenced by increases of 25 percent in answering engineering questions correctly and 18 percent for science questions related to motion and force.
- Students' positive opinions of STEAM rose on all of the attitude questions, of which 95 percent were significant increases. The largest shifts were toward greater science confidence, awareness of jobs using STEAM — including military, belief that the STARBASE experience will be helpful in school and desiring a STEAM-related career.
- Analyses found that students with prior exposure to military personnel achieved significantly higher knowledge scores both pre- and post-program, and also attained greater improvements in STEAM knowledge. Even so, students who have no prior military exposure made significant STEAM improvements, too, though their gains were smaller.
- Students who had prior experience with military personnel also showed significantly more favorable pre-program and post-program attitudes about STEAM, including feeling that learning about science is easy, being good at science and mathematics, recognizing that engineers help solve challenging problems and that mathematics is useful for solving engineering problems as well as important for developing new technology, and concluding that most people use STEAM skills every day. In addition, they showed more awareness of STEAM-related jobs.

Teacher Assessment FY 2024

- Teacher assessments were obtained from 3,570 classroom teachers who attended DoD STARBASE at 80 different academies from August 2023 to June 2024 with their fifth-grade classes. They anonymously answered survey questions online about their students' experiences with DoD STARBASE as well as their own.
- Teachers indicate that the biggest impact of DoD STARBASE on student attitudes and behaviors related to STEAM is an improved understanding of science and awareness of STEAM concepts.
- Additionally, teachers say that participation in DoD STARBASE leads to greater student interest in learning about science and technology plus more willingness to try new things.
- Teachers strongly agree that attending DoD STARBASE helps students better understand how STEAM skills and abilities fit job requirements of certain fields.
- Results indicated that 64 percent of teachers visiting DoD STARBASE for the first time say they are “Extremely Likely” or “Very Likely” to recommend DoD or the military as career options to students.
- Notably, almost every teacher that responded (99.3 percent) agrees they will recommend DoD STARBASE to other school personnel and also expresses high confidence that their school plans to attend DoD STARBASE again next year (6.9 rating on a scale of 1 to 7).



Industry Support

**Adrienne Hester, SENIOR ANALYST,
CORPORATE DEVELOPMENT & STRATEGY
SEAGATE TECHNOLOGY**



It is with great honor that I write this letter to express my support for STARBASE, MN. As a STEAM volunteer with 10 years of experience in the Twin Cities and La Crosse, WI, the immersive educational experience at STARBASE is incredibly unique.

STARBASE is an invaluable program that is making a significant impact on the next generation of innovators in Minnesota. What sets STARBASE apart is their meticulous attention to detail and utmost priority of the student learning experience to educate and inspire the next generation of innovators. The program immerses students in whimsically designed classrooms with cutting-edge technology, creating spaces for imagination, exploration, and learning to flourish. The space room (my personal favorite) is equipped with smartboards, computers for each student, and grouped desks for ease of collaboration, surrounded by walls of galaxies and glass-blown planetary globes. During the summer program, students planned an epic mission to Mars by designing in CAD, 3D printing, participating in robotics, and participating in a virtual reality experience to feel like the next great Mars explorers.

The educational experience far exceeds that of the traditional classroom. Learning at STARBASE is hands-on, focused on real-world STEAM activities, teamwork, creativity, and perseverance, led by energetic and exceptional educators and volunteers. As a volunteer, I admire the attention given to each student. At the end of each event, volunteers receive key takeaways shared by students showcasing what they learned. At STARBASE, students are not only educated, but inspired, ready to tackle future challenges with confidence.

It is a personal priority of mine as a STEAM professional to support STARBASE to prepare the next generation of leaders. In 2020, I eagerly accepted an invitation to be featured in a STARBASE STEAM career video to inspire students to pursue a career in STEAM. It was a chance to share my journey as a new engineer at Seagate, highlight essential engineering skills, the societal benefits of STEAM, and the importance of teamwork. STARBASE has a unique collection of career videos, highlighting a variety of career paths and industry professionals.

Early exposure to professionals in the community is crucial for students to envision themselves in STEAM. STARBASE understands that seeing is believing.



“Early exposure to professionals in the community is crucial for students to envision themselves in STEAM. STARBASE understands that seeing is believing.”

- ADRIENNE HESTER, SEAGATE TECHNOLOGY

In addition to the video, I actively participate in STARBASE’s STEAM at Work events, bringing exciting aspects of my job for students to explore and inquire about. Sharing my professional world with them, beyond what they see in the career video, is incredibly rewarding. These bright students ask insightful questions and exhibit a unique openness to new experiences. I love the authenticity, expressiveness, and sense of humor that fifth graders bring to each session. They are eager to jump in and explore! Although their learning is the focus during these sessions, I always learn something new from them. As a volunteer, I am honored to support these students through STARBASE, as they prepare to be the change-makers of tomorrow.



“I am proud of the longstanding partnership between the 145th Airlift Wing and the STARBASE program. The STARBASE Charlotte team have seamlessly integrated into our base populace, becoming an integral part of our daily operations, and enhancing our community engagement. The interactions between the STARBASE students and our Airmen are highly rewarding, particularly evident through the insightful questions posed during our C-17 aircraft tours that often inspire young minds on the possibilities that are available to them through their hard work and dedication. It has been an honor to provide the facilities and time to educate our community on STEAM topics, the North Carolina Air National Guard, and the United States Air Force.”

- MARSHAL HAYLETT, COLONEL,
145TH AIRLIFT WING COMMANDER,
NORTH CAROLINA AIR NATIONAL GUARD,
PARTICIPATING AT STARBASE CHARLOTTE

DoD STARBASE

Program Overview

The Participants

DoD STARBASE programs operate under the auspices of the Department of Defense (DoD) through the Office of the Assistant Secretary of Defense (OASD) for Manpower and Reserve Affairs (M&RA). A Congressional Appropriation to the DoD funds the operation of DoD STARBASE. Constructive collaboration between the host military command, schools, and surrounding communities enhances and strengthens the program. As such, it provides youth with a variety of STEAM programs and activities as defined in the Department of Defense Operating Instruction (DoDI) 1025.07, dated 15 January 2021, which governs the STARBASE program. Eighty active STARBASE programs reported participant data for the 2023-24 academic year.⁴

The Students

Traditional 5-Day Program: The traditional STARBASE program focuses on classroom-based STEAM lessons and activities targeted toward fifth-grade students and is typically conducted on a military installation. Each STARBASE classroom unit consisting of two instructors must conduct at least 30 classes during the school year, each comprised of 25 classroom contact hours over five days.

During SY 2023-24 the DoD STARBASE program conducted 4,418 classes serving a total of 106,033 students across the United States, Guam, and Puerto Rico. During the previous school year, service had included 4,012 classes and 96,280 students, reflecting a nine percent increase in both the number of classes and number of students. This increase is attributed to overall program growth.

Required Supplemental Programs: In addition to the basic five-day STARBASE program, the DoDI requires each STARBASE location to provide at least two weeks of classroom contact hours (20-25 hours per week) over schools' vacation breaks. This requirement is multiplied by the number of instructional pairs and classrooms. During SY 2023-24, this included a variety of specialized STEAM summer camps/activities (drones, rocketry, robotics, coding, engineering), including summer academies for military dependents from host locations.

STARBASE programs from CA - Los Alamitos, KS - Kansas City, Manhattan, Salina, Topeka, and Wichita, VT - Rutland and South Burlington,

⁴ Ten additional STARBASE programs: CA - San Luis Obispo, MD - STARBASE Maryland, MS - STARBASE Columbus and STARBASE Mississippi, NC - STARBASE Cherry Point, NE - STARBASE Offutt, NM - STARBASE Holloman and STARBASE Cannon, VA - STARBASE Blackstone and WA - STARBASE JBLM) received start-up funding but did not see students during the 2023-24 academic year.



VA - Winchester, and WV - Martinsburg continued a joint summer activity with the United States Marine Corps Junior Reserve Officers' Training Corps (JROTC). This effort, now in its third year, served 208 JROTC cadets, more than double the number reported in FY 2023. The platform was a robust robotics program that focused on the Engineering Design Process through building and coding with the BOE Shield Bot and C++ programming.

Of the 80 reporting locations, 67 fully met or exceeded supplemental programming requirements. The remaining 13 programs conducted some supplemental programs but did not meet the per instructional pair/classroom level requirements for their location. A total of 7,263 hours (approximately 363 weeks) of required supplemental programs were conducted in SY 2023-24 serving 8,054 additional students.

Community Outreach: The DoDI also requires each STARBASE location to participate in a minimum of four community outreach activities each academic year to strengthen existing relationships and work to develop new connections between educational entities, employers, and the communities. These are intended to build community support and strong STEAM ecosystems to help broaden and enrich a learner's journey. These include, but are not limited to, participating in local STEAM activities and community events, judging science fairs, conferences, and informational presentations for local organizations. These outreach requirement activities were exceeded at 57 sites and met at 21 sites for a total of 78 of the 80 reporting STARBASE locations. Two locations did not conduct any outreach during the academic reporting year.⁵ Many of these relationships include a wide variety of local and national outreach programs such as FIRST LEGO League, FIRST Robotics, Civil Air Patrol, The American Rocketry Challenge, Girl Scouts, and Scouts BSA.

Teacher training is another way that STARBASE shares their STEAM expertise with outreach to the community. During SY 2023-24, 25 DoD STARBASE locations provided training to local teachers. This ranged from general program orientation to training on specialized STEAM subjects such as CAD/3D printing, modeling and simulation, and aerial robotics/drones. Some participating teachers were able to obtain continuing education credits for these initiatives.

⁵ FL - STARBASE Florida and OK - STARBASE Burns Flat did not conduct outreach activities due to staff shortages and facility issues, respectively.



“Volunteering at STARBASE creates a connection between your every day work life and kids in school wanting to learn more about why you go to work everyday. It almost gives you a new look on what you do at work the next day because the kids found it so fascinating and interesting.”

- TESS WILLIAMS, SCIENTIST, PARTNER WITH STARBASE MINNESOTA - ST. PAUL



“I had SO MUCH fun at STARBASE! Getting to use computers, robots, and engineer our own answers to problems was so great!”

- GAVIN ROLFE, STUDENT AT RJ SEYMOUR SCHOOL, ATTENDING STARBASE WINDSOR LOCKS

Other Instruction: Some STARBASE locations also utilized other optional forms of program delivery that were outside of the required DoDI Basic and Supplemental program criteria. Some of these initiatives were developed to accommodate the schools and students impacted by school-related circumstances such as bus transportation issues or limitations on travel outside their school. Other sessions, such as a two-day “Taste of STARBASE,” were conducted to accommodate schools that could not otherwise be scheduled for a full STARBASE experience.


During the 2023-24 school year, 201 additional instructional programs were conducted for 155 schools/participant groups. A total of 7,823 students and 524 adults were reported as participants in these additional initiatives. A special instructional program developed during the pandemic by MN - STARBASE, St. Paul continued in partnership with the State of Minnesota Department of Education. “Destination Mars STEAM Kits” were provided to students in school districts across Minnesota who were not otherwise able to attend the resident STARBASE program. This 25-hour curriculum, complete with lesson plans and all necessary supplies, was provided to an additional 34,843 students and 870 teachers at 438 locations throughout the state during SY 2023-24.

The Military

The military hosts support DoD STARBASE programs at various military installations.⁶ During FY 2024, funding was provided for six new STARBASE programs: MD - STARBASE Maryland, NC - STARBASE Cherry Point, NE - STARBASE Offutt, NM - STARBASE Cannon, VA - STARBASE Blackstone and WA - STARBASE Joint Base Lewis McChord (JBLM) This results in a total of 90 STARBASE programs across the United States, Guam, and Puerto Rico as indicated in Table 1 below.

Table 1 - Distribution of DoD STARBASE Programs by Branch of Service

Air Force	Air Force Reserve	Army	Marine Corps	National Guard	Navy	Space Force	Total Programs
15	4	4	1	61	2	3	90


“The STARBASE program at Battle Creek has been phenomenal for my fifth grader. It is clearly evident that the staff are passionate about STEAM education and love to instruct. More importantly, I get to witness the wonder and excitement in my daughter’s eyes as she describes every moment of her day on the ride home. I highly recommend this program to any parent or teacher eager to instill a lifetime love of learning in children and I look forward to the day my younger kids are old enough to attend.”

- RETIRED COL KENT “MAGOO” HARBOUGH
110TH WING DEPUTY COMMANDER,
STARBASE BATTLE CREEK

The military is an integral part of the overall STARBASE experience. DoD has a wealth of expertise in STEAM education and provides the DoD STARBASE locations with access to resources and services that most school districts cannot offer. Many elementary school teachers do not have the time, educational background, and/or resources to cover STEAM topics appropriately and simply cannot match the DoD STARBASE experience in their own classrooms. OASD/M&RA provides state-of-the-art equipment and technology, and military commands provide classroom space, utilities, and security. The host command may also provide additional equipment, janitorial services, maintenance, transportation, and IT support. DoD STARBASE operates at the discretion of the host commander who may view this program as a venue for military personnel to positively interface with their community. As such, military personnel are encouraged to volunteer their time to the program as STEAM coaches, expert speakers, tour guides, and other support activities.

Military volunteers share unique, informative, and highly varied experiences with the students, which provides an exciting, stimulating environment to enhance their STEAM experience. Military volunteers provide a powerful force to inspire students to set goals for their own lives and serve their communities as they grow. Modeling selfless service, consistent and conscientious leadership, dedication to mission, and respect and dedication to the United States, these hard-working, highly disciplined men and women distinguish themselves in such a way that others admire and want to emulate. Participating classroom teachers are also inspired and encouraged by the involvement of military volunteers in the DoD STARBASE program.

⁶ Most STARBASE academies operate within the confines of a military base. A few operate in an affiliate site contiguous to the military installation but under the property management of the base. HI - STARBASE Hawaii is located in a former National Guard facility at Shipman Park in Kea’au. LA - Bayou State STARBASE is located in Rosedale at the original Iberville High School. CT - STARBASE - Waterbury is located at Naugatuck Community College because space became limited at the Waterbury Armory. Construction at SD - Sioux Falls resulted in partial program execution at the Sioux Falls School District Learning Lab.

The Schools and School Districts

Students from local school districts surrounding the host military installation participate in the DoD STARBASE program. Schools or school districts enter a formal agreement with the military command hosting the program in order to participate in DoD STARBASE. Accompanied by their classroom teacher, entire elementary classes are transported to their DoD STARBASE location to attend the 25-hour program over five consecutive days or one day a week over five consecutive weeks. As such, DoD STARBASE exposes students to content and careers in STEAM fields, presenting unparalleled opportunities in STEAM enrichment. As a result of the school’s participation in DoD STARBASE, the school’s curriculum is enhanced, students are better prepared for standardized state testing, and they are excited about continued STEAM education and STEAM careers.

A total of 1,948 schools from 612 school districts participated in the basic DoD STARBASE program during SY 2023-24 through traditional five-day academies. Specific breakout areas are illustrated in Table 2 below with a comparison to the most recent two school years.

Table 2: FY 2024 Participating School Demographics – Full 5-Day Programs⁷

School Type	School Year 2021-22 Number of Schools	School Year 2022-23 Number of Schools	School Year 2023-24 Number of Schools
Public	1,228 (84%)	1,485 (86%)	1,668 (86%)
Private (includes Homeschool Groups)	241 (16%)	210 (13%)	280 (14%)
Urban/Urban Cluster	1,068 (76%)	1,281 (73%)	1,454 (75%)
Rural	336 (24%)	462 (27%)	478 (25%)

“The best part of STARBASE Arizona was when we code robots. It’s so fun spending time figuring out what variable to change and even better when it actually works!”

- TAEGAN THOMPSON, STUDENT
ATTENDING STARBASE ARIZONA
SUMMER ACADEMY

This year, 91 percent of the DoD STARBASE programs served school districts within a 50-mile radius of the programs’ location.⁸ Most locations that extended beyond a 50-mile radius have established partnerships to reach students in sparsely populated areas such as northern Minnesota and Vermont. In Puerto Rico, students typically travel from all over the island to participate in the program which is located in San Juan.

⁷ Numbers shown are for five-day programs and do not include other supplemental programs. Some schools may be counted in more than one category.

⁸ MN - STARBASE Duluth, NM - STARBASE New Mexico, PR - STARBASE Puerto Rico, SD - STARBASE NOVA Honor and STARBASE NOVA Courage and VT - STARBASE Rutland and STARBASE South Burlington served students beyond 50 miles of their host facility during this reporting period.



“The collaboration between FSI and STARBASE as STEAM partners is evidence to our shared community to inspire the next generation of scientists, engineers, and innovators. Through hands-on activities and real-world applications, we provide students with unique learning experiences that ignite their curiosity and passion for STEAM fields. Our teams work effortlessly together to support and mentor these young minds, fostering an environment where creativity and critical thinking flourish.”

- OLGA FIGUEROA-MIRANDA, PHD, ASSOCIATE DIRECTOR, BUSINESS AND EDUCATION DEVELOPMENT, FLORIDA SPACE INSTITUTE, PARTNER WITH STARBASE CENTRAL FLORIDA



The Community

Public and private organizations support and enhance the DoD STARBASE curriculum and operation. Community leaders may volunteer their time by serving on boards, assisting with gaining access to community facilities, visiting classrooms, and/or providing financial support and awareness about the DoD STARBASE program. They also view the program as benefiting the community by promoting better life choices, problem-solving skills, and future job opportunities. Community leaders identify DoD STARBASE as a mechanism to nurture student interest in STEAM, and facilitate a well-trained STEAM workforce and a STEAM-literate public, thereby enhancing the future of their communities.



**DoD STARBASE
graduates**
WHERE ARE
THEY NOW?

A Tale of Two Generations: Father and Daughter Launch Rockets at STARBASE Kelly, 20 Years Apart

When Angelo Arranda learned that his daughter Hailey would be participating in the same STEAM program he attended as a fifth grader back in 2003, a rush of nostalgia swept over him. He vividly remembered the excitement of building and launching his own model rocket and visiting the C-5 Cargo Aircraft at STARBASE Kelly, an experience that left an indelible mark on his young mind. An experience that, in fact, helped guide him to eventually serving his country in the U.S. Army.

He eagerly dug through the boxes of trophies and awards that his grandfather kept for him and found the yellowed and aging STARBASE model rocket and showed it to Hailey.

When fifth-grade teacher Ms. Isabell Solis at Indian Creek Elementary told STARBASE Kelly Program Instructor Belinda Montoya about the second-generation STEAM enthusiasts, she got right to work! Ms. Montoya played a pivotal role in orchestrating a special day for the father and daughter. With unwavering determination, she reached out to Mr. Arranda, and invited him to bring his rocket for a special father-daughter launch, sparking a chain of events that would culminate in a truly unforgettable moment!

On a crisp March morning, against the backdrop of a clear Texas sky, Arranda and his daughter stood side by side, each clutching a model rocket in their hands. Anticipation crackled in the air as they prepared to launch their rockets, bridging the gap between past and present, father and daughter. As the countdown commenced, Arranda couldn't help but feel a surge of emotion. Memories of his own childhood flooded back, intermingling with the excitement of sharing this moment with his daughter. With a whoosh and a roar, the rockets soared into the sky, leaving behind a trail of smoke and wild cheering from the crowd.

After the successful launch and perfect landings, Arranda and his daughter shared a quiet moment of reflection. In the span of a single morning, they had forged a connection that transcended time and space, bound by the shared experience of launching rockets at STARBASE Kelly! As they walked hand in hand, Arranda couldn't help but marvel at the serendipity of it all. Two generations, separated by more than two decades, brought together by a love for science and a simple model rocket. In that moment, STARBASE Kelly had not only inspired the next generation of STEAM enthusiasts, but had facilitated a core memory for the Arranda family.

It is the hope at STARBASE Kelly that Hailey will also keep her rocket, and can facilitate another special launch right around the year 2044!



The Program Elements of DoD STARBASE

The guidelines and directives for the DoD STARBASE program are outlined in the DoDI 1025.07. These include operational requirements such as budget, student grade level, class size, scheduling hours, curriculum guidelines, documentation requirements, testing, and program location. DoD STARBASE directors are required to report on these items annually by obtaining aggregate data from the schools participating in the DoD STARBASE program.

DoD STARBASE Students

Grade Level

The DoD STARBASE program is authorized to serve students in kindergarten through 12th grade. Because of the dramatic decline in math and science performance by U.S. students after the fourth grade, the DoD STARBASE curriculum and standards are developed for the fifth-grade level. In order to fill class schedules during the pandemic, many locations used their Title 10 authority and adapted their full 25-hour curriculum to expand their reach beyond fifth grade. Last year, that number began a normalization back to the fifth-grade target audience. During FY 2024, 98 percent of participants in the basic STARBASE program were in the fifth grade. Table 3 shows the reported distribution of students for the basic 25-hour program in SY 2023-24.

Table 3: SY 2023-24 Grade Level of DoD STARBASE Students – Basic 25-Hour Program

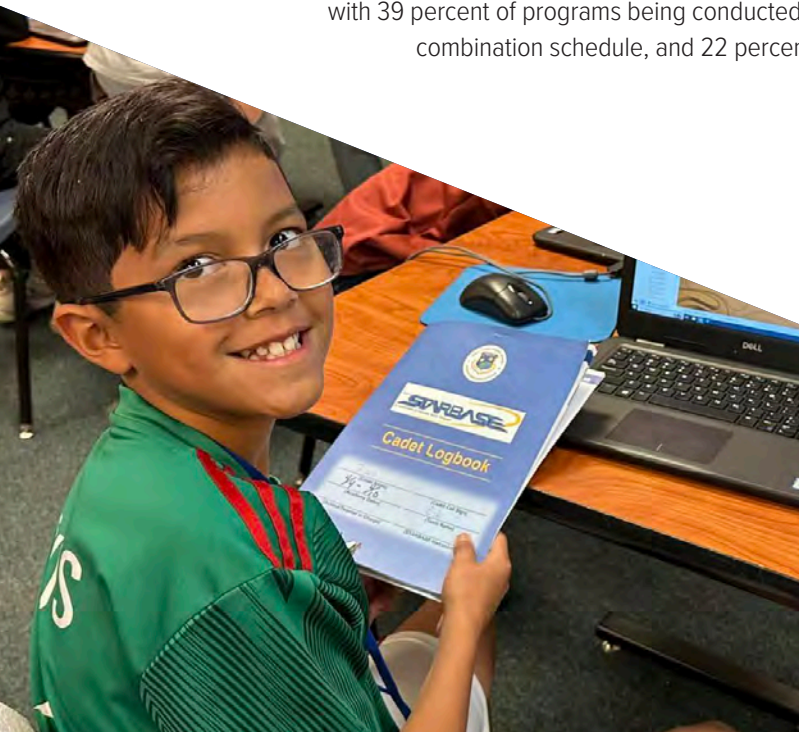
Grade Level	Number of Students
Kindergarten through 3rd Grade	22
4th Grade	950
5th Grade	103,406
6th Grade	1265
7th Grade	190
8th Grade	103
9th Grade and Above	97
Total Number of Students – Basic Program	106,033⁹



⁹ Grade distribution information was only collected for on-site basic 25-hour programs and does not include supplemental programs.

Class Size

Smaller class size is particularly important to the inquiry-based instruction used at DoD STARBASE locations. The DoDI requires two DoD STARBASE teachers per class, or an average DoD STARBASE instructor to student ratio of 1:15, with 20-35 students as an acceptable class size. The average class size for SY 2023-24 was 24 students with an average instructor-to-student ratio of 1:12. Sixty-three percent of reporting programs fell within the 20-24 student participant range. Only two locations reported class averages of less than 20 students, and six locations reported an average of 20 students.¹⁰ The highest reported average class size was 33 students at LA - STARBASE Fort Johnson and 31 students at KS - STARBASE Manhattan. A 30-student average was reported at CA - STARBASE Edwards and STARBASE Sacramento, MN - STARBASE St. Paul, and STARBASE New Hampshire. Program delivery schedules vary by location, with 20 percent providing programs one day per week for five weeks, 38 percent operating on consecutive days, and 42 percent using a combination of consecutive days and one day per week class scheduling. Last year, classroom delivery was relatively similar, with 39 percent of programs being conducted on consecutive days, 38 percent being conducted on a combination schedule, and 22 percent operating one day a week for five weeks.




“Thank you for teaching us at STARBASE. I had such a fun time. It was an awesome experience. I learned so much over the past five days. I love science, but you made me love it more!”

- RIVER MORTENSEN, STUDENT AT HEIGHTS ELEMENTARY SCHOOL, ATTENDING STARBASE IDAHO



¹⁰ OR - STARBASE Rees and SD - STARBASE NOVA Courage reported an average of less than 20 students per class. CT - STARBASE Windsor Locks, FL - STARBASE Patrick, IN - STARBASE South Bend, OK - STARBASE Tulsa, VT - STARBASE South Burlington, and WV - West Virginia STARBASE Academy averaged 20 students per class.


Thank you so much for working hard to make STARBASE available to our fifth-grade students! Each session was filled with standards-based, hands-on activities that supported our STEM curriculum directly. Truly, this program is the single best use of taxpayer dollars I've seen in my three-decades of teaching. The students learned so much and loved doing it.

- JULIE SCHNEIDER, EDUCATOR AT INDIALANTIC ELEMENTARY, STARBASE PATRICK

Many DoD STARBASE locations have increased their efforts to serve more students by opening additional classrooms so that classes may operate simultaneously. Additional DoD STARBASE classrooms allow schools to send more students, using the same transportation, who are then assigned a DoD STARBASE class. Depending on the number of students arriving from the school, the resulting DoD STARBASE class may contain students originating from multiple classrooms. In SY 2023-24, 35 percent of the STARBASE locations reporting operated with a single classroom, while 65 percent ran two or more classrooms at a time. Under the DoDI, STARBASE locations are expected to serve a minimum of 30 classes per classroom and instructor pair each year. Table 4 shows the number of sites operating each different classroom configuration and their required operational tempo.

Table 4: Number of Locations by Number of Classrooms

Number of Classrooms	Number of STARBASE Locations	DoDI Required Classes Per Year
1	28	30
2	38	60
3	10	90
4 or More ¹¹	5	120+



¹¹ AL - STARBASE Maxwell has five classrooms. FL - STARBASE Patrick, GA - STARBASE Robins, MN - STARBASE Duluth, and OH - STARBASE Wright-Patt have the capacity to run four simultaneous classes.

DoD STARBASE Staff

Employment Affiliation

The Department of Defense Instruction (DoDI) 1025.07 provides general guidelines on staffing models, salary parameters, and position descriptions. The primary employment affiliations are federal, state, and contractor agencies. Employment affiliation is an important consideration for each location. The employee’s affiliation determines his/her salary administration, hiring requirements, benefits, personnel policies, and practices, as well as reporting relationships. Federal and state affiliations typically provide retirement and health benefits, which increases a location’s personnel costs and uses a greater portion of the location’s operating budget. Contractor affiliations comprise 57 percent of the employment relationships, followed by state at 42 percent. CA - STARBASE Edwards was the only location with federal employment affiliations (four employees) in FY 2024.

Staffing Model

The DoDI outlines the prototypical staffing model for a DoD STARBASE location operating a single classroom. This basic staffing model includes four full-time paid staff positions: a director, a deputy director/instructor, an instructor, and an office manager or instructor assistant. For each additional classroom that operates at a DoD STARBASE academy, an additional instructor pair is required. The instructor pair required may include two instructors or an instructor and instructor assistant combination based on the needs of that location. A STARBASE Advanced program coordinator position may be added with the prior approval of OASD/M&RA to coordinate robust STARBASE Advanced program initiatives. The DoDI also includes broad guidelines on pay ranges for each staff position, which is also the basis for an annual budget for each location. Determination of starting salaries is the prerogative of each location. The suggested pay scale equivalencies of the above positions in the DoDI are GS 12-13, GS 11-12, GS 9-11, and GS 5-9, respectively. Of the 81 reporting STARBASE locations, 28 operated a single classroom during SY 2023-24.¹² Table 5 outlines the staffing profile for full-time and part-time personnel at the reporting DoD STARBASE locations.

Table 5: FY 2024 Staffing Profile

Position	Number of Staff	Full-Time	Part-Time
Director	77 ¹³	77	0
Deputy-Director/Instructor	72	68	4
Instructor	176	150	26
Office Manager	68	53	15
Instructional Assistant	87	54	34
2.0 Coordinator	28	19	9
Other (Technical Assistants)	0	0	0
Total	508	420	88

¹² DoD STARBASE locations that operate a single classroom: AZ - STARBASE Arizona, CA - STARBASE Edwards, CT - STARBASE Connecticut - Waterbury, FL - STARBASE Central Florida, GA - STARBASE Savannah, HI - STARBASE Hawaii, KS - STARBASE Manhattan, LA - Bayou State STARBASE and STARBASE Fort Johnson, MA - STARBASE Hanscom, MI - STARBASE Alpena, MT - STARBASE Fort Harrison and STARBASE Great Falls, ND - STARBASE North Dakota, NJ - STARBASE Joint Base McGuire-Dix-Lakehurst, NV - STARBASE High Sierra, OK - STARBASE Oklahoma - Burns Flat, OR - STARBASE Camp Rilea, STARBASE Kingsley, and STARBASE Rees (Umatilla), SC - STARBASE Swamp Fox, SD - STARBASE Rapid City/NOVA Honor and STARBASE Sioux Falls/NOVA Courage, TX - STARBASE Kelly, VT - STARBASE Vermont - Rutland, and STARBASE South Burlington.

¹³ During FY 2024, Directors in Connecticut, South Dakota, and Vermont operated multiple STARBASE locations.



“STARBASE is a chance for teachers to see their students in a different light. It is always so amazing to see how students truly break barriers and overcome challenges. Hearing students be so proud of their accomplishments at graduation is one of the most fulfilling things! I could not have provided this opportunity for my students on my own. I owe it to all the incredible STARBASE teachers for helping expand my student's knowledge and curiosity about the world they live in, as well as their self-awareness and confidence in who they are and who they can be.”

- ELYSE RAMIREZ, EDUCATOR AT SMITH ELEMENTARY SCHOOL,
ATTENDING STARBASE FORT HARRISON

Staff Experience

In FY 2024, 53 percent of DoD STARBASE staff overall have more than three years of DoD STARBASE experience, with 30 percent in the one to two-year range and 17 percent new to the STARBASE program with less than one year of experience. Directors and deputy directors/instructors have typically worked with DoD STARBASE for over five years at 57 percent and 42 percent experience, respectively. FY 2024 data indicates that 46 percent of instructors have over two years of STARBASE experience compared to 38 percent a year ago. Most instructors currently fall into the three to five-year range at 32 percent, with the one to two-year range close behind at 31 percent, indicating more instructional staff stability than in the previous year. The experience level of office managers with more than three years with the STARBASE program is 54 percent. Instructional assistants have the least amount of DoD STARBASE experience with 70 percent in their first or second year. New staff members are typically trained on the job. Prior to teaching at DoD STARBASE, new instructors may observe experienced instructors, who often serve as their mentors. Instructors also attend regional workshops for delivery of computer-aided design (CAD) instruction and the DoD STARBASE curriculum.

Staff Departures

There were 81 staff departures in FY 2024. This is a 12 percent decrease in the number of employees who left the program in FY 2023 (92 employees). The majority (30 departures) were at the instructor level. Instructional Assistants were the next highest at 22 departures, followed by Office Manager at 13 positions, Director at nine positions, Deputy Director at four positions, and “other” positions with three departures. The overall turnover rate in FY 2024 was 16 percent, down from 19 percent a year ago. A total of 23 percent of departing staff cited a better opportunity elsewhere as their reason for leaving the STARBASE program. This was followed by retirement (20 percent), relocation (16 percent), “other” reasons (16 percent), and returning to school teaching (11 percent). Eleven employees (14 percent) were terminated from the program.

DoD STARBASE “Center of Excellence” Concept Introduced to Recognize High Performing Programs

Last year, the concept of a Level III High Performing STARBASE Academy was revised to become a “Center of Excellence” (COE) initiative to better identify and use best practices that would benefit the entire DoD STARBASE program. This COE concept adheres to the requirements for Level III “A High Performing Location” as defined in DoDI 1025.07, January 15, 2021, section 6.4.

Candidate sites were identified by the Operational Evaluation (OE) and/or Resource Management (RM) Team through the site visit process. All COE recipients must agree to mentor and assist other STARBASE programs in their particular areas of expertise, as requested. Their nominations are then submitted to OASD/M&RA for review and approval.

Congratulations go out to Peach State STARBASE in Georgia and STARBASE Minnesota (MN) – St. Paul for their designation as the FY 2024 STARBASE “Centers of Excellence.”

STARBASE MN – St. Paul, MN

STARBASE MN – St. Paul developed an extensive array of outreach and extension activities that can be models and resources for other DoD STARBASE programs. They include:

- **STEAM-at-Work Scientist/Engineer Events.** These are monthly hands-on student interaction opportunities with a wide variety of corporate STEAM professionals.
- **STEAM Career Videos.** STARBASE MN – St. Paul created 46 videos over the past three years that provide information for students on real people in real STEAM careers.
 - STEAM Trading Cards were developed to support the aforementioned Career Videos, giving students a takeaway and additional information about the STEAM professionals and the companies they work for.
- **STARBASE Extension Activities.** A “STARBASE Clubhouse” booklet is provided to all students participating in their Basic and Supplemental STARBASE programs. The booklet, provided in both English and Spanish, includes additional STEAM-based activities and is intended to be completed at home to engage both students and families in STEAM.
- **STARBASE “Destination Mars” STEAM Kits.** This initiative started during COVID to keep students involved in the STARBASE program during school closures/quarantines. It continued and grew post-COVID, thanks to funding from the MN Legislature/Department of Education, and now serves as a resource for schools/students who would not otherwise be able to attend the on-site MN STARBASE programs due to capacity, geographic location, or transportation limitations.
 - During SY 2023-24, 35,000 STEAM Kits, paid for by the state, were distributed throughout Minnesota. More than 100,000 kits have been distributed to schools since 2020.
 - The kit consists of 23 unique STEAM lessons that integrate STEAM career skills and connections to STEAM careers.
 - Student and Teacher Guides are included with the kits, along with all classroom materials needed to complete the lessons.
 - A companion website featuring 80+ videos of STARBASE instructors delivering the lessons is available for easy implementation of the curriculum.
 - When STEAM kits are combined with on-site STARBASE programs at St. Paul and Duluth, it impacts 52 percent of fifth grade students across Minnesota.





Peach State STARBASE – Marietta, GA.

Peach State STARBASE has been involved in aerial robotics and drones for the past 10 years. What started as a platform for their local STARBASE Advanced after-school program has grown into a massive national initiative and model for other DoD STARBASE programs. Through their continued emphasis, interest, and establishment of partnerships, they have become the resident STARBASE experts on using drones and aerial robotics. As such, they have tested new products, developed a multi-faceted curriculum, and hosted trainings to share their expertise with local educators, as well as other STARBASE locations. Their initiative includes:

■ Development of a model for use of drones in STARBASE Advanced after-school programs.

- Assembly of a variety of commercial and locally-developed curricula so schools can quickly evaluate them and choose what works best for their students.
- Provision of tailored support equipment and materials which includes PC/iPad-based flight simulation programs for pre-field training.
- Provision of For the Win (FTW) “Hopper” aerial robots which have capabilities that range from autonomous flight coding to high quality videography and photography. More advanced drones are provided for demonstrations and advanced students.
 - ▶ Coding is done via “Tynker” and “Scratch.” Other programming languages such as “Java” and “Python” are also introduced.
- Giving students the opportunity to actually participate in FTW-Robotics regional drone competitions. To date, over 1,000 students have participated in the STARBASE Advanced aerial drone program and continue to transition to high school drone and STEAM clubs.

- School and STARBASE Staff Aerial Robotics Training.
 - Peach State STARBASE developed a two-day “Aerial Robotics Summer Institute for Teachers” which is conducted each summer by Peach State staff for teachers who participate in their STARBASE program.
 - ▶ Included with the curriculum is information on FAA regulations and updates. Local experts provide real-world insight into aerial robotics.
 - Since 2022, Peach State STARBASE has developed and provided specially-modified teacher three-day aerial robotics institutes to share their expertise and experience with the entire DoD STARBASE community.
- Established partnerships which benefit the national DoD STARBASE program.
 - Formed a mutually beneficial partnership with FTW Robotics which has accelerated and grown the Peach State STARBASE aerial robotics program.
 - ▶ FTW works with Peach State to field test and tweak new robotics products through STARBASE Advanced programs.
 - ▶ FTW also provides staff to support Peach State teacher and STARBASE instructor-based events as well as competition tracks and free drone kits for participants.
 - An additional partnership with the Georgia Tech Research Institute provides advanced robotics information for teachers and STARBASE instructors, as well as an established path to link the basic STARBASE and STARBASE Advanced middle/high school programs, to ongoing collegiate-level robotics competitions and challenges.



THE DoD STARBASE Curriculum

The DoD STARBASE curriculum is standardized, cutting-edge, research-based instruction that meets national educational standards and ensures a qualitative assessment of curriculum outcomes. It is designed to increase students' involvement and interest in STEAM activities, enhance their understanding of the role that STEM literacy plays in their lives, strengthen their potential for future careers, and make the pursuit of STEAM activities more attractive.

Curriculum development is aligned with the concepts presented by the Executive Office of the President of the United States. It also supports the Federal STEM Education goal to improve STEM instruction. The DoD STARBASE program has historically been recognized by the Office of Science and Technology Policy (OSTP) for their alignment with all the goals and pathways identified in the strategic plan. Their findings indicated that the DoD STARBASE program made major contributions and impacts toward the attainment of the following federal goals: "Building strong foundations in STEM literacy and preparing the STEM workforce for the future." The strategic plan is further organized around four pathways, representing a cross-cutting set of approaches to improve STEM education that will help fulfill its vision and achieve its three goals: through pathways developing and enriching strategic partnerships; engaging students where disciplines converge; and building computational literacy."¹⁴

All STARBASE curriculum focuses on the presentation of accurate scientific information, which promotes the development of STEAM skills, knowledge, and practices, thereby supporting the federal goals of a learning investment. According to the Executive Office of the President, "Basic STEM concepts are best learned at an early age — in elementary and secondary school — because they are the essential prerequisites to career technical training, and advanced college-level and graduate study."¹⁵

United States national standards, such as Next Generation Science Standards, International Society for Technology in Education Standards, National Council of Teacher of Mathematics Expectations, and Common Core Mathematics Standards, have influenced the creation of 27 DoD STARBASE learning objectives and various STEAM curriculum activity options. The DoD STARBASE curriculum engages students with rigorous, "hands-on, minds-on" STEAM lessons. STEAM is intertwined within standardized lesson plan activities and experiments to address real-world issues. Students work in teams simulating a workplace environment. The students find the learning experience both meaningful and inspiring. A student summative assessment tool is utilized both prior to and following the program to ascertain the achievement of the learning objectives.

¹⁴ <https://www.whitehouse.gov/wp-content/uploads/2024/04/2023-CoSTEM-Progress-Report.pdf>

¹⁵ Executive Office of the President of United States, "Charting a Course for Success: America's Strategy for STEM Education, Report by The Committee on STEM Education of the National Science and Technology Council," December 2018. Executive Summary, page v

Four basic types of lesson plans are used to teach the DoD STARBASE learning objectives:

1. **Parent lesson plans** provide the introductory background, instructional strategies, and materials required to teach the overall concepts of a curriculum topic. These are used in conjunction with lesson plan appendices.
2. **Appendix lesson plans** offer a choice of activities that provide students “hands-on, minds-on” opportunities to understand the introductory material presented in the parent lesson plan. Instructors teach the parent lesson plan and then choose one of the approved appendices to complete the lesson. This allows DoD STARBASE instructors to differentiate their approach to teaching the learning objective.
3. **Activity Station lesson plans** are intended to give students multiple activities to strengthen their understanding of the learning objective. These inquiry-based stations are generally short, and in most cases, a number of stations are taught in conjunction with a curriculum segment.
4. **Stand-alone lesson plans** are complete, self-contained documents that fully address the stated components of the curriculum objective. They contain the necessary background information, instructional guidance, and support criteria to meet the requirements for the objective.

STARBASE utilizes a rigorous process to continuously expand and enhance the curriculum offerings with a peer-reviewed evaluation process. DoD STARBASE directors and instructors may choose from multiple approved lesson plans to teach the required 27 objectives. Directors are asked to create a schedule outlining the lessons they have chosen to teach. The schedule also includes any time spent on academy management, student breaks, lunch, and graduation to accurately portray how students spend their days at each DoD STARBASE location. Curriculum schedules are submitted annually with the Directors’ Questionnaire, verified by a curriculum subject matter expert, and validated during visitations by the evaluation team.



“At DoD STARBASE, my students were able to perform experiments they would not have been able to do at our school. DoD STARBASE took down barriers and allowed the students access to amazing experiments that as a district we could not afford to provide. This week will be the highlight of the school year. Students were able to BE SCIENTISTS and BE ENGINEERS! I watched as their individual confidence grew over the week. Many students have told me about how great they feel using this hands-on approach to learning science and engineering.”

- HEATHER POGORLEC, EDUCATOR AT COHASSETT ELEMENTARY, ATTENDING STARBASE MINNESOTA-DULUTH



Volunteers and Military Support

Volunteers and their strategic engagement are essential in the DoD STARBASE program. This group of volunteers, who offer their time and support to enrich the STARBASE program, includes teachers, parents, industry professionals, and community leaders. These individuals serve as presenters, board members, advisors, tour guides, mentors, and instructor aids and provide a wide variety of daily support services. All STARBASE locations reported using volunteers during the school year (SY) 2023-24.

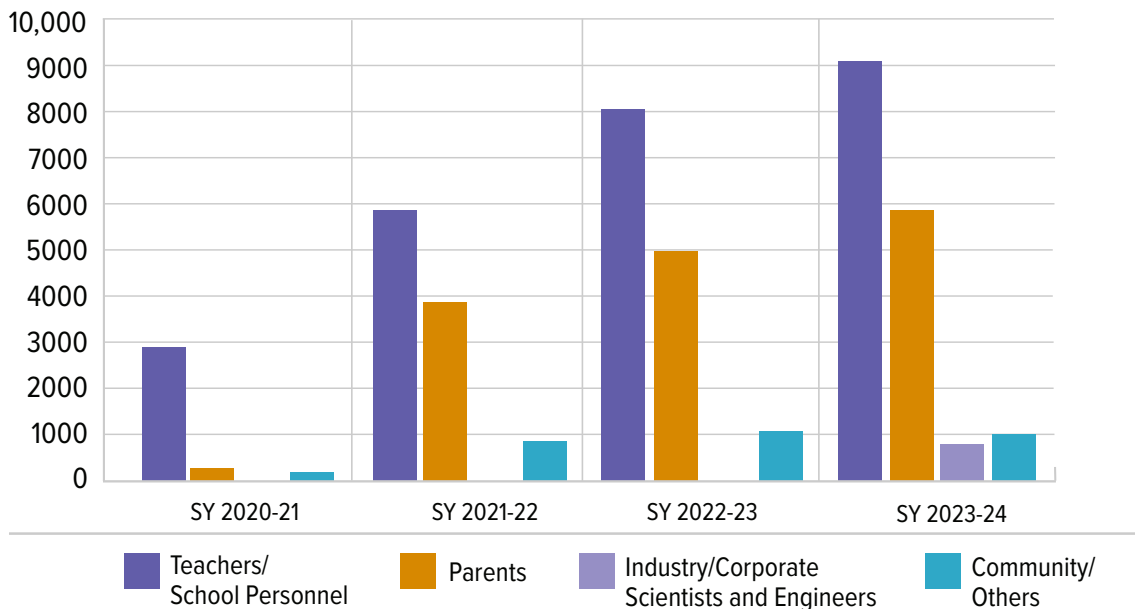
Collectively, the DoD STARBASE locations documented 16,695 volunteers who contributed a total of 194,640 hours, worth an estimated \$6,718,848¹⁶ contribution to the program during the SY 2023-24 (see Table 6).

Table 6: SY 2023-24 Volunteer Participation

	Volunteers	Hours	Value
Teachers/School Personnel	9,141	149,678	\$5,055,022
Parents	5,767	35,361	\$1,261,383
Industry/Corporate Science and Engineering ¹⁷	720	4,280	\$149,280
Community/Other ¹⁸	1,067	5,321	\$253,163

The number of volunteers for the DoD STARBASE program remains steady compared to the previous year. However, these numbers reflect an increase over the last year due to additional programs that became operational during SY 2023-24 (see Figure 1).

Figure 1: Volunteer Participation



¹⁶ The value of volunteer time presented here is the average wage of non-management, non-agricultural workers by state found at: https://www.independentsector.org/volunteer_time.

¹⁷ Industry/Corporate Science and Engineering is a new collection category.

¹⁸ Other volunteers include STEAM groups, firefighters, board members, etc.



Teachers and school personnel contribute the highest number of volunteers and hours to the DoD STARBASE program. They participate in the program alongside their students, offering instructional support and gaining valuable classroom techniques for activity-based education. In the SY 2023-24, teachers and school personnel volunteered over 185,000 hours, with an estimated value of \$5,055,022. This demonstrates the strong commitment and support of the school towards the DoD STARBASE program.

Military Support and DoD Scientists and Engineers

The DoD STARBASE program is supported by military personnel and DoD STEAM professionals who inspire students' interest and community engagement by connecting education with real-world applications. Nearly 100 percent of STARBASE locations were able to utilize military personnel to support their program this year.¹⁹ These personnel may act as guest speakers, explaining the use of STEAM in various careers, or as tour guides, showcasing the application of STEAM concepts in their missions and providing students with access to military facilities and operations. The military personnel share unique experiences with the students, creating an exciting environment to enhance their STEAM experience.

Table 7: SY 2023-24 Military/DoD Science and Engineering Participation

	Volunteers	Hours	Value
Military	4,146	11,990	\$405,220
DoD Science and Engineering	321	692	\$32,959

DoD Science and Engineering volunteers also contribute significantly to the DoD STARBASE program by serving as special guest speakers and interacting with the STARBASE Advanced programs.

¹⁹ The following location reported no military volunteer usage during SY 2023-24: OK - STARBASE Burns Flat.



“Working with STARBASE is one of the most rewarding aspects of my job. Having the opportunity to introduce students to STEAM activities and watching their excitement while they learn and grow is truly an honor. The students are always eager and engaging, full of questions, making every session fun and educational for both the students and instructors. I hope we can continue expanding this outreach opportunity to other students and schools in central Florida, in order to truly capitalize on the talent in the area and showcase STEAM career fields. We need more STARBASE!”

- CAPT ROB BETTS, EXECUTIVE OFFICER OF NAVAL SUPPORT ACTIVITY ORLANDO AND NAVAL AIR WARFARE CENTER TRAINING SYSTEMS DIVISION, STARBASE CENTRAL FLORIDA



“STARBASE Arizona is an invaluable tool for children to look at STEAM outside of a typical classroom. It not only connects children to real applications, but it connects them to a military community who can show and teach them about the application. From a personal standpoint, it was extremely rewarding to work with these kids in and outside of the classroom environment, to teach them about my job as an Enlisted Aviator, and to apply what I do with a STEAM perspective.”

- MSGT ADAM KONIAR, HH-60 EVALUATOR
SPECIAL MISSIONS AVIATOR,
STARBASE ARIZONA

Program Support and Training

The DoD STARBASE program has continued to experience rapid growth, leading to an increased need for additional program support and training. As a result, existing initiatives have been improved, and new ones have been developed to offer training and staff development opportunities for both new and existing locations.

STARBASE U

STARBASE U is DoD STARBASE's online Learning Management System and is available to all program staff. This resource was put in place in FY20 for employees across the nation to ensure information dissemination and provide an area for enhanced training possibilities. It continues to be a vital tool for sharing information about the program from the national level. New staff members are enrolled in courses that pertain to their jobs and have immediate access to training videos and resources. Various training courses have been developed and shared with the field throughout the last four years.



Director's Launch Training

The Director's Launch Training (DLT) concept, initiated in FY 2022, has evolved into a valuable orientation tool for new program directors at existing or newly established academies. The DLT allows the new director to network and receive information and reference materials on program operations, best practices, testing administration, reporting schedules, documentation, performance expectations, resource management, training, and other operational protocols. This time is also used to answer any questions and concerns the staff and sponsors may have. Along with the provided program guidance, new directors are also able to observe classroom instruction and curriculum delivery, as the DLT is traditionally hosted by a high-performing DoD STARBASE program. Following the training, program mentors are assigned to the new directors as a direct line of support and communication in the field as the trainees navigate their first year at the helm of the program and prepare for their first evaluation visit. The FY 2024 DLT was conducted at STARBASE Los Alamitos, CA in November 2023 for 22 program directors.





Brown Bag Virtual Training

As the DLT concept evolved, it became clear that additional training opportunities for existing directors and program staff needed to be developed and made available. Thus, the DoD STARBASE Brown Bag training was created. These training courses build upon the content covered in the new director's training and encourage collaboration between new and experienced program directors. Conducted virtually, these training courses are led by subject matter experts from The SPECTRUM Group (TSG). Once completed, the training is accessible on the STARBASE-U learning management system, for the benefit of the field. In FY 2024, TSG completed three Brown Bag Training sessions on the following topics:

- Community Outreach and Supplemental Programming
- Technology Updates and Resources with LEGO
- Curriculum Implementation, Instruction, and Scheduling

STAFF PROFESSIONAL STEAM DEVELOPMENT

PTC Onshape

The PTC Onshape training is designed to teach the basics of 3D computer-aided design (CAD) software. The training focuses on navigation, assembly, part creation, modeling, measurements, materials, weights, volume, and more. This training is mandatory for all program instructors and is held at various STARBASE locations across the nation several times throughout the fiscal year. During the two-day training,²⁰ participants enhance their understanding of digital transformation, product design, and CAD terminology. This enables them to effectively teach the required three hours of PTC Onshape at their home site during the Basic program academies.

²⁰ PTC Onshape training was conducted at STARBASE Arizona, STARBASE Arkansas, STARBASE Pensacola, STARBASE Jackson Barracks, STARBASE Los Alamitos and STARBASE Portland.

STEAM Professional Development Training

In FY 2024, DoD STARBASE offered various STEAM professional development courses for program staff. Many of the lessons learned have been brought back to the programs and implemented during their Supplemental and Advanced Programs.

- The Aerial Robotics training was offered to DoD STARBASE program instructors and directors in order to build and enhance their knowledge of drones. The training was hosted and conducted by Peach State STARBASE. Participants were able to build drones and also learned about principles, technologies, aeronautics, and operational techniques and skills.
- Rocketry training was hosted and conducted by STARBASE Louisiana which provided instruction on rocket design, computer simulation, assembly, and launch procedures. Participants also received sample files for 3D printing of custom rocket parts using the Onshape software.
- The Modeling and Simulation workshop offered valuable insights into modeling, simulation, augmented reality, virtual reality, and artificial intelligence. Participants had the chance to explore the I/ITSEC²¹ exhibits and engage with industry and military professionals, gaining real-world experience. Additionally, attendees learned new lesson plans to implement in their classrooms. Host organizations were STARBASE Central Florida, STARBASE Patrick, and STARBASE Pensacola.



REGIONAL WORKSHOPS

During the summer of 2024, STARBASE hosted workshops in the East, Central, and West²² regions for the first time in its history. State Leadership from host locations warmly welcomed each region and expressed strong support for the DoD STARBASE program while emphasizing the program's nationwide significance. Furthermore, field experts presented crucial program updates and strategies to not only adapt to the evolving STEAM environment but also to foster a strong team culture that supports and equips program staff. These workshops provided a rare opportunity for in-person collaboration among program directors, a significant development not experienced since 2019.



²¹ I/ITSEC is the Interservice/Industry Training, Simulation and Education Conference held in Orlando, Florida each year. It is the world's largest modeling, simulation, and training event.

²² GA - Peach State STARBASE hosted the East Regional Conference. The Central Regional Conference was hosted by KS - STARBASE Kansas City, and the West Regional Conference was hosted by NV - STARBASE High Sierra.

DoD STARBASE Advanced Program

Program Elements

STARBASE Advanced is a unique school-based extracurricular program that targets 6th to 12th grade students. It combines STEAM activities with a relationship-rich, after-school, and extracurricular environment to provide the missing link for youth making the transition from elementary to middle school and/or high school. It extends the positive impact of the DoD STARBASE program through an after-school STEAM coaching approach that solidifies students' attachment to and engagement with school. The middle school program takes place in partnering schools that have expressed the desire for additional DoD STARBASE program instruction and resources. As with other school-based coaching/mentoring programs, STARBASE Advanced is highly structured and intends to help support school goals, provide safe environments for students, and improve student-teacher relationships. STARBASE Advanced started with a middle school component (STARBASE 2.0) in FY 2010, and in FY 2020, a similar program for high school students (STARBASE 3.0) was introduced.

Program Requirements

DoDI 1025.07, dated 15 January 2021, formally documented operational requirements for the STARBASE 2.0 program, which has also been applied to the STARBASE 3.0 high school programs. In addition, a STARBASE Advanced program guide was developed in response to the evolution of the program, and this additional resource has been made available to program directors via the STARBASE U platform. Execution of the STARBASE Advanced program must adhere to the following requirements:

- It must support STEAM activities and must target middle school students for 2.0 and high school students for 3.0.
- The program should be school-based and should have district support. Meetings will typically take place after school, and each program will be supported by a teacher from the participating school.
- Meet for no less than four hours each month, for a minimum of 20 hours for the school year.
- Each STEAM coach will support no more than four students.
- Must have a memorandum of understanding or memorandum of agreement in place.
- Must have a designated STEAM coach coordinator.

The DoDI also requires cooperation from the participating school to include:

- Providing adequate meeting space, such as a classroom or all-purpose room.
- Appointing a teacher or designated school representative as the STARBASE Advanced point-of-contact.
- Providing background checks of STEAM coach volunteers.
- Providing computer/information technology support as needed.
- Arranging for an after-school snack for students and providing parking for DoD STARBASE program staff and STEAM coaches.



DoD STARBASE Advanced Curriculum

STARBASE Advanced students typically work with a STEAM coach on a team project at their school. The outcomes for all students participating in the DoD STARBASE Advanced program are as follows:

- Increased STEAM interest and knowledge
- Reduced high-risk behavior
- Increased engagement with school
- Increased STEAM career awareness

Program locations use a variety of different team projects to achieve these goals. STEAM projects include robotics, rocketry, computer-aided design, coding, aerial robotics (drones), engineering design processes, CO₂ cars, weather balloon launches, and wind energy. Several programs culminate with some related competitions, such as FIRST LEGO League competitions and the American Rocketry Challenge (ARC).²³

“STARBASE helps my students see themselves in careers and paths they may not have imagined themselves in before, and it’s utterly amazing to watch them realize that they already know way more about the STEAM world than they previously believed.”

- DESIREE NAPOLEAN, EDUCATOR, CAPITAL PREPARATORY SCHOOL ATTENDING STARBASE WINDSOR LOCKS



²³ FIRST LEGO League is a global competition where elementary and middle-school students build LEGO-based robots to complete tasks on a thematic playing surface. The American Rocketry Challenge (ARC) is an annual model rocketry competition for students in 7th -12th grades where they design, build, and launch a rocket with specific characteristics.



“I have been working directly with STARBASE Louisiana for a little over a year now and it’s been such a rewarding professional experience! Watching the staff operate has been incredibly inspiring because of how dedicated they are to the program and their crafts. The passion and enthusiasm they bring to those students is just as incredible as what they do behind the scenes to ensure the children have an unforgettable experience! Looking forward to working with them for as long as my military career will allow me.”

- MSGT EVAN JOHNSTON, IGI USAF AFRC, STARBASE LOUISIANA



Participants

DoD STARBASE 2.0

During FY 2024, STARBASE 2.0 programs were active at 57 STARBASE locations in 27 states and Puerto Rico.²⁴ This is a five percent increase in program locations reported in FY 2023. Forty percent of the total number of 2.0 clubs were conducted by six locations: LA - STARBASE Louisiana (20), GA - STARBASE Robins (14), GA - Peach State STARBASE (11), AL - STARBASE Maxwell (11), and MT - STARBASE Fort Harrison (10).

In FY 2024, school districts partnered with DoD STARBASE at 112 school locations to operate 170 individual STARBASE Advanced 2.0 clubs. While this represents a 19 percent decrease in locations and 13 percent decrease in number of overall clubs from FY 2023, the total number of students involved decreased by only five percent to 2,860 students. The average club size increased from 15 to 17 students. These changes may be attributed to an effort by the STARBASE sites to concentrate their after-school programs on locations and schedules that have a better chance of success and longevity. The majority (87 percent) of clubs were located in urban school settings, which is fairly consistent with the previous year’s data. STARBASE Advanced program completions remained in the very high range of 97 to 99 percent. Sixty-one percent of DoD STARBASE Advanced 2.0 students were former DoD STARBASE students, which is up significantly from FY 2023 at 48 percent.

The duration of STARBASE Advanced 2.0 club activity ranged from a concentrated time period to year-long initiatives, with 60 percent of programs meeting in weekly sessions and 93 percent now meeting during after-school hours, which is up from 76 percent the previous year. The retention rate for FY 2024 Advanced programs continued to be in the 80-85 percent range at 82 percent. Directors reported several reasons why students discontinued the program. School suspension/prohibition of after-school/extracurricular activities, relocation, time conflicts, and lack of interest in the chosen curriculum were cited as the main reasons why students drop from the program.

²⁴ In FY 2024, STARBASE Advanced 2.0 programs were offered in Alabama, Arizona, Colorado, Connecticut, Florida, Georgia, Hawaii, Idaho, Indiana, Kansas, Louisiana, Massachusetts, Michigan, Minnesota, Montana, North Carolina, New Mexico, Ohio, Oklahoma, Oregon, Puerto Rico, South Dakota, Texas, Utah, Virginia, Vermont, West Virginia, and Wisconsin.

DoD STARBASE 3.0

The STARBASE Advanced 3.0 program for high school students experienced 31 percent growth from the previous reporting year. Seventeen STARBASE locations reported initiating or continuing high-school level STARBASE Advanced 3.0 programs during FY 2024.²⁵ There were 29 total STARBASE 3.0 initiatives reported impacting 783 students across the country, compared to 535 students reported in FY 2023.

The American Rocketry Challenge (ARC) is being used as a STARBASE Advanced 3.0 program platform at STARBASE Louisiana and STARBASE New Mexico. STARBASE Louisiana conducts a year-round program and has six active ARC clubs. STARBASE Robins continued their rocketry program with 334 JROTC cadets in Broward County, FL as part of their STEAM Leadership Summit. Texas STARBASE Austin worked in partnership with the Austin Rocketry Group and UT Austin Longhorn Rocketry program.

Robotics was the focus of 3.0 programs in Idaho, Puerto Rico, and Montana. The 3.0 club led by STARBASE Puerto Rico focused on robotics and CO2 Dragsters programming for island 9th, 10th, and 12th graders. Programs in Idaho and Montana involved students in the LEGO FIRST Robotics Challenge and FIRST Tech Challenge.

Staff

DoD STARBASE Advanced Program Coordinator

DoD STARBASE Advanced is primarily a volunteer program. The participation of volunteer STEAM coaches and volunteer classroom teachers is managed by a designated DoD STARBASE Advanced program coordinator. This is typically a part-time position, and many programs choose to assign the coordinator in-house with their existing DoD STARBASE director, deputy director, program instructor, or office manager taking on the additional responsibilities. The STARBASE Advanced program coordinator plays an invaluable and critical role in the success of the program. The responsibilities of the Advanced program coordinator include:

- Creating and implementing program marketing
- Managing relationships with schools
- Recruiting and screening program volunteers
- Managing volunteer STEAM coaches
- Coordinating and delivering volunteer training
- Tracking data
- Supporting and motivating program volunteers
- Selecting program curriculum



²⁵ STARBASE 3.0 programs were conducted at CA - STARBASE Los Alamitos, GA - STARBASE Robins, ID - STARBASE Idaho, KS - STARBASE Kansas - Kansas City, Manhattan, Salina, Topeka and Wichita, LA - STARBASE Louisiana, MT - STARBASE Fort Harrison, NM - STARBASE New Mexico, PR - STARBASE Puerto Rico, TX - Texas STARBASE Austin, VA - Winchester STARBASE Academy, VT - STARBASE Rutland and STARBASE South Burlington, and WV - STARBASE Martinsburg.

STEAM Coaches

STEAM Coaches play a vital role in the success of both the participants and the STARBASE Advanced program as examples of successful STEAM professionals. Serial engagements with professionals in STEAM careers allow students to network with someone experienced in the field and to envision pathways for themselves to pursue those types of careers. Additionally, STEAM coaching can be a powerful experience for STEAM professionals, building communication skills, and connecting them to their community. The ideal STEAM coaching team consists of a lead STEAM Coach, representatives from local STEAM industries, college students, and members of the military. To serve as a DoD STARBASE Advanced STEAM coach, volunteers must meet the following minimum requirements:

- Be at least 18 years of age
- Successfully pass screening/background check

The 636 coaches who participated in the STARBASE Advanced 2.0 and 3.0 programs during FY 2024 came from various STEAM professions, including military, DoD professionals, industry professionals, and college students who support the STARBASE Advanced program staff (see Table 8). Working with a coach, participating students are exposed to the lifelong benefits of higher education and a career in a STEAM-related field. They may also receive guidance about educational and career options. The target coach-to-student ratio defined in the DoDI for the STARBASE Advanced 2.0 program is 1:4, and approximately 67 percent of 2.0 clubs met this ratio. The FY 2024 ratio for STARBASE 3.0 clubs averaged one coach for every six student participants.

Table 8: STEAM Coach Types

Type	Number of Coaches
Military	83
DoD Science and Engineering	22
Non-Military, DoD, Professionals	4
Industry Science and Engineering	59
Industry Professionals (Other)	30
College Students	38
STARBASE Staff Members	167
Host School Staff Members	138
Other	95
Total Number of Coaches	636

Funding

The DoD STARBASE Advanced programs operate using a combination of federal and private funds.²⁶ Of the 57 DoD STARBASE Advanced locations, 70 percent operate solely using their federal DoD STARBASE funds. The remaining 30 percent reported receiving additional funding from a combination of non-DoD and private organizations, totaling a reported \$111,470.

DoD STARBASE Advanced Program Oversight

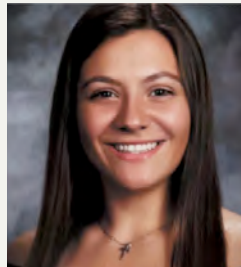
Throughout FY 2024, directors of the participating locations were interviewed during site visits and surveyed to obtain data regarding program requirements, participants, curriculum, staff, and funding to help determine the overall operational status of the STARBASE Advanced programs.

²⁶ Private funds include not-for-profit, donations, grants, and host school contributions.



**DoD STARBASE
graduates
WHERE ARE
THEY NOW?**

STARBASE MAXWELL, ALUMNI SPOTLIGHT
Savannah Sanchez CLASS OF 2015

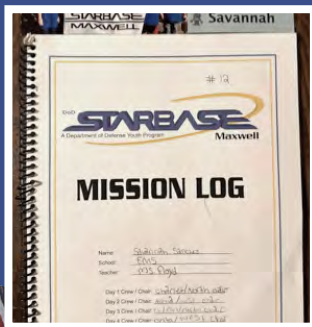


STARBASE Maxwell in Alabama celebrated their 20th anniversary this year with an open house, and their featured guest speaker was one of their own graduates. Savannah Sanchez attended STARBASE Maxwell with her fifth-grade class from Eclectic Middle School during the 2015-2016 school year and spoke to the guests about her firsthand experience.

Savannah graduated from Eclectic High School in May of 2023 and is a sophomore at Southern Union State Community College. She plans to further her education at Auburn University to major in science with the goal of becoming an astrophysicist. She credits STARBASE Maxwell for determining the path of her future. She also hopes to teach at the university level someday so she can "teach people the very things that STARBASE introduced to me in fifth grade."

"I went to STARBASE at Maxwell Air Force Base with Mrs. Floyd's fifth-grade class back in 2015. STARBASE is what really got me interested in science, especially physics. The way they were able to teach STEAM was so unique and so exciting. They were able to take very complex ideas and convey them simply enough that a fifth grader could understand it, yet keep it intriguing enough to keep our attention. I remember learning Newton's Laws of Motion while playing with tennis balls. We studied the types of matter, Bernoulli's Principle, and robotics, as we built a rover and programmed it to navigate a moon-like surface, and so much more during my time there...and it was so much fun! Thanks to STARBASE, I plan on getting my PhD in astrophysics."

"Savannah is just one example of the influence STARBASE Maxwell has had on our local students," said Ted Welch, STARBASE Maxwell director. "Just thinking of the influences that our program has had over the past 20 years, our team is very excited about the future and proud to help lead the way!"



“They were able to take very complex ideas and convey them simply enough that a fifth grader could understand it, yet keep it intriguing enough to keep our attention.”

- SAVANNAH SANCHEZ

Program Oversight

Compliance

The Office of the Assistant Secretary of Defense (OASD) for Manpower and Reserve Affairs (M&RA) has the overall responsibility for the management of the DoD STARBASE program. The Department of Defense Instruction (DoDI) 1025.07, which was updated 15 January 2021, provides the policies and procedures that guide the current DoD STARBASE academies. The DoDI directs the locations on operational requirements such as the number of classes, classroom hours, student numbers, participant eligibility, program site location, staffing models, core curriculum, and reporting requirements. These items are reviewed by the Operational Evaluation team. A separate Resource Management team ensures that all DoD STARBASE programs also comply with the regulations, policies, processes, and procedures associated with the accountability and management of DoD-owned property and equipment and the financial management of federal funds. Both types of evaluations are conducted on a scheduled three-year basis with special reviews conducted as directed by OASD/M&RA.

Operational Compliance Procedures

The Operational Evaluation (OE) process was designed and developed to ensure that the DoD STARBASE academies adhere to the DoDI as well as to other administrative directions and reporting requirements directed by OASD/M&RA. Three progressive levels of program and organizational performance are identified – Basic (Level I), Advanced (Level II) and High Performing (Level III). Each level has a prescribed set of activities which must be met for full program compliance at that level. To address the continued growth of the STARBASE program, all Basic (Level I) and Advanced (Level II) are now combined into a single OE site visitation. This allows for review of both program levels at the same time, but also allowed the team to coach and guide locations on how they could better advance their program. In addition, the on-site review of hard copy-required documents was changed to electronic submission prior to the visit. This allows the evaluation team to review program documentation prior to the visit which gave them a better picture of program operations and areas, if any, that needed to be addressed during the visit.

The performance level of a STARBASE program is determined through site visitations, academy reporting requirements, and periodic surveys using detailed criteria that are established and reviewed annually by OASD/M&RA and the STARBASE OE team. Shortfalls or non-compliance issues are typically managed through a corrective action plan agreed upon by the participants and OASD/M&RA. In most cases, these corrective action plans are short-term and successfully obtained. The attainment of the performance level under review is held in abeyance and considered “pending” until the corrective action requirements are completed and verified.

The OE assessment system also ensures that the academy can only advance to higher levels of performance after it successfully attains a positive assessment at the prior level (i.e., an academy must meet all required Basic (Level I) activities before it can claim any Advanced (Level II) designation and so on).

The successful attainment of these levels of performance provides OASD/M&RA and the military service representatives a way to determine the efficacy of the program. The system also distinguishes and identifies those locations that operate at higher levels of performance to their sponsors and participant groups, the local community, the school systems, and military sponsors.

The following sections outline details of the performance assessment system.

Performance Level Descriptions

The Basic Academy (Level I)

The Basic (Level I) criteria include all DoDI requirements and operating guidelines stipulated by OASD/M&RA. This incorporates required program activities such as number of classes, student numbers, classroom hours, installation of core curriculum content, military-installation program delivery, required documentation (i.e., MOU's, student participation forms, etc.), reporting requirements, and a number of administrative responsibilities such as employee evaluations, student assessments, visiting teacher surveys, etc.

The Advanced Performing Academy (Level II)

In order for programs to achieve an Advanced Performing status, they must first successfully meet the criteria for a compliant Basic Program, fulfilling all associated operational and resource management requirements. This entails demonstrating a solid foundation of compliance and effective operations, which serve as essential stepping stones toward attaining a higher level of performance recognition. Once Basic Program Compliance status has been attained, sites may opt to implement a STARBASE Advanced Program at either the middle school or high school level. The Advanced Program requires further operational planning, documentation, and managerial enhancements. Detailed information regarding these additional requirements can be found in DoDI 1025.07 and the STARBASE Advanced Program Guidebook

The High Performing Academy (Level III)

During FY 2024, the concept of a Level III High Performing STARBASE Academy was revised to focus more on a "Center of Excellence" approach. While the original process, started in 2018, identified high-performing programs, it was not an effective way to provide a long-term resource of best practices that would be beneficial to the entire DoD STARBASE program. The "Center of Excellence" (COE) concept better addresses those needs and adheres to the requirements for Level III, "A High Performing Location," as defined in section 6.4 of the DoDI.

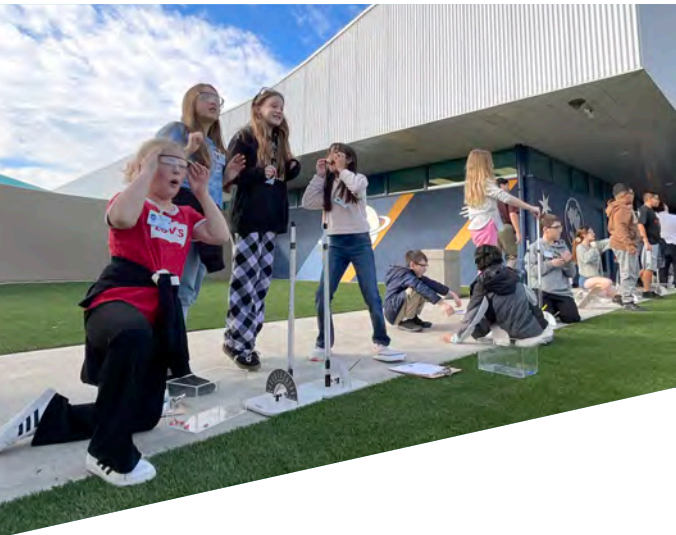
Through the COE process, the Operational Evaluation (OE) and/or Resource Management (RM) Team can identify potential COE sites through observations of policy, procedures, standard practices, operational and program enhancements, higher-level problem-solving techniques, time-sensitive improvements, and/or efficiencies in operations used in an activity, or set of activities. Included is an overall review of program oversight, resource management data, operational activities, program enhancements, collaboration activities with third-parties, relationships and involvement with sponsors, and other downstream strategic objectives to improve the DoD STARBASE program. These activities must significantly advance the DoD STARBASE program vision and mission and be easily transferrable/usable by other STARBASE locations.

If an initiative is identified that meets this criterion, the OE or RM team member will complete a "Recommendation for DoD STARBASE Center of Excellence" worksheet. Nomination worksheets will be reviewed and discussed by the OE and RM team on an annual basis. Unanimous concurrence on the nomination is required to forward the final package to OASD/M&RA for final approval. Once recognized as a COE, all sites must agree to mentor and assist other STARBASE programs in their particular areas of expertise, as requested.



"I can't wait to go home after school and figure out a way to build my own launcher for my rocket."

- NIGHT SKY (GRACIE), STUDENT AT CUSTER ELEMENTARY SCHOOL, ATTENDING STARBASE NOVA HONOR



“I would highly recommend the DoD STARBASE program to all involved in the education of our children. This is beyond a STEAM experience, it is a life-changing experience.”

- LIZ FICK, TEACHER AT ARABI ELEMENTARY, ATTENDING STARBASE JACKSON BARRACKS

FY 2024 Operational Compliance Results

Initial Operational Evaluations

New STARBASE programs are visited approximately one year after starting operations for their Initial Operational Evaluation. During this visit, program operations and documentation are reviewed, and guidance is provided to ensure that the new program and director have all the resources they need and are on target for success. During FY 2024, two Initial Operational Evaluations were conducted to help guide new directors at AR – STARBASE Arkansas and NY – STARBASE Fort Drum.

Operational Evaluations

The Operational Evaluation (OE) is conducted on a three-year cycle, to confirm basic compliance with program requirements. This evaluation combines Basic and Advanced program reviews into an overall OE.

The OE visit involves a one-to-two-day review of program operations, documentation, classroom observation, interviews with the director and staff, and other participant groups, as appropriate. At the conclusion of the visit, an exit-briefing is conducted with the commanding officer hosting the program, other program representatives, and the DoD STARBASE director to review the preliminary results of the visit and to discuss if any corrective action is required. A plan of action is developed, and a schedule for completion is mutually agreed upon. A written report is then sent to the OASD/M&RA program manager upon completion of the visit. OASD/M&RA forwards the final report to the director and host command leadership and may discuss the key points of the report with them. Overall, the non-compliant activities most commonly noted are administrative/technical in nature. Given the number and scope of activities, the number of more serious compliance incidents is small and involves only a few academies. During FY 2024, 25 OE site visits were conducted. One of the most common concerns expressed by directors was student transportation and bus driver shortages, which impacted their overall student numbers, hours of instruction, and program attendance.

Special Assistance/Follow-Up Visitations

One Special Assistance/Follow-Up visit was directed by OASD/M&RA during FY 2024.²⁷ The purpose of these visits varies, and the special assistance provided may include help with program set-up, curriculum, and specific local issues involved in the program. They may also be conducted to follow up on items of concern from a previous site visit.

²⁷ A special assistance visit was conducted at NH - STARBASE New Hampshire who began program operations in November 2023.

Resource Management Compliance Procedures

During FY 2024, the Resource Management Evaluation process included all STARBASE programs' fiscal responsibilities, processes and procedures, and property accounting procedures. These actions included reviews of fiscal year expenditures to evaluate compliance with fiscal regulations, the execution of each location's annual budget, and the accounting of all equipment and supplies.

The Department of Defense service components (Army, Air Force, Air Force Reserve, Marine Corps, Navy, National Guard and Space Force) governing fiscal documents and resource management procedures are vastly different in some instances. As such, the financial section of the Resource Management Checklist is broken down into two sections – National Guard (Cooperative Agreements) and Active/Reserve Programs, which allow the evaluation to center on the pertinent requirements of the host service component.

Resource Management Compliance

During FY 2024, 24 existing STARBASE programs and three new programs were visited. Visitations to existing sites centered on their current Resource Management practices and how they could be improved. At the new STARBASE sites, the Resource Management team members trained the directors and their staff on proper procedures and related documentation. All locations visited this year were found to be compliant with the Resource Management checklist.



"If this is Day One of STARBASE, it's going to be one heck of a week."

- "BLT" A1C CHRIS HEINEMAN,
SOUTH DAKOTA ARMY NATIONAL GUARD,
STARBASE NOVA HONOR





DoD STARBASE
graduates
WHERE ARE
THEY NOW?

Full Circle: Shakeerryah and Jamal's Journey with STARBASE Robins

Shakeerryah Barrett and Jamal Smith, both proud products of the STARBASE Robins program, have come full circle in their educational journeys. As fifth graders, they were inspired by the STEAM-focused curriculum that ignited their passions for Science, Technology, Engineering, Art & Design, and Mathematics. Now, as instructors at STARBASE Robins, they are dedicated to fostering that same spark in the next generation of students.

For Shakeerryah, attending STARBASE was a transformative experience. She vividly recalls building and launching her own rocket, a moment that solidified her love for STEAM. With a degree in elementary and special education and five years of teaching experience, she is now committed to instilling a love of learning in her students. Shakeerryah believes that STARBASE's hands-on approach fuels curiosity and helps students envision exciting futures in STEAM fields.

Similarly, Jamal's journey began in fifth grade, when STARBASE introduced him to the thrill of technology. Now a cybersecurity student, he takes pride in returning to the program as a teaching assistant and STARBASE Advanced 2.0 instructor. Jamal understands the profound impact STEAM education can have in a nurturing environment, and he uses his experiences to engage students and demonstrate their potential.

Both emphasize the importance of mentorship. Shakeerryah often witnesses her students transform from hesitant learners to confident STEAM enthusiasts over the course of the program. Jamal shares this sentiment, finding fulfillment in guiding students who are navigating the same path he once walked.



Mrs. Greene's Parkwood
Elementary Class, 2004.

Shakeerryah Barrett,
then and now.





Above left, Jamal Smith in the STARBASE Robins classroom.

Jamal and Mrs. Turner's Morningside Elementary Class of 2007.

Through their roles, Shakeerryah and Jamal are not only inspiring the next generation but also rekindling their own passions for STEAM.

Both educators draw from their own formative experiences in STARBASE, allowing them to connect with students on a personal level. This connection fosters an environment of trust and relatability, encouraging students to engage more fully in STEAM activities.

The STARBASE Robins staff found that it was most interesting that Shakeerryah and Jamal were both featured on their school's picture page back in 2004 and 2007, which made them think they were destined to return to STARBASE Robins to lead.

Their work at STARBASE Robins is more than just a job; it is a platform for them to give back to the program that shaped their futures. Through their roles, Shakeerryah and Jamal are not only inspiring the next generation but also rekindling their own passions for STEAM. Together, they embody the lasting impact of STARBASE, proving that education can indeed come full circle.



Above, Shakeerryah quizzes her students at STARBASE Robins.

Fiscal Analysis


A congressional appropriation to the Department of Defense (DoD) funds the operation of DoD STARBASE. The Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs (M&RA) oversees the program and distributes funding. In FY 2024, the total program budget was \$53,000,000, an increase from the \$50,000,000 allocated in FY 2023. This increase funded the start-up of six new program sites and allowed existing programs to add classroom capacity, upgrade classroom technology, add staff, and make other program improvements. During FY 2024, OASD/M&RA allocated \$49,112,256 to program operations. The remainder of the appropriation was used for assessment activities, staff development, training, and overall program design and development activities.

In FY 2024, the median operating cost per location was \$583,409. Several factors contribute to the cost variances, including geographic location, number of operational classrooms, type and number of supplementary programs, salary scales, and number of employees. OASD/M&RA annually reviews each location's budget to maintain an equitable distribution of funds.

The operation of simultaneous classrooms requires duplicate equipment, supplies, and staff. Many DoD STARBASE locations offset these expenses by sharing equipment between classrooms. These offsets keep staff costs down to an average of 81 percent of their operating budget. Operating costs per operational classroom are shown in Table 9.

Table 9: Operating Costs Per Classroom

Classrooms	Median	Average Staff Costs
1	\$452,550	\$358,222
2	\$592,711	\$503,112
3	\$840,000	\$728,076
4	\$813,473	\$673,879


“Thank you so much for giving students an opportunity to experience such a variety of hands-on STEAM activities. For many of these students, this has been their first experience with these real-world STEAM concepts. Being able to get an in-depth tour of the C-130 was something the students will remember forever! Attending STARBASE has really helped my students become more interested in STEAM and STEAM-related careers.”

- ALISON KIDD, EDUCATOR AT LULU WALKER ELEMENTARY, ATTENDING STARBASE ARIZONA



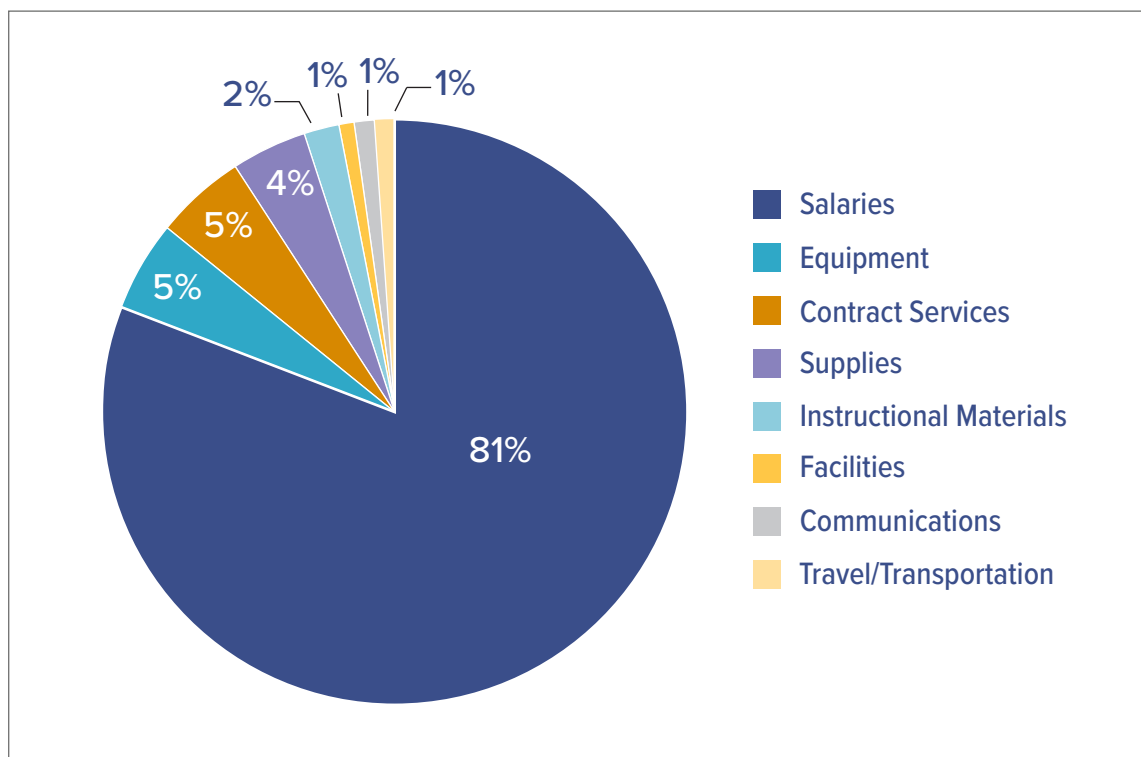
➤ “STARBASE has been the best part of my year!
I wish all my classes were like STARBASE!”

- MASE ANDERSON, STUDENT AT FJ KINGSBURY SCHOOL,
ATTENDING STARBASE WATERBURY



Overall expenditures of DoD STARBASE funds allocated to each program site are shown in Figure 2. Staff costs on average, account for 81 percent of the site budget, followed by equipment (5 percent), contract services (5 percent), supplies (4 percent), instructional materials (2 percent), facilities (1 percent), communications (1 percent), and travel/transportation was (1 percent), which covers costs for staff business travel.

Figure 2: FY 2024 Expenditures of DoD Funds



In addition to DoD funds, 32 of the 90 locations obtained funding from non-DoD sources such as state allocations, grants, and donations. The total raised from non-DoD funding for FY 2024 was \$1,166,390, with the majority coming from state funds and grants/donations at 55 and 42 percent, respectively.



DoD STARBASE
graduates
WHERE ARE
THEY NOW?

STARBASE KANSAS CITY, ALUMNI SPOTLIGHT

Captain Maria Anderson

**ADMINISTRATIVE OFFICER, MEDICAL DETACHMENT,
KANSAS ARMY NATIONAL GUARD**

Captain Maria Anderson (Gallegos) began her journey with the STARBASE program while attending STARBASE Kansas City with her fifth-grade class from White Church Elementary School in 2004. While there, she developed a keen interest in science, technology, and the military. This formative experience laid a solid foundation for her educational and career pursuits. What she didn't know back then was that life would bring her back to STARBASE in a totally different capacity as an adult.

After graduating from Turner High School in May 2011, she enlisted in the military, embarking on a path that would significantly shape her future. Following Basic Combat Training at Fort Jackson, South Carolina, in 2011, she completed Advanced Individual Training (AIT) and was assigned to the 778th Transportation Company in Kansas City, Kansas, as an enlisted soldier. During this time, she also began her higher education at Park University.

In 2014, she attended the Army's Airborne School, where she completed the rigorous training necessary to earn her parachutist badge. This achievement enhanced her physical endurance and mental resilience, reinforcing her commitment to the values of courage and teamwork that are fundamental to military service.

In 2016, she earned her Bachelor of Science in criminal justice with an emphasis on law enforcement from Park University and was commissioned as an officer in the Kansas Army National Guard. She also went on to obtain a master's degree in health care administration from Park University. This strong educational background has equipped her with essential skills and knowledge that she effectively applies in her professional career.

In 2024, CPT Anderson was selected to be the Administrative Officer (AO) for the Medical Detachment at the National Guard Armory in Lenexa, Kansas, where she leads a team dedicated to managing the medical readiness of soldiers throughout the state. As such, she demonstrates an unwavering commitment to ensuring the health and well-being of her



“Personal success is not just about achieving individual goals, but about embracing challenges, learning from experiences, and uplifting those around you.”

- CAPTAIN MARIA ANDERSON

fellow service members. Coincidentally, the Lenexa Armory where she was assigned is also the current home of STARBASE Kansas City, and her life influences came about full circle in a new capacity.

As Administrative Officer, CPT Anderson plays a crucial role in strengthening the partnership between the Kansas Army National Guard and STARBASE Kansas City, with a focus on STEAM education and mentorship for young students—just as she herself once benefited as a STARBASE student. CPT Anderson and her team lead all rocket launch activities for STARBASE Kansas City and organize Ground Ambulance tours, offering students immersive experiences that inspire them to pursue their interests in STEAM. She has also supported a key initiative in collaboration with the University of Kansas Medical Center, hosting a cadaver lab that provides medical personnel with invaluable hands-on training to hone their skills. Through these efforts, CPT Anderson continues to empower the next generation of leaders and innovators.

In addition to her military responsibilities, CPT Anderson has worked for Oracle Corporation, where she specialized in writing content for the Department of Defense and Veterans Affairs, focusing on women’s health, gynecology, and referral management. This experience has further strengthened her expertise in health care and advocacy.

As CPT Anderson reflects on her journey, she shares, “Personal success is not just about achieving individual goals, but about embracing challenges, learning from experiences, and uplifting those around you.” Her path—from an eager STARBASE student inspired by science to a dedicated leader in both the military and health care—embodies the power of resilience, service, and commitment to a purpose larger than oneself. She acknowledges that none of this would have been possible without the unwavering support of her family and the inspiration she draws from her four sons. CPT Anderson’s story stands as a testament to what is possible through dedication and the desire to make a meaningful difference in the lives of others.



Student Assessment

Overview

The effectiveness of the DoD STARBASE program in sparking the interest of fifth graders is evaluated each school year by measuring changes in STEAM-related knowledge and attitudes of students who attend a DoD STARBASE Academy. This evidence-based approach utilizes a time-series research design to look for significant improvements over baseline inclinations after going to STARBASE. An online questionnaire gathers student answers and opinions privately.

The questionnaire assesses students' takeaways from STARBASE in terms of:

- Knowledge questions that measure STEAM conceptual understanding,
- Attitudes about STEAM topics (e.g., subjects, applications, personal mastery),
- Interest in STEAM careers, both military and civilian, and
- Opinions about the military (e.g., military personnel and jobs).

Evaluation Methodology

ASSESSMENT ADMINISTRATION

- ▶ *Students completed the assessment online under the supervision of STARBASE instructors.*
- ▶ *Students completed the assessment, first at the start of their 25-hour experience (pre-program) and again at the end of their experience (post-program), to evaluate the effect of STARBASE participation on their STEAM understanding and related attitudes.*

STEAM KNOWLEDGE MEASUREMENT

The knowledge section of the questionnaire consisted of 20 multiple-choice STEAM problems reflecting domains of the approved STARBASE STEAM curriculum.

- ◆ Curriculum areas are Science, Technology, Engineering, and Mathematics with embedded Art & Design concepts.
- ◆ Scores were computed as the percentage correct of the 20 multiple-choice questions for a total score and on subsets of questions within each curriculum area. This facilitates comparisons with previous yearly results that may have different total numbers of items.
- ◆ A “gap” score was determined by subtracting the pre-program assessment value (i.e., percentage) from the post-program value obtained by each student and then averaging across the entire sample.



“Thank you so much! I had the best week. I was very interested in little Bits and Spheros, so maybe I'll be an engineer when I'm older. I can't wait for us to be able to see the Air Base in Sioux Falls. It's going to be so much fun seeing an F-16 in person. I never knew that chemical reactions, engineering, robotics, and math could be so fun.”

- DYLAN “WI-FI” SCHABLIN, STUDENT AT BIG STONE CITY ELEMENTARY, ATTENDING STARBASE NOVA COURAGE



“STARBASE was a very fun and different way of learning about STEAM. Instead of sitting in a chair listening to a lecture we got to do a lot more hands on activities and learned while having fun!”

- VIOLET VOLKMANN, STUDENT AT NORTH JEFFERSON ELEMENTARY SCHOOL, ATTENDING STARBASE MARTINSBURG

STEAM ATTITUDES MEASUREMENT

The attitude survey portion of the questionnaire consisted of 19 core statements about student views on STEAM topics and careers, and perceptions of the military. Students rated their opinion of each one on a Likert-type scale from 1 (*Definitely No*) to 5 (*Definitely Yes*). In addition, five items assessed student perceptions of the STARBASE program at the program’s end.

- ◆ A mean averaged score of student overall STEAM interest was created by summing each student’s ratings for the 19 core items and dividing the sum by that number of items.
- ◆ For the post-program assessment only, the five extra evaluation items were included in calculating the overall STEAM interest mean value, which was based on a total of 24 items.
- ◆ Overall attitude scores were averaged across all students to obtain a mean total score of the sample on overall STEAM interest for both the pre-program and the post-program.
- ◆ Three unique dimensions of students’ attitudes and interests related to STEAM were also identified from their questionnaire responses using statistical modeling techniques. Table 10 describes these student STEAM interest dimensions at a general level.

Table 10: Measurement Dimensions of STEAM Attitudinal Survey

Measurement Dimension	Definition	Number of Items ²⁸
STEAM Concept Awareness	Recognition of the value of STEAM for solving challenging problems and improving life.	10
Science Confidence and Interest	A positive view of one’s own capacity for learning about and enjoying STEAM activities.	8
STARBASE Program Evaluation	Positive reactions to the STARBASE program in learning about STEAM.	6

²⁸ The total number of items is 24 because the STARBASE Program Evaluation scale includes five statements used only in the post-program assessment in addition to the 19 statements presented both times.

Study Sample

This year, the STARBASE student assessment was administered between January and June. The assessment was administered online twice to selected classes of students (pre-program and post-program) at each participating academy to gauge program impact. All locations assessed at least one class as requested, and some locations assessed two or more classes.

- Students attended one of the 78²⁹ active STARBASE Academies out of 84 programs distributed nationwide and in two U.S. territories, as shown in Figure 3 by region.
- Each participating academy is sponsored by one of six DoD components as shown in Figure 4.
- Of the 2,806 total assessments completed, pre- and post-program records were matched for 2,417 students that served as the sample for analysis.

Figure 3: Student Sample by Region

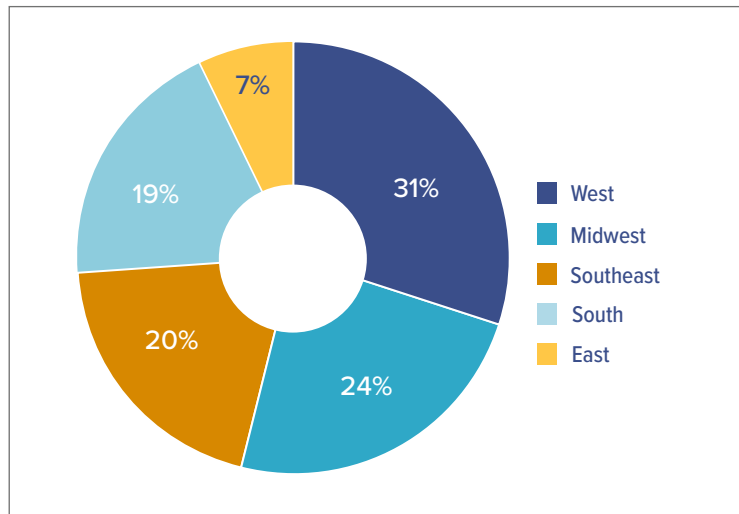
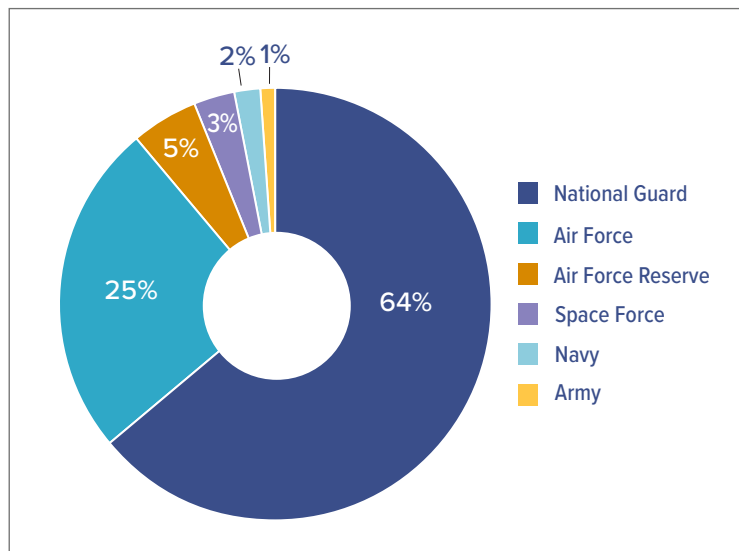


Figure 4: Student Sample by DoD Component



²⁹ There was one additional academy that submitted pre-program assessments but did not provide post-program assessments, and therefore, the data could not be used.



➤ "I loved to discover at STARBASE. Every scientific discovery I made was so fun and AWESOME!"

- BENTLEY BARTON, STUDENT AT LAYTON ELEMENTARY SCHOOL, ATTENDING STARBASE HILL

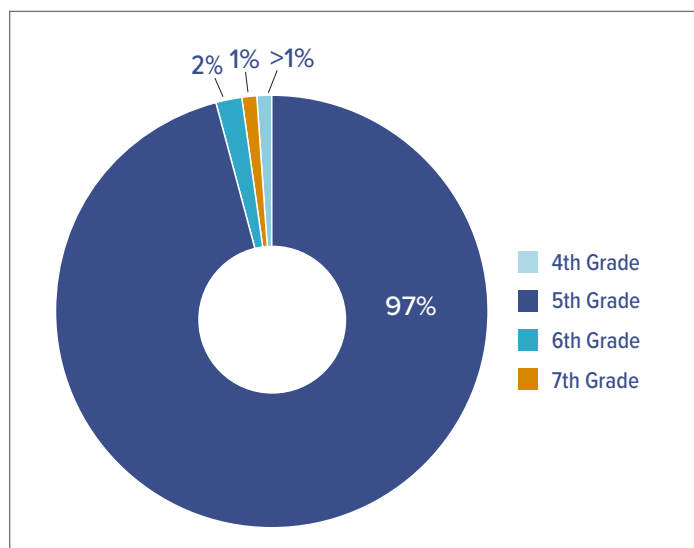
STUDENT SAMPLE SNAPSHOT

Students who attended STARBASE in person and completed the questionnaire both before and after participation appear reasonably similar to students assessed in previous years.

- A vast majority of the students, 97 percent, were fifth graders, which is the program's target population (see Figure 5).
- More than half (58 percent) of participating students reported having heard of STARBASE before finding out that they would be attending.
- The same percentage (58 percent) also reported they knew someone who went to STARBASE previously.
- About 41 percent reported they had not met any military personnel before attending DoD STARBASE.
- Moreover, approximately 18 percent of the students reported their parent or guardian is in the military.

These aspects of the students' prior knowledge about STARBASE and experience with military personnel suggest that DoD STARBASE largely succeeds at serving the targeted communities of fifth-grade students in the locale of each academy.

Figure 5: Percentages of Students Participating in the DoD STARBASE Program



STEAM Knowledge Performance

DoD STARBASE IMPACT ON STEAM PERFORMANCE

- ▶ Gap scores of the total score, as well as all five STEAM knowledge curriculum area scores, showed significant increases in the post-program test after attending STARBASE (.001 level of confidence).
- ▶ Total STEAM knowledge scores increased by 17 percent on average (mean gap score = +16.6 percent).
- ▶ Pre-program domain scores ranged from 38 percent to 51 percent correct answers; average post-program percent correct answers ranged from 54 percent to 69 percent.
- ▶ Scores in the Engineering curriculum area increased by about 25 percent on average (Engineering mean gap score = +24.5 percent).
- ▶ The Science domain showed a score improvement of 18 percent on average (mean gap score = +17.8 percent)
- ▶ Mathematics scores increased by 12 percent on average, while Technology increased by 6 percent exactly.

These findings suggest that students were already fairly knowledgeable in the areas of Mathematics and Science when they arrived. Their knowledge of Engineering was relatively lower at the outset.

MILITARY EXPOSURE COMPARISON ON STEAM PERFORMANCE

Students' total STEAM knowledge was compared according to whether they had met military personnel before attending STARBASE.

- Students who previously met military personnel had significantly higher total knowledge scores, both prior to and after the program, than students who did not know military personnel (.001 level of confidence).
- Both groups made significant gains in STEAM knowledge (+17.4 percent with, +15.4 percent without prior exposure, at a .001 confidence level). This indicates that the STARBASE program improved the STEAM understanding of students regardless of previous exposure to military personnel.



"STARBASE, it's not just science, it's magic."

- JEREMIAH, STUDENT AT SMITH ELEMENTARY,
ATTENDING STARBASE FORT HARRISON



STEAM Attitudes

DoD STARBASE IMPACT ON STEAM ATTITUDES

- ▶ *The post-program mean total score increased significantly (.001 level) over the pre-program total score, from 4.08 to 4.29. This is in line with the amount of change seen annually since 2022 for STARBASE, which has been on the order of +.16.*
- ▶ *The mean values were converted to percentage values of the highest attainable response favorability (5.0) to facilitate comparability of scores across years. The relative percentage of change this year is +4.2 percent, which is higher than the gains observed during 2019-2023.*
- ▶ *The top-rated attitudinal statement by students both pre- and post-program is:*
 1. I like doing science experiments.
- ▶ *The five STEAM-related attitudes that showed the greatest increase in favorableness by students from pre-program to post-program assessment are:*
 1. I am good at science (+7.6 percent).
 2. Learning about science is easy for me (+6.8 percent).
 3. Engineers help solve challenging problems (+5.9 percent).
 4. A lot of people who work for the military use science, technology, engineering, art/design, or mathematics (+5.1 percent).
 5. I think DoD STARBASE will help me do better in school (+4.2 percent).
- ▶ *These are the same top items as in 2023, but their rank ordering is slightly different. This year, items reflecting confidence in science have risen to the number one and two positions. Belief that DoD STARBASE will help in school has fallen by one percentage point and two rankings, yet is still among the top five items of greatest increase in favorableness.*
- ▶ *Overall, 100 percent of the 19 core STEAM attitude statements increased in favorableness, of which 18 statements (95 percent) yielded post-program ratings that were significantly more favorable on average than at pre-program assessment at the .05 confidence level or greater. One statement did not achieve significance (I am good at mathematics).*
- ▶ *The attitude dimension that showed the most positive shift between pre- and post-program is STARBASE Program Evaluation (+0.32), which was significant at a .001 confidence, may be largely due to there being just one pre-program item, but five additional items for the post-program mean. Positive shifts in the two new composite attitude dimensions were also highly significant with shifts of +0.12 and +0.13.*

These results demonstrate that STARBASE promotes confidence in students, particularly in science, with a growing appreciation of STEAM-related applications in general. In fact, attitudes about all aspects of STEAM improved after attending STARBASE. For example, students became more aware that STEAM is relevant for solving engineering and other technical problems and identified its importance with the contributions of engineers and scientists to making life better for everyone. The results also show that STARBASE promotes more awareness among students that military personnel perform a variety of jobs by applying STEAM methods and skills.

MILITARY EXPOSURE COMPARISON ON STEAM ATTITUDES

- Students who met military personnel prior to STARBASE exhibited significantly more favorable attitudes about STEAM, both before and after the program, than students who had no previous contact with military people (.001 level of confidence).
- This is underscored by significant differences on all of the core survey STEAM statements at both points of assessment, such as a greater appreciation for applications of mathematics, liking and learning about science and technology, and recognizing that military personnel use STEAM principles in their jobs.

RELATIONS OF STEAM ATTITUDES TO STEAM KNOWLEDGE

Student scores on measurement scales of the two STEAM attitudinal dimensions were correlated to the STEAM knowledge total score. This analysis was performed by correlating pre-program attitudes with 1) pre-program knowledge; 2) post-program knowledge; and 3) pre- to post-program knowledge gap. Additionally, post-program attitudes were correlated with post-program knowledge. Results of the analysis found that:


- *The STEAM Concept Awareness* dimension is the more strongly-related attitudinal indicator of STEAM knowledge, both pre- and post-STARBASE, with significant correlations (.001 level) in the positive direction.
- *The Science Confidence and Interest* attitudinal dimension is also a strong indicator of STEAM knowledge total scores pre- and post-STARBASE (.001 level).

These relationships found between student attitudes about STEAM and student STEAM knowledge improvements at multiple levels of analysis demonstrate the important role of student awareness, interest, and confidence in gaining a better understanding of STEAM.

“STARBASE just
blows my mind!”

- MYLES CAISSIE, STUDENT AT THE
FRANCIS DRAKE SCHOOL, ATTENDING
STARBASE HANSCOM




 “It’s great for kids to have the opportunity to do hands-on STEAM activities. The cost of many of the activities as well as the teacher confidence are both obstacles to hands-on science in schools. Thank you to STARBASE for eliminating those obstacles and allowing all students the chance for hands-on STEAM.”

- MELISSA STROTHER, PARENT, CARBONDALE ATTENDANCE CENTER,
 VISITOR AT STARBASE ATTENDING STARBASE HILL



Conclusion

The DoD STARBASE program again met its major goals successfully in 2024 as determined from statistical analyses performed on the student assessment data of STEAM-related knowledge and attitudes before and after participating in the program:

1. STARBASE participation generated significant gains in students’ overall understanding of STEAM concepts as demonstrated by their pre- and post-program knowledge test performance, and also by increased percentages of correct answers for each of the STARBASE STEAM curriculum domain areas.
2. Participation in STARBASE led to significant gains in students’ attitudes about science, technology, engineering, art/ design, and mathematics, as demonstrated by their pre- and post-program attitudinal survey responses. Strong improvements occurred in attitudinal areas related to *STEAM Concept Awareness* and to *STEAM Confidence and Interest*. Enhancements in favorable attitudes like these can help make it more likely that students will be motivated to continue learning about STEAM topics during their academic careers.

The STARBASE program furthered the DoD’s community outreach objectives as well, by creating or reinforcing positive impressions of many students about the military in general and of the STEAM nature of many jobs done by people who work for DoD and the military.

Overall, most students completed the program with better knowledge of STEAM topics, greater awareness of STEAM importance, and more interest in STEAM-related careers. This broad impact should likely help motivate continuing school learning about STEAM principles and applications and exploration of STEAM career opportunities in the future.



EDUCATOR Letter of Support



www.clevelandcountyschools.org
(704) 476-8000



As a former fifth grade teacher and elementary principal, I am writing to enthusiastically recommend the STARBASE program. My experience with STARBASE has been overwhelmingly positive, and I believe it offers significant benefits to students, teachers, and schools. I now serve as a Director of Elementary Education and I continue to endorse the program to the schools that I oversee.

Having worked closely with the STARBASE content, I can attest to the program's strong alignment with our Standard Course of Study. While some principals initially express concern about dedicating 25 hours of classroom time for the program, I firmly believe the investment is worthwhile. The curriculum, based on national fifth-grade standards, has been carefully adapted to meet North Carolina's specific requirements. This alignment ensures that participating schools can confidently integrate STARBASE into their academic calendar without compromising learning time at the school. After schools attend STARBASE for the first time, they also quickly realize the time spent in the STARBASE is completely worthwhile and enthusiastically sign up to attend again in the future.

The benefits of STARBASE for students have been remarkable. I've witnessed increased engagement in STEM subjects, improved problem-solving skills, and a growing interest in science-related careers among participants. Teachers have also reported positive outcomes, noting that the program provides valuable professional development opportunities and fresh approaches to teaching STEAM concepts.

Some of our school board members have visited STARBASE sessions and were highly impressed by the program's hands-on approach and the enthusiasm it generates among students. Their observations have led to a consensus that STARBASE is an invaluable asset to our educational community.

Based on the overwhelmingly positive impact we've seen, our Board, district administration, and I have actively encouraged all our elementary schools to apply for the STARBASE program. We believe it provides an unparalleled opportunity to enhance STEAM education and inspire the next generation of scientists, engineers, and innovators.

I wholeheartedly recommend the STARBASE program and am confident that other schools will find it to be an excellent addition to their curriculum.

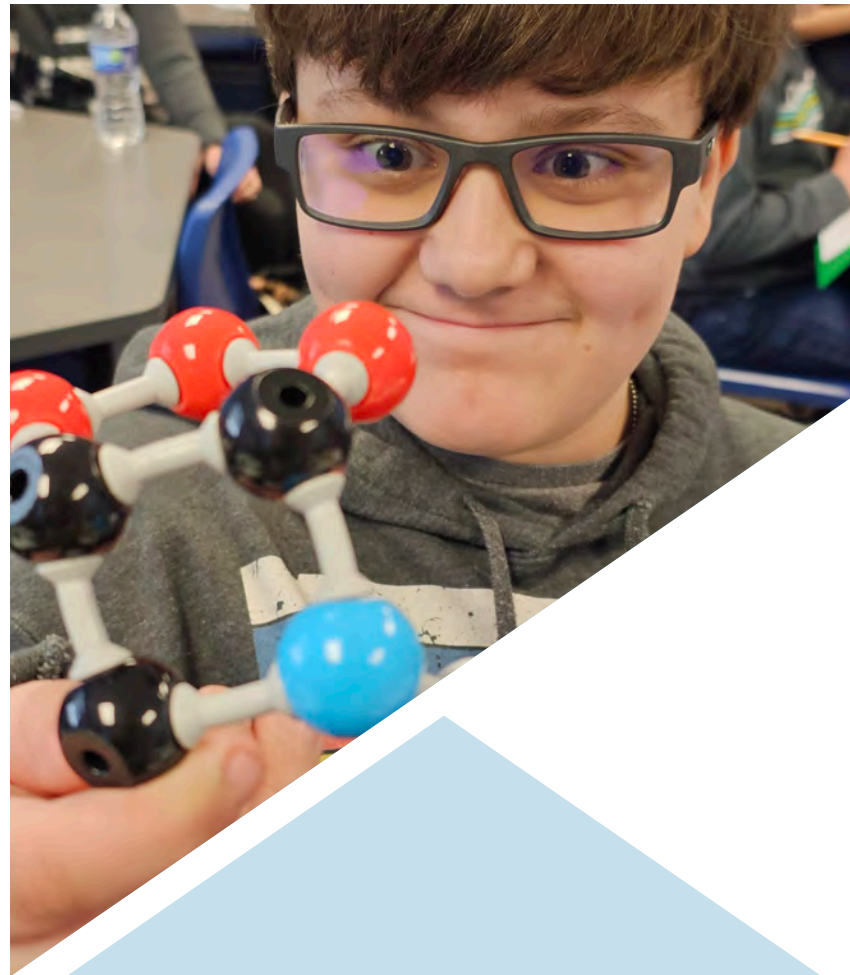
Sincerely,

Jason L. Parker, Ed.D., NBCT
Executive Director of Elementary Education

ELEMENTARY EDUCATION
400 West Marion Street
Shelby, North Carolina 28150

➤ “Cleveland County Schools is proud of its strong partnership with STARBASE Charlotte, which has provided immersive STEAM experiences for our fifth-grade students over the past five years. This collaboration has not only fostered academic growth but also offered invaluable experiences that have significantly impacted our students. As new schools have started participating in the program, we’ve received numerous accolades regarding the opportunities afforded to students. The program’s robust alignment with fifth-grade science standards is particularly impressive, enabling students and teachers to maximize learning connections. For many of our students, STARBASE offers a unique perspective on STEAM that they may not have encountered before. These experiences are helping to shape our fifth graders’ future career aspirations and life pathways. We are deeply grateful for the enduring partnership between Cleveland County Schools and STARBASE Charlotte, which continues to enrich our students’ educational journey.”

- DR. JASON PARKER, EXECUTIVE DIRECTOR
OF ELEMENTARY EDUCATION,
CLEVELAND COUNTY SCHOOLS, NORTH CAROLINA



SURVEY SAMPLE

The DoD STARBASE Teacher Survey captures feedback from teachers throughout the school year. Given the voluntary nature of answering the survey and its broad use, the sample is reasonably representative of many, if not all, of the classes and schools that attended a DoD STARBASE academy during the 2023-2024 academic year.

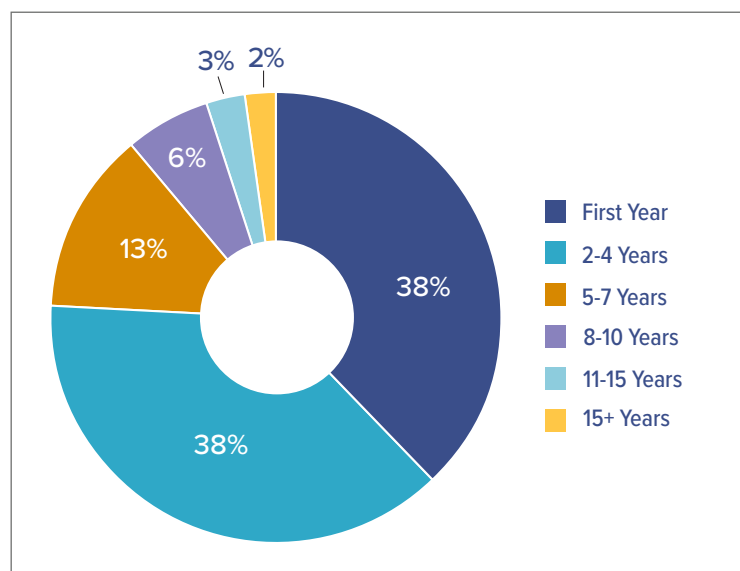
- Teachers attended one of 80 active STARBASE Academies distributed nationwide and in two U.S. territories sponsored by one of six DoD components.
- During the 2023-2024 academic year, 3,843 school personnel responded to the Teacher Survey from August 2023 until June 2024, of which 93 percent were classroom teachers.

Teacher Snapshot

Respondents to the DoD STARBASE Teacher Survey appear fairly similar to public school elementary teachers in the U.S., in regard to their teaching experience. The most recent data that is available on elementary school teachers, reported by the *COE - Characteristics of Public School Teachers (ed.gov)* for 2020-2021, found 63 percent of all public school elementary teachers had 10 years or more of experience and 29 percent had three to nine years of experience, while 7 percent had fewer than three years of teaching experience.³⁰

- In this sample, 53 percent of responding teachers have taught more than 10 years, 24 percent have been teaching for 5-10 years, and 16 percent have 2-4 years of experience teaching. Thus, about 10 percent fewer teachers responding to the survey than teachers nationally have taught for more than ten years.
- Importantly, there were 1,370 teachers, or 38 percent of the sample, who attended STARBASE for the first time. These teachers offer a novel outlook on evaluation of the program (see Figure 6).
 - 8 percent of respondents indicated this is also their first year of teaching.
- Teachers who have attended STARBASE previously (62 percent) were asked a series of questions about its impact on student outcomes they observed afterward.
- Many respondents gave suggestions for improvements to STARBASE in an open-ended comment question. Ideas mostly concern advance teacher orientation, classroom takeaway materials, instructor class management skills, and visit or class activity scheduling.
- In addition, almost 84 percent of respondents report that their college major and/or minor was *not* in a STEAM-related area. These teachers are about evenly divided in being very/quite confident (51 percent) or fairly/somewhat confident (47 percent) in teaching STEAM topics to students, but 2 percent acknowledge that they are not at all confident in teaching STEAM topics.

Figure 6: Number of Years Attending the DoD STARBASE Programs



³⁰ COE 2023-2024 update was not available at time of publication.

DoD STARBASE Impact on Students

STIMULATING STEAM INTEREST

- ▶ Teachers commonly report that students gain an improved understanding of science by attending DoD STARBASE (mean rating = 6.73).
- ▶ Teachers also indicate more interest by students in learning about technology (mean rating = 6.46) and science (mean rating = 6.44) after participating at STARBASE, equal to pre-pandemic findings.
- ▶ Teachers view DoD STARBASE as helping students better appreciate how math can be applied to a variety of situations (mean rating = 6.38).
- ▶ Most teachers observe that students also show increased interest in learning about engineering (mean rating = 6.15) and mathematics (mean rating = 5.77).

POST-PROGRAM IMPACT

Teachers with at least one year of prior experience at DoD STARBASE also rated the beneficial impacts they noticed after students have had a DoD STARBASE experience. The means for the post-program impacts are presented in Table 11 in rank order. Students talking about STARBASE long after it has ended is the highest rated post-program impact once again, perhaps as much because it is the most obvious behavior for teachers to observe often as it is a sign of lasting student enthusiasm.

While most of the item means closely approximate magnitudes and ranking from 2023, teacher reports of increased participation in Science Fair and other STEAM-related challenge programs showed the largest absolute gain (+0.69) year-over-year. Observations that students who attended STARBASE seem to do better on standardized state assessments increased substantially as well (+0.57). Both of these surpassed a rating of 6.0 for the first time. Such promising trends may indicate that students are becoming more engaged and focused on academic progress post-pandemic, aided by DoD STARBASE.

Table 11: Teacher Mean Ratings for Post-STARBASE Student STEAM Behavior Impact

Post-Program Impact Item	2023 Mean	2024 Mean
The students talk about DoD STARBASE long after the program has ended.	6.42	6.45
Attending DoD STARBASE helps students better understand how STEAM skills/abilities fit job requirements for certain career fields.	6.36	6.39
Students that have attended DoD STARBASE seem to perform better on standardized state assessments.*	5.74	6.31
After DoD STARBASE attendance, there is increased participation in the Science Fair and other STEAM-related challenge programs (e.g., FIRST LEGO League, Odyssey of the Mind, American Rocketry Challenge, etc.).*	5.461	6.30
After DoD STARBASE, students are more interested in using computers for class-related learning activities.*	6.12	6.22
DoD STARBASE helps to improve cooperative learning in the classroom even after the program ends.	6.16	6.16
Attending DoD STARBASE helps students link their experience to careers in both military and non-military positions.	6.11	6.12
After the DoD STARBASE program, the students ask more questions about technology.	5.91	5.87

*These items include a "No Awareness" response option. Teachers that selected that response option are not included in the item mean.



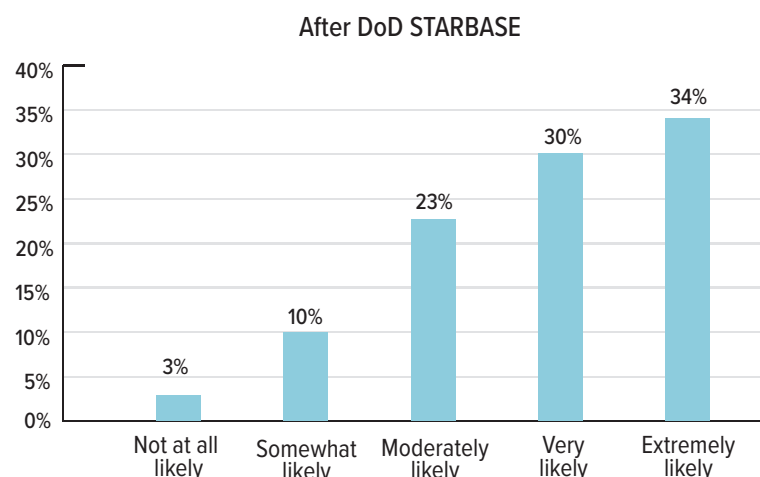
DoD STARBASE Impact on Teachers

For teachers, attending STARBASE has substantive meaningful impacts on their perspectives.

- ▶ Over 91 percent of teachers attending STARBASE for the first time agree that the DoD STARBASE experience has influenced them to become more skilled in STEAM instruction.
- ▶ 83 percent (N = 1,130) of teachers who attend STARBASE for the first time report becoming more aware of Department of Defense STEAM career opportunities (both military and civilian).
- ▶ These first-time teachers also indicated how likely they are to recommend DoD or the military as a career option after attending a DoD STARBASE program.
 - Results show that 64 percent of the teachers are Extremely or Very Likely to recommend military or DoD civilian careers after participating at STARBASE for the first time.

Figure 7 displays the level of endorsement by first-time attendee teachers based on percentages of answers within each of the response categories.

Figure 7: Likeliness to Recommend DoD or Military Career Options After Attending DoD STARBASE



▶ “I appreciate the work and planning that goes into the success of STARBASE. I love that they acknowledge the fun of the activity, but then identify the content that was needed to accomplish such a task. Connecting the experiences to careers creates such an “ah ha” moment for students!”

- LEIA LINS, EDUCATOR AT
MORNINGSIDE ELEMENTARY SCHOOL,
ATTENDING STARBASE GREAT FALLS

DoD STARBASE Impact on Schools

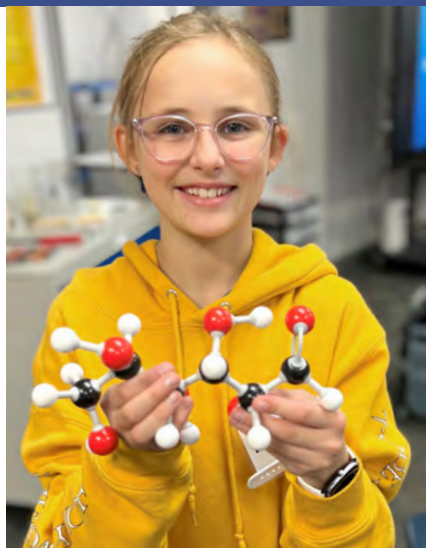
- ▶ *Almost all responding teachers (99.3 percent) say they will recommend DoD STARBASE to colleagues.*
- ▶ *Nine out of 10 teachers (91.4 percent) say that DoD STARBASE provided information about how the STARBASE curriculum relates to state education standards.*
- ▶ *A very large proportion (87.4 percent) also say they will use DoD STARBASE materials in their classroom.*

The DoD STARBASE program influences students and teachers, yet also impacts the school system as well, both formally and informally. As part of the Teacher Survey, teachers shared their knowledge of specific practices based on their participation in the program. Table 12 provides the pattern of results in favorable responses to six items for this year and last year. This data shows small increases in positive responses over the last year except that recommendations of STARBASE are unchanged. This is due to the ceiling effect of above 90 percent endorsement. Most notably, school communication about DoD STARBASE jumped back up to 60 percent again, where it was before the pandemic.



“Attending STARBASE was a highlight for my students during their fifth-grade year. They enjoyed every minute of discovery as they participated in multiple hands-on activities that required collaboration, ingenuity, and out-of-the-box thinking. As a teacher, I was impressed with the detailed planning of all lessons and activities designed to correlate directly with the California Next Generation Science Standards. The opportunity of attending a science-based program of this caliber, for a whole week, has sparked new interests in my students and has encouraged them to consider limitless possibilities for their future.”

- ANA URIBE, 5TH/6TH DUAL LANGUAGE IMMERSION TEACHER,
HAPGOOD ELEMENTARY, LOMPOC UNIFIED SCHOOL DISTRICT,
ATTENDING STARBASE VANDENBERG





➤ “This supports our Kansas Science Standards to a tee, but more importantly it inspires the love of STEAM in my students. I love seeing my Title I students getting some of the opportunities that they may otherwise not. The staff is **EXCELLENT** at conveying advanced knowledge in a way my fifth graders can understand.”

- STACIE NELSON, EDUCATOR AT MERRIAM PARK ELEMENTARY, ATTENDING STARBASE KANSAS CITY

Table 12: DoD STARBASE Impact on the School System

Item	Positive (Yes) Responses	Positive (Yes) Responses
Current Item	2023	2024
Is there formal communication from your school that raises community awareness of the DoD STARBASE program (e.g., letters to parents, overview at parent open house meetings, etc.)? *	54.5%	60.1%
Will you recommend DoD STARBASE to other teachers, principals, or school educators/ administrators?	99.3%	99.3%
To the best of your knowledge, did your DoD STARBASE provide you and/or your school with information about how STARBASE curriculum is related to your state education standards?	90.2%	91.4%
In your view, does the DoD STARBASE curriculum help you reach your state education standards?	86.4%	88.0%
Do you or will you use DOD STARBASE materials/techniques in your own classroom?	85.4%	87.0%
Do you or will you use DoD STARBASE take home activities beyond your classroom?	65.0%	66.3%

* This item includes an “I don’t know” response option. Teachers selecting that response are not included in the sample for determining the percentage of positive responses.



“Our students love coming to DoD STARBASE. STARBASE provides opportunities we can’t always give our students in the classroom. Students who sometimes struggle socially or have behavior problems often excel at STARBASE. One thing I’ve noticed over the years is our student attendance is always high. Students do not want to miss STARBASE days. Thank you for all the exciting opportunities you give our students.”

- JESSIE KIRKPATRICK, EDUCATOR AT OSAGE CITY ELEMENTARY SCHOOL, ATTENDING STARBASE TOPEKA

School Support

- ▶ Teachers responding to the survey agree quite highly (mean rating = 6.9) that their school will attend DoD STARBASE again next year.
- ▶ The teachers agree strongly (mean rating = 6.39) that parents are enthusiastic about their student attending DoD STARBASE.
- ▶ Teachers are also very favorably disposed (mean rating = 6.31) toward receiving more STEAM supplemental teaching materials from DoD STARBASE to use in their classrooms.

Program support includes support and advocacy of DoD STARBASE by teachers themselves, as well as the resources and support provided to the teachers in the school environment. Table 13 presents mean values on the 7-point rating scale of teacher responses to five items that reflect school and community support. A school’s plan to continue participation in the DoD STARBASE program next year (mean rating = 6.90) indicates that participating schools place a high value on having students attend the program. Moreover, it is apparent that parents are delighted their children are participating (mean rating = 6.39). Principals are still solid proponents for the program as well (mean rating = 5.78), although their support seems to be slipping gradually for the past few years.

Table 13: Program Support Attitudes Ranked from Most to Least Favorable

	Mean
My school plans to participate in the DoD STARBASE program again next year.	6.90
Parents are delighted that their children are participating in DoD STARBASE.	6.39
I would like more DoD STARBASE supplemental resources to take back to my classroom.	6.36
I plan to incorporate DoD STARBASE teaching techniques into my daily classroom activities.	6.18
My principal is a strong advocate of DoD STARBASE.	5.78



➤ "The kids' curiosity and tenacity to learn are blessings honored by STARBASE. The impact of their learning is enhanced by seeing the jets and hearing from the Guardsmen about the engineering of the aircraft and the importance of the mission they support. The kids have remarkably inquisitive minds about all the details of the jets, and if this inspires even one child to pursue an education and career in STEAM, it will be worth it all!"

- SSGT JOSHUA BEIERSDORF,
INTEGRATED AVIONICS TECHNICIAN,
STARBASE PORTLAND

➤ "The DoD STARBASE program is a vital part of introducing Montana's students to our local military installations, their purpose, and providing them a look at STEAM careers they can be successful in. We are lucky to have these two STARBASE classrooms in our state to provide this connection to Montana's youth."

- MG "PETE" HRONEK, ADJUTANT GENERAL
OF MONTANA, STARBASE GREAT FALLS

Teacher Attitudinal Ratings

DoD STARBASE ATTITUDES

Teachers rated 35 attitudinal items in the survey on a 7-point Likert scale from Disagree (1) to Agree (7) based on their experience with the DoD STARBASE program. Eight items relate to changes in student behavior after attending STARBASE. Therefore, teachers in their first year of attending DoD STARBASE were not asked these items. Instead, they were asked two other questions related to how DoD STARBASE affected their awareness of military and non-military jobs in DoD, and their likelihood of recommending these as career options to students.

Survey findings show that most responding teachers embrace the STARBASE program. This is evidenced by favorable attitudes and overall high approval ratings of DoD STARBASE. Most of the ratings improved slightly from last year or else remained almost the same as in 2023.

- ▶ *Teachers gave relatively higher mean ratings for the impact of STARBASE on students' grasp of STEAM concepts of science (mean rating = 6.73) or mathematics (mean rating = 6.38) and for STEAM education resources provided to teachers (mean rating = 6.30).*
- ▶ *They gave relatively lower mean ratings for STARBASE impact regarding their personal opinions on military career options, and their perceptions of student opinions on the same (mean rating = 5.84), students' future STEAM career planning (mean rating = 5.80), and DoD or military career options (mean rating = 5.44).*
- ▶ *All the rating factors showed mean averaged ratings well above the rating scale midpoint of 4, which indicates overall favorable ratings of STARBASE impact.*

The 35 items were combined into an Overall Engagement Index³¹ to reflect teachers' own attitudes and their perception of students' reactions as a result of STARBASE program participation, such as:

- grasping and enjoying the STEAM curriculum content,
- displaying confidence and motivation in classroom settings, and
- planning for future goals and careers in STEAM-related fields.

The Overall Index is calculated as a composite average of responses given by a teacher to the 35 items. The mean rating of the Overall Engagement Index for all teacher respondents in 2024 is 6.10. The Overall Index value indicates strong favorability of responding teachers toward DoD STARBASE's influence on them and on their students as a whole.

The attitudinal items were grouped into rational behavioral areas based upon data analytic methods. Measures of participant engagement and student outcomes were also created to evaluate broader impacts of STARBASE. Table 14 presents brief descriptions of the seven areas and mean rating values on the 7-point scale for the total sample.

Consistent with the Overall Index rating, teachers responded favorably across all engagement topics. The most favorable responses this year (presented in rank order) occurred in the areas of: STEAM Concepts, Program Support, Behavioral-Motivational, and Student Confidence.

³¹ For teachers in their first year of attending STARBASE, the Overall Engagement Index included 27 items.

Table 14: Teacher Survey Overall Index Rating by Engagement Areas

Measurement Area	Definition	Mean Rating
STEAM Concepts	Student interest in and understanding of STEAM concepts	6.32
Program Support	Support and resources provided to the teachers	6.30
Behavioral-Motivational	Teachers' views of positive student behaviors as a result of STARBASE participation	6.18
Confidence	Students' confidence in their abilities and capabilities	6.16
Teamwork	Students working with and supporting each other	6.04
Military and Career	Teachers' personal opinions on military career options, and their perceptions of student opinions on the same	5.84
Future Planning	Students seeing future possibilities and opportunities in STEAM fields	5.80

The analyses also examined the outcomes of DoD STARBASE on student STEAM and academic motivation beyond the immediate effects of attendance. The post-program impact scale uses responses to eight items completed by those teachers who have more than one year of experience with the DoD STARBASE program (N = 2,200). Items included a broad range of post-program measures including students' interest in STEAM topics, their career choice options, performance on state tests, and participation in STEAM-related activities. The mean rating of post-program STARBASE impact on students by just the experienced teachers is a realistic 6.08 on the 7-point scale.

➤ **“Working with STARBASE is like unlocking a treasure chest of knowledge where forensic science becomes our map! Together, we embarked on a thrilling adventure, turning young minds into detectives of the future, one clue at a time. Who knew learning could be this much fun?”**

- ERIC DAVIS, CALDWELL SUMMER MIGRANT SCHOOL PRINCIPAL,
PARTNER WITH STARBASE IDAHO



➤ **“The STARBASE program has been invaluable to our students in a number of ways. Through hands-on activities, they are able to explore STEAM fields, work as a team, solve real-life problems, and use tools that might not otherwise be available to them at such a young age. My students look forward to their time at STARBASE and talk about it long after it ends. I truly believe it’s a game changer for them!”**

- TERESA MICHALSKI, EDUCATOR AT PAGE ELEMENTARY SCHOOL,
ATTENDING STARBASE BATTLE CREEK

“This week has been one of the best experiences of my 10-year teaching career. I cannot express how thorough and efficient this program is. Not only are students taught STEAM concepts, but they’re taught how to work together, appreciate those who serve our country, and mentally stretch themselves farther than they thought possible. I believe every fifth grader in our country should be afforded this opportunity.”

- FIFTH GRADE INSTRUCTOR, BOILING SPRINGS ELEMENTARY SCHOOL, ATTENDING STARBASE CHARLOTTE



Conclusion

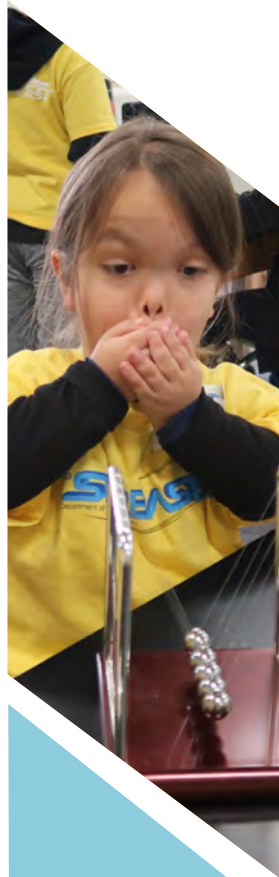
The DoD STARBASE program enables fifth-grade students to link STEAM concepts to “real-world” applications and to their future roles. Their teachers report that participation in this DoD program appears to create excitement among students about their careers and future potential. Specifically, teachers attending the DoD STARBASE program report that students:³²

- Have an improved understanding of science (mean rating = 6.73);
- Have an improved appreciation of how math applies to a variety of situations (mean rating = 6.38);
- Have more interest in learning technology (mean rating = 6.46), and more interest in learning science (mean rating = 6.44);
- Better understand how STEAM skills/abilities fit job requirements for certain career fields (mean rating = 6.43).

Based on analyses of the teacher survey and review of teacher comments, it is clear that teachers value the DoD STARBASE program experience for providing awareness of and hands-on activities in STEAM concepts to students. The survey data reveals that about 85 percent of all respondents say they plan to incorporate DoD STARBASE techniques in their classrooms, and 65 percent of first-time participants are “extremely likely” or “very likely” to suggest military or civilian STEAM career opportunities to their students. These results strongly suggest that many teachers will continue to support DoD STARBASE by using STARBASE techniques in classroom teaching of STEAM-related concepts, by recommending STARBASE to their peers, and potentially by recommending DoD career paths to students.

³² Likert scale based on response options from 1 (Disagree) to 7 (Agree).

DOD STARBASE: LOCATIONS Directory



STARBASE MAXWELL

MONTGOMERY, ALABAMA



ESTABLISHED 2004
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Maxwell Air Force Base
CLASSROOMS AUTHORIZED: 5



SCHOOL DISTRICTS SERVED

- | | |
|--------------------------------|---------------------------------|
| Autauga County School District | Maxwell Unified School District |
| Butler County School System | Montgomery Public Schools |
| Crenshaw County Schools | Pike Road School District |
| Elmore County Public Schools | Private Schools |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Montgomery Education Foundation

As Alabama’s premier youth STEAM organization, STARBASE Maxwell is a shining example of innovation and inspiration in the Montgomery River Region. In concert with an incredible team formed by Maxwell Air Force Base, Montgomery Education Foundation, and Montgomery’s Mission Partners, STARBASE Maxwell served a record 3,222 fifth graders from public, private, and home schools across six area school districts during the 2023-2024 academic year. As DoD’s largest STARBASE organization, STARBASE Maxwell offers a dynamic and unique “hands-on, minds-on” approach to STEAM education. Operating five state-of-the-art classrooms, STARBASE Maxwell provides an exciting and engaging environment where young minds can explore the wonders of science, technology, engineering, and mathematics. Students get hands-on experience with rockets, robots, electrical circuits, engineering design processes, computer-aided design, 3D printers, and much more, making learning fun and impactful for our nation’s future innovators.

FY24 PROGRAM HIGHLIGHTS

- Celebrated STARBASE Maxwell’s 20th anniversary with an open house event. The event was attended by Maxwell Air Force Base leadership, Montgomery Education Foundation leaders, River Region School District superintendents, and Alabama congressional and governor staffers.
- During the program’s first full academic year, STARBASE Maxwell celebrated its largest student turnout with 3,222 fifth graders from the River Region attending the Basic program.
- STARBASE Maxwell successfully hosted over 300 kids during six weeks of summer STEAM Camps and supplemental programs.
- STARBASE Maxwell was proud to take part in Maxwell Air Force Base’s “Beyond the Horizon” Airshow STEAM Hangar Event. As a main attraction and familiar face for STEAM education in the Montgomery River Region community, STARBASE Maxwell provided exciting STEAM demonstrations to thousands of airshow attendees of all ages.
- The Advanced program continued to mature and grow its footprint in terms of the number of kids and participating schools. During the 2023-2024 school year, the program engaged nearly 120 River Region middle school-aged students through the robotics, engineering, and drone curriculum.

CONTACT INFORMATION

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EMAIL: SB.Maxwell@dodstarbase.org **WEBSITE:** www.starbasemaxwell.org



STARBASE ARIZONA

TUCSON, ARIZONA

ESTABLISHED 2006
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Davis-Monthan Air Force Base
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- Amphitheater Unified School District
- Sunnyside Unified School District
- Tucson Unified School District
- Vail Unified School District

Davis-Monthan Air Force Base, located in the heart of Tucson, has been the home to STARBASE Arizona since 2006. The area is known for beautiful desert landscapes, abundant sunshine every year, and, of course, skies often filled with the magnificent A-10. STARBASE Arizona provides enriching experiential opportunities that engage students in a robust, mind-provoking STEAM curriculum. Certified instructors set the stage for students to learn about global positioning systems, computer-aided design, chemistry, and more. Over 800 students from four school districts in Tucson and surrounding areas attended the program.

The support STARBASE Arizona receives from the Davis-Monthan military community is phenomenal. True positive role models at their finest provide meaningful connections to real-world STEAM scenarios. Students are provided an opportunity to visit a working military facility, which enhances STEAM interactions even further.

STARBASE Arizona is dedicated to empowering and inspiring students to reach for the unreachable as they navigate the amazing world of science, technology, engineering, art & design, and mathematics. These future STEAM leaders must see their potential and be aware of the vast number of career possibilities.

FY24 PROGRAM HIGHLIGHTS

- Hosted an open house to celebrate STARBASE Arizona's 500th Class.
- Successfully re-established a STARBASE Advanced Program to increase STEAM education for middle school students. Curriculum was focused on CO₂ dragsters and computer-aided design.
- Partnered with Air and Space Force Association and provided rocketry training during first teacher STEAM camp.
- Participated in community outreach events at a local high school and several elementary schools throughout the year.
- Served over 800 students during the 2023-2024 academic year.

CONTACT INFORMATION

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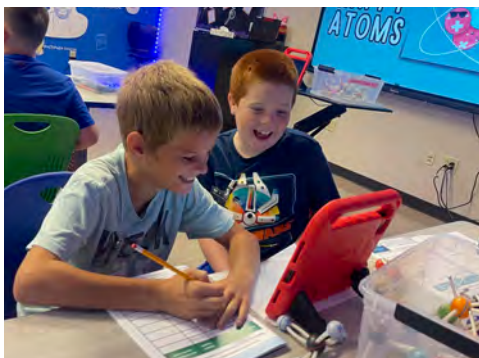
STARBASE ARKANSAS

JACKSONVILLE, ARKANSAS



ESTABLISHED 2022
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Little Rock Air Force Base
CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

- | | |
|---------------------------------------|----------------------------------------|
| Charter Schools and Homeschool Groups | North Little Rock School District |
| England School District | Pulaski County Special School District |
| Jacksonville School District | Riverview School District |
| Little Rock School District | Violonia School District |
| Mayflower School District | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Forge Institute

Since its establishment in October 2022, STARBASE Arkansas has provided a comprehensive STEAM-focused curriculum and a supportive environment for young minds. The program is proud to be an integral part of the Arkansas STEAM ecosystem and is committed to reaching out to the local community through STEAM outreach initiatives.

The partnership with the 19th Airlift Wing at Little Rock Air Force Base provides students with the opportunity to interact with dedicated Airmen, witnessing firsthand how STEAM principles are integrated into various career fields. The program’s goal is to prepare students for a world where their STEAM skills can lead to success and innovation.

FY24 PROGRAM HIGHLIGHTS

- Beyond the core academies, STARBASE Arkansas extended its educational reach through supplementary programming. This included engagements with pre-kindergarten students and older in Cabot, Arkansas, and instructional programs at England Elementary, Wakefield Elementary, and Cabot School District for the “Taste of STARBASE” with 374 student participants.
- STARBASE Arkansas’ outreach initiatives broadened STEAM exposure to even more students through successful events such as Little Rock Air Force Base STEM FEST and Airshow, Crestwood Elementary STEM Night, University of Arkansas at Little Rock STEM Night, and Solar Eclipse Day at the Arkansas State Fair.

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STARBASE EDWARDS

EDWARDS, CALIFORNIA



ESTABLISHED 2019
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Edwards Air Force Base
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- Acton-Agua Dulce Unified School District
- Eastside Union School District
- Muroc Joint Unified School District
- Palmdale School District
- Tehachapi Unified School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Edwards, Inc.

STARBASE Edwards offers a unique opportunity to its students. Being situated on Edwards Air Force Base allows the program access to top-notch equipment, to invite Air Force STEAM experts as guest speakers, and to take students on exclusive STEAM career explorations in the heart of the aerospace testing universe. STARBASE Edwards provides comprehensive STEAM instruction that complies with Next Generation Science Standards (NGSS), Common Core State Standards (CCSS), Career and Technical Education Standards, and the Computer Science Standards for California Schools. Through various interactive activities, students engage in experiences where they learn from and collaborate with others, all while being encouraged to think critically, innovatively, and creatively.

FY24 PROGRAM HIGHLIGHTS

- During the 2023-2024 school year, STARBASE Edwards completed 31 classes and hosted 951 students at the program.
- Invited 30 students to the 50th anniversary celebration of the F-16. Students could see the event, talk to pilots on the flight line next to the F-16s, and watch an air show.
- Recommitted to the base community by hosting events during the summer season. STARBASE Edwards hosted two “Welcome to Edwards Air Force Base” events for families who recently arrived at the installation and two early childhood STEAM fairs in partnership with the base library.
- Implemented 31 STEAM career exploration trips on Edwards Air Force Base for students. This included forging new partnerships with the Air Force Research Lab, the F-22 Air Dominance Squadron, the Emerging Technologies Integrated Task Force, the 418th Squadron (KC-46s), and REDCORE.
- Held two week-long summer camps for base families and civilian support personnel with a total of 38 students in attendance.
- Secured an additional educational partnership agreement with Southern Kern Unified School District. Southern Kern Unified School District will send all seventeen fifth-grade classes to STARBASE Edwards next year.

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STARBASE LOS ALAMITOS

LOS ALAMITOS, CALIFORNIA

ESTABLISHED 2013
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Joint Forces Training Base Los Alamitos
CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

Cypress Unified School District	Private Schools
Fullerton Unified School District	Santa Ana Unified School District
Los Angeles Unified School District	Westminster School District
Orange County Department of Education	

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Los Alamitos State Military Nonprofit



STARBASE Los Alamitos hosts over 3,100 fifth-grade students annually for five days of “hands-on, minds-on” curriculum. The program also supports and mentors several local high school after-school rocket teams. Moreover, STARBASE Los Alamitos provides innovative STEAM summer programs for local scout troops and homeschool students, featuring advanced robotics and weather balloon curriculum and launches. Over 4,000 students visit STARBASE Los Alamitos each year to learn about CAD, robotics, and physics. The primary goal here is to prepare students for their future and help them reach their full potential.

FY24 PROGRAM HIGHLIGHTS

- Completed a winter and summer high-altitude weather balloon launch as a partner with University of Southern California’s Project Payload.
- Served over 200 JROTC students in partnership with several STARBASE Programs across the country.
- Hosted the Army Research Labs GEMS 1, 2, and 3 summer camps.
- Hosted and provided instruction to Orange County Scouts Robotics Camp and Rocket Launch, enabling the Scouts to earn their robotics badges.
- Competed in the America Rocketry Challenge in partnership with Cypress and Westminster High School.
- Served over 100 fifth-grade classes during the basic 25-hour academies.



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STARBASE PORTERVILLE

PORTERVILLE, CALIFORNIA

ESTABLISHED 2023

SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Porterville Military Academy

CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Burton Elementary School District
 Hope Elementary School District
 Porterville Unified School District
 Strathmore Union Elementary

On January 19, 2024, a significant milestone was achieved with the establishment of STARBASE Porterville, the first of its kind in the Central Valley of California, a region often referred to as the “breadbasket of the world.” This initiative is made possible through the support of the California National Guard and is situated on the same campus as the Porterville Military Academy, a local leadership and aviation charter school, operating under a cooperative agreement with the California Military Department and the Porterville Unified School District.

By harnessing collaboration, STARBASE Porterville aims to provide rural students with invaluable exposure to advanced STEAM (science, technology, engineering, art & design, and mathematics) concepts and facilitate connections with like-minded peers who are pursuing a STEAM education. The ultimate goal is to serve as a bridge that ignites inspiration within middle school students, encouraging them to fully embrace the comprehensive STEAM Pathway programs offered by local high schools. Through joyful and immersive learning experiences, STARBASE Porterville seeks to instill the foundational skills required for success in STEAM fields.

FY24 PROGRAM HIGHLIGHTS

- Served over 1,000 students during their initial year of program operations.
- 30 students attended summer camp, creating a cohort of students excited about STEAM who will continue to be encouraged through middle school.
- Open house drew over 30 in attendance from Congressman Valadao’s office, the California State Adjutant General, state representatives, the County Office of Education, Porterville City Council, and the School District Board of Trustees.
- Developed relationships with current high school programs as part of STARBASE Porterville’s “Pipeline to Pathways” Initiative, preparing students for high school STEAM Pathways through partnerships with local Extended Learning Opportunity Programs.
- Prototyped a new air rocketry and drone flying program for the Middle School Extended Learning Opportunity Program.

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STARBASE SACRAMENTO

SACRAMENTO, CALIFORNIA



ESTABLISHED 1994

SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Okinawa Street Armory

CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------------------|-----------------------------------------|
| Delta Elementary Charter District | Robla Unified School District |
| Elk Grove Unified School District | Sacramento City Unified School District |
| Folsom Cordova Unified School District | San Juan Unified School District |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Sacramento Academy Inc.

Since its establishment in 1994, STARBASE Sacramento has been at the forefront of introducing innovative STEAM concepts to students in the greater Sacramento area. With a focus on “hands-on, minds-on” instruction, they currently serve six school districts and 27 schools, providing engaging educational experiences. STARBASE Sacramento is grateful for the invaluable support of the California Military Department, which has been instrumental in their success. Moving forward, STARBASE Sacramento remains dedicated to delivering high-quality STEAM curriculum to the youth of the greater Sacramento area, a commitment they have upheld for the past three decades.

FY24 PROGRAM HIGHLIGHTS

- Served over 2,000 students during the 2023-2024 school year.
- Hosted four summer academies for children and relatives of service members in the area.
- Ensured consistent STEAM speakers who exposed students to their STEAM careers through firsthand experiences by visiting classes.
- Created new partnerships with the engineers at the Society of American Military Engineers.
- Completed multiple projects to create a more immersive and safe environment for the visiting students.

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STARBASE SAN LUIS OBISPO

SAN LUIS OBISPO, CALIFORNIA



<p>ESTABLISHED 2023 SERVICE COMPONENT: Army National Guard</p>	<p>MILITARY LOCATION: Camp San Luis Obispo CLASSROOMS AUTHORIZED: 2</p>
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SCHOOL DISTRICTS SERVED

- Atascadero Unified School District
- Lucia Mar Unified School District
- San Luis Coastal Unified School District
- San Luis County Office of Education

STARBASE San Luis Obispo is located at the California National Guard installation, Camp San Luis Obispo (SLO). Camp SLO has historically been the original home of the California National Guard. STARBASE SLO uses a “hands-on, minds-on” approach to engage and develop America’s future youth. By implementing STARBASE, this region becomes a center of excellence with an investment in our country’s brightest resources.

For decades, Camp San Luis Obispo has been home to the Grizzly Youth Challenge Academy and the California Cadet Corps. STARBASE SLO benefits from youth-centric partnerships with Cuesta College, California Polytechnic State University, San Luis Obispo (whose motto is “learn by doing”), and the San Luis Obispo County Office of Education — the largest supporter of youth programs in the state. With our strategic community network and partnerships, as well as our exceptional location, we are proud to serve the youth of San Luis Obispo County.

FY24 PROGRAM HIGHLIGHTS

- Established a partnership with the San Luis Obispo County Office of Education, which supports ten public school districts and two charter school districts.
- Collaborated with the California National Guard Family Programs for future Month of the Military Child events.

CONTACT INFORMATION

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STARBASE VANDENBERG

LOMPOC, CALIFORNIA

ESTABLISHED 2019
SERVICE COMPONENT: Space Force

MILITARY LOCATION: Vandenberg Space Force Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Buellton Union School District	Orcutt Union School District
College Elementary School District	Santa Maria Bonita School District
Lompoc Unified School District	

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STEAM Imagine

The STARBASE Vandenberg Academy, located in Central California near the Pacific Ocean, has hosted approximately 4,800 students to date. In the 2023-2024 school year, 60 Basic Academies and five supplemental programs for military families were conducted. Situated on an active-duty Space Force Base, the academy provides students with the opportunity to witness frequent rocket launches.

Beyond its educational programs, the academy plays an integral role in the community by actively participating in various events such as back-to-school gatherings, family STEAM (science, technology, engineering, art & design, and mathematics) nights, holiday celebrations, and parades. The academy's commitment to the community is further highlighted by its partnerships with the Lompoc Library and the Lompoc Teen Center, enhancing its presence and influence within the community.

FY24 PROGRAM HIGHLIGHTS

- Partnered with the Vandenberg Exceptional Family Members Program (EFMP) to provide fun and engaging STEAM activities at events for their members.
- Built relationships with the installation community at Vandenberg Space Force Base by participating in events such as the Block Party, Salute to Youth, Trunk or Treat, and the Christmas Parade.
- STARBASE Vandenberg has partnered with the Lompoc Public Library, the Lompoc Teen center and NASA (through the NIFTY Grant) to provide engaging and interactive STEAM lessons after school for junior high and high school students in Lompoc.
- STARBASE Vandenberg has partnered with the Lompoc Public Library to provide an eclipse-themed series of lessons leading up to a viewing event for the 2024 solar eclipse.
- Interacted with over 3,000 community members through public outreach.
- STARBASE Vandenberg staff has been coined twice in recognition and appreciation of their participation in the EFMP Global Hearts event and the Boys and Girls Club Youth of the Year selection.

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STARBASE PETERSON

COLORADO SPRINGS, COLORADO

ESTABLISHED 2014
SERVICE COMPONENT: Space Force

MILITARY LOCATION: Peterson Space Force Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|-----------------------------------------|---------------------------------------|
| Calhan School District Rural Joint | Ellicott School District |
| Cheyenne Mountain School District | Fountain-Fort Carson School District |
| Colorado Charter School Institute | Peyton School District |
| Colorado Springs School District | Private Schools and Homeschool Groups |
| El Paso County Colorado School District | Widefield School District |

In beautiful Colorado Springs at the foot of Pikes Peak, STARBASE Peterson is fortunate to be located on Peterson Space Force Base (SFB), the home of Space Operations Command, NORAD/NORTHCOM, and other space defense units. The Peterson Air and Space Museum is nearby, allowing participating students the opportunity to visit during their time at the program. Colorado Springs is also home to the United States Air Force Academy, Schriever Space Force Base, and Fort Carson. STARBASE Peterson held its first classes in February 2015. Since then, its effect on STEAM education in the local community has continued to grow and expand. Students can learn about the impact space has on their daily lives by interacting with active duty personnel working in various missions such as GPS or NORAD.

A variety of supplemental events take place at STARBASE Peterson throughout the year, ranging from STARBASE Advanced, part-day STEAM enrichment activities, and week-long STEAM camps. STARBASE Peterson is proud to work with a variety of community partners through homeschool STEAM events at the local library district, STEAM Nights for elementary and middle schools, and other collaborative efforts that further the expansion and visibility of STEAM education in the Colorado Springs region.

FY24 PROGRAM HIGHLIGHTS

- Began a STARBASE Advanced program with a charter school to expand STEAM offerings to middle-schoolers.
- Exceeded minimum requirements by conducting 65 Academy classes.
- Frequently partnered with the Peterson Air and Space Museum to increase awareness of Colorado Springs' rich aerospace history.
- Students interacted with a variety of unique military careers located on Peterson SFB such as the CAD technicians at the Area Dental Lab or professional musicians from the USAFA Band.
- Conducted activities for schools not able to attend the full program through outreach such as STEAM Nights, and part-day enrichment events.
- Hosted a hands-on activity booth as part of the annual Colorado Springs Cool Science Festival.

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STARBASE CONNECTICUT- WATERBURY



WATERBURY, CONNECTICUT

ESTABLISHED 2003
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Naugatuck Valley Community College
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Waterbury Public Schools

The Connecticut Air National Guard (CTANG) has demonstrated unwavering dedication to providing essential support to the state of Connecticut and its communities for many years. STARBASE CT - Waterbury stands as a prominent testament to this commitment. Since its establishment in 2003, STARBASE CT - Waterbury has played a pivotal role in the Waterbury Schools by delivering innovative, immersive curriculum and instruction to students in the area. Housed on the premises of Naugatuck Valley Community College, STARBASE CT - Waterbury offers invaluable learning and mentoring opportunities to students across various age groups, concurrently exposing them to CTANG members, Navy personnel, and the college's STEAM programs, including nursing labs, among others. The program takes great pride in its role as a reliable partner in enhancing the educational experiences of students in the region.

FY24 PROGRAM HIGHLIGHTS

- Participated in the Naugatuck Valley Community College STEAM Fair.
- Hosted an eclipse study event on the campus of Naugatuck Valley Community College for the solar eclipse.
- Completed a successful STARBASE Advanced program at West End Middle School.
- Held a series of workshops with Civil Air Patrol Cadets to collaborate on STEAM projects centering on the solar eclipse.
- Aided Civil Air Patrol in Cadet Presentation preparation and assessment.

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STARBASE CONNECTICUT- WINDSOR LOCKS



HARTFORD, CONNECTICUT

ESTABLISHED 2000
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Windsor Locks Readiness Center
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------------|------------------------------|
| Capitol Region Education Council | Hartford Public Schools |
| East Granby Public Schools | Private Schools |
| Granby Public Schools | Windsor Locks Public Schools |

The Connecticut Air National Guard (CTANG) has a steadfast commitment to supporting the state of Connecticut (CT) and its communities. A strong example of this dedication is STARBASE CT - Windsor Locks, which offers innovative and immersive curriculum and instruction to the youth of the greater Hartford area. Situated at the Windsor Locks Army Readiness Center, STARBASE CT–Windsor Locks engages students in various areas of learning, including the STARBASE Basic program, STARBASE Advanced programming, one-time learning opportunities in the community, and more. Since 2000, STARBASE CT - Windsor Locks has proudly served Connecticut’s students, establishing itself as a trusted partner in enriching the student learning experience throughout the state.

FY24 PROGRAM HIGHLIGHTS

- Successfully completed four STARBASE Advanced Programs that focused on engineering, chemistry, and creative problem-solving serving multiple communities.
- Participated in Hartford Athletic’s STEAM & Soccer Education Day by showcasing student work from STARBASE Advanced programming at Betances STEAM Magnet School in Hartford.
- Prepped and judged the science fair at Sarah J. Rawson STEAM Magnet School in Hartford.
- Hosted a STEAM Olympiad Event at East Granby Middle School as the culmination of a semester long STARBASE Advanced program.
- Hosted a summer career enrichment event in conjunction with Bloomfield Youth Services for high school students.
- Participated in Career Day at Jumoke Honors at the Hartford Conservatory.

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STARBASE CENTRAL FLORIDA

ORLANDO, FLORIDA



ESTABLISHED 2022
SERVICE COMPONENT: Navy

MILITARY LOCATION: Navy Support Activity (NSA) Orlando
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Florida Virtual School
Orange County Public Schools
Seminole County Public Schools
Private Schools and Homeschool Groups

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

The National Center for Simulation



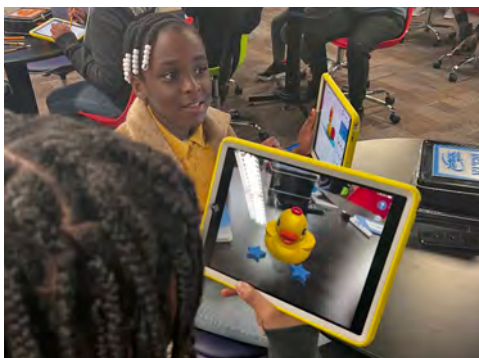
Welcome to DoD STARBASE Central Florida! Established in 2022, the program is located in Orlando's Research Parkway, bridging Orlando and the Space Coast in industry collaborations. DoD STARBASE Central Florida provides 25 hours of STEAM education for fifth-grade students and their teachers. The program targets communities and offers an innovative and engaging learning environment for practicing cooperative collaboration and focusing on essential STEAM content. Central Florida specializes in introducing students, their teachers, and families to the world of modeling, simulation, and training (MS&T) to foster workforce development through partnerships with the military, industry, government, and academia.

The Central Florida team consists of enthusiastic educators specializing in supporting all students and their learning needs. They serve multiple school districts in Central Florida, providing opportunities for cooperative collaboration and STEAM learning while using design thinking and today's workforce tools to solve challenges relating to state standards and real-world problems.



FY24 PROGRAM HIGHLIGHTS

- Established a partnership with the Florida Virtual School (FLVS) Foundation to help fifth-grade students attend the basic program and create portfolios for summer programming and internships.
- Held the second DoD STARBASE workshop in conjunction with I/ITSEC for STARBASE educators and directors from across the nation.
- Hosted a record number of students through our 25-hour medical training supplemental program, where students learned essential life-saving practices.
- Facilitated opportunities for teachers and students in the community to build critical thinking skills and develop workforce habits through serious play as they competed in their FIRST LEGO League and SeaPerch piloted teams.



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STARBASE FLORIDA

JACKSONVILLE, FLORIDA



ESTABLISHED 1994
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Jacksonville Air National Guard Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Duval County Public Schools
 Private Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Florida, Inc

For over 30 years, STARBASE Florida has forged partnerships with the Florida Air National Guard and the Duval County Public School (DCPS) district. Located in Jacksonville, Florida and hosted by the 125th Fighter Wing, STARBASE Florida supports more than 150 schools, both public and private, in the local community. Recognized as a prominent STEAM education provider in North East Florida, STARBASE Florida offers an immersive, two-classroom program for youth. Students benefit from learning experiences encompassing engineering, robotics, aircraft flight dynamics, computer-aided design, and essential scientific subjects. As a result, STARBASE Florida is widely regarded as an indispensable asset for student achievement in schools across Northeast Florida.

FY24 PROGRAM HIGHLIGHTS

- Celebrated its 30th anniversary with the 125th Fighter Wing with an open-base community event highlighting the resources of both STARBASE Florida and the Florida Air National Guard.
- Initiated a pilot Middle School STARBASE Advanced program focusing on robotics. This program, which participated in the local FIRST LEGO League, successfully qualified to participate in the Northeast Florida Regional Competition.
- Successfully partnered with the Rotary Club, STEAM2hub, and Vystar Bank to help support both outreach and after-school programs in the community.
- During the summer supplemental programs, STARBASE Florida piloted the introduction of Spike Prime robots and WozEducation indoor drones as future supplemental technology resources to augment their present curriculum.

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STARBASE PATRICK

SATELLITE BEACH, FLORIDA



ESTABLISHED 2020
SERVICE COMPONENT: Space Force

MILITARY LOCATION: Patrick Space Force Base
CLASSROOMS AUTHORIZED: 4



SCHOOL DISTRICTS SERVED

Brevard County School District
 Private Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

The Aldrin Foundation
 Hope Through Education

DoD STARBASE Patrick is situated in Satellite Beach, Florida, and has been hosted by the United States Space Force, Space Launch Delta (SLD) 45, since 2020. Located 35 miles south of Cape Canaveral, STARBASE Patrick is well-positioned to allow fifth graders from participating schools to view rocket launches. STARBASE Patrick’s state-of-the-art facilities provide an immersive experience for both students and classroom teachers who attend the program.

The program employs instructors who are skilled in utilizing hands-on activities and interactive lessons designed to be fun while also supporting local schools’ educational needs. Additionally, STARBASE Patrick includes the vital participation of DoD civilians, military personnel, and representatives from other STEAM fields, who reinforce knowledge gained while interacting with students through demonstrations and presentations, answering student questions, and sharing their journeys into STEAM.

FY24 PROGRAM HIGHLIGHTS

- Served 34 schools in Brevard County, totaling 99 classes and 2,041 students in the Basic Program.
- Supported Aldrin Family Foundation’s Rockets & Rovers Summer Camp for Brevard County students by providing “hands-on, minds-on” STEAM activities for 101 students from three districts.
- Facilitated a robotics programming activity for PI-DAY, reaching more than 100 young people.
- Held four summer camps, specifically for military dependents ages 7 - 12, with a focus on STEAM activities.
- Volunteered at Patrick Space Force Base’s Youth Center, built and launched water rockets and parachutes, and supported the Base’s Play for a Day event, reaching over 600 participants.
- Selected to host a STEAM student activity demonstration with the opportunity to interact with the First Lady of the United States, and Secretary of Veteran’s Affairs, Denis McDonough, in October 2024.
- Co-hosted DoD STARBASE instructors and directors at I/ITSEC to facilitate collaboration and enrich STARBASE programming through the incorporation of modeling, simulation, and training in future curriculum.

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STARBASE PENSACOLA

PENSACOLA, FLORIDA



ESTABLISHED 2022
SERVICE COMPONENT: Navy

MILITARY LOCATION: Naval Air Station Pensacola
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Escambia County School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

National Naval Aviation Museum Foundation

Welcome aboard! DoD STARBASE Pensacola is situated at the Naval Air Station Pensacola in Pensacola, Florida, inside the National Flight Academy's simulated aircraft carrier "Ambition." Among the six Carrier Air Groups (CAGs) on Ambition, STARBASE Pensacola occupies two, providing a Ready Room for cadets' daily briefings, a Joint Intelligence Center (JIC) for intelligence and hands-on activities, and the Joint Operations Center (JOC) for Computer Aided Design (CAD) operations.

DoD STARBASE Pensacola primarily serves students from the Escambia County School District throughout the year. During the 2023-2024 school year, 1,401 fifth graders from various elementary schools in the area participated in programs at STARBASE Pensacola. Recently, STARBASE Pensacola was asked by the NAS Pensacola Commanding Officer to initiate a STARBASE Advanced program with a newly-established charter middle school outside the gate of NAS Pensacola - Warrington Preparatory Academy, where 16 dedicated STEAM students successfully launched a high-altitude air balloon. STARBASE Pensacola embodies the words and motto of the Blue Angels and is always "Glad to be here!"

FY24 PROGRAM HIGHLIGHTS

- Since opening in March 2022, all elementary schools in Escambia County, Florida, have participated in the STARBASE Pensacola program. The program maintains a set rotation to ensure that all local schools can experience STARBASE.
- On the fifth day of the program, team members from the Blue Angels Demonstration Team share their experiences and knowledge of their careers in the Navy and Blue Angels with students and take pictures with each group.
- Attended 18 outreach programs providing STEAM activities, speaking about STARBASE, judging regional science fairs at the University of West Florida.
- Collaborated with the Children's Youth Centers at both NAS Pensacola and Corry Station to provide STEAM activities to their center participants in grades K-6. The average group size was 25-30.
- Returned to the Blue Wahoos Baseball stadium for the 2nd Inning! Participants showed up at the stadium to undergo physical and mental challenges as the STARBASE team provided lessons on teamwork and activities illustrating how STEAM fits into baseball.

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PEACH STATE STARBASE

MARIETTA, GEORGIA

ESTABLISHED 2001

SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Clay National Guard Center

CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Cobb County School District
Marietta City Schools
Private and Homeschool Groups

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Peach State STARBASE Foundation, Inc.

Georgia's Peach State STARBASE serves approximately 1,500 fifth graders through more than 60 on-base classes yearly. Peach State STARBASE provides a fast-paced course of instruction spanning 25 contact hours. Additionally, over 500 middle school students participate in 11 ongoing year-long STARBASE Advanced programs in three public middle schools.

Peach State STARBASE has graduated over 18,000 students since opening in 2001. The program collaborates with public and private school teachers in the Atlanta metro area, providing material support directly related to STARBASE programs as well as consultation and logistical support for other STEAM initiatives within the schools. Twice a year, Peach State STARBASE offers a two-day Aerial Robotics Teacher Institute to participating middle school program teachers, other STARBASE instructors, and other partners in the education community on operating and maintaining the small aerial drones used in the middle school programs.

While at STARBASE, students engage in challenging activities related to aviation and STEAM careers, enhancing their classroom instruction. They interact with military personnel and witness direct applications of their academic studies in real-world situations at the Clay National Guard Center and Dobbins Air Reserve Base.

FY24 PROGRAM HIGHLIGHTS

- Hosted both the fifth-annual STARBASE Aerial Robotics Teachers Institute and the STARBASE Eastern Regional Director's Workshop.
- The 2023-2024 school year saw 1,532 students participate in both STARBASE Basic and Advanced Programs, setting a new attendance record.
- Expanded participation in community events, such as the annual STEAMAPALOOZA, and partnered with local police and fire departments in their outreach efforts to elementary students, with over 20 events supported.
- Selected by For The Win (FTW) Robotics to be their initial outlet and primary trainer partner for a new line of totally USA-made educational-market aerial robots.

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STARBASE ROBINS

WARNER ROBINS, GEORGIA



ESTABLISHED 1996
SERVICE COMPONENT: Air Force Reserve

MILITARY LOCATION: Warner Robins Air Force Base
CLASSROOMS AUTHORIZED: 4



SCHOOL DISTRICTS SERVED

- Bibb County School District
- Houston County Schools
- Laurens County Schools
- Private Schools
- Twigs County Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Museum of Aviation Foundation

In the heart of Middle Georgia, STARBASE Robins has been a source of inspiration for young minds for the past 28 years. This dynamic STEAM education program reflects on a year of exploration, growth, and innovation. Committed to hands-on learning, STARBASE Robins launched a series of engaging workshops that took students beyond textbooks. From coding to building model rockets, these immersive experiences sparked students' imaginations and sharpened their problem-solving skills.

Through partnerships with local schools, businesses, and visionaries, STARBASE Robins has become a community-driven movement. Shared resources and collective passion have empowered students to apply their learning to real-world situations, deepening their understanding of how STEAM impacts daily life. As STARBASE Robins proudly displays a tapestry of accomplishments, it continues to make dreams a reality, inspiring the next generation of scientists, technologists, engineers, and mathematicians. STARBASE Robins continues to ignite STEAM passions in Middle Georgia.

FY24 PROGRAM HIGHLIGHTS

- Conducted the 18th Annual FIRST LEGO League Super Regional Tournament.
- Continues partnership with Fort Valley State University, College of Education, to prepare future teachers in leading a relevant, STEAM focused, hands-on classroom.
- Completed 28 STARBASE Advanced clubs and one summer academy through the STARBASE 3.0 program with the Broward County, FL JROTC STEAM Leadership Summit.
- Conducted a STARBASE Robins Engineership Summer Academy with Kliptown Youth Program from Soweto, South Africa.

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STARBASE SAVANNAH

SAVANNAH, GEORGIA



ESTABLISHED 2012
SERVICE COMPONENT: Army

MILITARY LOCATION: Hunter Army Airfield
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Candler County School District
Independent Schools
Savannah Chatham County Public Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Savannah Foundation

STARBASE Savannah is located on Hunter Army Airfield in the beautiful city of Savannah, Georgia. It was opened in 2012 and proudly holds the distinction of being the first STARBASE established on an Army installation. Since its establishment, STARBASE Savannah has served an estimated 14,500 students. Committed to providing an immersive, hands-on learning environment, STARBASE Savannah aims to challenge students and offer an experience that extends beyond the traditional classroom setting, while also complementing their regular curriculum.

FY24 PROGRAM HIGHLIGHTS

- Completed first full academic year since the impact of COVID and successfully completed 32 classes.
- The Honorable Mr. Pete Hoffman, Civilian Aide to the Secretary to the Army, visited STARBASE Savannah.
- Twenty-four out of 26 students from Sarah Mills Hodge Elementary School who attended STARBASE Savannah tested distinguished or proficient on their Georgia Milestones Assessment Systems test.
- Served a total of 1,900 students through Basic, Advanced, Supplemental, and community outreach programs.
- Continued to enhance and upgrade classrooms to ensure a stronger STEAM-centered, immersive learning environment.

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STARBASE GUAM

BARRIGADA, GUAM

ESTABLISHED 2021

SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Guam Army National Guard Readiness Center

CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Guam Department of Education

Hosted by the Guam Army National Guard, STARBASE Guam celebrates its fourth year of operation. Since its inaugural cohort in October 2021, the program has engaged over 3,200 students, providing them with 25 hours of stimulating, inquiry-based curriculum and instruction in science, technology, engineering, art & design, and mathematics (STEAM).

STARBASE Guam has fostered positive relationships with students, teachers, and administrators dedicated to expanding the local STEAM community. Its mission remains centered on providing students with valuable real-world connections in an integrated curricular setting and nurturing relationships with military and civilian partners to explore dynamic careers in STEAM.

FY24 PROGRAM HIGHLIGHTS

- Served 1,203 fifth-grade students from 18 schools during the 2023-2024 school year.
- Held the second Annual STEAM Day at the Agana Shopping Center, an event where a proclamation signing declared October 11 as STARBASE Day and the month of October as STARBASE Month on the island of Guam.
- Hosted The Contraption Challenge (The CONCH) with Daniel L. Perez Elementary School. Thirty-five fourth and fifth-grade participants submitted their hand-drawn contraptions to solve global issues using the Engineering Design Process, applying physics, the transfer of energy, and potential and kinetic energy while developing an eco-conscious mindset to make a difference in their community.
- Participated in several events with Air Force organizations to promote the STARBASE program and expose students of all ages to STEAM.

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STARBASE HAWAII

KEA'AU, HAWAII



ESTABLISHED 2008
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Kea'au Armory
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Hawaii Department of Education

STARBASE Hawaii brings a dynamic STEAM outreach to life on the windward side of Hawaii island by inspiring students with a balanced blend of interactive, hands-on, and classroom talk-story and lessons. The program's aim is to foster a spirit of inquiry, promote logical reasoning, foster critical thinking, and build collaboration skills for students to become future thinkers, problem solvers, innovators, and leaders in an increasingly technological future, as well as working to prevent the "brain drain" that has been plaguing Hawaii for a half-century.

STARBASE Hawaii offers the opportunity to create passion about STEAM in local communities, to develop the next generation of STEAM leaders and innovators. STARBASE Hawaii has partnered with Kea'au Elementary and Intermediate schools to support and guide their VEX robotics teams. Most of these teams successfully qualify for and participate in the Hawaii State VEX IQ Robotics Championship held annually in February. Furthermore, STARBASE Hawaii continually collaborates with the Hawaii Science and Technology Museum to engage in "Science Nights," during which hands-on STEAM activities are brought to local elementary schools. These outreach events showcase local STEAM organizations and feature astronomy, tropical conservation, and robotics topics.

Hawaii students must develop their STEAM capabilities if they are to become or remain competitive in an increasingly technological world. STARBASE stands ready to guide students into the frontiers of a future governed by technology and to help island students understand the benefits and challenges of globalization and a knowledge-based economy.

FY24 PROGRAM HIGHLIGHTS

- Piloted STARBASE Advanced program with Kea'au Intermediate STARBASE Hawaii. STARBASE Hawaii coached four teams for the VEX IQ Competitive Robotics Big Island League. Teams took home the following awards: Skills Championship, Design Award, and Build Award. All four teams competed in the Hawaii State Championship and finished in the Top 25.
- Participated in Science Night with Hawaii Science and Technology Museum, which serves seven local elementary schools and provides hands-on STEAM activities and robotics.
- Partnered with Youth Challenge Academy Hilo and delivered the 25 hours hands-on STEAM curriculum.
- Built a new partnership with the County of Hawaii - Parks and Recreation - Keiki Summer Fun, delivering three days of hands-on STEAM activities.

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STARBASE IDAHO

BOISE, IDAHO



ESTABLISHED 2017
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Gowen Field Air National Guard Base
AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

- | | |
|-----------------------------|---------------------------|
| Basin School District | Middleton School District |
| Caldwell School District | Nampa School District |
| Charter and Private Schools | Notus School District |
| Kuna School District | Wilder School District |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Idaho Youth Challenge Academy Inc.

STARBASE Idaho is located on Gowen Field Air National Guard Base in Boise. The program has been running for seven years and continues to expand as more people learn about the innovative STEAM program. In Idaho's capital city, Gowen Field provides easy access to surrounding school districts, allowing the program to reach rural and urban schools. The three-classroom site is staffed by state-certified educators with extensive teaching experience. These educators work with over half a dozen school districts. Gowen Field personnel enthusiastically share their passion for STEAM careers with students. Depending on the time of year, students visiting the program are exposed to various facilities, including the Blackhawk Hangar, Tank Training Facility, Civil Support Team training building, Fire Station, or the Office of Emergency Management. These tours offer students real-world examples of the skills and concepts they learn in the STARBASE classroom.

STARBASE Idaho currently runs three STARBASE Advanced programs and plans to expand in FY25, all while constantly improving their supplemental program offerings. STARBASE Idaho aims to continue growing in all areas of the program to provide enrichment for students in the Treasure Valley and beyond.

FY24 PROGRAM HIGHLIGHTS

- Organized and hosted a STEAM Expo for the Gowen Thunder Air Show, featuring over three dozen community organizations and businesses.
- STARBASE Advanced Middleton Program won the second place Breakthrough Award for its newest FIRST LEGO League team, the Jedi Knights.
- Participated in 20 outreach events over the year for schools, businesses, and community organizations.
- Designed and implemented two new camp themes for their Guard Camps: Social Media Influencer and LEGO Engineering.
- Expanded the lesson repertoire for Summer Forensic Camps to include blood typing, soil analysis, and entomology.
- Brought STEAM Enrichment to over 2,900 students through Basic, Advanced, and Supplemental programming.
- Piloted a STARBASE Advanced program at the high school level and participated in the FIRST Robotics Challenge.

CONTACT INFORMATION

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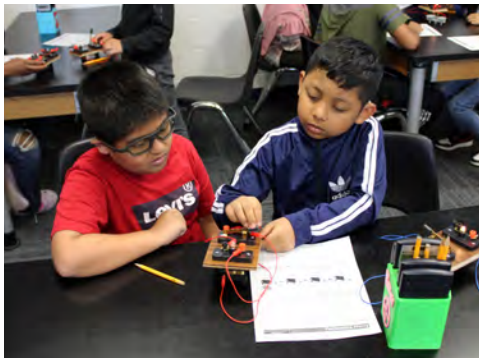
STARBASE INDIANA-FORT WAYNE

FORT WAYNE, INDIANA



ESTABLISHED 2012
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Fort Wayne Air National Guard Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

East Allen County Schools
Fort Wayne Community Schools
Huntington Community Schools
Private Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Indiana, Inc.

The 122nd Fighter Wing hosts STARBASE Indiana-Fort Wayne at the Fort Wayne Air National Guard Base. The Fort Wayne team welcomed their first class on February 14, 2012. Due to an increased interest in the STARBASE program, they opened their second classroom in the fall of 2015. They have been proudly serving two classes concurrently ever since. Approximately 66 different fifth-grade classes participate in the Basic program each year.

The Fort Wayne STARBASE team also instructs sixth through eighth-grade students during their after-school Advanced program. Each program is tailored to the interests of the participating school and covers topics related to 3D printing and Computer-Aided Design software, life on Mars, and coding. In addition, the Fort Wayne team has collaborated and partnered with various STEAM-centered organizations and universities throughout the Fort Wayne area to bring new and exciting opportunities to students while they attend summer programs and other outreach activities.

FY24 PROGRAM HIGHLIGHTS

- STARBASE Fort Wayne staff completed 10 community outreach events throughout Fort Wayne and the surrounding area.
- Worked closely with the 122nd Fighter Wing military members to increase the number of speakers, thus exposing students attending the Basic Academies to more military career fields.
- Developed and offered new Summer Supplemental Programming initiatives for students entering the fifth-eighth grade.
- Hosted 68 fifth-grade classes, allowing the Basic Academies program to serve 1,644 students.
- Increased the number of STARBASE Advanced middle school programs from one annually to two per year, allowing STARBASE staff to pilot a new robotics program.

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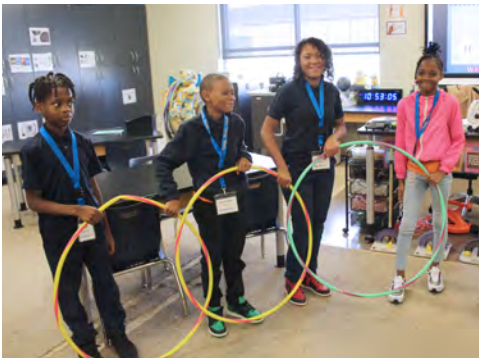


STARBASE INDIANA-GARY

GARY, INDIANA

ESTABLISHED 2018
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Indiana National Guard Armory
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|-----------------------------------|-------------------------------------------|
| Burnham School District | Private Schools |
| Gary Community School Corporation | River Forest Community School Corporation |
| Lake Station Community Schools | School City East Chicago |
| Lincoln School District | School City of Hammond |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Indiana, Inc.

STARBASE Indiana-Gary was established in 2018 at the Indiana National Guard Armory with the support of the 113th Engineer Battalion. Its primary objective is to provide an in-depth introduction to STEAM education for students in North Lake County. The program is dedicated to igniting enthusiasm for STEAM and offering learning opportunities for students from public, charter, private, and homeschooled settings. STARBASE Gary focuses on delivering comprehensive STEAM services to its school partners, including the fifth-grade Basic experience, Advanced after-school programs, Supplemental opportunities, STEAM experiences for district summer school programs, support for STEAM Family Nights, and volunteering in local schools to maintain a consistent STARBASE presence.

FY24 PROGRAM HIGHLIGHTS

- Hosted 68 classes from 14 school districts.
- Partnered with New Chicago for Lunch and Learn, a summer feeding program.
- Provided support for the Gary Community School Corporation during their inaugural STEAM event.
- Served over 1,700 students.
- Engaged with the homeschool community and saw increased enrollment for summer camp.
- Participated in 14 outreach programs with the community and launched four after-school clubs.

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STARBASE INDIANA-INDIANAPOLIS

INDIANAPOLIS, INDIANA



ESTABLISHED 2015
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Indiana Joint Force Headquarters-Stout Field
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Franklin Township Community School Corporation	Wayne Township Metropolitan School District
Indianapolis Public Schools	Private School and Homeschool Groups
Decatur Township Metropolitan School District	South Putnam Community School Corporation

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Indiana Inc.

Since its first class in February 2015, DoD STARBASE Indiana - Indianapolis, located at the Indiana National Guard Joint Force Headquarters - Stout Field, has been dedicated to providing excellent education. STARBASE Indianapolis has developed strong relationships with school districts in the greater Indianapolis area and surrounding townships. They offer the STARBASE Basic program to local fifth-grade classes and provide after-school STARBASE Advanced programs for middle school students.

In 2022, STARBASE Indianapolis expanded by establishing a second classroom, allowing the program to reach more schools in the community. This expansion has also increased their summer camp sessions, providing continuous engagement and learning opportunities for 5th - 12th grade students. STARBASE Indianapolis continues to offer a wide range of high-quality programs for the wider community.

The STARBASE Indianapolis team has deep connections in the community, forming partnerships with organizations such as Deeply Ingrained, The Indiana State Museum, IPS & Decatur Township STEAM Fests, Commemorative Air Force and Indy Executive Airport, Rolls-Royce, ScienTech, and the Pacers Foundation. Through these collaborations, they conduct an array of engaging STEAM outreach activities and programs, inspiring the next generation of innovators and leaders.

FY24 PROGRAM HIGHLIGHTS

- Added six new schools to the basic program operating calendar and one new school district.
- Served over 1,300 students through the basic and supplemental STEAM programs and successfully implemented a STARBASE Advanced after-school program.
- Hosted five summer supplemental programs for 5th - 12th graders serving the local communities of Central Indiana.
- Participated in six community outreach events with over 9,000 local participants.
- Continued to create and strengthen relationships with community partners.

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STARBASE INDIANA- SOUTH BEND

SOUTH BEND, INDIANA



<p>ESTABLISHED 2016 SERVICE COMPONENT: Army National Guard</p>	<p>MILITARY LOCATION: South Bend National Guard Armory CLASSROOMS AUTHORIZED: 2</p>
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SCHOOL DISTRICTS SERVED

- | | |
|-------------------------|-----------------------------------------|
| Argos Community Schools | South Bend Community School Corporation |
| Private Schools | Union North United School Corporation |
| School City Mishawaka | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Indiana Inc.

STARBASE Indiana - South Bend has been located in the South Bend National Guard Armory since 2016. The program's immediate impact led to the quick opening of a second classroom. The program continues to expand with year-round educational opportunities offered through supplemental programming and community outreach. STARBASE South Bend's focus and goal is to exceed last year's impact for the Basic and Advanced programming, community engagements, and summer STEAM academies.

STARBASE South Bend has a strong partnership with the Indiana National Guard and the US Marine Corps military partners. In FY24, it recorded 37 hours from military volunteers. To increase our community engagement, program staff attended multiple summer camp fairs and school science nights, which has increased scheduled classes for the 2025 calendar year and sparked partnerships with several community organizations to offer immersive summer STEAM Academies.

FY24 PROGRAM HIGHLIGHTS

- Partnered with multiple STEAM collaborators to create an immersive advanced summer STEAM academy with a deep career focus in fields such as health science, biology, environmental science, robotics, and engineering.
- Re-established partnership with the Argos Community School Corporation.
- Built strong relationship with local US Marine Corps Reserves in South Bend, increasing student engagement with military partners in a positive career-focused way.
- Connected with industry leaders, schools, and STEAM professionals for multiple community engagements that resulted in an increase in schools to be served this upcoming academic year.
- New school partnerships were developed this year and have been established to continue in FY 25.

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STARBASE KANSAS CITY

LENEXA, KANSAS



ESTABLISHED 1999

SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Lenexa National Guard Armory

CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|--------------------------------------------|-----------------------------------------|
| Baldwin City School District | Private Schools |
| Basehor-Linwood Unified School District | Shawnee Mission Unified School District |
| Easton Unified School District | Turner Unified School District |
| Kansas City Kansas Unified School District | Wellsville Unified School District |
| Lansing Unified School District | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Kansas STARBASE, Inc.

Since its inception in 1999, the Kansas National Guard has fully supported STARBASE Kansas City. Hosted by the 1077th Ground Ambulance Company and Medical Detachment, STARBASE Kansas City continues to significantly impact the community serving over 3,000 students through the Basic program, Advanced programs, Supplemental programs, and various outreach opportunities during the 2023-2024 school year. Operating at full capacity, the Basic program has provided a comprehensive introduction to STEAM (science, technology, engineering, art & design, and mathematics) for students, fostering their curiosity and building foundational skills.

STARBASE Kansas City is dedicated to expanding STEAM education through partnerships with community organizations, schools, and nonprofits in the greater metropolitan area. The primary focus of STARBASE Kansas City remains on increasing student knowledge, enhancing inquiry-based skills, and cultivating a strong interest in STEAM disciplines through hands-on investigations. Looking ahead, STARBASE Kansas City's commitment is to continue offering a premier, student-centric environment. Here, students are given numerous opportunities to develop their critical thinking skills through inquiry and exploration, equipping them to solve real-world problems.

FY24 PROGRAM HIGHLIGHTS

- Conducted Advanced programs with an engineering focus at two of our partnering middle schools.
- Established new relationships, increasing Basic program opportunities to support two new school districts.
- Continued partnership with the Joseph Pedrotti Foundation, which provided 20 VR Goggles and a Unitree Go 1 Quadruped robot for student/classroom use.
- Increased outreach opportunities and worked with over 1,400 children providing STEAM activities.
- Collaborated and participated with various other STARBASE programs across the nation to implement a program with Marine JROTC cadets during the summer.
- Hosted a Military Families event featuring a STARLab space dome.

CONTACT INFORMATION

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STARBASE MANHATTAN

MANHATTAN, KANSAS

ESTABLISHED 2012

SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Manhattan National Guard Armory

CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Chapman Public Schools	Morris County School District
Clay Center School District	Riley County School District
Geary County Unified School District	Rural Vista School District
Herington Unified School District	Wamego School District
Manhattan-Ogden Unified School District	

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Kansas STARBASE, Inc.

STARBASE Manhattan has proudly served as a youth program of the Kansas Adjutant General's department since its establishment in 2012. Hosted by the Command of the 130th Field Artillery Brigade, Kansas National Guard, this signature "hands-on, minds-on" DoD Youth Outreach Program serves Manhattan, Junction City, Fort Riley, and surrounding rural communities.

STARBASE Manhattan continuously collaborates with volunteer speakers and tour guides from the 130th, Fort Riley, and Kansas State University to provide an amazing opportunity for students to make real-world connections to STEAM topics and careers. In addition to the exemplary 25-hour basic STARBASE program, STARBASE Manhattan provides a STARBASE Advanced program at a local middle school. STARBASE Manhattan provides community outreach by facilitating STEAM activities at community events.

FY24 PROGRAM HIGHLIGHTS

- Partnered with area middle school to host STARBASE Advanced Club for robotics. The club focused on advanced coding of the LEGO Spike Prime Robot and Sphero Bolt Robot. Students participated in a culminating Battle Bots event upon the conclusion of the club.
- Collaborated with Kansas STARBASE sites to provide a two-day professional development workshop for the 29 STARBASE employees.
- Served over 2,000 students through various STARBASE Basic, Advanced, supplemental programs, and community outreach events.
- Collaborated with all Kansas sites to host evening robotics classes for 180 Kansas JROTC students on Fort Riley.
- Participated in a joint, inter-state STARBASE program with 208 cadets who built and coded robots during their JROTC resident summer camps.
- Provided outreach to six different schools, visiting 16 classes of students who are on our waitlist to conduct a STARBASE STEAM lesson and build relationships.
- Conducted two summer academies focused on coding robots and CAD/Engineering. Prioritized developing innovative problem solvers through a variety of engineering and coding challenges.

CONTACT INFORMATION

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STARBASE SALINA

SALINA, KANSAS



ESTABLISHED 1998
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Great Plains Joint Training Center
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|---------------------------------------------|---------------------------------------------|
| Abilene Public Schools | Marion-Florence Unified School District |
| Canton-Galva Unified School District | McPherson Public Schools |
| Central Plains Unified School District | Moundridge Unified School District |
| Chapman Unified School District | North Ottawa County Schools |
| Clifton-Clyde Unified School District | Private Schools and Homeschool Groups |
| Concordia Public Schools | Salina Public Schools |
| Ell-Saline Unified School District | Smoky Valley Public Schools |
| Ellsworth-Kanopolis School District | Solomon Unified School District |
| Goessel Unified School District | Southeast of Saline Unified School District |
| Hillsboro Unified School District | Southern Cloud Unified School District |
| Inman Public Schools | Sylvan Grove Unified School District |
| Lincoln Unified Schools | Twin Valley School District |
| Little River-Windom Unified School District | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Kansas STARBASE Inc.

Located in the heartland of the United States, STARBASE Salina serves as a hub of innovation and inspiration, devoted to shaping the future of science, technology, engineering, art & design, and mathematics (STEAM) education for young learners. The 25-hour program is designed to ignite the interest and imagination of students, through immersive, hands-on experiences.

Since 1998, STARBASE Salina has partnered with the city and surrounding school districts to deliver STEAM-focused education. Sponsored by the Great Plains Army National Guard and supported by the 235th Aviation Center, students at STARBASE Salina have the unique opportunity to engage with military personnel and explore how STEAM is utilized in both military and civilian careers. Through STEAM experiments and activities that extend beyond the traditional classroom, STARBASE Salina has been providing a dynamic learning environment for over 26 years.

FY24 PROGRAM HIGHLIGHTS

- Completed 64 academies from 48 schools and served over 1,600 students in the 25-hour Basic program.
- Hosted two successful Advanced robotics clubs that competed in the Fort Hays State Western Kansas LEGO Robotics Competition and conducted six successful outreach programs.
- Introduced flight simulators as a career exploration tool for fifth-grade students.
- Collaboratively worked with various STARBASE locations across the nation to implement a program for Marine JROTC cadets during the summer at Fork Union Military Academy.
- Assisted in an outreach program with Fort Riley JROTC, engaging 180 cadets in various STEAM activities.

CONTACT INFORMATION

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STARBASE TOPEKA

TOPEKA, KANSAS



ESTABLISHED 1994
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Forbes Field
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|--------------------------------|--------------------------------|
| Auburn-Washburn Public Schools | Private Schools |
| Burlingame Public Schools | Royal Valley Public Schools |
| Central Heights Public Schools | Santa Fe Trail Public Schools |
| Holton Public Schools | Seaman Public Schools |
| Jefferson West Public Schools | Shawnee Heights Public Schools |
| Kaw Valley Public Schools | Topeka Public Schools |
| Mission Valley Public Schools | Valley Falls Public Schools |
| North Jackson Public Schools | Wabaunsee Public Schools |
| Osage City Public Schools | West Franklin Public Schools |
| Perry-Lecompton Public Schools | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Kansas STARBASE, Inc.

STARBASE Topeka is celebrating its 31st year of operation. It is situated at Forbes Field within the Armed Forces Reserve Center and is hosted by the Kansas Army National Guard 69th Troop Command. Since its establishment, STARBASE Topeka has consistently surpassed the program's capacity for service. During the 2023-2024 school year, STARBASE Topeka engaged over 3,300 students through the STARBASE Basic and Advanced programs, community outreach opportunities, and events. The STARBASE Advanced after-school program allows middle school students to delve into robotics, rocketry, and the engineering design process. STARBASE Topeka collaborated with several other STARBASE locations to teach JROTC cadets about the engineering design process using robotics.

Looking ahead, STARBASE Topeka remains committed to finding innovative ways to educate, inspire, and generate enthusiasm for STEAM among the youth of Kansas.

FY24 PROGRAM HIGHLIGHTS

- Conducted eight Advanced programs and piloted one High School JROTC program.
- Increased outreach opportunities and worked with over 1,400 children providing STEAM activities.
- Collaborated with various STARBASE programs across the nation to implement an Advanced program for 208 Marine JROTC cadets during the summer.
- Partnered with all Kansas STARBASE sites to host evening robotics classes for 180 Kansas JROTC students on Fort Riley.
- Jointly worked with Kansas sites to provide a two-day professional development workshop for the 29 STARBASE employees. The main focus of this workshop was maximizing student engagement, and celebrate site successes throughout the year.

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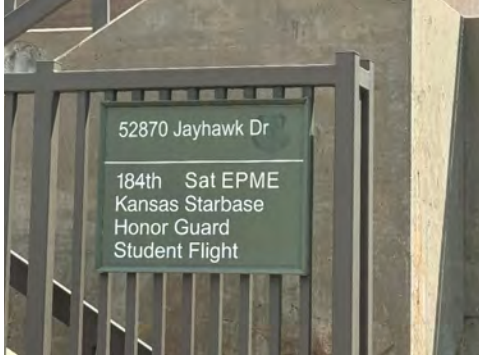
STARBASE WICHITA

WICHITA, KANSAS



ESTABLISHED 1993
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: McConnell Air Force Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|---------------------------|-----------------------------------|
| Andover Public Schools | Derby Public Schools |
| Augusta Public Schools | El Dorado Public Schools |
| Central Public Schools | Haysville Unified School District |
| Circle Public Schools | Private Schools |
| Clearwater Public Schools | Wichita Public Schools |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Kansas STARBASE INC.

Established in 1993, STARBASE Wichita is dedicated to inspiring and educating young minds in the fields of science, technology, engineering, art & design, and mathematics (STEAM). In collaboration with the city of Wichita and the surrounding school districts, the program aims to ignite the interest and imagination of students through immersive, hands-on experiences. The program is sponsored by the Kansas Air National Guard's 184th Wing. It is situated at McConnell Air Force Base, directly off the flight line, providing a stimulating learning environment for participating students. Students at STARBASE Wichita are engaged in various STEAM experiments and activities, moving beyond the conventional classroom setting. They also get the chance to interact with military personnel and understand the integration of STEAM into military careers and civilian professions. Over the last 31 years, STARBASE Wichita has provided students with a practical STEAM experience, helping them develop skills in science, technology, engineering, art & design, and mathematics, as well as observational and investigative strategies. The program has also contributed to boosting students' confidence in core subjects.

FY24 PROGRAM HIGHLIGHTS

- Hosted Young Business Leaders of Wichita, speaking to students about what it means to be a leader.
- Wing Commander engaged with students about STEAM and how it relates to being both a pilot and support roles for pilots.
- Established a relationship with the Youth Center on the active side of the base where two outreach events were held.
- Partnered with Boy Scouts of America to help them obtain their engineering and robotics merit badges through a STEAM event.
- Participated in the Clearwater School District Elementary and Middle School Graduation.
- Met with the U.S. Deputy Secretary of Education, Derby school board members, and parents to discuss how STEAM helps students throughout their scholastic careers and future endeavors.

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BAYOU STATE STARBASE

BATON ROUGE, LOUISIANA



ESTABLISHED 2015
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: North Iberville Parish High School
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- East Baton Rouge Parish
- Iberville Parish
- Pointe Coupee Parish
- West Baton Rouge Parish

Bayou State STARBASE is uniquely located in the North Iberville High School building in Rosedale, Louisiana. It is sponsored and supported by the Gillis Long Louisiana Army National Guard, as well as the Iberville Parish School Board, which provides the facility. Bayou State STARBASE conducts at least 30 academies each year for Greater Baton Rouge Area students. This industrial area is rich with STEAM professionals who volunteer their time at Bayou State STARBASE to provide insight to participants on the potential STEAM careers in the area. Bayou State STARBASE is continuing STARBASE Advanced programs, which began in 2021 and are conducted in partnering schools, bringing robotics and drone experiences to local sixth graders.



FY24 PROGRAM HIGHLIGHTS

- Completed 30 academies, with over 700 students finishing 25 hours of “hands-on, minds-on” STEAM curriculum.
- Implemented six STARBASE Advanced programs.
- Hosted two summer robotics camps with 35 students attending.
- Completed additional instructional programs and opportunities for an additional 64 students.
- Conducted four outreach events, reaching approximately 240 local community members.



CONTACT INFORMATION

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PELICAN STATE STARBASE

PINEVILLE, LOUISIANA

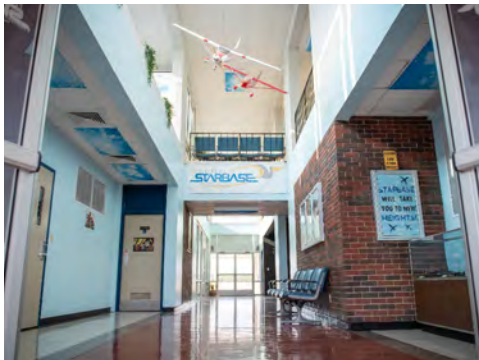


ESTABLISHED 1999

SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: LANG Training Center Pineville

CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------------|------------------------------------------|
| Avoyelles Public Charter Schools | Louisiana Independent School Association |
| Grant Parish Schools | Private Schools |
| Lasalle Parish Schools | Rapides Parish Schools |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

LANG Youth Foundation Program

Pelican State STARBASE has been a notable STEAM education provider in the state of Louisiana for 25 years. Originally established in New Orleans, in 1999, Pelican State STARBASE was relocated to Central Louisiana after Hurricane Katrina. The program resumed full operations at Training Center-Pineville (TC-P) in the spring of 2006. After operating a single classroom on TC-P's main post for over 17 years, the program was granted a new location at the Elser Regional Airport, an extension of Training Center - Pineville. After being primarily used for LANG operations for over 25 years, the Elser Regional Airport has been revitalized, and the 50+ year-old structure begins its new mission as the newest home for Pelican State STARBASE. Pelican State STARBASE is eagerly looking forward to the future as the program continues reaching students in a four-parish area in Central Louisiana.

FY24 PROGRAM HIGHLIGHTS

- Operated the first year as a double classroom program, achieving the 60 academy requirement and seeing over 1,350 students.
- Provided four summer supplemental programs consisting of 20 hours each with 88 participants representing second-seventh grades.
- Held an additional eight programs during the year, presenting five or more hours of the STARBASE curriculum for schools and students unable to attend the Basic program academy.
- Hosted 11 outreach opportunities during the year consisting of on-site tours, STEAM/Math Night engagements, mini-STEAM lessons, festival appearances to promote the program, etc.
- Completed one STARBASE Advanced program with a focus on drone instruction and provided an additional instructional STARBASE program, completing 10 hours of robotics instruction.
- Program staff recognized by Director of the Louisiana Military Department Education Programs for the work and creativity in setting up operations in record time to begin operating dual classrooms.

CONTACT INFORMATION

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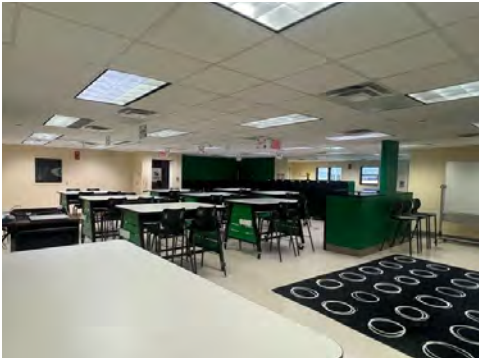
STARBASE FORT JOHNSON

LEESVILLE, LOUISIANA



ESTABLISHED 2024
SERVICE COMPONENT: Army

MILITARY LOCATION: Fort Johnson
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Beauregard Parish School District

STARBASE Fort Johnson is located at the Joint Readiness Training Center, United States Army Garrison, in Leesville, Louisiana. This year, STARBASE Fort Johnson officially opened its doors to students in the Beauregard Parish School district and hosted eight successful academies. While building and establishing relationships within the community, STARBASE Fort Johnson looks forward to providing a minimum of 30 academies across Beauregard and Vernon Parish schools, inspiring approximately 1,000 fifth-grade students annually. The program staff looks forward to providing authentic instruction that will spark inquisitiveness among our students. By incorporating positive military and civilian role models, students will learn how STEAM is present in their daily lives and allow them to make connections for future career aspirations. When students enter STARBASE Fort Johnson, the goal is to grow their love and understanding for all things related to STEAM and leave knowing they have the potential and the confidence to achieve great things!

FY24 PROGRAM HIGHLIGHTS

- Officially opened its doors to welcome 300 fifth-grade students.
- Successfully built a relationship with Beauregard parish and have established a relationship with Vernon Parish to start offering our program to both parishes for the following year.
- Completed eight different outreach opportunities that involved a variety of students from pre-k to 12th grade.
- Engaged with homeschool and private school communities during summer camps, which ultimately provided more academies for the upcoming school year.
- Recruited new guest speakers to add to our STEAM Careers list for students future success.

CONTACT INFORMATION

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STARBASE JACKSON BARRACKS

NEW ORLEANS, LOUISIANA



ESTABLISHED 1999
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Jackson Barracks
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Jefferson Parish Schools
Orleans Parish Schools
St. Bernard Parish Schools

The STARBASE Jackson Barracks program, proudly sponsored by the Louisiana National Guard, has undergone a significant expansion. It now caters to two fifth-grade classes daily from three different parishes. Additionally, an Advanced program has been introduced in four middle schools, accommodating over 100 students annually, with plans for further expansion in the pipeline.

Committed to upholding the DoD STARBASE vision, the program is built on the belief that all students can excel when engaged and motivated. Its mission is to kindle motivation through interactive, hands-on experiences, ultimately leading to personal success. Despite the challenges posed by Hurricane Katrina, the program has successfully served over 11,000 fifth-grade students since its reopening.

FY24 PROGRAM HIGHLIGHTS

- Advanced program staff coached robotics team in the FIRST LEGO League Competition and made it to State Regionals in New Orleans.
- Recruited three new schools to participate in the Basic program. This effort has resulted in a waiting list of 19 academies for the upcoming school year.
- Hosted an Onshape training for STARBASE staff from across the nation.
- Served over 1,600 students through the Basic, Advanced, and Supplemental programming initiatives.
- Participated in community and military outreach activities that reached well over 500 students throughout the year.
- Partnered with new and relevant guest speakers from the STEAM community such as a Valero Refinery chemist, NASA engineer, nurses and EMTs, military police and engineers.

CONTACT INFORMATION

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STARBASE LOUISIANA

BOSSIER CITY, LOUISIANA

ESTABLISHED 1999

SERVICE COMPONENT: Air Force Reserve

MILITARY LOCATION: Barksdale Air Force Base

CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

Bienville Parish School District
Bossier Parish Schools
Caddo Parish Public Schools

Garrison Independent School District
Red River Parish Public Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Louisiana, Inc.

DoD STARBASE Louisiana, sponsored by the 307th Bomb Wing on Barksdale Air Force Base, is celebrating 25 years of delivering exciting and meaningful STEAM programming to over 40,000 students in northwest Louisiana since 1999. Their mission is to inspire students and ignite a passion for learning through collaborative STEAM experiences to empower the innovators of tomorrow. The three-classroom program brings fifth-grade classes onto the installation and into the STARBASE facility to receive 25 hours of exciting, real-world STEAM missions designed to expose them to science, technology, engineering, art & design, and mathematics careers.

STARBASE Louisiana also has one of the largest STARBASE Advanced programs in the nation, bringing challenging semester-long or year-long engineering projects to sixth-12th grade students in 26 separate programs. Their middle school students design, build, and race CO2 cars, investigate alternative energy with wind turbine design, and code robotic arms and Tetrax robots. Their high school students participate in the American Rocketry Challenge (ARC), the world's largest rocketry competition. In the past four years, they have had six teams qualify for the national level of competition in Washington D.C. Most participating seniors have gone on to major in STEAM fields at various universities. DoD STARBASE Louisiana is making a difference in the futures of thousands of students every year in northwest Louisiana!

FY24 PROGRAM HIGHLIGHTS

- Completed 25th year of operations, serving over 40,000 students in the community.
- Hosted military STEAM night which provided one-hour activities designed for parent and student cooperative learning.
- Added virtual reality for simulations and training.
- Staff presented at four conferences to educate on STEAM topics.
- Advanced program hosted area wide CO2 car event at Barksdale Air Force Base.
- Hosted a rocketry training workshop for DoD STARBASE directors and instructors.

CONTACT INFORMATION

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STARBASE MARYLAND

MIDDLE RIVER, MARYLAND

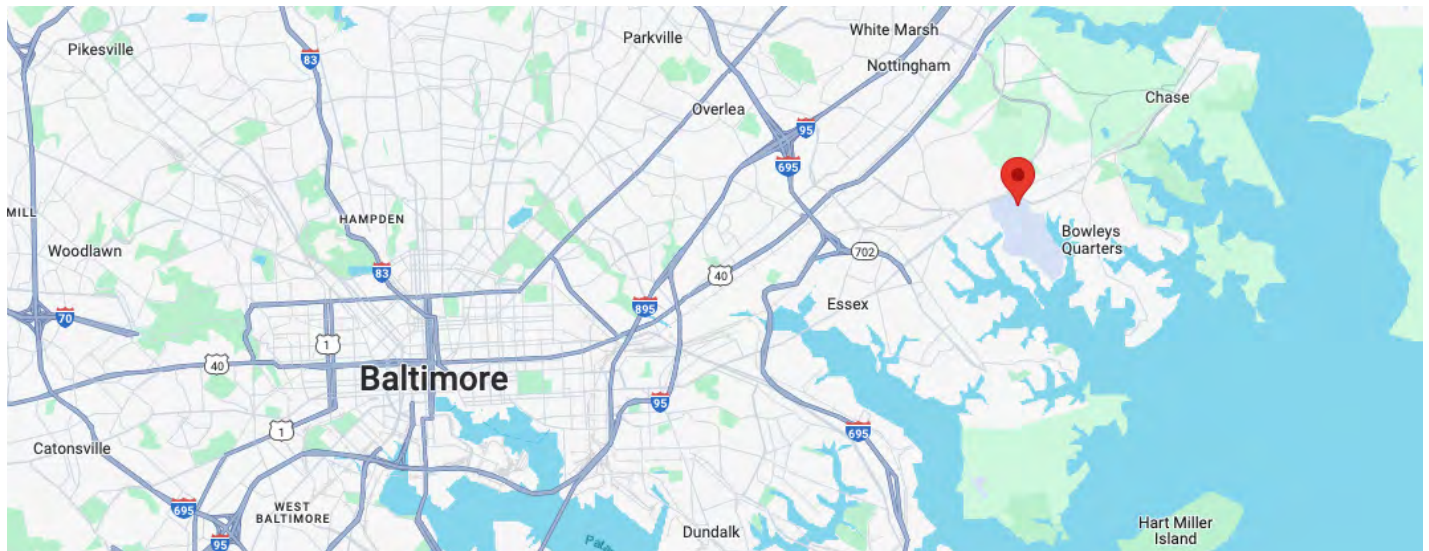


ESTABLISHED 2024

SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Warfield Air National Guard Base

CLASSROOMS AUTHORIZED: 1



ANTICIPATED SCHOOL DISTRICTS SERVED

Baltimore City Schools
Baltimore County Schools

The 175th Wing of Maryland's Air National Guard is recognized for its advanced use of technology in combat and support roles. It was the first Air National Guard unit to receive the A-10 Thunderbolt II in 1979. It has since developed a dual focus on air combat and cyberspace operations, making it a crucial asset in modern warfare and defense strategies.

The inclusion of cyberspace operations highlights the Wing's flexible approach to emerging security challenges. The Wing offers a wide range of science, technology, engineering, and mathematics (STEM) opportunities in aviation, cyberspace, information technology, and engineering. The Warfield Air National Guard Base, home of the 175th Wing, is an ideal location to host STARBASE Maryland, located in Baltimore County and only 25 minutes from Baltimore City.

STARBASE Maryland aims to expose youth to technology, provide positive role models, nurture collaboration, and build goodwill in the community. It will focus on improving STEAM knowledge, critical thinking, and problem-solving skills for local students. The program will host a minimum of 30 weeks of interactive instruction, hands-on activities, and specialized on-base tours. The 25-hour approved STARBASE curriculum will be delivered over a five-week period, with classes once a week for five hours each day.

Additionally, STARBASE Maryland will raise STEAM education awareness within the greater Baltimore metropolitan area and promote interest in STEAM careers. It will align with the Maryland Early Learning Standards and support the contributions of volunteers, teachers, parents, community leaders, civilians, and MD National Guard members.

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STARBASE HANSCOM

BOSTON, MASSACHUSETTS



ESTABLISHED 2012
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Hanscom Air Force Base
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|--------------------------|---------------------------|
| Billerica Public Schools | Leominster Public Schools |
| Boston Public Schools | Malden Public Schools |
| Fitchburg Public Schools | Medford Public Schools |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Hope Through Education, Inc.

The STARBASE Academy at Hanscom Air Force Base stands as a dedicated and innovative STEAM education partner serving students, educators, and school districts across Massachusetts. By nurturing collegial bonds and fostering collaborative initiatives, the STARBASE Hanscom team unites individuals from various walks of life, including military personnel, STEAM practitioners, educators, parents, aspiring teachers, and seasoned instructors. Notably, this year, a three-year project funded by the National Science Foundation in partnership with Bridgewater State University (BSU) was extended to a fourth year and continues to be a proud achievement. This collaborative venture directly immersed Bridgewater’s aspiring teachers into the STARBASE experience by contributing to BSU educational courses and providing an immersive internship. We look forward to future collaborations and partnerships in the coming years.

FY24 PROGRAM HIGHLIGHTS

- Honored to have welcomed Ms. Christine Grady, Spouse of the Vice Chairman of the Joint Chiefs of Staff U.S. Navy Admiral Christopher Grady, to STARBASE Hanscom AFB.
- Delighted to have had the Hanscom AFB Airman Leadership School graduating class visit their site and take on challenging STEAM, team-building activities selected by the STARBASE team.
- Thrilled to have used classroom videocasting equipment to have teachers-in-training at Bridgewater State University observe in real-time the STARBASE team conducting an Engineering Design Process (EDP) activity with fifth-grade students.
- Pleased to have partnered with the Development Command (DEVCOM) Soldier Center in Natick, MA to jointly challenge STARBASE students to a parachute aid-delivery activity.
- Excited to have partnered with the Northeastern University Engineering Department to have Northeastern students mentor students in the STARBASE Advanced Club at the Yawkey Boys and Girls Club in Boston. As a result, STARBASE Advanced students were able to participate in a robotics showcase involving all Boys and Girls Clubs in Boston.

CONTACT INFORMATION

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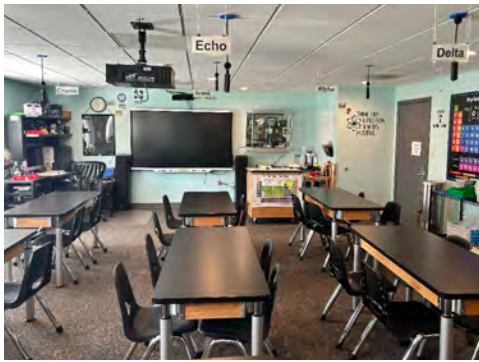
STARBASE ALPENA

ALPENA, MICHIGAN



ESTABLISHED 2012
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Alpena Combat Readiness Training Center
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|-------------------------------|------------------------------------|
| Alcona Community Schools | Mio-Ausable Schools |
| Alpena Public Schools | Posen Consolidated School District |
| Atlanta Community Schools | Private Schools |
| Fairview Area School District | Rogers City Area Schools |
| Hillman Community Schools | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE, Inc.

Proudly situated at the Alpena Combat Readiness Training Center in Michigan’s northern lower peninsula, STARBASE Alpena has been committed to moving full-STEAM ahead in education for the past twelve years! Although it’s a small location, it has a big impact on the area. The program promotes “hands-on, minds-on”, inquiry-based education to all schools within a 50-mile radius and even extends its reach to schools up to 80 miles away. Participants consistently desire more of the program and eagerly anticipate returning.

This explains the popularity of the additional programs offered by STARBASE Alpena in the summer, after school, and throughout the year in collaboration with schools, museums, and other educational programs. The summer programs have included a wide range of problem-solving scenarios with full-scale trebuchets, “Area 45” investigations, Mars-themed robotics, and our own STARBASE Olympics.

FY24 PROGRAM HIGHLIGHTS

- Opened additional space to students for use in regular academies and summer academies, offering space for lessons that require more room and resources.
- Broke their long-standing attendance record this year.
- Partnered with the Innovator’s Club at Thunder Bay Junior High to host the 2nd Annual Brick Builder’s Competition. This competition set record attendance with its classic K-12 builds and a new live build competition, which invited adults to join in with families or sponsor their workplace. This competition required partnerships with the Thunder Bay National Marine Sanctuary for hosting, MiSTEM Network for prizes, and the Alpena High School ROV Team to judge the contest.
- Participated in the Square One Education Network Underwater IVD Event as a judge.
- Hosted three classrooms over the summer for students who attended our regular academy to dive deeper into chemistry and robotics in a Mars-themed academy.

CONTACT INFORMATION

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STARBASE BATTLE CREEK

BATTLE CREEK, MICHIGAN



ESTABLISHED 2006
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Battle Creek Air National Guard Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|-------------------------------------|----------------------------|
| Battle Creek Public Schools | Hopkins Public Schools |
| Bellevue Community Schools | Lawton Community Schools |
| Colon Community Schools | Maple Valley Schools |
| Delton Kellogg Schools | Mar Lee School District |
| Galesburg-Augusta Community Schools | Pennfield Schools |
| Harper Creek Community Schools | Private Schools |
| Hasting Area Schools | Thornapple Kellogg Schools |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE, Inc.



STARBASE Battle Creek is on the Air National Guard Base in Battle Creek, MI. The program began with one classroom as a pilot program in January 2006. By the fall of 2007, it had grown to operating multiple classrooms. January 2025 marks 19 years for STARBASE Battle Creek.

Program participants engage in activities highlighting science, technology, engineering, art & design, and mathematics (STEAM) fields through “hands-on, minds-on,” experiential learning opportunities. Additionally, every student can climb into a spacesuit replica for a souvenir photo. They also visit partners in the marketplace, including Western Michigan College of Aviation, Duncan Aviation, and the Battle Creek Executive Airport, and interact with the military groups on base. Along with hosting classrooms on base during the school year, STARBASE Battle Creek conducts an after-school STARBASE Advanced program at partnering schools.



FY24 PROGRAM HIGHLIGHTS

- Supported the Battle Creek Air National Guard Base for several events, including the annual base-wide haunted house and other STEAM events on family day reaching over 300 people.
- Established relationships with the Battle Creek U.S. Army Reserve and the Battle Creek U.S. Naval Reserve.
- Supported a district currently on the waiting list, by providing and instructing STEAM activities for their summer school sessions.
- Mentored four pre-service teachers as well as two high school students in a teacher prep program.
- Doubled STARBASE Advanced program by creating a new collaboration with a local district.
- STARBASE Battle Creek reached over 1,500 students through the basic five-day program and an additional 430 through our various outreach opportunities.



CONTACT INFORMATION

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STARBASE ONE

HARRISON TOWNSHIP, MICHIGAN



ESTABLISHED 1993
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Selfridge Air National Guard Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|-------------------------------------------|-----------------------------|
| Anchor Bay School District | Lamphere Public Schools |
| Armada Area Schools | New Haven Community Schools |
| Detroit Public Schools Community District | Richmond Community Schools |
| Ecorse Public Schools | River Rouge Public Schools |
| L'Anse Creuse Public Schools | South Lake School District |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE, Inc.

STARBASE One has the distinction of being the first STARBASE. Beginning in 1991 as Project STARS under a W.K. Kellogg grant and with the support of the 127th Wing at Selfridge Air National Guard Base near Detroit, Michigan, the program transitioned to Department of Defense funding in 1993, launching STARBASE across the United States.

From its humble beginnings in a WWII-era barrack slated for demolition, STARBASE One now resides in a 17,000-square-foot facility with an immersive educational playground, including a full-scale space shuttle nose simulator and a simulated Mars surface for robotics challenges. For over 32 years, STARBASE One has remained a proud pillar and leader of STEAM education in the Detroit tri-county area, offering academies to schools, advanced summer academies for repeat attendees, and after-school STARBASE Advanced clubs to middle school students.

FY24 PROGRAM HIGHLIGHTS

- Partnered with Macomb Intermediate School District and Little Inventors to help bring an elementary student's engineering prototype (a toddler's Montessori set) to life.
- STARBASE Advanced middle school club participated in the Square One underwater innovative vehicle design challenge.
- Offered two additional academy weeks, with an emphasis on chemistry, for rising sixth and seventh-grade students who previously attended the basic STARBASE program.
- Supported the Selfridge ANG Base 2024 STEAM outreach initiative and airshow/open house.

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STARBASE MINNESOTA-DULUTH



DULUTH, MINNESOTA

ESTABLISHED 2017
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Duluth Air National Guard Base
CLASSROOMS AUTHORIZED: 4



SCHOOL DISTRICTS SERVED

- | | |
|------------------------------------------|-------------------------------------------|
| Barnum Public Schools | Hibbing Public Schools |
| Carlton School District | International Falls School District |
| Chisholm School District | Mesabi East School District |
| Cloquet Public School District | Moose Lake School District |
| Cromwell Wright Public School District | Mountain Iron Buhl Public School District |
| Duluth Catholic Schools | Nett Lake Public School District |
| Duluth Edison Charter Schools | North Shore Community School |
| Duluth Public Schools | Private Schools |
| Esko School District | Proctor School District |
| Fond du Lac Tribal Schools | Rock Ridge Public Schools |
| Grand Rapids Independent School District | St. Louis County Schools |
| Hermantown School District | Wrenshall Public Schools |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Minnesota, Inc.

STARBASE Minnesota-Duluth was established in 2017 and has served over 13,000 students since its opening. The program has four classrooms and serves students from a 500-square-mile service area that includes many rural communities. Over 3,200 students experience the STARBASE difference each year through the Basic program, STARBASE Explorers Summer Camp, STARBASE Advanced, and numerous community outreach events. Duluth is proud of the strong support from the 148th Fighter Wing and industry STEAM professionals who engage and inspire students, showing them that a future in STEAM is achievable.

FY24 PROGRAM HIGHLIGHTS

- Piloted Camp Code Quest — a middle school, camp to get students hands-on experience with coding, CAD design, 3D printing, laser cutting, soldering, LED programming and more.
- Awarded the Coin of Excellence issued by General Michael Loh, Director of the Air National Guard.
- Participated in over 12 community outreach events including the Duluth Airshow, Boys & Girls Club STEAM hour, Steve O’Neil Birthday Celebration, and the 148th Fighter Wing Bulldog Day, to introduce area students to hands-on STEAM activities.
- Increased military and industry volunteerism to an all-time high, over 100 individuals, by adding strategic roles such as Advanced Coaches, Program Lunch Buddies, and Guest STEAM speakers who conducted student collaborative experiments.
- Served over 40 schools representing 19 school districts in Greater Minnesota.

CONTACT INFORMATION

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STARBASE MINNESOTA- ST. PAUL



ST. PAUL, MINNESOTA

ESTABLISHED 1993
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Minneapolis-St. Paul Joint Air Reserve Station
CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

- | | |
|--------------------------------------------------|---------------------------------|
| Anoka-Hennepin School District | Osseo Public School District |
| Cannon Falls Public School District | Private Schools |
| Columbia Heights Public School Dist | Randolph Public School District |
| Eden Prairie Public School District | Saint Paul Public Schools |
| Hopkins Public School District | South Washington County Schools |
| Minneapolis Public School District | White Bear Lake School District |
| North St. Paul-Maplewood Oakdale School District | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Minnesota, Inc.

Since 1993, STARBASE Minnesota - St. Paul has educated and inspired over 88,000 Twin Cities youth in science, technology, engineering, art & design, and mathematics (STEAM). Additional supplementary programming and resources put STEAM in the hands of another 35,000 fifth graders and their teachers across the State of Minnesota each year. Located at the 133rd Airlift Wing, the program has state-of-the-art facilities, access to an exciting, immersive environment with advanced technologies, and over 300 military and corporate volunteers. In addition to the military, STARBASE Minnesota - St. Paul partners with local STEAM corporations with a global reach, universities, government, and other community organizations in the advancement of STEAM. As a recipient of the Minnesota High Tech Association's Tekne Award for Community Impact in 2018, STARBASE Minnesota - St. Paul has a strong track record of engaging the community in its mission and contributing to a STEAM-skilled workforce, robust economy, and stronger communities.

FY24 PROGRAM HIGHLIGHTS

- Served 16 school districts and 55 schools in five-day programs, expanded supplementary program of STEAM kits and accompanying website to 35,000 students and teachers in 82 of 87 counties in Minnesota.
- Increased military volunteers to 91 members contributing 266 hours and expanded STEAM industry partners to involve 192 participants supporting STARBASE programs, including 10 STEAM at Work events, where 997 students interacted with professionals.
- Engaged the broader community to support STARBASE by involving 204 community volunteers, including local high school students, to contribute approximately 324 hours of support to STARBASE programs.
- Built connections with STARBASE alumni by involving recent alumni in volunteer activities, awarding seven scholarships through STARBASE Minnesota, Inc., and engaging alumni in STEAM fields as volunteers for STEAM at Work events.
- Expanded bank of STEAM career videos by adding 10 more videos, bringing the total STEAM career videos posted to the STEAM career website to 46 STEAM professionals.

CONTACT INFORMATION

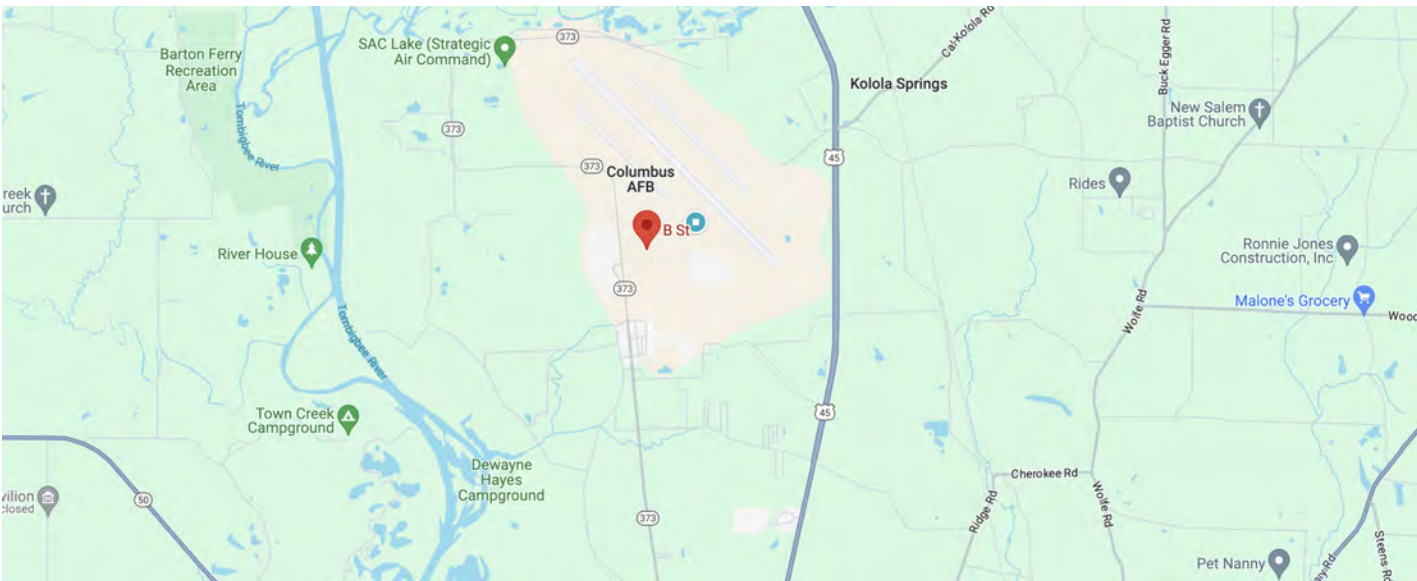
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STARBASE COLUMBUS

COLUMBUS, MISSISSIPPI



<p>ESTABLISHED 2023 SERVICE COMPONENT: Air Force</p>	<p>MILITARY LOCATION: Columbus Air Force Base CLASSROOMS AUTHORIZED: 1</p>
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ANTICIPATED SCHOOL DISTRICTS SERVED

- Lowndes County School District
- Columbus Municipal School District

As one of Mississippi’s newest STARBASE programs, STARBASE Columbus will be housed at Columbus Air Force Base (CAFB). CAFB has been an integral part of the community for over 75 years, and continues to forge strong ties with the surrounding communities. STARBASE Columbus strongly desires to develop a robust STEAM program for every fifth-grade classroom in the Lowndes County communities. Lowndes County, located on the eastern border of the state, has a population of just over 81,000 residents but still maintains the hometown hospitality the south is known for. STARBASE Columbus plans to further support the community through various outreach efforts in STEAM engagement at the local level.

The STARBASE program will utilize over 6,200 square feet of space, including one large classroom and student lunch area. Participants will maximize their learning potential through the DoD STARBASE curriculum and hands-on activities, which reinforce and build upon the local standards and objectives taught at their schools.

CAFB is a technical training installation, and with mission permitting, Airmen and base personnel will be invited to support the program on a volunteer basis. Local educators will be able to rotate through the program for maximum benefit to the district, enhancing their current science, technology, engineering, art & design, and mathematics (STEAM) offerings.

CONTACT INFORMATION

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 EMAIL: SB.Columbus@dodstarbase.org



STARBASE MISSISSIPPI

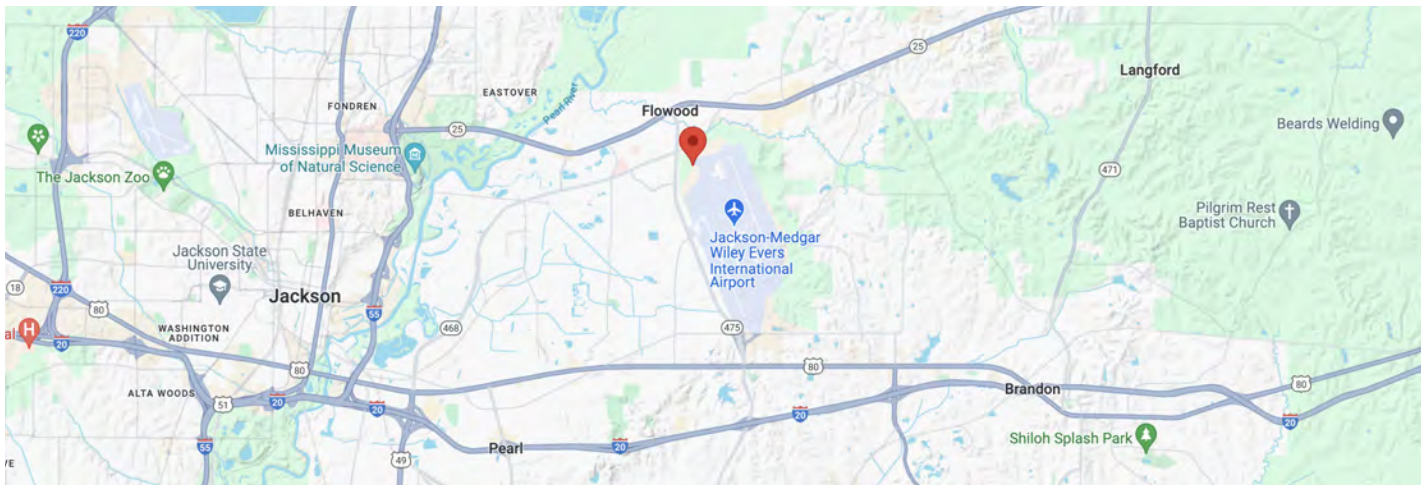
JACKSON, MISSISSIPPI

ESTABLISHED 2023

SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Allen C. Thompson Field

CLASSROOMS AUTHORIZED: 2



ANTICIPATED SCHOOL DISTRICTS SERVED

- Clinton Public Schools
- Jackson Public Schools
- Hinds County School District
- Rankin County School District

STARBASE Mississippi is one of two new sites in the state and is proudly hosted by the 172nd Airlift Wing (AW), home of the C-17 Globemaster III aircraft. Even though the STARBASE team was just recently assembled, they are eager to begin renovating the building, creating an exciting and meaningful “hands-on, minds-on” experience when students walk through the doors. The building will be transformed into a student-friendly environment that will spark curiosity, increase knowledge, and ignite excitement for students in the world of STEAM (science, technology, engineering, art & design, and mathematics) education, all while aligning with the Mississippi standards. The mission is to empower local youth to positively impact future generations and pursue growing STEAM careers.

Program staff have engulfed themselves in training and visiting other STARBASE programs to collaborate and prepare for students. With the support of the 172nd AW community, students will have the opportunity to experience a positive military environment while being exposed to military and civilian careers centered around STEAM. Work is underway in partnering with local school districts to provide fifth-grade students with a hands-on, engaging, fun experience actively participating in STEAM activities. Students will be able to observe the 172nd AW personnel proudly working while providing insight on how STEAM careers are vital to our state and national safety and security. Ranging from airport firefighters, pilots, loadmasters, civil engineers, and advanced technological fields to doctors, dentists, and nurses who provide full medical services, students attending STARBASE will gain personal and professional experiences that positively impact their future.

Inside the classroom, students will be inspired and have a memorable experience with STARBASE staff and mentors while participating in STEAM activities that enhance existing STEAM programs in local school districts. STARBASE Mississippi staff are thrilled to have the opportunity to share an exciting, challenging, and innovative curriculum designed for meaningful engagement. The staff anticipates hosting its first group of fifth-grade students in the Spring of 2025. Summer programs will also be offered to the surrounding communities and military dependents.

CONTACT INFORMATION

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STARBASE FORT HARRISON

HELENA, MONTANA



ESTABLISHED 2007
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Fort Harrison Army National Guard Base
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- East Helena Public School District
- Helena Public Schools District 1
- Montana City Elementary School District
- Private Schools

The Montana Army National Guard hosts STARBASE at Fort William Henry Harrison, three miles west of Helena, MT. Since its inception in 2007, STARBASE Fort Harrison has served nearly 13,000 youth in the Basic five-day program by providing them with a hands-on, small group, high-quality STEAM curriculum. The STARBASE Fort Harrison program serves all fifth-grade students in the Helena Public School District and fifth-grade students in the greater Helena area. STARBASE Fort Harrison implemented 12 Advanced STEAM programs this year at the local middle schools to continue nurturing and expanding students' exposure to STEAM disciplines. Extensive outreach events are held throughout the year to engage community members in the excitement of experiencing and learning about STEAM and continue to raise awareness about the STARBASE Fort Harrison program. STARBASE Fort Harrison looks forward to continuing to serve the youth and community members of the greater Helena area each year.

FY24 PROGRAM HIGHLIGHTS

- Reached 844 students through the Basic five-day program, as well as an additional 351 students through supplemental and STARBASE Advanced programs.
- Hosted three STEAM family night outreach events at local elementary schools, reaching 382 community members.
- Partnered with Shodair Children's Hospital, a local children's hospital, to provide STEAM outreach to in-patient students.
- Coordinated with local volunteers to provide a STEAM career guest speaker to every visiting class.
- Implemented 12 STARBASE Advanced programs at local middle schools in the greater Helena area.

CONTACT INFORMATION

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STARBASE GREAT FALLS

GREAT FALLS, MONTANA



ESTABLISHED 2011
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Great Falls Air National Guard Base
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Great Falls Public School District
 Private Schools

The Montana Air National Guard hosts the STARBASE program in Great Falls at the 120th Airlift Wing. Since its inception in 2011, the program has served over 12,000 Montana youth. All fifth-grade students in the Great Falls Public School District attend STARBASE Great Falls for the five-day basic program, where they participate in high-quality, hands-on STEAM activities and experience real STEAM occupations and opportunities on the Guard Base. Private schools, homeschool families, and rural schools in the surrounding area are also invited to supplemental programming and outreach through day trips to the STARBASE Great Falls classroom, summer camps, and STARBASE Advanced after-school programs. STARBASE Great Falls graduates consistently shared that because of STARBASE, they have an increased awareness of civilian and military STEAM opportunities, as well as bolstered confidence and resilience to pursue and achieve their STEAM career goals. STARBASE Great Falls is excited to continue to expand their reach and impact to benefit Montana's youth and communities.

FY24 PROGRAM HIGHLIGHTS

- Provided an opportunity for every student who visits STARBASE Great Falls to tour a C-130 Hercules airplane, which students frequently see flying around Great Falls.
- Reached 733 students through the Basic five-day program and an additional 339 students through summer camps, outreach, and the STARBASE Advanced after-school program.
- Conducted four STARBASE Advanced after-school programs at North Middle School, East Middle School, Chief Joseph Elementary, and West Elementary in the Great Falls Public School District, partnering with the Science Olympiad team.
- Travel yearly to a community for STEAM programming in partnership with Montana State University Extension. This year's summer camps were provided in Hot Springs, MT, and Dixon, MT, for elementary-aged youth.
- Piloted a teacher-training program for rural teachers to observe STEAM activities and best practices and implement them in their classrooms. The training ended by assisting with a STARBASE summer camp in their area. STARBASE Great Falls worked with Malta, MT teachers in the summer of 2024.

CONTACT INFORMATION

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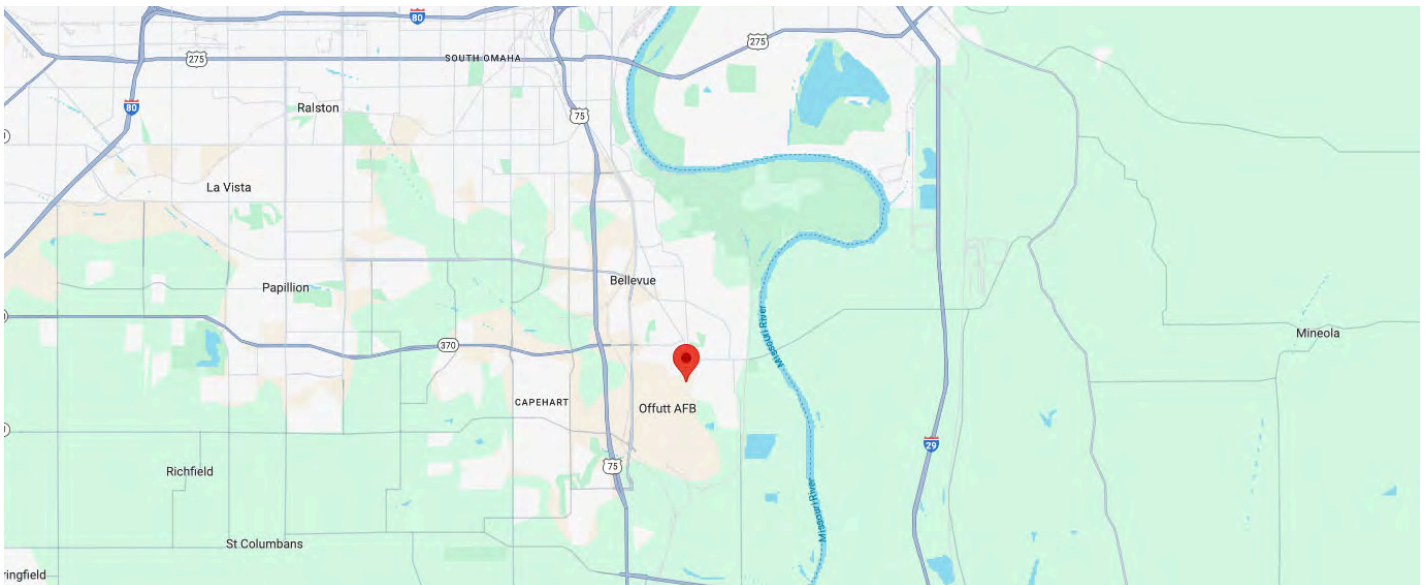
STARBASE OFFUTT



OMAHA, NEBRASKA

ESTABLISHED 2024
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Offutt Air Force Base
CLASSROOMS AUTHORIZED: 2



ANTICIPATED SCHOOL DISTRICTS SERVED

- Bellevue Public Schools
- Papillion La Vista Community Schools

Offutt AFB has a proud tradition of leadership with great support from their surrounding communities. Offutt Air Force Base and the City of Omaha have a long history of varied educational partnerships and relationships and are looking forward to growing community impact through the launch of a DoD STARBASE Youth Program.

STARBASE Offutt will play a crucial role in addressing educational needs of the local area in order to support the DoD’s mission of attracting, inspiring, and developing exceptional STEAM talent across the education continuum and advancing the current DoD STEAM workforce.

The main goal of STARBASE Offutt is to provide a comprehensive program to every fifth-grade classroom in the Omaha Metro and surrounding Sarpy County communities. The program is specifically designed for fifth-grade students and will be held at an existing Offutt AFB, NE facility within the 557th Weather Wing in Building 185. Students will enter the installation through the Kenny Gate, or Flag Gate, and head towards STARBASE, where they will be greeted by static aircraft, the Martin Bomber Building, and the newly opened 2+ mile long runway.

CONTACT INFORMATION

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STARBASE HENDERSON

HENDERSON, NEVADA



ESTABLISHED 2022
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Henderson Armory
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Clark County School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Battle Born Youth Foundation

Nestled in the southeast corner of Henderson, NV, STARBASE Henderson shines as one of the amazing jewels of the Nevada National Guard. This youth program, designed specifically for fifth-grade students, ignites interest through hands-on interactive science activities. By exposing students to essential skills in STEAM, including coding, robotics, mathematics, engineering design, and science content, STARBASE Henderson bridges the connection between classroom learning and real-world applications. All these offerings directly support the Nevada Academic Content Standards. In addition, the program introduces students to STEAM careers, guiding them toward potential paths as they grow into middle and high school. With a recent expansion from a one to two-classroom program in the 2023-2024 school year, STARBASE Henderson has immersed over 1,500 students across the Las Vegas Valley in engaging activities, fostering a love for science and mathematics. With a growing waitlist, STARBASE Henderson hopes to serve even more students, allowing them to participate in stimulating, hands-on STEAM projects. The program's impact resonates throughout the community, sparking curiosity and driving a passion for learning and growth.

FY24 PROGRAM HIGHLIGHTS

- Expanded program from one to two classrooms that served over 1,500 Clark County School District students, immersing students in engaging STEAM activities that sparked interest and curiosity in STEAM concepts.
- Collaborated with Doolittle Community Center and East Las Vegas Community Center by bringing STARBASE Henderson's exciting STEAM curriculum into the community.
- Hosted Lunch, Learn, and Play for teachers, administrators, and military personnel to highlight the curriculum and demonstrate connections to the Nevada Academic Content Standards.
- Partnered with the Nevada National Guard to bring presenters into the classroom, introducing students to various careers in the military that utilize STEAM.
- Connected with military families by participating in community outreach for Trunk or Treat night.
- Maintained a waiting list of approximately 20 schools eager to participate in the STARBASE Henderson STEAM program.

CONTACT INFORMATION

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STARBASE HIGH SIERRA

RENO, NEVADA

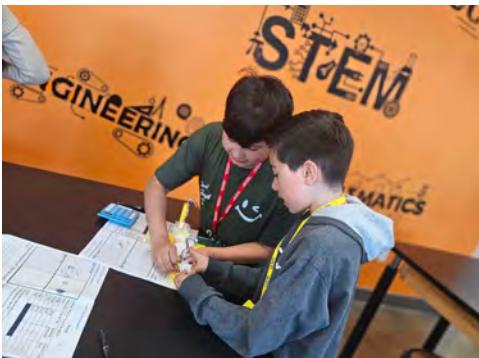


ESTABLISHED 2022

SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Nevada Air National Guard Base

CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Washoe County School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Battle Born Youth Foundation

STARBASE High Sierra primarily serves fifth graders within the Washoe County School District (WCSD). STARBASE High Sierra is also available to fifth graders in the county's Charter schools. The curriculum supports Next Generation Science Standards (NGSS) grade level expectations, as well as meets or exceeds established national standards. Certified teachers and full-time program staff lead STARBASE High Sierra classroom instruction through hands-on activities. Additionally, military and civilian professionals within STEAM career fields support STARBASE High Sierra voluntarily, providing guest instruction, mentorship, tours, and demonstrations. STARBASE High Sierra utilizes facilities located at the Nevada National Guard Air Base located in Reno, Nevada, Building 76. STARBASE High Sierra is administrated by the Nevada National Guard and the Nevada Department of the Military. STARBASE High Sierra also serves as an outreach program to raise STEAM education awareness within WCSD and increase interest in STEAM careers. STARBASE High Sierra's objectives are to expose students to technological environments and provide positive role models, nurture a network of collaborators, as well as build mutual goodwill within the community. STARBASE High Sierra also focuses on improving the STEAM knowledge, critical thinking, and problem-solving skills of these students. STARBASE High Sierra hosts a minimum of 30 academies of interactive instruction, hands-on activities, and specialized on-base tours. For each academy of students, the 25-hour approved STARBASE curriculum is delivered one day per week, for five hours, over five weeks.

FY24 PROGRAM HIGHLIGHTS

- Implemented supplemental programming to serve students in both Winnemucca and Dayton counties, which represent rural communities that do not have the ability to attend the program during the school year.
- Successfully incorporated the Dog Tag Lesson into the CAD portion of the curriculum.
- Scheduled with the Reno Air Base Fire Station to provide STEAM Careers presentations and on-base field trips on the first day of every academy.

CONTACT INFORMATION

DIRECTOR: Tiffany Young

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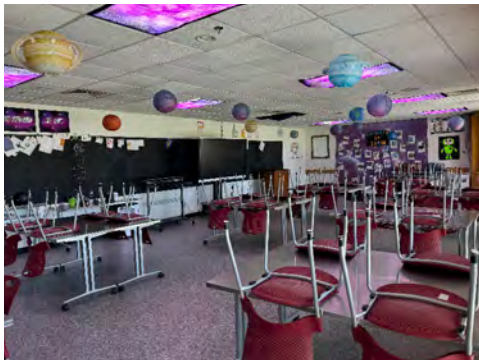
STARBASE NELLIS

LAS VEGAS, NEVADA



ESTABLISHED 2012
SERVICE COMPONENT: Air Force Reserve

MILITARY LOCATION: Nellis Air Force Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Clark County School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Nexus High Q Education Inc

Located at the home of the United States Air Force Thunderbirds and sponsored by the 926th AFRC Wing, STARBASE Nellis provides 25 hours of “hands-on, minds-on” activities to students from the Clark County School District. Sponsored and supported by the Air Force Reserve, STARBASE Nellis is proud to be a leader in STEAM educational opportunities. A unique and memorable experience for the students is being able to tour the base to see the military members in action in their respective STEAM fields, made possible by having our own bus driver to transport the students around the base. STARBASE Nellis engages students in an educational adventure unlike anything they have ever experienced!

FY24 PROGRAM HIGHLIGHTS

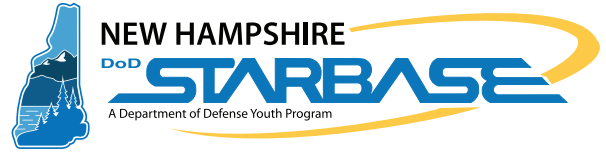
- Completed renovations to the building — FPM, director, and office manager have painted, wrapped desks in vinyl, and revamped the decor to make classrooms more immersive.
- Implemented new and updated call signs on PVC cards.
- Purchased three new 3D printers, which ensure that every student leaves the program with a 3D-printed item that they watched being printed.
- Taught Onshape utilizing 60 new laptop computers with better processing time.
- Continued collaboration with Clark County School District transportation.
- Collaborating with the Youth Center on base and extending our marketing efforts to expand our outreach on and off base.

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STARBASE NEW HAMPSHIRE

CONCORD, NEW HAMPSHIRE



ESTABLISHED 2023
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Edward Cross Training Complex
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------|----------------------------|
| Allenstown School District | Dunbarton School District |
| Bow School District | Franklin School District |
| Concord School District | Manchester School District |
| Deerfield School District | Pittsfield School District |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Hope Through Education

STARBASE New Hampshire officially opened their doors in November 2024 with a ribbon cutting ceremony hosted by Major General David Mikolaities, The Adjutant General, New Hampshire Army National Guard. Their classroom was designed to engage learners. Two 85" Smartboards and two 65" TVs present information allowing students to interact with the content of all STARBASE lessons. Other equipment such as state-of-the-art laptops, 3D printers, LEGO Robots, and Virtual Reality headsets further enhances the lessons. With a goal to motivate New Hampshire students to explore STEAM opportunities as they continue their education, STARBASE New Hampshire plans to work with school districts to ensure they are supporting all of their standards and learning objectives.

By the end of the 2023-24 school year, STARBASE New Hampshire completed 17 Basic STARBASE academies with students from four local school districts. Additionally, five other schools participated in a "Taste of STARBASE," a shorter version of the Basic program, to introduce them to the newest, best STEAM-thing in the state. A full slate of 30 five-day Basic academies is planned for 2024-25 school year.

FY24 PROGRAM HIGHLIGHTS

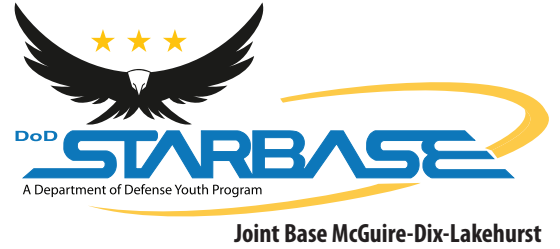
- Partnered with the New Hampshire National Guard to host a congressional open house where guests interacted with students from Southside Middle School, Manchester School District. Representatives remarked on the "impressive" nature of the program and the special STEAM opportunity it brings to New Hampshire students.
- Served 428 students through 17 Basic STARBASE academies and an additional 315 students through an introductory "Taste of STARBASE."
- Conducted four summer camps for 3rd-8th grade students which totaled 112 hours of STEAM focused activities. Of the 74 student participants, 50 percent were from military families.
- Participated in five outreach activities to promote their new program, the only one in the State of New Hampshire.
- Produced an informational video in collaboration with Allenstown Community School to introduce the DoD STARBASE program.

CONTACT INFORMATION

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STARBASE JOINT BASE MCGUIRE-DIX-LAKEHURST

TRENTON, NEW JERSEY



ESTABLISHED 2022
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Joint Base McGuire-Dix-Lakehurst
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|-------------------------------|--------------------------------------|
| Lakehurst School District | Pemberton School District |
| New Hanover Township School | Private and HomeSchools |
| North Hanover School District | Springfield Township School District |

STARBASE Joint Base McGuire-Dix-Lakehurst (JB MDL) is the nation's first STARBASE program on a tri-service joint base. The program began welcoming students in May of 2022. STARBASE JB MDL currently utilizes one classroom with the intent to establish additional classrooms in the near future. The program hosts over 1,000 students through classroom instruction and outreach programs.

STARBASE JB MDL is the third initiative of the JB MDL Executive STEAM Council, a newly created group hosted by the 87th Air Base Wing that incorporates key mission partners who are working to create an ecosystem to develop the country's future workforce.

STARBASE JB MDL is surrounded by a densely populated community that needs STEAM-based programs. The program's presence on an active military base has allowed students the opportunity to tour military facilities and jobs, such as bioenvironmental engineering, explosive ordnance disposal, and air traffic control, as well as civilian positions in and around the base.

FY24 PROGRAM HIGHLIGHTS

- Hosted a workshop for New Jersey Teachers of the Year.
- Partnered with the Joint Base McGuire-Dix-Lakehurst and local school districts to provide STEAM outreach to over 1,000 students.
- Collaborated with youth centers to provide hands-on STEAM activities to students ages 5-10.
- Expanded opportunities for students to engage with members of the military and STEAM careers across the installation.
- Collaborated with the Institute for Earth Observations at Palmyra Cove and The Naval Surface Warfare Center, Philadelphia Division, to provide dynamic, hands-on STEAM instruction over the summer that included satellites and robotics.

CONTACT INFORMATION

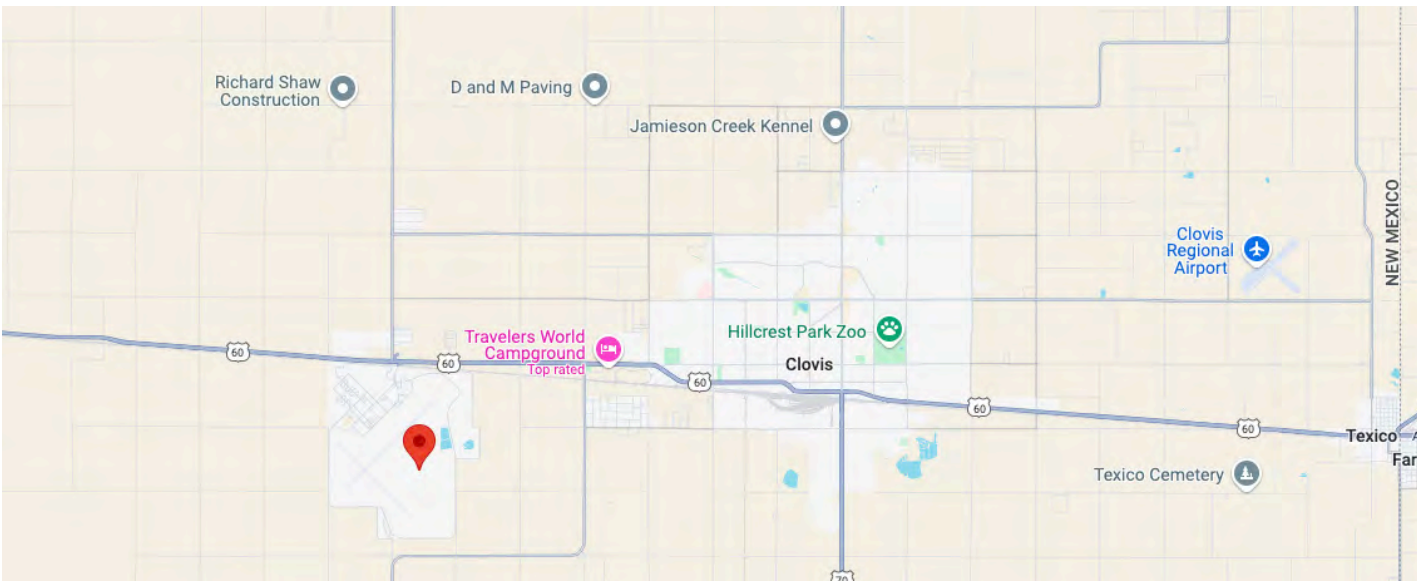
DIRECTOR: Christina Dorsey
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EMAIL: SB.JBMDL@dodstarbase.org

STARBASE CANNON

CLOVIS, NEW MEXICO



<p>ESTABLISHED 2024</p> <p>SERVICE COMPONENT: Air Force</p>	<p>MILITARY LOCATION: Cannon Air Force Base</p> <p>CLASSROOMS AUTHORIZED: 1</p>
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ANTICIPATED SCHOOL DISTRICTS SERVED

- Curry County Public Schools
- Roosevelt County Public Schools

Cannon Air Force Base is home to the 27th Special Operations Wing and is located on the high plains of eastern New Mexico, six miles west of the city of Clovis. Base personnel are focused on strengthening relationships with partners and allies while leveraging unique special operations capabilities to enable the joint force to deter, compete, and win. As the threats and operating environment evolve and change, the current challenge is to stay one step ahead of our peer competitors and adversaries anytime, anyplace, anywhere. To achieve these goals, it's crucial to create opportunities for future generations to engage with the ever-changing and growing STEAM and military environment in our nation.

DoD STARBASE Cannon will play a vital role in developing the education ecosystem and pipeline that supports the DoD's mission to attract, inspire, and develop exceptional STEAM talent across the education continuum and advance the current DoD STEAM workforce.

Cannon Air Force Base and the 27th Special Operations Wing pledge a committed and loyal partnership with DoD STARBASE that aligns with their mission: "Steadfast is not just an ode to our history; it is a promise to our future. We are Air Commandos, holding the steadfast line."

CONTACT INFORMATION

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STARBASE HOLLOWAN

ALAMOGORDO, NEW MEXICO

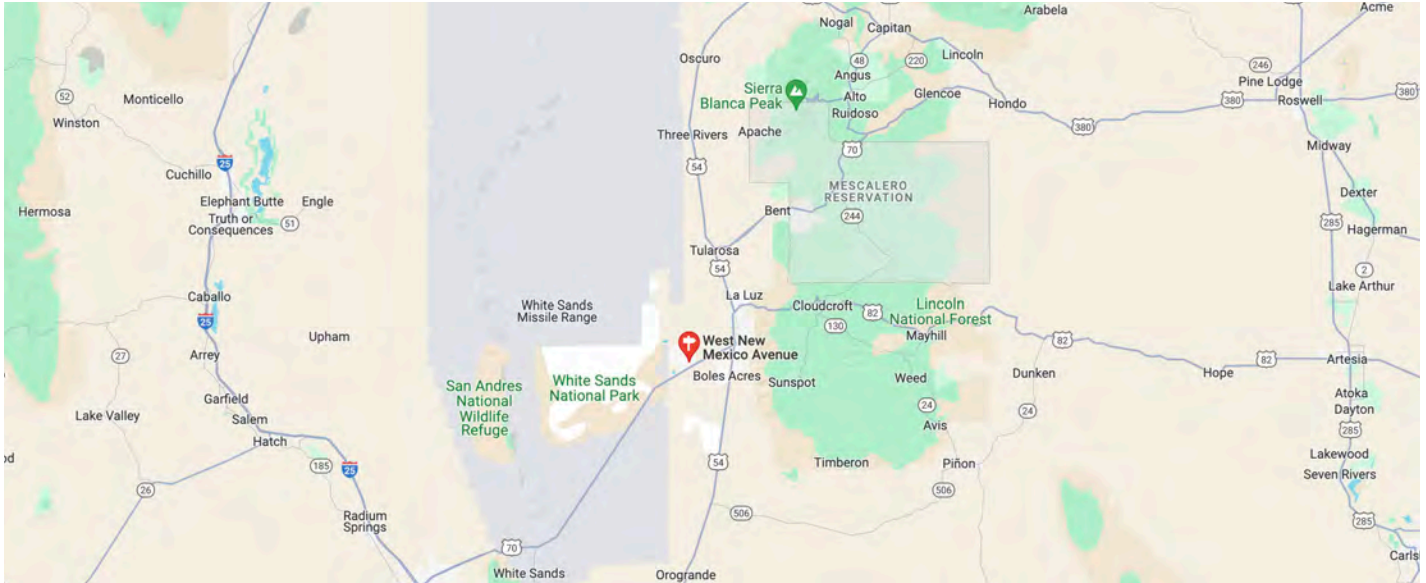


ESTABLISHED 2023

SERVICE COMPONENT: Air Force

MILITARY LOCATION: Holloman Air Force Base

CLASSROOMS AUTHORIZED: 2



ANTICIPATED SCHOOL DISTRICTS SERVED

- Alamogordo Public Schools
- Cloudcroft Municipal Schools
- Las Cruces Public Schools
- Local Private and Parochial Schools
- Mescalero Schools
- Ruidoso Municipal Schools
- Tularosa Municipal Schools

The goal of STARBASE Holloman is to create a comprehensive program for every fifth-grade classroom in the Alamogordo and Otero County communities. The program will follow a five-day, five-week rotation and will cover the established DoD STARBASE core curriculum standards. Students will develop critical thinking, time management, teamwork, and hands-on skills while engaging with advanced technology. The objective is to show students how science and mathematics are used in real-world situations. The national curriculum aligns with the State of New Mexico Grade Level Expectations and exceeds the established national standards. By participating, students will enhance their learning experience through the DoD STARBASE curriculum and hands-on activities that reinforce and build upon their school learning.

Holloman Air Force Base is all set to become the first DoD STARBASE in the triad of Holloman AFB-White Sands Missile Range-Fort Bliss. The remote location, combined with the local community, highlights the significant need for DoD STARBASE as a foundation to address educational access and instruction. STARBASE Holloman is just the beginning of the STEAM Pipeline and Ecosystem designed to support STEAM careers and meet the goals of the DoD STEM Initiatives, aiming to position the nation as a world leader in STEAM once again.

CONTACT INFORMATION

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STARBASE NEW MEXICO

ALBUQUERQUE, NEW MEXICO



ESTABLISHED 2003
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Kirtland Air Force Base
CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------------|------------------------------|
| 21st Public Schools | Private & Charter Schools |
| Albuquerque Public Schools | Rio Rancho Public Schools |
| Albuquerque School of Excellence | Santa Fe Public Schools |
| Laguna Department of Education | Socorro Consolidated Schools |
| Los Lunas School District | |

Since its inception in 2003, DoD STARBASE New Mexico (NM) has grown from one classroom to a three-classroom program. Located on Kirtland Air Force Base in Albuquerque, STARBASE NM has served over 17,000 students. It has a proud partnership with Kirtland AFB and the Air Force Research Laboratory (AFRL), and has built strong relationships with the community.

In 2015, the University of New Mexico Center of Education Policy Research conducted a study that reported DoD STARBASE NM students gained competence in both mathematics and language arts that persists through middle and high school. DoD STARBASE NM added its first Advanced program in 2012 and has competed in the American Rocketry Challenge (ARC) National Finals twice and competed in the National ARC finals in Washington D.C., in the spring of 2024.

FY24 PROGRAM HIGHLIGHTS

- Served 2,151 students and 109 teachers from 43 different schools in our Basic STARBASE program.
- Participated in eight community STEAM events, serving over 13,000 students.
- Celebrated STARBASE New Mexico's 20th year anniversary.
- Partnered with Tuskegee Airmen Inc. Lloyd W. "Fig" Newton Chapter to host an annual Youth Aviation Camp that culminates with the cadets flying a Cessna.
- Provided six week-long summer programs to area youth and military dependents.

CONTACT INFORMATION

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 WEBSITE: www.afrlnm.com/STEAM/missions/dod-starbase-nm

STARBASE FORT DRUM

WATERTOWN, NEW YORK



ESTABLISHED 2022
SERVICE COMPONENT: Army

MILITARY LOCATION: Fort Drum
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------------------------|-----------------------------------------|
| Beaver River Central School District | Indian River Central School District |
| Belleville Henderson Central School District | Lafargeville Central School District |
| Carthage Central School District | Lyme Central School District |
| Clifton Fine Central School District | Sackets Harbor Central School District |
| Copenhagen Central School District | South Jefferson Central School District |
| General Brown Central District | Thousand Island Central School District |
| Harrisville Central School District | Watertown City School District |
| Hermon DeKalb Central School District | |

STARBASE Fort Drum is on an active-duty United States Army Base in Fort Drum, NY. STARBASE Fort Drum opened its doors in July 2022 and welcomed its first students on September 12, 2022, serving about 1,300 students yearly.

Fort Drum Garrison arranges all the STEAM Career Collaborations. Some recent collaborations include trips to the airfield to explore the air traffic control towers and multiple types of helicopters, including Apache, Blackhawk, and Chinook. They worked with the 10th Mountain Division Mountain Training Group to create pulley systems for moving gear and vehicles, and with Fort Drum Department of Public Works to learn about electrical power by connecting a simulated transformer to a streetlight.

Fort Drum STARBASE Academy hosts two separate summer camps. This year's camp focused on aviation, robotics, and Fort Drum field training. Campers designed, built, and raced Sphero boats, explored Mars with LEGO Mars Rovers, learned land navigation, created first aid kits, identified animal tracks, and completed an obstacle course. STEAM career collaborations during summer camps included flight simulators, Explosive Ordinance Disposal, Vehicle Crew Trainers, Fort Drum Natural Resources, and Land Navigation with the 2nd Brigade Combat Team.

FY24 PROGRAM HIGHLIGHTS

- Hosted 64 classes from 15 different school districts and served approximately 1,300 students.
- Welcomed the U. S. Army Chief of Staff spouses group in July 2024 for a tour of STARBASE Fort Drum and provided information about its history and the students served.
- Participated in a base-wide celebration of the solar eclipse on April 8, 2024. STARBASE Fort Drum was in the Path of Totality, and all visitors and students received eclipse glasses and made a sundial.
- Participated in the Fort Drum Trees for Troops in December 2023, where staff helped distribute Christmas trees to soldiers and their families.
- Welcomed Colonel Braman, the Interim Fort Drum Commander, along with Major General Anderson, the Garrison Commander, in January 2024, who visited STARBASE Fort Drum and were instructed on how to use the Sphero Bolts robots.

CONTACT INFORMATION

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STARBASE CHARLOTTE

CHARLOTTE, NORTH CAROLINA



ESTABLISHED 1993

SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Charlotte Air National Guard Base

CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Catawba County Schools
 Cleveland County Schools
 Gaston County Schools

Iredell-Statesville Schools
 Lincoln County Schools
 Private Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE North Carolina, Inc

This was another successful school year for STARBASE Charlotte in providing STEAM education and activities to students in their community. STARBASE Charlotte is hosted by the 145th Airlift Wing, North Carolina Air National Guard, on the Charlotte Air National Guard Base, home of the C-17 Globemaster III aircraft. Students who attend STARBASE Charlotte have the unique opportunity to watch the 145th Airlift Wing personnel in action by touring and talking to pilots, loadmasters, firefighters, maintenance, and security forces personnel. Each student gets a firsthand look inside a C-17 flight deck and cargo area. This provides the students with insight into how STEAM careers play an essential role in the safety and security of our state and nation. Through efforts to grow the program’s impact on the community, STARBASE Charlotte proudly partners with five school districts and four private/charter schools in the NC Southern Piedmont region.

FY24 PROGRAM HIGHLIGHTS

- Served 1,472 students through Basic academy classes, summer camps, STARBASE Advanced, and Supplemental programs.
- Added three new schools during the 2023-2024 school year, bringing the total number of participating schools to 19.
- Conducted a presentation for the Cleveland County School Board, resulting in more interest in participating from that school district.
- Participated in the Charlotte Motor Speedway STEMfest for Fall 2023, where attendance of school-age students and adults totaled over 3,500.
- Provided STEAM education to 54,481 students in 2,165 classes since 1993.

CONTACT INFORMATION

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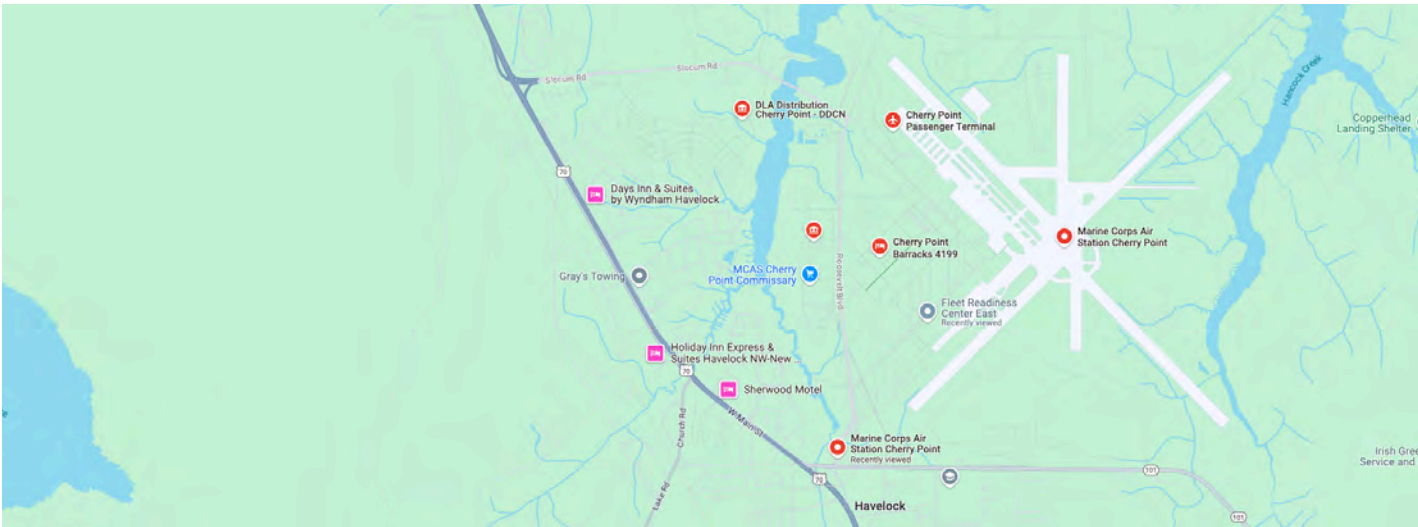
WEBSITE: www.starbasecharlotte.org

STARBASE CHERRY POINT

HAVELOCK, NORTH CAROLINA



ESTABLISHED 2024	MILITARY LOCATION: Marine Corps Air Station Cherry Point
SERVICE COMPONENT: Marine Corps	CLASSROOMS AUTHORIZED: 2



ANTICIPATED SCHOOL DISTRICTS SERVED

- Craven County Schools
- Jones County Schools
- Pamlico County Schools

Marine Corps Air Station (MCAS) Cherry Point has a rich history of excellence in aviation and aviation maintenance, dating back to World War II. Today, MCAS Cherry Point remains one of the best all-weather jet bases worldwide. The air station and its associated support locations occupy approximately 29,000 acres. The core of MCAS Cherry Point is its extensive four-point runway system designed to offer multiple approach and departure advantages to all aviators flying here. The air station’s runways are so long that they served as an alternate emergency landing site for NASA during the years when the agency had a space shuttle program.

North Carolina continues to be a leader in fostering a culture of STEAM education. As the state welcomes additional jobs and industries, the STEAM efficacy of local students is more critical now than ever before. In eastern North Carolina, STEAM-focused career clusters and support networks provide students with opportunities aligned with industries unique to the area. Areas of Aviation Science, Smart Agriculture, Green Energy, BioPharma, Health Science, and Blue Economy all drive opportunities for students to pursue successful and meaningful career options. Partnerships and alliances have recently formed within the region, promoting STEAM careers and pipeline opportunities and connecting educators with industry representatives. These networks are formed through the collaborative efforts of regional businesses, school districts, economic development municipalities, private foundations, state and local government, and many others. The intent is that students across the region will engage in real-world STEAM learning opportunities that directly align with career opportunities.

At MCAS Cherry Point, STEAM and educational outreach are vital to workforce and business development. By supporting STEAM education in the local communities and academic institutions, STARBASE Cherry Point helps foster a culture of innovation and critical thinking that will pay dividends for sustaining the future workforce. Establishing a DoD STARBASE at MCAS Cherry Point allows this impact to grow. Engaging with students at the critical fifth-grade age and exposing them to exciting STEAM concepts and ideas will spark and fuel their interest in a future STEAM career in eastern North Carolina.

CONTACT INFORMATION

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STARBASE WILMINGTON

WILMINGTON, NORTH CAROLINA

ESTABLISHED 2004

SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Carolina Beach Road Readiness Center

CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Brunswick County Schools
New Hanover County Schools
Private and Charter Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE North Carolina Inc.

DoD STARBASE Wilmington is proud to enter its 21st year serving students in southeastern North Carolina. This past year, the program had the privilege of engaging more than 1,300 students through fifth-grade academies, with a focused effort to expand outreach into neighboring Brunswick County. They also expanded the relationship with Onslow County Schools and military families near Camp Lejeune. A highlight of this collaboration was our Engineering Design Camp, where students had the opportunity to design bridges, create Rube Goldberg devices, and develop new skills in CAD.

FY24 PROGRAM HIGHLIGHTS

- Kicked off the year by participating in a downtown back-to-school block party joining forces with other community members to celebrate the start of the academic year.
- Successfully hosted an Advanced program at Murray Middle School, where students focused on Engineering Design and built rubber band-powered paddle wheel boats.
- Continued to foster the relationship with Legion Stadium, home to the Wilmington Sharks and New Hanover High School Athletics, where students have the opportunity to launch rockets.
- Reached a significant milestone as the staff transitioned to full-time state employees, and as such, STARBASE Wilmington is committed to increasing impact in the local community.
- Upcoming events include STEAM nights, Advanced camps, and the establishment of a supporting non-profit foundation.

CONTACT INFORMATION

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STARBASE NORTH DAKOTA

MINOT, NORTH DAKOTA



ESTABLISHED 2015
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Minot Air Force Base
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- Glenburn Public School District
- Minot Public School District
- South Prairie Public School District

STARBASE North Dakota is located on Minot Air Force Base and is hosted by the 5th Bomb Wing. The program opened in January 2015 and is located on base at North Plains Elementary School. Students who attend STARBASE North Dakota have the unique opportunity to visit the only Department of Defense installation with both B-52 bomber aircraft and a fleet of 150 Minuteman III intercontinental ballistic missiles (ICBMs). As such, students participating in the STARBASE program get to visit work centers with active-duty Air Force members who actively use STEAM in exciting career fields. Student STEAM tours typically include the B-52H Stratofortress Weapons System Trainer and the Missile Procedures Trainer. Through these tours and conversations with the military personnel, students get a glimpse into the incredible technological possibilities available with any future STEAM career.

During the school year 2023-24, STARBASE North Dakota outreach programs reached 595 students and family members. Minot AFB personnel contributed 265 volunteer hours from 147 volunteers during base-wide STEAM career investigations.

FY24 PROGRAM HIGHLIGHTS

- STARBASE North Dakota Deputy Director was recognized by the General David C. Jones, Chapter 135 of the Air Force Association as Teacher of the Year.
- Received support from 265 volunteers who provided 1,701 volunteer hours.
- Reached 595 students and family members during the 2023-2024 school year.
- Completed their first aviation-centric supplemental programs. These programs included helicopter tours with flight demonstrations and time in the B-52 simulator.
- Graduated its 250th Basic STARBASE class during the 2023-2024 school year.

CONTACT INFORMATION

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STARBASE WRIGHT-PATT

DAYTON, OHIO



<p>ESTABLISHED 2004 SERVICE COMPONENT: Air Force</p>	<p>MILITARY LOCATION: Wright-Patterson Air Force Base CLASSROOMS AUTHORIZED: 4</p>
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SCHOOL DISTRICTS SERVED

- | | |
|----------------------------|------------------------------|
| Beavercreek City Schools | Mad River Local Schools |
| Dayton Public Schools | Miamisburg City Schools |
| Fairborn City Schools | Private Schools |
| Huber Heights City Schools | West Carrollton City Schools |
| Kettering City Schools | Yellow Springs Schools |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

The Ohio Educational Outreach Foundation



This year, STARBASE Wright-Patt celebrated its 20th year of operation at Wright-Patterson Air Force Base serving students from the Greater Dayton Ohio area. From a modest start, it has grown into a four-classroom operation that still commands a waiting list, serving over 2,500 students per year in its Basic STARBASE program. In addition to its many Wright Patterson AFB partnerships, STARBASE Wright-Patt has built and maintained strong support in the local educational community which include Beavercreek City Schools, Mad River Local Schools, the University of Dayton, Wright-State University and Sinclair Community College. These partnerships have expanded the number of students impacted each year through a wide variety of outreach activities which include the NCAA First Four STEAM Hoopla, TechFest, FIRST LEGO League and more. STARBASE Advanced after-school clubs for middle school students grew to a record of four schools during FY 2024 to keep students in the local STEAM pipeline. As part of the Wright-Patterson AFB Educational Outreach Program, numerous other doors are opened for students who want to grow and develop their STEAM skills into future careers beyond their STARBASE experience.



FY24 PROGRAM HIGHLIGHTS

- Celebrated 20th year Anniversary of operations with a community Open House in October 2024, honoring dignitaries and staff who helped create the program and showcasing new technologies and capabilities.
- Served 9 school districts, 28 schools, and over 2500 students during the 2023-24 school year.
- Introduced “Circuitry” to STARBASE Advanced students through four clubs.
- Forged new partnership with Sinclair Community College UAS training and certification center to excite students about unmanned aerial systems and vast career opportunities.
- Hosted summer camps for Ohio FIRST LEGO League training and the Air Force LEGACY program.



CONTACT INFORMATION

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STARBASE OKLAHOMA-BURNS FLAT

BURNS FLAT, OKLAHOMA



ESTABLISHED 2006
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Western Technology Center
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|-------------------------------------|-------------------------------------|
| Arapaho/Butler Public Schools | Merritt Public Schools |
| Burns Flat-Dill City Public Schools | Mountain View-Gotebo Public Schools |
| Canute Public Schools | Olustee Public Schools |
| Carnegie Public Schools | Sayre Public Schools |
| Clinton Public Schools | Private and Homeschools |
| Erick Public Schools | Sentinel Public Schools |
| Hammon Public Schools | Sweetwater Public Schools |
| Leedey Public Schools | |

STARBASE Oklahoma-Burns Flat is located next to the Clinton Sherman Industrial Airpark, which is a licensed spaceport that features the third-longest civilian runway in North America. The program is housed on the campus of the Western Technology Center, located on the former site of the Clinton Sherman Air Force Base (1954-1969). This provides the considerable advantage of being near The Oklahoma Air & Space Port. The Space Port is a public-use airport and industrial airpark with facilities for aerospace testing, research and development, flights, and launches. It is one of 12 spaceports in the nation and the only one with an FAA-approved spaceflight corridor not in restricted airspace or Military Operation Areas.

FY24 PROGRAM HIGHLIGHTS

- Employed a staff of full-time employees and certified educators with a combined 60+ years of education experience.
- Increased student participant numbers from 415 cadets to 578 cadets, and are on track for the coming year for 756 cadets.
- Strengthened their relationship with the Stafford Air and Space Museum as supporters and donors for Star Student Leaders.
- Continued to work with surrounding local leaders to promote awareness about the STARBASE program and STEAM Education.
- Maintained strong program relationships with the Premium Aerospace Center for career day tours who refurbishes old fighter jets and planes for museums.

CONTACT INFORMATION

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STARBASE OKLAHOMA-FORT SILL

LAWTON, OKLAHOMA



ESTABLISHED 2006
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Fort Sill
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|-----------------------------|-----------------------------|
| Bishop Public Schools | Flower Mound Public Schools |
| Central High Public Schools | Geronimo Public Schools |
| Chattanooga Public Schools | Indianapolis Public Schools |
| Comanche Public Schools | Lawton Public Schools |
| Cyril Public Schools | Private Schools |
| Duncan Public Schools | Riverside Indian School |
| Empire Public Schools | Sterling Public Schools |
| Fletcher Public Schools | Temple Public Schools |

STARBASE Oklahoma-Fort Sill is based at the Fort Sill FIRES Center of Excellence near Lawton, Oklahoma. The program features two well-equipped classrooms that offer an excellent learning environment for students. STARBASE provides an enriching STEAM curriculum within a military setting, allowing students to gain firsthand experience with the various programs and support Fort Sill offers to the U.S. Army. Fort Sill, renowned for its long-standing history, is home to the Army's Field Artillery and Air Defense Schools. The program extends beyond the U.S. Army, with guests from Fire & Safety, Military Police, Reynolds Army Health Clinic, and the Marine Corps visiting STARBASE Fort Sill classrooms to showcase how STEAM is integral to their fields. Additionally, STARBASE Oklahoma-Fort Sill offers programs like STARBASE Advanced, which delves into rocketry, energy, and the engineering design process. The program also hosts summer camp academies and engages with the community through local youth centers and STEAM clubs at churches. The STARBASE Oklahoma-Fort Sill team is eager to continue providing students with hands-on STEAM experiences in the coming year.

FY24 PROGRAM HIGHLIGHTS

- Increased the number of students served to 1,343.
- Hosted eight career days with military partners.
- Scheduled several new schools and districts for the first time.
- Began operating as an independent site under the STARBASE Oklahoma umbrella.
- Became fully staffed following the approved DoDI manning model.

CONTACT INFORMATION

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STARBASE OKLAHOMA-OKLAHOMA CITY

OKLAHOMA CITY, OKLAHOMA



<p>ESTABLISHED 2006 SERVICE COMPONENT: Air National Guard</p>	<p>MILITARY LOCATION: Oklahoma Military Complex CLASSROOMS AUTHORIZED: 2</p>
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SCHOOL DISTRICTS SERVED

- | | |
|-------------------------------------|--------------------------------------|
| Choctaw-Nicoma Park School District | Midwest City/Del City Public Schools |
| Crooked Oak Public Schools | Private Schools |
| Crutcho Public Schools | Union City Public Schools |
| Harrah Public Schools | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Oklahoma

Established in 2006, STARBASE Oklahoma City (OKC) is located in the heart of the Oklahoma City region. STARBASE OKC is at the Oklahoma Military Complex and co-located with the Oklahoma Job Challenge, both serving Oklahoma’s youth under the Oklahoma National Guard’s Youth Programs. STARBASE OKC is directly supported by the Oklahoma National Guard, which frequently responds to natural disasters or other state emergencies and can be activated to defend the nation when needed.

The Oklahoma Military Department provides two classrooms, a computer lab, and a robotics lab for students in Oklahoma City and the surrounding areas. The proximity of the classrooms to all of the military resources makes the location an excellent military learning environment. STARBASE OKC hosts three STARBASE Advanced after-school clubs that explore the engineering design process, rocketry, wind and mechanical energy, drones, and much more.

FY24 PROGRAM HIGHLIGHTS

- Participated in Aero Oklahoma, an event sponsored by the Aeronautical Association of Oklahoma and located at the state capital. Over 2,000 participants and 100 vendors supported the STEAM event. Educational information was provided along with current and previous year statistics.
- Participated in Tinker Air Force Base Family Readiness Group, KUDOS (Kids Understanding Deployment) Day as a means for youth to understand why our military deploys. STARBASE OKC provided a robotics station where returning military members and their children were able to “race” against each other and enjoy spending time working with STEAM topics. Over 60 youth participated, with approximately 40 returning military members.
- Attended and participated as judges at the Technology Student Associations, Oklahoma Chapter, which hosted the state championship round in Norman, Oklahoma. This event had over 3,000 students in attendance, and STARBASE OKC served as judges in two categories — Golbert and Construction.

CONTACT INFORMATION

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STARBASE OKLAHOMA-TULSA

TULSA, OKLAHOMA



ESTABLISHED 1993
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Tulsa Air National Guard Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------------|-----------------------------|
| Afton Public Schools | Pawhuska Public Schools |
| Anderson Public Schools | Porter Public Schools |
| Asbury Classical Conversation HS | Pretty Water Public Schools |
| Aspire Home School Group | Private Schools |
| Barnsdall Public Schools | Pryor Public Schools |
| Beggs Public Schools | Salina Public Schools |
| Caney Vallley Public Schools | Sand Springs Public Schools |
| Haskell Public Schools | Sequoyah Public Schools |
| Hominy Public Schools | Sperry Public Schools |
| Hulbert Public Schools | Union Public Schools |
| Justus-Tiawah Public Schools | Woodall Public Schools |
| Kansas Public Schools | Wynona Public Schools |
| Osage Hills Public Schools | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Oklahoma, Inc.

Established in 1993, STARBASE Oklahoma -Tulsa is located on the Tulsa Air National Guard Air Force Base, home to the 138th Fighter Wing. The 138th Fighter Wing maintains F-16 Fighting Falcon combat forces ready for mobilization and deployment. The Tulsa Air National Guard provides two state-of-the-art classrooms for students in Tulsa and the surrounding area. The proximity of the classroom to all the Air National Guard resources makes the location an excellent military aerospace learning environment. STARBASE OK-Tulsa concurrently offers two STARBASE Advanced after-school programs for middle school students, as well as summer camps for military and non-military families.

FY24 PROGRAM HIGHLIGHTS

- Worked as a team to recruit new schools that have never been to STARBASE and invited former schools that previously attended the program to return.
- Served as judges for the OSAGE Nation Education Department Science Fair for sixth to eighth grades.
- Built a new relationship with Tulsa University's Oklahoma Cyber Innovations Institute. The original staff are former/retired Air Force or Air Guard.
- Increased numbers for the summer camps, including active participation from the Base staff.
- Made connections with a newly elected local Representative.

CONTACT INFORMATION

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STARBASE CAMP RILEA

WARRENTON, OREGON

ESTABLISHED 2019
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Camp Rilea Armed Forces Training Center
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------|-------------------------------------------|
| Astoria School District | Naselle-Gray River Valley School District |
| Clatskanie School District | Seaside School District |
| Jewell School District | Warrenton-Hammond School District |
| Knappa School District | |

Camp Rilea’s Armed Forces Training Center is home to STARBASE Oregon’s third STARBASE program. Located at an annexed school building obtained by Camp Rilea in 2018, STARBASE Camp Rilea hosts children from 13 schools and two homeschool co-ops from Oregon and Washington’s beautiful Pacific Northwest. STARBASE Camp Rilea continues to receive incredible support from the staff at Camp Rilea and the local community. Strong participation from the community remains with the collaborations between STARBASE Camp Rilea, local non-profits, education departments at the local schools, and the Department of Human Services. STARBASE Camp Rilea was excited to successfully conduct two STARBASE Advanced programs with local middle schools for the first time.

FY24 PROGRAM HIGHLIGHTS

- Successfully began their first STARBASE Advanced program and successfully completed two programs throughout the spring of 2024.
- Added eight new fifth-grade classes, three from the neighboring state of Washington, bringing the total classes in Washington to five.
- Featured in a news article in the Daily Astorian, a local newspaper read by the entire coastal area and county.
- Piloted a high school-level supplemental program focusing on engineering and the building of fully electric and rideable vehicles.
- Hosted seven supplemental summer camps this year using curriculum topics of robotics, coding, and science.

CONTACT INFORMATION

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STARBASE KINGSLEY

KLAMATH FALLS, OREGON

ESTABLISHED 1993

SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Kingsley Field

CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Klamath County School District
Klamath Falls City Schools
Private & Homeschools

The DoD STARBASE Kingsley program is proud to claim that they've been offering hands-on STEAM education to the local community for over 30 years now. It is the Kingsley team's continued goal to inspire the next generation of innovating scientists, engineers, and aviators for years to come. The program would not be here without the unwavering support of the Oregon National Guard, 173rd Fighter Wing, Kingsley Field's commanders, military and civilian personnel, local military families, and the educational community. The team is grateful for the ability to invite and host every fifth grader in Klamath County.

FY24 PROGRAM HIGHLIGHTS

- Provides 25 hours of "hands-on, minds-on" STEAM education, allowing students to explore and discover the amazing scientific world around us. Curious fifth graders solve engineering design challenges, use physics and chemistry in a variety of team challenges, and develop skills in computer-aided design (CAD).
- Reestablished the STARBASE Advanced program for local middle school students in an after-hours school-based STEAM mentoring club.
- Successfully hosted a group of Military Dependent kindergarteners for the second annual Winter Wonderland STEAM Camp. The little explorers were full of excitement as they investigated STEAM through a multitude of activities.
- Expanded STEAM outreach to additional local kindergarteners with an in-school day of exploration and investigations.
- Inspired to assist in the industry shortage of professional pilots, since 2018, STARBASE Kingsley has offered an annual Aviation Summer Academy. This supplemental program continues to infuse curiosity in aeronautics, allowing youth to interact with professional aviators and crew teams, tour cockpits, and simulate flying various aircraft.
- After piloting an additional STEAM outreach event last year, the STARBASE Kingsley Team offered their second annual summer STARBASE Camp, serving fourth through eighth graders. In 2024, the Kingsley STARBASE Team created a treasure hunt requiring students to navigate and compete in various STEAM challenges.

CONTACT INFORMATION

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STARBASE PORTLAND

PORTLAND, OREGON



ESTABLISHED 1993
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Portland Air National Guard Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|---------------------------|---------------------------------|
| Beaverton School District | North Clackamas School District |
| Canby School District | Parkrose School District |
| Corbett School District | Private Schools |
| Homeschool Groups | Portland Public School District |
| Mt. Angel School District | Reynolds School District |

DoD STARBASE Portland has inspired thousands of future STEAM professionals over the last 30 years. It is eager to continue this mission with increasing passion and innovation far into the future. As the program pursues its goal of inspiring the next generation of scientists, technicians, engineers, artists/designers, and mathematicians, it recognizes that it could only have come this far with the tremendous support of its many organizations and individuals. Specifically, the program staff is very grateful to the 142nd Fighter Wing community, as well as the school districts, educators, and families in the Portland area who have been champions of the STARBASE program and its mission over the years.

FY24 PROGRAM HIGHLIGHTS

- Offered STEAM education to more than 2,500 students during the 2023-2024 school year across eight districts and private schools and provided each student visiting the program with a chance to tour a jet hangar, as the 142nd Fighter Wing is home to the new F-15EX fighter jet. Many STEAM topics that students investigate in the classroom come to life as they learn about the design, maintenance, and operation of the F-15EX from a mechanic or pilot.
- Offered 11 camps to students from second to eighth grade, where they experimented with different forms of energy, built chain reaction machines, explored wetlands and took samples to view under microscopes, conducted chemistry experiments, built and programmed robots, developed CAD models, and much more.
- Hosted two science and engineering-based experiments for a summer day camp that reached 600 students in first - fifth grades.
- Partnered with multiple after-school programs in the Parkrose, Canby, and Beaverton School Districts by offering Sphero Robotics and CAD camps to third-sixth grade students in attendance.
- Relunched the STARBASE Advanced Club with Corbett Middle School, where students had the opportunity to program, design, and print components for Sphero robots.

CONTACT INFORMATION

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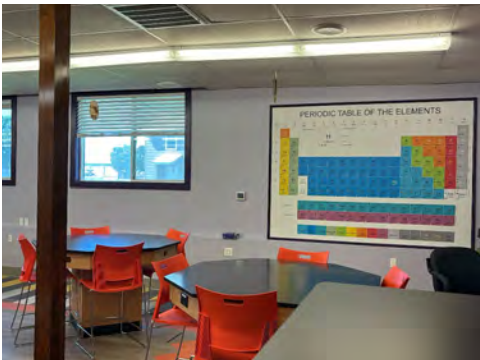


STARBASE REES

HERMISTON, OREGON

ESTABLISHED 2021
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Raymond Rees Training Center
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|----------------------------|---------------------------|
| Echo School District | Private Schools |
| Helix School District | Prosser School District |
| Hermiston Christian School | Umatilla School District |
| Patterson School District | Stanfield School District |
| Pendleton School District | |

STARBASE Rees is the newest of four sites in Oregon. Their vision is that all students who attend will develop the essential STEAM literacy and knowledge needed to thrive in an increasingly complex world. Their mission is to empower every student to confidently explore and remain current in the rapidly evolving world of STEAM. STARBASE Rees made significant strides to cultivate new partnerships with Oregon school districts in Echo, Hermiston, Milton-Freewater, Athena Weston, and Pendleton. These efforts resulted in many supplemental and outreach programs during FY24 and paved the way for the potential addition of another three basic classes in FY25. In addition, partnerships were forged in southeast Washington, with the Patterson and Prosser school districts which allow STARBASE Rees to provide 14,214 hours of hands-on STEAM education to 1,064 students from NE Oregon and SE Washington.

FY24 PROGRAM HIGHLIGHTS

- Provided 14,214 hours of hands-on STEAM education to 1064 students from NE Oregon and SE Washington.
- Conducted 10 supplemental programs for 283 students utilizing various activities throughout the calendar year.
- Participated in eleven outreach events for 477 students that involved interactions with local private and public schools, and Raymond Rees Training Center for base employees on Take Your Child to Work Day.

CONTACT INFORMATION

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STARBASE PUERTO RICO

CAROLINA, PUERTO RICO



ESTABLISHED 1995
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Muñiz Air National Guard Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|---------|----------|
| Arecibo | Mayaguez |
| Bayamón | Ponce |
| Caguas | San Juan |
| Humacao | |

STARBASE Puerto Rico has been located with the 156th Wing at Muñiz ANG Base since 1995. The program has been privileged to serve over 33,000 participants who speak Spanish as their first language. This STARBASE program is the only site on the island which is divided into seven educational regions, making it the only STARBASE in the nation that teaches the curriculum in Spanish. STARBASE Puerto Rico's facility includes two classrooms and a computer lab with two 3D printers. The program allows participants to meet military members from the Air National Guard with careers involving STEAM.

In addition, the program offers STARBASE Advanced programs that focus on robotics and CO₂ dragster competitions for middle and high school students across the island. The program continues their commitment to the Puerto Rico STEAM community working closely with the NASA Space Grant Consortium, EcoExploratorio Science Museum, and the Scouts of Caribe. The involvement with these programs provides a wide variety of outreach opportunities, school visits, instructor support and more.

FY24 PROGRAM HIGHLIGHTS

- Established a new Memorandum of Understanding with the "InGenious" homeschool group which added to the number of students served by the program.
- Expanded STEAM partnership with EcoExploratorio and Scouts of Caribe.
- Continued relationship with NASA Space Grant Consortium for instructional support.
- Upgraded to MIMEO Interactive Flat Panel boards for classroom instruction.
- Upgraded computer laboratory equipment to 64 RAM to more efficiently teach CAD programs.
- Conducted 62 Basic STARBASE Academies
- Provided STARBASE Advanced program at four middle schools and two high schools.
- Renewed agreement with the Puerto Rico Department of Education who furnishes hot lunches for all students participating in STARBASE at no cost to the program or student.

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STARBASE SWAMP FOX

EASTOVER, SOUTH CAROLINA

ESTABLISHED 2003
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: McEntire Joint Air National Guard Base
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Kershaw County School District	Richland School District
Lexington County School District	Sumter County School District
Private Schools	

STARBASE Swamp Fox has served students in the midlands and surrounding areas since its inception in 2003. STARBASE is located on the 169th Fighter Wing at Joint Base McEntire in Eastover, South Carolina (SC). STARBASE Swamp Fox runs a single-classroom Basic program. STARBASE instructors collaborate with military volunteers to relate the principles students learn in the classroom to real-world applications. Students tour different facilities and participate in presentations by members of the SC Air and Army National Guards on their STEAM-integrated careers. The goal is to excite students about STEAM and the possibility of pursuing a STEAM-based career. STARBASE Swamp Fox provided educational enrichment to 651 students this year, busting through the threshold of 20,000 students reached since its inception in 2003. Thousands more students have experienced the joy of STARBASE through summer camps, supplemental programs, and community outreach.

FY24 PROGRAM HIGHLIGHTS

- Offered summer camp for two different age groups. (Camp #1 was provided to rising fifth and sixth graders, while the second camp was offered to rising second and third graders).
- Received the inaugural Arbour Award in honor of the lovely late Cheryl Arbour, a former STARBASE Director and SPECTRUM Group member.
- Expanded base-wide partnerships to several new departments including base operations, GIS, the fire department, medical group, recruiting, security forces, Army Aviation, and drones.
- Participated in several on-base events, such as Family Day and a medical expo.
- Traveled to the coast to run a STEAM day for fifth graders at an elementary school in Hilton Head, South Carolina.

CONTACT INFORMATION

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STARBASE RAPID CITY

RAPID CITY, SOUTH DAKOTA

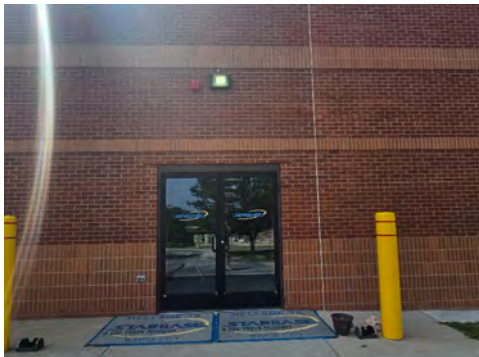


ESTABLISHED 2002

SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Camp Rapid

CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Douglas School District
Rapid City School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE of South Dakota, Inc.

Proudly hosted by the South Dakota National Guard on Camp Rapid in Rapid City, South Dakota, STARBASE Rapid City was established in 2002 and has been running strong for 21 years and counting. The instructors share their excitement for learning and STEAM with an average of 800 local students each school year. In addition to the traditional STARBASE program, they provide two and three-day modified STARBASE sessions for schools on the waiting list to maintain relationships and serve the maximum amount of Rapid City students each year.

STARBASE Rapid City also has an established STARBASE Advanced after-school program that focuses on robotics and computer-aided design with a little physics on the side. Over the years, the program has grown a strong relationship with local engineering companies, such as Caterpillar and VRC Metal Systems. These companies provide engineers to volunteer at the Advanced clubs, where they mentor students in computer-aided design software. Each student designs their CO₂ car, prints it on a 3D printer, and then races it while evaluating its force, mass, acceleration, and design. STARBASE Rapid City staff members also participate in community and school activities such as STEAM Nights, science fairs, and career days.

FY24 PROGRAM HIGHLIGHTS

- Continues to partner with local outreach programs to showcase STEAM opportunities across the state and country. This event is held at the South Dakota School of Mines and Technology and Black Hills State University each spring and approximately 800 middle school students attend each camp.
- Continued partnership with the South Dakota National Guard Youth Program to provide and lead activities for military children attending the camps each summer.
- Engagement with local elementary schools that are not able to attend during the school year by providing a “Touch of STARBASE” in one or two-day sessions as well as participating in their family STEAM events across western South Dakota.
- Participation in a partnership with Ellsworth Air Force Base in a Back to School Roundup event that supplied military families with all the supplies needed to start the school year off successfully.
- Successful STARBASE Advanced Club was a hit with students again this school year.

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STARBASE NOVA HONOR

RAPID CITY, SOUTH DAKOTA



ESTABLISHED 2008
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Camp Rapid
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p> Cheyenne Eagle Butte School District
 Custer School District
 Edgemont School District
 Haakon School District
 Harding County Schools
 Hill City School District
 Hot Springs School District
 Isna Wica Owayawa Loneman School </p> | <p> Kadoka Area School District
 Lead-Deadwood School District
 Lyman County School District
 Meade School District
 New Underwood School District
 Stanley County Public Schools
 St. Joseph's Indian School
 Timber Lake School District </p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE of South Dakota, Inc.

A passion for learning and loads of energy is shared with students on Native American Indian Reservations and in rural communities as a traveling team, NOVA Honor, makes their way across western South Dakota and into as many classrooms as the academic calendar will allow each school year. STARBASE NOVA Honor was established in 2008 and has formed strong relationships with school districts across western South Dakota. Instructors are typically on the road traveling to schools with a pull-behind trailer four to five days a week during the school year. The focus of STARBASE NOVA Honor is to reach as many students as possible during the school year who would otherwise not be able to have the STARBASE experience during their fifth-grade school year. While on the road, STARBASE NOVA Honor often partners with the schools that hold evening activities, such as Family STEAM Nights and Best of STEAM Days.



FY24 PROGRAM HIGHLIGHTS

- Continued engagement with local elementary schools that are not able to attend during the school year by providing a “Touch of STARBASE” in one or two-day sessions as well as participating in their Family STEAM Events across western South Dakota.
- Continued partnership with the South Dakota National Guard Youth Program to provide and lead activities for military children attending the camps each summer.
- Partnership with local outreach programs to showcase STEAM opportunities across the state and country. Approximately 800 middle school students attend each camp.
- Took the premier STARBASE curriculum on the road to reach as many fifth-grade students as possible across western South Dakota.



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STARBASE SIOUX FALLS

SIOUX FALLS, SOUTH DAKOTA



ESTABLISHED 1994
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Joe Foss Field
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Garretson School District
Private Schools
Sioux Falls School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE of South Dakota, Inc.

STARBASE Sioux Falls is the original of four South Dakota sites, located in the state's southeast corner. Experiencing the many STEAM careers involved in flying the F-16 while being on the South Dakota Air National Guard host base at Joe Foss Field in Sioux Falls, South Dakota, STARBASE fifth graders can connect with military speakers and guides, some of whom went to STARBASE as fifth graders themselves.

In addition to the Basic STARBASE program, a complete STARBASE Advanced Middle School program was conducted. Working with sixth through eighth graders, the Engineering Design Process theme was also used for our summer military camps. We have enjoyed expanding outreach with military volunteer groups that serve military dependents in South Dakota.



FY24 PROGRAM HIGHLIGHTS

- Contributed extension lesson plan to DoD-approved curriculum.
- Conducted a STARBASE Advanced middle school program.
- Expanded outreach with military volunteer groups.
- Collaborated with Omnitech, a Sioux Falls engineering company, to provide career exploration for STARBASE Advanced middle school students.
- Collaborated with Sioux Falls Fire and Rescue to provide career exploration for STARBASE Advanced middle school students.
- Served additional classes with two-day "Taste of STARBASE" programming.



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STARBASE NOVA COURAGE

SIoux FALLS, SOUTH DAKOTA



ESTABLISHED 1999
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Joe Foss Field
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|--------------------------------------|------------------------------------|
| Andes Central School District | Rosholt School District |
| Armour School District | Sisseton School District |
| Avon School District | Summit School District |
| Big Stone City School District | Tripp-Delmont School District |
| Browns Valley Public School District | Wagner Community School District |
| De Smet School District | Waubay School District |
| Enemy Swim Day School (BIE School) | Webster Area Schools |
| Huron School District | Wilmot School District |
| Iroquois School District | Wolsley Wessington School District |
| Private Schools | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE of South Dakota, Inc.



The STARBASE NOVA Courage team continues to travel the roads of South Dakota, bringing hands-on STEAM lessons to Native American Indian Reservations and rural schools. With schools multiple hours away from Sioux Falls, many teachers and administrators are committed to getting their students to experience the Air Guard Base in Sioux Falls. At the 114th Fighter Wing, they experience the excitement and technology involved in life on a National Guard base with F-16 jets.



FY24 PROGRAM HIGHLIGHTS

- Completed 31 sessions, even with schools canceling due to excessive snow and low temperatures that froze the supply trailer locks.
- Traveled over 8,000 miles to serve 18 school districts in Reservation and rural communities of eastern South Dakota.
- Overcame the technology barriers of serving these remote school districts while safely moving the supply trailer to every school.
- Conducted a STARBASE Advanced middle school program and participated in a STEAM Night at one of the remote rural communities.



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STARBASE AUSTIN

AUSTIN, TEXAS



ESTABLISHED 2012
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Camp Mabry
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Austin Independent School District
Del Valle Independent School District
Hutto Independent School District
Lockhart Independent School District
Pflugerville Independent School District
Private Schools
Round Rock Independent School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Texas STARBASE Inc.

Hosted by the Texas Military Department at Camp Mabry, STARBASE Austin challenges K-12 students to participate in “hands-on, minds-on” STEAM activities and investigate how STEAM could be used in potential military or civilian careers.

Through partnerships with local school districts, STEAM partners, and military members, the Austin STARBASE Advanced program brings opportunities to students and local community members.

FY24 PROGRAM HIGHLIGHTS

- Welcomed almost 1,000 students to a STARBASE booth during the University of Texas Day STEAM event.
- Partnered with the Extend-A-Care Program and the YMCA of Greater Austin to conduct seven summer camps at various local campuses.
- Established a new partnership with Austin Public Libraries to conduct lessons at eight locations during the summer school break.
- Served the local community by presenting at the Texas ISEA conference, hosting computer science training for local area educators, and hosting science events at various community locations.
- Celebrated the 2024 total solar eclipse with a viewing party on base and delivered eclipse glasses to over 1,200 students.

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STARBASE GOODFELLOW

SAN ANGELO, TEXAS



ESTABLISHED 2017
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Goodfellow Air Force Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|-----------------------------------------|-----------------------------------|
| San Angelo Independent School District | Olfen Independent School District |
| Bronte Independent School District | Private Schools |
| Christoval Independent School District | Texas Leadership Public Schools |
| Grape Creek Independent School District | Wall Independent School District |
| Miles Independent School District | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

San Angelo Museum of Fine Arts (SAMFA).



STARBASE Goodfellow has served students in San Angelo and Tom Green County in West Texas since 2017. STARBASE Goodfellow is hosted by the 17th Training Wing at Goodfellow Air Force Base and through a partnership agreement with the San Angelo Museum of Fine Arts. After seven years in operation, STARBASE Goodfellow has served over 9,600 students from 32 schools representing 20 districts. STARBASE Goodfellow also conducts STARBASE Advanced after-school programs with local participating schools.

FY24 PROGRAM HIGHLIGHTS

- Cultivated relationships: teamed up with Angelo State University Project Tuskegee Outreach Event showcasing a variety of aircraft and inspiring the next generation of aviators.
- Recruited two new private schools to attend STARBASE for the first time – Great Beginnings and Kingdom Master Academies.
- Coached and mentored local Scouts in drone introduction/operations, which was critical to them earning merit badges.
- Conducted two special events for military families on base: flying drones to the general base populace and STEAM hands-on activities for Exceptional Family Member Program (EFMP) children.
- Participated in Angelo State University’s Third Annual Youth Cybersecurity Workshop and Expo – helped educate and expose 130 students to cybersecurity and STEAM career fields and related opportunities.
- Conducted 14 community outreach events positively impacting over 3.3K students, teachers, and parents.
- Received rave reviews in teacher surveys regarding staff and STEAM education programs.



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STARBASE KELLY

SAN ANTONIO, TEXAS



ESTABLISHED 1995
SERVICE COMPONENT: Air Force Reserve

MILITARY LOCATION: Joint Base San Antonio-Lackland
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- San Antonio Independent School District
- Southwest Independent School District
- Edgewood Independent School District
- San Antonio Archdiocese

STARBASE Kelly in San Antonio, TX, is an exciting hub for young minds, where students dive into the world of science, technology, engineering, art & design, and math (STEAM) through dynamic, hands-on experiences. Serving multiple independent school districts in Bexar County, the program sparks curiosity and creativity by allowing students to explore everything from robotics to rocketry, Computer-Aided Design to Physics and Engineering. Supported by the 433rd Airlift Wing at Kelly Field, Joint Base San Antonio-Lackland, STARBASE Kelly offers both a Basic and an Advanced program, providing students with the tools to dream big and prepare for a future in STEAM. The program is proud to connect over 60 community and military mentors to students in various ways. Coaches work alongside students in the STARBASE Advanced Program, modeling problem-solving skills and perseverance. Mentors also visit the classroom and provide tours of the Air Force’s largest cargo aircraft, the C-5. Teachers offer dynamic and hands-on lessons and model co-teaching in a low-risk, highly engaged environment. STARBASE Kelly is where future innovators and community and military leaders begin their journey.

FY24 PROGRAM HIGHLIGHTS

- Hosted the Aviation Science students from Incarnate Word High School in San Antonio. Members of the 433rd Airlift Wing and the staff of STARBASE Kelly worked together to schedule service members to host students in the C-5 simulator, the C-5 Engine Shop, the Kelly Field ATC tower, and the VR training lab.
- Launched rockets with two generations of STARBASE Kelly students, one a current student and the other a parent. A current STARBASE Kelly student mentioned that her dad was a former STARBASE student. He brought his original rocket and launched it alongside his daughter, the first time his rocket had been launched in almost 20 years!
- Worked with a local campus to share the excitement of the big “Ring of Fire” Eclipse event. STARBASE Kelly staff headed out and shared a fun family eclipse STEAM activity focused on teaching about the sun’s corona.

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TEXAS STARBASE HOUSTON

HOUSTON, TEXAS



ESTABLISHED 1994
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Ellington Field Joint Reserve Base
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

- | | |
|-----------------------------------------|--------------------------------------|
| Galena Park Independent School District | Pasadena Independent School District |
| Houston Independent School District | Sheldon Independent School District |
| Humble Independent School District | Private Schools |
| LaPorte Independent School District | Homeschool Groups |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Texas STARBASE Inc.

Since September 1994, Texas STARBASE Houston at Ellington Field has served over 31,000 students from 153 schools, representing 26 school districts. Texas STARBASE Houston is a two-classroom program site serving the Houston/Galveston area and provides fifth graders with innovative, hands-on activities aligned with our state and national standards. Texas STARBASE Houston partners with the Army, Air Force, USO Houston, Coast Guard Houston, and the 147th Fire Department, as well as other entities, to provide our community with this unique opportunity.



FY24 PROGRAM HIGHLIGHTS

- Completed 12 outreach events, reaching over 2,000 students and their families this school year.
- Conducted five STEAM camps, including two USO-sponsored camps for military dependents and a Scout camp.
- Developed new relationships with San Jacinto College and the Houston Forensics Science Center and hosted the site's first intern.
- Served over 1,300 students in eight different districts this year.
- Launched the first phase of a paperless platform and completely automated the registration process for students, teachers, and families.



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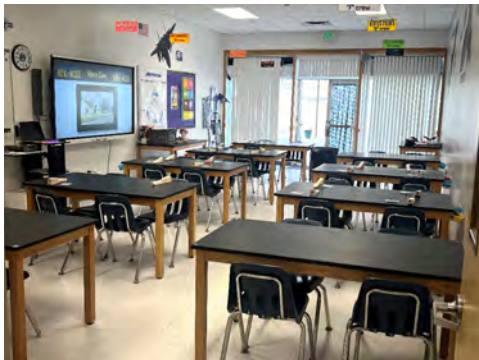
STARBASE HILL

LAYTON, UTAH



ESTABLISHED 2011
SERVICE COMPONENT: Air Force

MILITARY LOCATION: Hill Air Force Base
CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

Catholic Diocese of Utah	Salt Lake City School District
Davis School District	Weber School District
Ogden School District	

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Davis Education Foundation

The STARBASE Hill program opened its doors on Hill Air Force Base (HAFB) in the fall of 2011 and has maintained the reputation of a premier science, technology, engineering, art & design, and mathematics (STEAM) academy for the students of Utah. From the day STARBASE Hill began serving the youth of Utah, Hill AFB has welcomed more than 25,000 students into the fascinating realm of STEAM. An educational titan on HAFB amongst the Air Force goliaths known as the Ogden Air Logistics Center and the 75th Air Base Wing, STARBASE Hill extends STEAM activities and military immersion to more than 2,500 students annually in northern Utah. With the academy's successes, the STARBASE Hill Advanced program completed 19 after-school clubs, enthusing more than 200 students in STEAM extension courses. Now educating five school districts, three parochial schools, and one charter school, STARBASE Hill looks to continually expand in the future so even more Utah students will benefit from the STEAM education offered on Hill AFB.

FY24 PROGRAM HIGHLIGHTS

- Piloted the first-ever Advanced Rocketry program with Centerville Jr. High — program to continue and grow to include ninth graders next school year.
- Accomplished 21 separate instructional programs that were at least five weeks long for students in sixth through eighth grades.
- Named as a vital piece of the Salt Lake City School District STEAM Ecosystem/College and Career Pathways Initiative.
- Serviced 2,700+ students from 80+ schools in northern UT.
- Utilized and trained 80 different coaches from Hill AFB, equaling 361 volunteer hours.

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STARBASE VERMONT- RUTLAND

RUTLAND, VERMONT



ESTABLISHED 2001
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Vermont Armed Forces Reserve Center
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

- | | |
|--------------------------------------------|--------------------------------------|
| Bennington-Rutland Supervisory Union | Rutland Northeast Supervisory Union |
| Greater Rutland Country Supervisory Union | Slate Valley Unified School District |
| Mills River Unified Union School District | Southwest Vermont Supervisory Union |
| Mountain Views Supervisory Union | Two Rivers Supervisory Union |
| Otter Valley Unified Union School District | Windham Central Supervisory Union |
| Private Schools | Windsor Southeast Supervisory Union |
| Rutland City School District | |

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

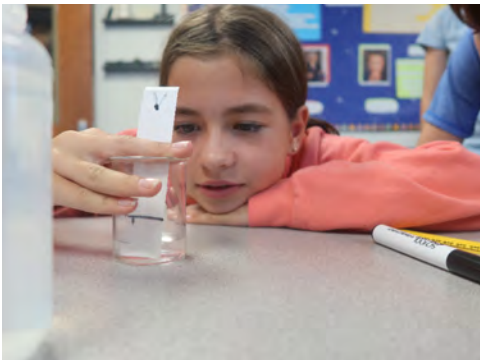
STARBASE Vermont, Inc.

STARBASE Vermont’s Rutland site has been at the forefront of STEAM education in the Green Mountain State for over 20 years. Sponsored by the 158th Fighter Wing of the Vermont Air National Guard and supported by the STARBASE Vermont, Inc. (501c3) nonprofit, the Rutland site reaches over 1,200 students annually. With “hands-on, minds-on” lessons, the program ignites a passion for learning that empowers tomorrow’s innovators.



FY24 PROGRAM HIGHLIGHTS

- Established outreach partnerships with Wonderfeet Kids’ Museum, Rutland Recreation, and West Rutland Recreation Centers.
- Judged at the Vermont STEAM Fair (VSTEAMF), a middle and high school STEAM fair hosted by Norwich University.
- Successfully ran a new CAD-themed Advanced program.
- Collaboratively worked with various STARBASE locations across the nation to implement a program for Marine JROTC cadets during the summer at Fork Union Military Academy.
- Increased technology application in lessons (EV3, Spike Prime Robots, and Happy Atoms).
- Implemented first annual 25-hour summer program for homeschooled students.



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STARBASE VERMONT- SOUTH BURLINGTON

SOUTH BURLINGTON, VERMONT



ESTABLISHED 1993
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Vermont Air National Guard Base
CLASSROOMS AUTHORIZED: 1



SCHOOL DISTRICTS SERVED

Addison Northwest Supervisory Union	Franklin West Supervisory Union
Burlington School District	Grand Isle Supervisory Union
Caledonia Central Supervisory Union	Lamoille North Supervisory Union
Champlain Valley School District	Missisquoi Valley School District
Franklin Northeast Supervisory Union	Winooski School District

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

STARBASE Vermont, Inc.

STARBASE Vermont’s South Burlington site has been at the forefront of STEAM education in the Green Mountain State for over 30 years. Sponsored by the 158th Fighter Wing of the Vermont Air National Guard and supported by the STARBASE Vermont, Inc. (501c3) nonprofit, the South Burlington site reaches over 1,300 students annually. With “hands-on, minds-on” lessons, the program ignites a passion for learning that empowers tomorrow’s innovators.

FY24 PROGRAM HIGHLIGHTS

- Collaboratively worked with various STARBASE locations across the nation to implement a program for Marine JROTC cadets during the summer at Fork Union Military Academy.
- Participated in various outreach events, including the Fletcher Free Summer Library program, Saint Albans STEAM festival, and presented to the Air Force Association. Collaboration between STARBASE VT and ESRI to present a newly developed GIS lesson to other STARBASE teams in Orlando, Florida, as part of the I/ITSEC convention.
- Maintained consistent STEAM presenters from the VT Air National Guard Fire Department, where students met with firefighters to discuss the different paths to becoming a firefighter and toured the facility.
- Established a partnership with BETA Technologies to collaborate and further enhance the program. BETA Technologies is an electric aerospace company.
- Collaborated with local STEAM fairs near STARBASE facilities to run booths and activities for families of all ages to increase STEAM interactivity in the community.

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STARBASE BLACKSTONE

BLACKSTONE, VIRGINIA



ANTICIPATED 2024	MILITARY LOCATION: Blackstone Readiness Center
SERVICE COMPONENT: Army National Guard	CLASSROOMS AUTHORIZED: 1



ANTICIPATED SCHOOL DISTRICTS SERVED

- | | |
|---------------------------------|-------------------------------------|
| Amelia County Public Schools | Lunenburg County Public Schools |
| Brunswick County Public Schools | Nottoway County Public Schools |
| Dinwiddie County Public Schools | Prince Edward County Public Schools |

Launching its state-of-the-art Department of Defense STARBASE program, STARBASE Blackstone intends to strengthen the connection between the local communities and military installation. The goal is to provide a unique educational opportunity for schools and the local community through the STARBASE program, emphasizing STEAM (science, technology, engineering, art & design, and mathematics) education. Positive military and civilian role models will highlight the connection between these academic disciplines and potential careers, including military service.

STARBASE Blackstone aims to create a comprehensive program available to every fifth-grade classroom in the surrounding community. The program will offer hands-on, inquiry-based activities for a minimum of 30 classes, with five hours of instruction for five days during the school year. The program will be based on a five-day, five-week rotation or a five-consecutive-day format for one week. Students will be exposed to the established DoD STARBASE core curriculum standards and will develop skills necessary for critical thinking, time management, and teamwork. They will have the opportunity to apply this knowledge through hands-on activities and to understand how science and math are used in real-world situations.

The objectives between the base and the community are to enhance educational partnerships with the Blackstone Readiness Center, Fort Barfoot, and outlying schools and teachers to support and improve grade level expectations in STEAM, thereby enhancing assessment skills on the Virginia Standards of Learning Testing. The aim is to foster students' natural interests in these subjects and apply them practically from the classroom to the workplace. The program also seeks to extend learning opportunities beyond the five-day program to increase motivation for youth to continue their education through exposure to positive military role models and showcase career opportunities in STEAM fields. Other goals include boosting students' interest, confidence, and success, critical thinking, time management, and teamwork abilities, and improving socialization skills in children through team teaching methods. Additionally, the program seeks to motivate students to enhance their academic performance in school.

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WINCHESTER STARBASE ACADEMY

WINCHESTER, VIRGINIA



ESTABLISHED 2012
SERVICE COMPONENT: Army National Guard

MILITARY LOCATION: Winchester Readiness Center
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Clarke County Public Schools	Private Schools
Frederick County Public Schools	Winchester Public Schools
Homeschool Consortium	

The Winchester STARBASE Academy is a premier program for students of the Shenandoah Valley region. Encouraging a future in a STEAM career field is a priority. This allows students to explore many exciting possibilities with hands-on, inquiry-based lessons.

Located at the Winchester Readiness Center, soldiers from the 116th Infantry Regiment talk with the students about military careers, the history of the unit, and the importance of STEAM for the future. Many STEAM community members visit the Winchester STARBASE Academy to share their jobs with the students.

In addition to working with upper elementary students, the Winchester STARBASE Academy runs a STARBASE Advanced program at James Wood Middle School and works in joint collaboration with other STARBASE programs for a summer supplemental program with Marine JROTC cadets. They also support the community through a variety of outreach programs, such as activities at the local library, the Kids Clubs of Northern Shenandoah Valley, school STEAM nights, Aviation Day, and the National Guard Youth Camp. The Winchester STARBASE Academy is working diligently to encourage, engage, and inspire students of all ages.

FY24 PROGRAM HIGHLIGHTS

- Worked with students at The Kids Clubs of Northern Shenandoah Valley.
- Provided aviation activities at the Winchester Regional Airport. One hundred students ages 8-12 could fly drones, enter various airplanes, and learn about becoming pilots.
- Partnered with Orchard View Elementary utilizing Sphero robots to participate in their school Math Night.
- Supported the Handley Regional Library with its summer camp programs.

CONTACT INFORMATION

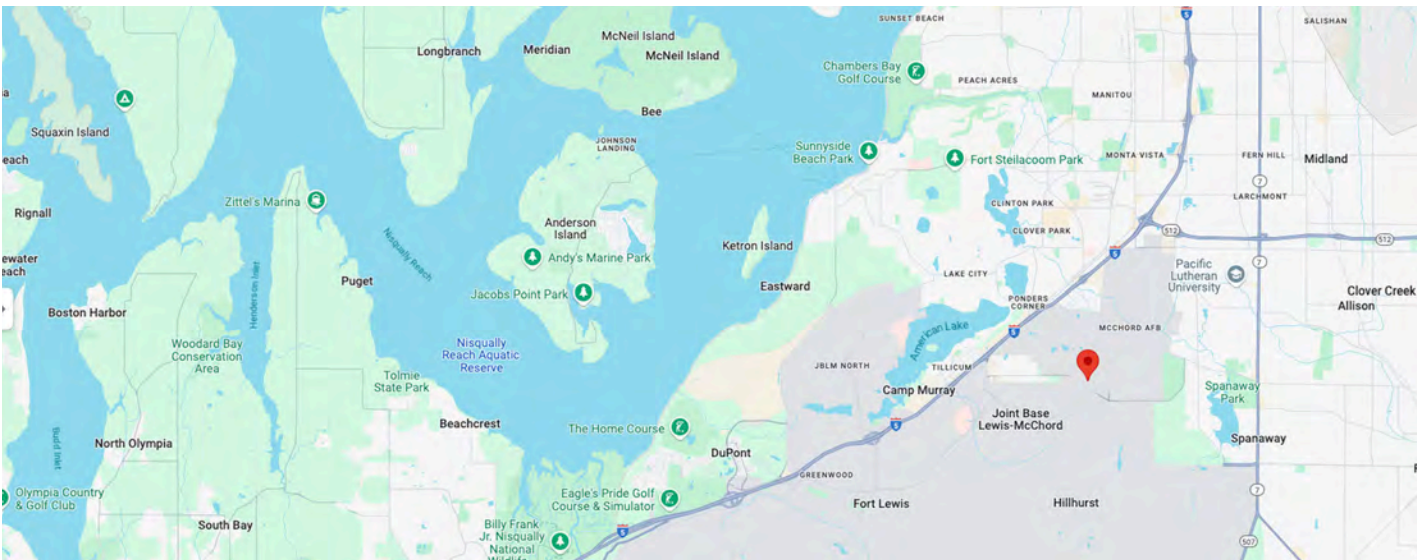
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STARBASE JBLM

PIERCE COUNTY, WASHINGTON



ANTICIPATED 2024 SERVICE COMPONENT: Army **MILITARY LOCATION: Joint Base Lewis-McChord (JBLM)**
CLASSROOMS AUTHORIZED: 2



ANTICIPATED SCHOOL DISTRICTS SERVED

- Clover Park School District
- Steilacoom Historical School District

Joint Base Lewis-McChord (JBLM) is the largest military installation on the West Coast and is the only Army-led joint base in the DoD. JBLM is situated in the Pacific Northwest, and its geographical location is not only crucial for strategic mission requirements but also provides access to some of the nation’s leading technology-based companies, including Boeing, Amazon, Microsoft, and Google, among others. These partnerships allow JBLM access to advanced, cutting-edge STEAM-based technology.

The DoD STARBASE program offers an innovative solution to prepare fifth-grade students to solve complex real-world issues and problems. DoD STARBASE will be an important investment to expose children to innovative and challenging “hands-on, mind-on” activities. Initially, two school districts, consisting of 17 elementary schools, will participate in STARBASE JBLM.

In line with the DoD STARBASE mission statement, the JBLM STARBASE program objectives aim to expose youth to the technological environments and unique individuals found within the military community. By collaborating with Clover Park School District and Steilacoom Historical School District, JBLM STARBASE will provide STEAM-based instruction to enhance the participants’ knowledge and capabilities. Once the program is established and a foundation is built, JBLM intends to expand to additional classrooms to maximize its impact on the area.

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STARBASE MARTINSBURG

MARTINSBURG, WEST VIRGINIA



ESTABLISHED 2003
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: Shepherd Field Air National Guard Base
CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

Berkeley County Public Schools	Morgan County Public Schools
Greencastle-Antrim School District	Private Schools
Jefferson County Public Schools	

STARBASE Martinsburg has been at the forefront of engaging students in STEAM education in the eastern panhandle of West Virginia since 2003. Located at the 167th Airlift Wing in Martinsburg, WV, STARBASE Martinsburg is committed to positively impacting every student who walks through the doors. The STARBASE site in Martinsburg runs three classrooms daily, providing a 25-hour “hands-on, minds-on” STEAM curriculum to every fifth-grade student in the surrounding school districts, reaching approximately 2,500 students annually.

STARBASE Martinsburg also offers STARBASE Advanced, an after-school program designed to cultivate further students’ interest in STEAM that will carry the students through middle and high school.

STARBASE Martinsburg also hosts a yearly STEAM Night to engage the community with various STEAM careers and hands-on activities. Over 700 people attended this single event. As the site approaches its 22nd year of operation, STARBASE Martinsburg remains dedicated to preparing students for the challenges of an ever-changing world.

FY24 PROGRAM HIGHLIGHTS

- Organized and held a community-wide STEAM night for the second year with over 40 vendors and 700 attendees.
- Provided STEAM activities for over 400 families at the “167th Airlift Wing Family Day.”
- Partnered with Shepherd University to provide STEAM education for their “Seeding the Future” event.
- Partnered with Berkeley County Schools to provide “STEAM in the classroom” courses for their county-wide SkillsU Teacher Workshop.
- Expanded STARBASE Advanced middle school program with an additional school.
- Facilitated a county-wide community service project, “Labors of Love,” for a participating school to enable them to help military families.
- Presented STEAM lessons for a teacher workshop held at Blue Ridge Community College.
- Collaboratively worked with various STARBASE locations across the nation to implement a program for Marine JROTC cadets during the summer at Fork Union Military Academy.

CONTACT INFORMATION

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WEST VIRGINIA STARBASE CHARLESTON ACADEMY

CHARLESTON, WEST VIRGINIA



ESTABLISHED 2001
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: McLaughlin Air National Guard Base
CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

Kanawha County School District
Putnam County School District

West Virginia (WV) STARBASE Charleston is located on the West Virginia National Guard Joint Force Base in Charleston, WV. WV STARBASE Charleston has been able to serve the local public and private schools for 23 years providing an engaging “hands-on, minds-on” science, technology, engineering, art & design, and mathematics (STEAM) curriculum. STARBASE Charleston operates three classrooms across the entirety of Joint Base West Virginia — one embedded with the Army State Headquarters and two with the 130th Airlift Wing. They serve over 2,000 local fifth-grade students from Kanawha and Putnam County public and private schools. Their STARBASE Advanced program is partnered with Clay County Middle School. This program is fully partnered and committed to both the West Virginia Army and Air Guard Family Readiness and Child and Youth Programs. The program’s presence is felt throughout the central and southern areas of the great state of West Virginia.

FY24 PROGRAM HIGHLIGHTS

- Provided instruction to over 1,800 fifth-grade students from Kanawha and Putnam County public and private schools, including three new schools from Putnam County and one new private school.
- Partnered with Clay County Middle School and CMI2 to teach teamwork, problem-solving, and communications skills while working with Aerial Drones during the STARBASE Advanced program, which resulted in ranking within the top 10 in the Aerial Drone Competition.
- Provided hands-on, engaging STEAM activities to over 1,800 students and adults with Supplemental programs, other instructional programs, and outreach events.
- Partnered with NASA IV&V to judge the Northeastern Regional Championship Aerial Drone Competition hosted in Fairmont, WV.
- Participated in vendor fairs and Legislative Day at the state capital by providing a table display with exciting hands-on STEAM lessons.
- Shared lessons with local community companies that partner with West Virginia Employer Support of the Guard and Reserve (ESGR) while they toured and explored the 130th Airlift Wing.

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STARBASE WISCONSIN

MILWAUKEE, WISCONSIN



ESTABLISHED 2011
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: US Army Reserve Center
CLASSROOMS AUTHORIZED: 3



SCHOOL DISTRICTS SERVED

Milwaukee Public Schools
West Allis/West Milwaukee Public Schools

STARBASE Wisconsin is proudly sponsored by the Wisconsin Air National Guard and supported by the 128th Air Refueling Squadron and U.S. Army Reserve Training Center in Milwaukee, serving the students in Milwaukee Public Schools and other area school districts since 2011. STARBASE Wisconsin is dedicated to reaching students through an interactive, hands-on science program. STARBASE Wisconsin served approximately 2,466 students in Basic and Supplemental programs in the 2023-24 school year.

A third classroom was added this school year, enabling this location to serve approximately 630 - 1,010 additional students. STARBASE Wisconsin was proud to continue its STARBASE Advanced Aviation program in a neighborhood middle school, bringing to light the aviation-rich opportunities Wisconsin has to offer, as this state is home to the Experimental Aircraft Association (EAA). Their new summer supplemental programs focused on Aviation: Flight Simulation and Drones, Forensic Science, Life Science and Wisconsin Wildlife, Rocketry, and Robotics were a great success, with students diving deeper into topics they didn't have time for during the school year.

FY24 PROGRAM HIGHLIGHTS

- Presented and recruited schools at the Milwaukee Public Schools STEAM Fair exhibition, where 600 youth from 50 MPS schools competed.
- Distributed coats and footwear, in partnership with Erie Insurance, to K- fifth-grade students at the Samuel Clemens, a Milwaukee Public School.
- Highlighted STEAM education at the 27th annual Rockets for School rocketry competition at the Blue Harbor Resort in Sheboygan, Wisconsin. The event drew 25 teams from sixth through 12th grades, including participants from New Jersey and Oregon.
- Completed first school year operating three instructional classrooms.
- Welcomed 151 young people who took part in Supplemental programs. The programs were open to local summer schools, youth programs, and individuals from families. Some young participants even traveled more than 90 minutes to attend.

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WYOMING STARBASE ACADEMY

CHEYENNE, WYOMING



ESTABLISHED 1994
SERVICE COMPONENT: Air National Guard

MILITARY LOCATION: John Raper Armory
CLASSROOMS AUTHORIZED: 2



SCHOOL DISTRICTS SERVED

Laramie County School District 1
Laramie County School District 2
Private Schools

SUPPORTING NOT-FOR-PROFIT ORGANIZATION

Wyoming SB Academy Foundation

Wyoming STARBASE Academy is a DoD youth program operated in partnership with the Wyoming National Guard and Wyoming Military Department since 1994. The program is located in Cheyenne, Wyoming, at the Raper Armory. Their mission is to expose the nation's youth to technological environments and positive civilian and military experiences that encourage them to explore STEAM education and careers through hands-on instruction and activities that meet or exceed national standards.

The Wyoming STARBASE program serves fifth-grade public, private, and homeschool students in Laramie County, Wyoming. Through teamwork, students participate in challenging "hands-on, minds-on" activities in science, technology, engineering, art & design, and mathematics (STEAM). Students also interact with military personnel to explore careers and make connections in the real world.

Wyoming STARBASE activities include several hands-on science labs, activities centered on the Engineering Design process, designing and launching straw rockets, and working with computer-aided design software. Volunteers from the base are an integral part of the STEAM career activities and explorations they make available for student participants.

FY24 PROGRAM HIGHLIGHTS

- Completed second full year of STARBASE Advanced programming.
- Partnered with Child and Youth Services for a record-breaking attendance at our Month of the Military Child event.
- Presented at the annual Principals meeting to generate interest in STARBASE.
- Completed 29th year as a successful program.
- Participated as readers at the annual "Read Across America" read-a-thon.
- Partnered with local school districts to support community events such as Family STEAM Nights.

CONTACT INFORMATION

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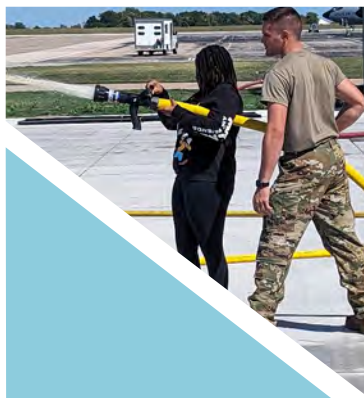
➤ “The Coast Guard members at Air Station Detroit jump at the opportunity to talk with local elementary schools about our missions that directly impact their communities. During our tours, students learn about search and rescue operations firsthand. They get to see our helicopters up close, hear stories of real-life rescues, and understand the importance of teamwork and safety in our missions. Air Station Detroit is passionate about inspiring the next generation and we love to see the students’ curiosity and enthusiasm grow while learning about the Coast Guard.”

- LT RACHAEL MCGHEE, PILOT,
STARBASE ONE

➤ “This is my second year at STARBASE, and our instructors are the best we’ve ever had! I loved being with them all week. They had such fun banter, were patient with my all of my students, made learning fun, and inspired me to be a better teacher. It is a joy to work with these ladies. THEY ROCK!”

- MRS. BRAY, FRANK MITCHELL
INTERMEDIATE SCHOOL
(VILONIA SCHOOL DISTRICT)

Appendix



DoD STARBASE Student POST Assessment 2023-2024

Select the answer you think is best.

1. Which one of Newton's Laws explains why it is important to wear a seat belt in a moving car?

- First Law of Motion - an object in motion will stay in motion unless acted upon by an outside force.
- Second Law of Motion - acceleration of an object increases as the amount of force increases.
- Third Law of Motion - for every action there is an equal and opposite reaction.
- Law of Gravity - an object attracts another object in direct proportion to their combined mass.

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Select the answer you think is best.

2. Your robot traveled 60 meters out of a total distance of 300 meters. What percent of the total distance did the robot travel?

- 15%
- 20%
- 40%
- 50%

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Select the answer you think is best.

3. An Engineering team meets for the first time. Which step of the Engineering Design Process will they do first?

- Make a list of requirements.
- Brainstorm solutions.
- Make a hypothesis.
- Define a problem.

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Select the answer you think is best.



4. What will happen if Ball A and Ball B are kicked with the same amount of force?

- Ball A will roll farther.
- Ball B will roll farther.
- They will roll the same distance.
- The distance cannot be predicted.

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DoD STARBASE Student POST Assessment 2023-2024, cont.

Select the answer you think is best.

5. Which states of matter are fluids?

- Liquid and gas
- Gas and solid
- Solid and liquid
- Solid, liquid, and gas

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Select the answer you think is best.

6. Sodium and chloride bond to form salt (NaCl). What does this bonded substance represent?

- An element
- An atom
- A compound
- A cell

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Select the answer you think is best.

7. How does Computer-Aided Design (CAD) software communicate ideas between people?

- Text-to-speech describes design ideas for people to hear.
- The program learns your design idea and draws needed parts on its own to show.
- It displays design ideas to share and explore a visual model.
- It creates videos of design ideas to watch.

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Select the answer you think is best.

8. Which of the following are equivalent numbers?

- $\frac{7}{100}$, 7%, 0.07
- 0.07, 7%, $\frac{7}{1000}$
- 70%, 0.7, $\frac{7}{100}$
- 0.7, $\frac{70}{100}$, 7%

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DoD STARBASE Student POST Assessment 2023-2024, cont.

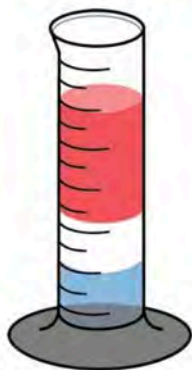
Select the answer you think is best.

9. Which of the following describes a transfer of energy in a chemical reaction?

- The noise a balloon makes when it is popped.
- The pressure applied to a scissor handle when cutting paper.
- The temperature change when freezing ice cream.
- The light made by a glow stick when bent and shaken.

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Select the answer you think is best.



10. Three different liquids were poured into a graduated cylinder. From the picture, what can you conclude about the densities of the liquids?

- The blue liquid is the least dense.
- The white liquid is the least dense.
- The red liquid is the least dense.
- They are all of equal density.

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Select the answer you think is best.

11. When you sprain an ankle, you need to apply an activated cold compress to relieve the swelling. Which reaction does the activated cold compress produce?

- Hydrophobic
- Endothermic
- Exothermic
- Hydrophilic

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Select the answer you think is best.

12. Which of the following states of matter has the least amount of kinetic energy?

- Solid
- Liquid
- Gas
- Plasma

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DoD STARBASE Student POST Assessment 2023-2024, cont.

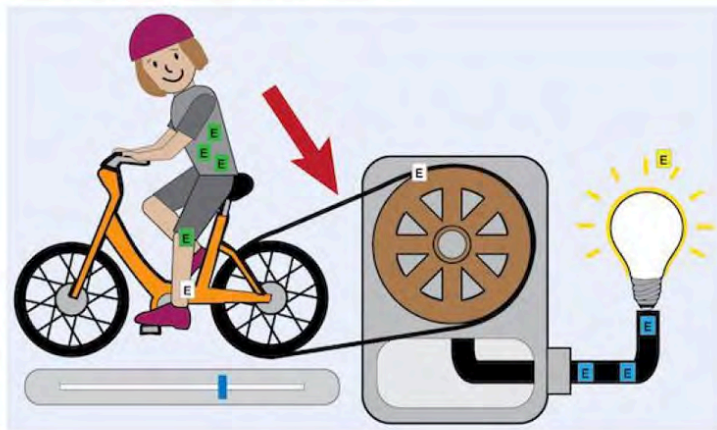
Select the answer you think is best.

13. Computer-Aided Design (CAD) software allows a user to view designs:

- In 2-dimensions
- In 3-dimensions
- In 4-dimensions
- As a finished manufactured product

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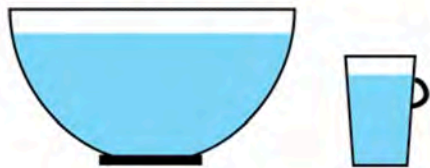
Select the answer you think is best.



14. Which energy (E) change occurs in the generator (brown wheel)?

- Mechanical to electrical
- Heat to light
- Light to chemical
- Chemical to mechanical

Select the answer you think is best.



15. A small cup and a large bowl are filled with water. What is the same about the water in each container?

- Mass
- Shape
- Volume
- Density

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Select the answer you think is best.

16. Which of the following is an example of physical change?

- Baking soda and vinegar mix and produce bubbles and foam.
- A glass falls on the floor and shatters.
- Paper burns and produces smoke and ash.
- Batter is baked to make a cake.

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DoD STARBASE Student POST Assessment 2023-2024, cont.

Select the answer you think is best.

17. The make-up of air in our atmosphere is 78% nitrogen, 21% oxygen and 1% other gases. Which type of graph would be best to use to display this data?

- Line Graph
- Coordinate Plane
- Bar Graph
- Pie Graph

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Select the answer you think is best.

18. You are using a graduated cylinder to measure the volume of a liquid in a bottle. Which unit of measurement are you most likely to use?

- Grams
- Microns
- Milliliters
- Centimeters

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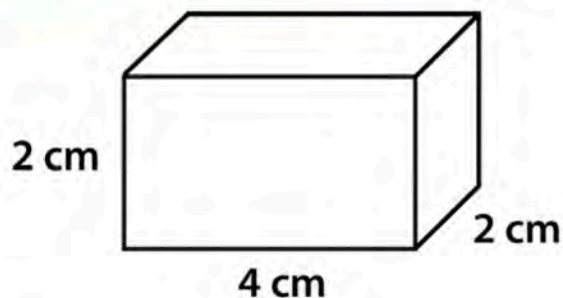
Select the answer you think is best.

19. Which of the following are examples of technologies that solve real problems in the world today?

- A farmer using GPS to plant crops.
- A doctor using a 3D printer model for practice before performing surgery.
- Robots used in places that are unsafe for humans.
- All of the above.

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Select the answer you think is best.



20. What is the volume of the box?

- 6 cm^2
- 8 cm^3
- 16 cm^3
- 8 cm^2

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Glossary

Academy: See DoD STARBASE Academy.

Additional Instruction: DoD STARBASE initiatives that, for one reason or another (e.g., below minimum hours, do not cover the core curriculum areas, etc.) do not meet DoDI standards. They may be designed to reach students that do not fall under the targeted “participant” schools or are in response to requests by members of the community to serve other groups of children. In many cases, these initiatives are established in response to the demand created by the popularity and success of the DoD STARBASE program within the community.

Appropriations: An act of Congress that permits federal agencies to incur obligations and to make payments out of the Treasury for specified purposes. An appropriations act is the most common means of providing budget authority.

Art & Design: Fostering creative expression is key to visualizing connections formed during the creative process. Art and Design emphasizes creativity, self-expression, and problem-solving through visual, auditory, and tactile mediums while driving innovation by connecting imagination with real-world applications.

Class: Within the context of a DoD STARBASE Academy, a class is a grouping of students. This group may not necessarily have been a homogenous entity prior to DoD STARBASE instruction; it may be a temporary grouping only for the purposes of assembling for the 25-hour minimum period of DoD STARBASE instruction.

Classroom Contact Hour: A period of 60 minutes, plus or minus five minutes, in which a DoD STARBASE Academy instructor is actively involved with students or in which a military member is demonstrating, displaying, or teaching an application of science, technology, engineering/arts & design, and mathematics to the students.

Classroom Teacher: Teacher from schools who participate in DoD STARBASE classes.

Coach: An experienced adult providing support, training, and guidance to a student in achieving a specific goal.

Computer-Aided Design (CAD): The use of computer systems to assist in the creation, modification, analysis, or optimization of a design. It is both a visual and symbol-based method of communication whose conventions are particular to a specific technical field.

Core Curriculum: The fixed course of study taught by all DoD STARBASE academies. (See DoD STARBASE Curriculum.)

Current Expenditures: Expenditures for operating DoD STARBASE Academies, excluding capital outlay. These expenditures include such items as staff salaries, facilities, staff travel, supplies, equipment, contract services, and public relations/outreach.

Director: DoD STARBASE staff member responsible for the DoD STARBASE Academy.

DoD: Department of Defense.

DoD Components: DoD entities that have established or are in pursuit of establishing a DoD STARBASE Academy, including the military departments, defense agencies, and defense field activities.

DoD Instruction (DoDI): Document that implements policies, responsibilities, and procedures for executing the DoD STARBASE program.

DoD STARBASE Academy: A DoD educational program designed to improve the knowledge and skills of students in kindergarten through 12th grade in mathematics, science, and technology. It follows the academy model description in DoDI 1025.07.



“The STARBASE Program is a staple of our science curriculum. You help our students meet dozens of science standards, and you do it in a way that is engaging and fun for the students. The STARBASE teachers are always prepared to deliver top-notch lessons and my students adore them.”

- COREY HYDE, EDUCATOR AT VANDENBERG ELEMENTARY SCHOOL, ATTENDING STARBASE RAPID CITY

Glossary, CONTINUED

DoD STARBASE Curriculum: DoD STARBASE core curriculum is comprised of the following areas:

SCIENCE

- A. Science Fundamentals
- B. Characteristic Properties
- C. Motion & Force
- D. Science Explorations

TECHNOLOGY

- A. Applying Technology

ENGINEERING & ART/DESIGN

- A. Engineering Design Process
- B. 3-D Computer-Aided Design

MATHEMATICS

- A. Number Relationships
- B. Measurement
- C. Geometry
- D. Data Analysis

SCIENCE, TECHNOLOGY, ENGINEERING, ART & DESIGN, AND MATHEMATICS, (STEAM) CAREERS

- A. STEAM Careers on Military Facilities
- B. Personal Investigations

DoD STARBASE Program: The DoD STARBASE program is authorized by Title 10 United State Code Section 2193b as a DoD science, technology, engineering, and mathematics education improvement program. The OASD/M&RA administers policy and oversight; the DoD components execute the program at DoD STARBASE academies. DoD STARBASE is funded by Congress as a Civil Military Program.

DoD STARBASE Site/Location: The location of a DoD STARBASE Academy where the program is taught.

DoD STARBASE Advanced 2.0 Program: A unique school-based program targeting students in 6th to 8th grade outside of normal school hours. The program takes place in partnering schools expressing the desire for additional DoD STARBASE program resources.

DoD STARBASE Advanced 3.0 Program: A unique program targeting students in grades 9-12 outside of normal school hours while forming partnerships with JROTC cadets and high school students, with collaboration among STARBASE locations to fully extend the authority of Title 10 U.S. Code Section 2139b culminating in the STARBASE program's reach from kindergarten to high school.

DoE: Department of Education.

Driver: Drivers identify a set of related attitudinal clusters for the student population (i.e., when the driver is present, the set of attitudes will most likely be present, or in reverse, when the condition in the list of attitudes are present, the target “driver” attitude will also be present).

Elementary School: A school with one or more of grades K–6 that does not have any grade higher than grade 8.

Engineering: The discipline dealing with the art or science of applying scientific knowledge to practical problems. Engineering is the use of scientific principles to design and build machines, structures, and other items, including bridges, tunnels, roads, vehicles, and buildings. The discipline of engineering encompasses a broad range of more specialized fields of engineering, each with a more specific emphasis on particular areas of applied mathematics, applied science, and types of application.

Glossary, CONTINUED

Enrollment: The total number of students registered at a DoD STARBASE Academy at a given time, generally in the fall of the year.

Expenditures: Charges incurred, whether paid or unpaid.

Expenditures Per Pupil: Charges incurred for a particular period of time divided by a student unit of measure, such as enrollment, average daily attendance, or average daily membership.

Fiscal Year (FY): The yearly accounting period for the federal government, which begins on October 1 and ends on the following September 30. The fiscal year is designated by the calendar year in which it ends; for example, fiscal year 2024 begins on October 1, 2023, and ends on September 30, 2024.

Full Time Employees: Those employees who are regularly scheduled to work the number of hours and days required by the administrative work-week for their employment group or class.

Gap Score: Difference between pre-program and post-program test scores.

Graduate: An individual who has received formal recognition for the successful completion of a prescribed program of studies.

High School: A secondary school offering the final years of high school study necessary for graduation, in which the lowest grade is not lower than grade 9. Usually includes grades 10, 11, and 12 or grades 9, 10, 11, and 12. Alternatively, according to the 2007-08 Schools and Staffing Survey, defined as a school with no grade lower than 7 and at least one grade higher than 8.

Inquiry-Based Learning: A student-centered educational approach which focuses on using and learning content as a means to develop information-processing and problem-solving skills. In this approach the teacher acts as a facilitator. Students are involved in the building of knowledge through active involvement.

Instructor: DoD STARBASE educator.

Kindergarten: Includes transitional kindergarten, kindergarten, and pre-1st grade students.

Location: See DoD STARBASE Site/Location.

Mapping: The process of using maps to chart a course.

Mathematics: The study of the measurement, properties, and relationships of quantities and sets, using numbers and symbols. A body of related courses concerned with knowledge of measurement, properties, and relations quantities, which can include theoretical or applied studies of arithmetic, algebra, geometry, trigonometry, statistics, and calculus.

Median: A number that half of the data is larger than it and half is smaller. If the itemized data are listed in order of size, the median is the middle number in the list.

Middle School: A school with no grade lower than 5 and no grade higher than 8.

Navigation: The theory, practice, and technology of charting a course for a ship, aircraft, or spaceship.

Not-For-Profit Organization: A legal entity recognized or chartered by a competent state authority and to which the Internal Revenue Service has given status as a 501(c) 3 tax-exempt educational organization.

OASD/M&RA: Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs.

Onshape: A computer-aided design (CAD) software system delivered over the internet. The cloud-based application allows for solid modeling, assembly modeling, and drafting. The Onshape CAD system allows multiple users to access and work on a single design concurrently over the cloud using any computer, tablet, or phone.

Operational Academies: An academy that is processing students.

Outreach: Providing services to any populations who might not otherwise have access to those services. A key component of outreach is that the groups providing it are not stationary, but mobile; in other words, they are meeting those in need of outreach services at the locations where those in need are located. In addition to delivering services, outreach has an educational role, raising the awareness of existing services.

Participant: A DoD STARBASE student. Participant may also refer to military command support units, the local sponsoring base command, community leaders, local community sponsoring committees, school systems, schools, teachers, military service volunteers, DoD STARBASE board members, staff, and parents.

Glossary, CONTINUED

Part Time Employees: Those employees who are regularly employed on a prearranged scheduled tour of duty that is less than the specified hours or days of work for full time employees in the same group or class.

Percentile (Score): A value on a scale of 0 to 100 that indicates the percent of a distribution that is equal to or below it.

Pre/Post Application: Prior to the start of the program and at the completion of the program.

Public School: A school that provides educational services for at least one of grades K-12 (or comparable ungraded levels), has one or more teachers to give instruction, has an assigned administrator, receives public funds as primary support, and is operated by an education or chartering agency.

Rural Location: All population, housing, and territory not included within an urbanized area. Whatever is not urban is considered rural.

Salary: The total amount regularly paid or stipulated to be paid to an individual, before deductions, for personal services rendered while on the payroll of a business or organization.

Sample Population: A statistically significant representation of the total number of students tested each year.

School District: An education agency at the local level that exists primarily to operate public schools or to contract for public school services.

School Year (SY): The period of time during which a school system operates, typically beginning on July 1st and ending on June 30th of the following year.

Science: The body of related course concerned with knowledge of the physical and biological world and with the processes of discovering and validating this knowledge.

Secondary School: A school with one or more of grades 7-12 that does not have any grade lower than grade 7. For example, schools with grades 9-12, 7-9, 10-12, or 7-8 are classified as secondary.

Site: See DoD STARBASE Site/Location.

STARBASE: Abbreviated term used to describe the DoD STARBASE Program

STARBASE U: The DoD STARBASE online learning management system where resources and training materials are made available to program staff.

STEAM: Science, technology, engineering, art & design and mathematics (STEAM) fields of study that are considered to be of particular relevance to advanced societies.

STEAM Careers: Account for over 24 percent of all U.S. jobs. The acronym refers to science, technology, engineering, art & design, and mathematics, and includes careers in physical and life sciences, computer science, mathematics, and engineering. Many employment experts include health professions, health technology, and social sciences under this umbrella as well.

Supplemental Programs: In addition to the Basic 5-day STARBASE program, the DoDI requires each location to provide at least two weeks of supplemental classroom contact hours (20-25 hours per week) over school vacation breaks. This requirement is multiplied by the number of instructional pairs and classrooms at that location.

Teacher Certification: License granted by states for teachers to teach a given subject. These vary by state but generally include: obtaining a bachelor's degree; completing a teacher preparation program, which includes either an undergraduate, master's, or alternative program; getting state or national certification to teach by completing all requirements.

Technology: The sum of techniques, skills, methods, and processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation. Technology can be the knowledge of techniques, processes, and the like, or it can be embedded in machines to allow for operation without detailed knowledge of their workings. Systems applying technology by taking an input, changing it according to the system's use, and then producing an outcome are referred to as technology systems or technological systems.

Urban Location: Consists of at least 2,500 people.

Volunteer: A person who freely offers to take part in an enterprise or undertake a task.



“STARBASE Hill provides two things vital for the inspiration of our future STEAM leaders... access and opportunity. The opportunity to experiment, so young people know they can do hard (and cool!) things successfully and access to leaders in the industries we need their inquiring minds to flourish!”

- COL STEPHANIE Q. WILSON, COMMANDER,
309TH MISSILE MAINTENANCE GROUP,
HILL AFB, STARBASE HILL



“STARBASE does such great things with the kids. Seeing the topics they cover is amazing to me! The level of critical thinking is far beyond anything I have seen for young people that age.”

- COL HENRY CHMIELINSKI, DIRECTOR OF STAFF -
AIR CTNG - STARBASE WINDSOR LOCKS





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