



Department of Defense Civil-Military Programs



DoD STARBASE

Civil-Military Programs
ASD M&RA (DASD(RI))

Vision Statement

To raise the interest and improve the knowledge and skills of at-risk youth in science, technology, engineering, and mathematics (STEM), which will provide for a highly educated and skilled American workforce that can meet the advanced technological requirements of the Department of Defense.

Mission Statement

By exposing youth to the technological environments and positive role models found on military bases and installations, we will provide 25-hours of exemplary instruction, using the DoD curriculum that meets or exceeds the National Standards. We will nurture a winning network of collaborators and build mutual loyalty.

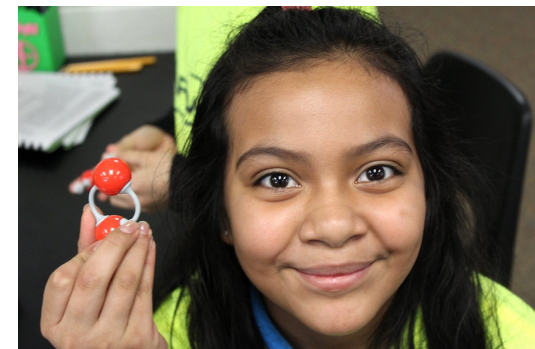
Our Goal

Provide an outstanding, unforgettable STEM educational opportunity for students and teachers in a hands-on, hi-tech, alternative, discovery/inquiry-based environment on military installations.



Program Justification

- 7,000 students drop out of school every day nationwide. †
- 1 in 10 male high school dropouts is in jail or juvenile detention. † †
- 1 in 4 African-American dropouts are incarcerated or institutionalized. † †
- Female dropouts are nine times more likely to become single mothers. † †
- Possible to identify as early as 6th grade up to half the students who won't graduate. † † †
- Cutting dropout rate in half would yield \$45 billion annually in tax revenue or cost savings. †
- U.S. Department of Labor estimates 90% of new high-growth, high-wage jobs will require some level of postsecondary education.



† Committee on Education & Labor (12 May 2009)

† † The New York Times (8 October 2009)

† † † "Keeping Middle Grades Students On Track to Graduation," Robert Balfanz, Liza Herzog (May 2006)



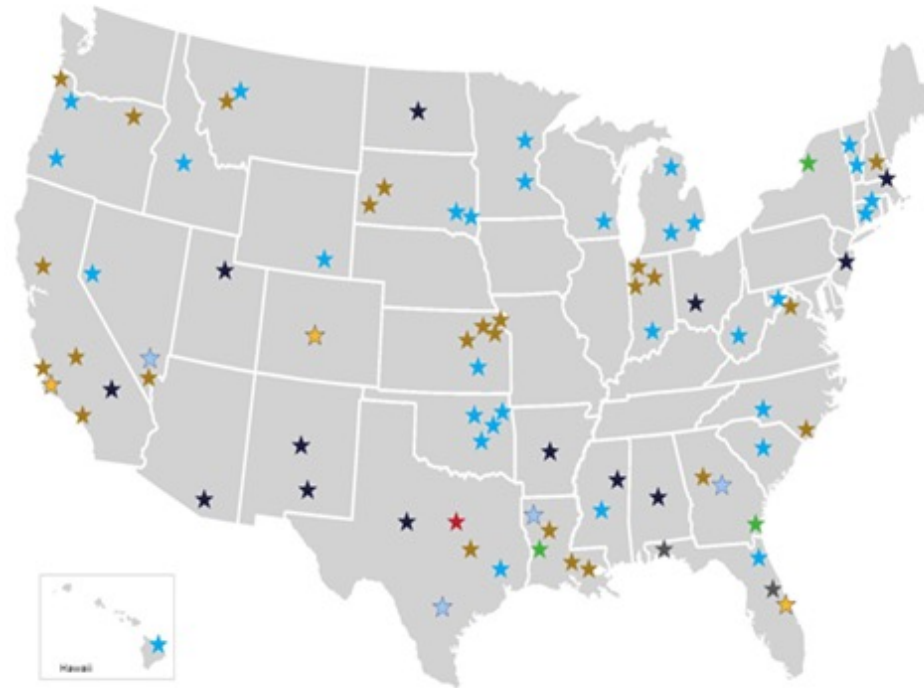
General Information

- Created at Selfridge ANGB, MI in 1991 as Project Stars with a grant from W.K. Kellogg Foundation.
- Officially authorized as a DoD program through congress in FY93 (10 USC 2193b).
- 82 locations including Puerto Rico, Guam and Native American reservation outreach programs.
- Hosted by US Army, Army National Guard, US Air Force, Air National Guard, Air Force Reserve, US Navy and US Space Force.
- ~110,000 students participate annually.
- Average Program cost are around \$450,000.





STARBASE Locations



- ★ Air Force
- ★ Air Force Reserve
- ★ Air National Guard
- ★ Army
- ★ Army National Guard
- ★ Navy
- ★ Navy Reserve
- ★ Space Force

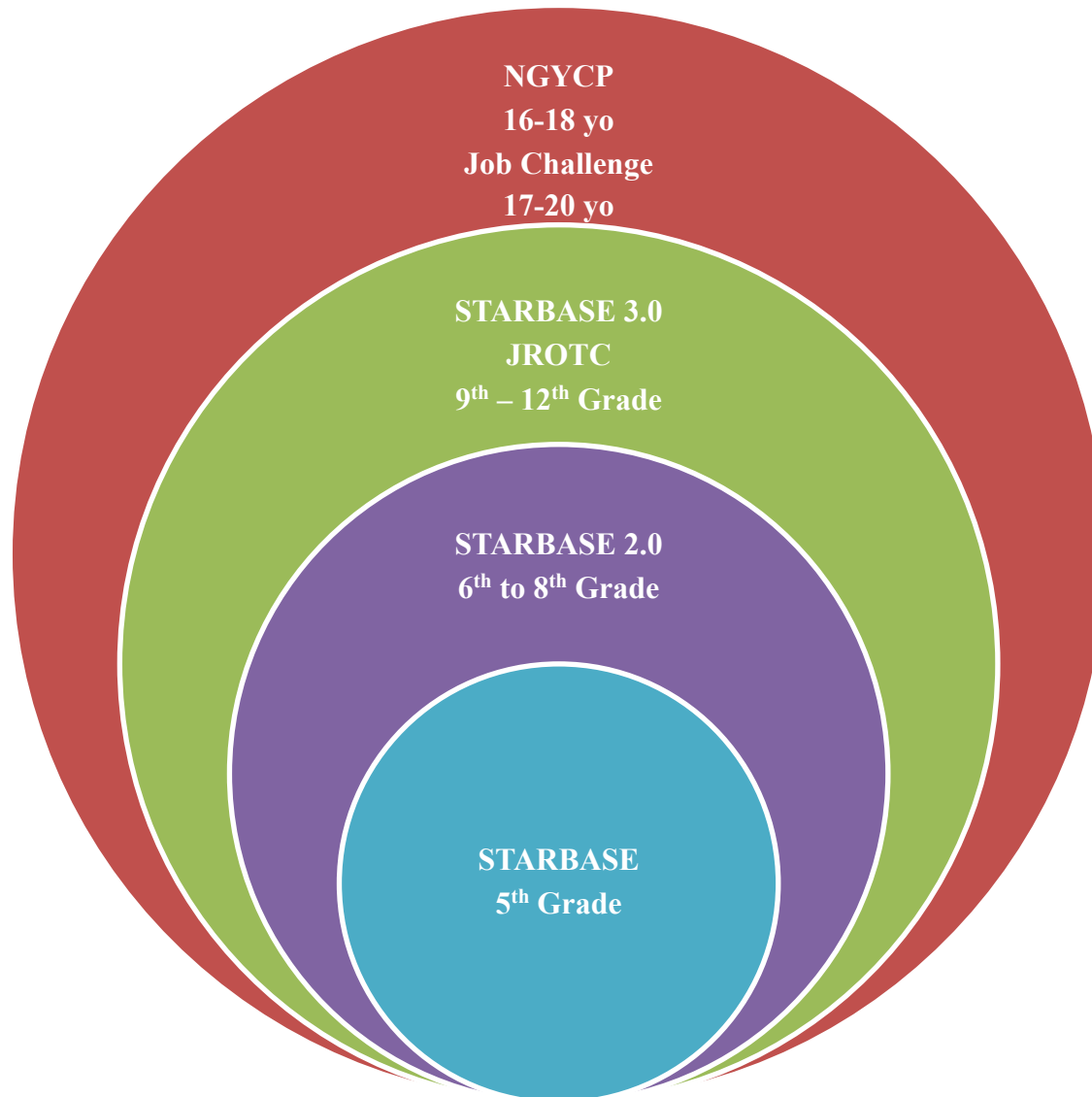
TOTAL LOCATIONS--85

ST	Service Component Sponsor	Academy	ST	Service Component Sponsor	Academy
AL	Air Force	STARBASE Maxwell	MS	Air National Guard	STARBASE Mississippi
AR	Air Force	STARBASE Arkansas	MS	Air Force	STARBASE Columbus
AZ	Air Force	STARBASE Arizona	MT	Army National Guard	STARBASE Fort Harrison
CA	Space Force	STARBASE Vandenberg	MT	Air National Guard	STARBASE Great Falls
	Air Force	STARBASE Edwards	MT	Air National Guard	STARBASE Charlotte
	Army National Guard	STARBASE Los Alamitos	NC	Army National Guard	STARBASE Wilmington
	Army National Guard	STARBASE Sacramento	ND	Air Force	STARBASE North Dakota
CO	Army National Guard	STARBASE Fort Carson	NH	Army National Guard	STARBASE New Hampshire
	Space Force	STARBASE Peterson	NJ	Air Force	STARBASE McGuire-Dw-Lakehurst
	Air National Guard	STARBASE San Luis Obispo	NJ	Air Force	STARBASE New Mexico
CT	Air National Guard	STARBASE Connecticut Windsor Locks	NM	Air Force	STARBASE Holloman
	Air National Guard	STARBASE Connecticut Waterbury	NM	Air Force Reserve	STARBASE Nellis
FL	Space Force	STARBASE Patrick	NV	Air National Guard	STARBASE High Sierra
	Air National Guard	STARBASE Florida	NY	Army National Guard	STARBASE Henderson
	Navy	STARBASE Central Florida	NY	Army	STARBASE Fort Drum
GA	Navy	STARBASE Pensacola	OH	Air Force	STARBASE Wright Pat
	Army National Guard	Peach State STARBASE	OH	Air National Guard	STARBASE Oklahoma Oklahoma City
	Air Force Reserve	STARBASE Robins	OK	Air National Guard	STARBASE Oklahoma Tulsa
HI	Army	STARBASE Savannah	OK	Air National Guard	STARBASE Oklahoma Fort Sill
	Army National Guard	STARBASE Guam	OK	Air National Guard	STARBASE Oklahoma Barnes Rat
IA	Air National Guard	STARBASE Hawaii	OR	Army National Guard	STARBASE Camp Rilea
	Air National Guard	STARBASE Idaho	OR	Army National Guard	STARBASE Rees
IL	Army National Guard	STARBASE Indiana Gary	OR	Air National Guard	STARBASE Kingsley
	Army National Guard	STARBASE Indiana South Bend	OR	Air National Guard	STARBASE Portland
	Army National Guard	STARBASE Indiana Indianapolis	PA	Air National Guard	STARBASE Puerto Rico
	Air National Guard	STARBASE Indiana Fort Wayne	SC	Air National Guard	STARBASE Swamp Fox
IN	Army National Guard	STARBASE Kansas City	SD	Air National Guard	STARBASE NOAA Courage
	Army National Guard	STARBASE Manhattan	SD	Army National Guard	STARBASE NOAA Honor
	Army National Guard	STARBASE Salsha	SD	Army National Guard	STARBASE Rapid City
KS	Army National Guard	STARBASE Topeka	SD	Air National Guard	STARBASE Sioux Falls
	Air National Guard	STARBASE Wichita	SD	Air Force	STARBASE Goodfellow
	Army National Guard	Pelican State STARBASE	SD	Air Force Reserve	STARBASE Kelly
	Army National Guard	Bayou State STARBASE	TX	Army National Guard	Texas STARBASE Austin
LA	Army National Guard	STARBASE Jackson Barracks	TX	Air National Guard	Texas STARBASE Houston
	Air Force Reserve	STARBASE Louisiana	TX	Navy Reserve	STARBASE Fort Worth
	Army	STARBASE Fort Johnson	UT	Air Force	STARBASE Utah
MA	Air Force	STARBASE Hanscom	VA	Army National Guard	Winchester STARBASE Academy
	Air National Guard	STARBASE Alpena	VT	Air National Guard	STARBASE Vermont Rutland
MI	Air National Guard	STARBASE Battle Creek	VT	Air National Guard	STARBASE Vermont South Burlington
	Air National Guard	STARBASE One	WI	Air National Guard	STARBASE Wisconsin
	Air National Guard	STARBASE Minnesota St. Paul	WV	Air National Guard	STARBASE Marlinton
MN	Air National Guard	STARBASE Minnesota Duluth	WV	Air National Guard	West Virginia STARBASE Charleston
	Air National Guard	STARBASE Minnesota Duluth	WY	Air National Guard	Wyoming STARBASE Academy



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Academies

- Five day, 25-hour curriculum - non-residential
- Five hours per day, approximately 9:00 am to 2:00 pm
- School year: Extended over five consecutive weeks and teachers enroll the entire classroom – other option would be Monday – Friday
- Summer: 25-hour curriculum, Monday – Friday and Parents/guardians enroll individual students
- STARBASE provides all materials
- Schools and/or parents provide a bag lunch/drink and transportation to and from facility





STARBASE Places Emphasis on:

- Understanding Scientific Concepts
 - Developing abilities of inquiry
 - Integrating all aspects of science
 - Multiple process skills
 - Management of information
 - Troubleshooting systems and applications
 - Understanding connections
 - Asking questions and defining problems
 - Construction explanations
 - Designing solutions
 - Implementing designs
 - Communicating
 - Applying metric measurement
 - Analyzing data – statistical methods
 - Date, tables, and graphs
 - Understanding equivalent numbers
 - Cartesian Coordinates Systems in navigation
 - Using estimations
- And many more topics





Curriculum Subjects

- **Science:**
 - Motion & Force
 - Science Fundamentals
 - Characteristics of Properties
 - Science Explorations
- **Technology:**
 - Applying Technology
- **Engineering:**
 - Engineering Design Process
 - 3D Computer Aided Design
- **Mathematics:**
 - Number & Number Relationships
 - Measurement
 - Geometry
 - Data Analysis
- **STEM Careers:**
 - STEM Careers
 - Personal Investigations





Sample of Curriculum Lessons

- Building Blocks of Matter
- Energy Explorations
- 3D PTC CREO 4.0
- Physics
- Chemistry
- Buoyancy & Solutions
- Rocketry & Newton
- Circuitry
- GPS
- Coding
- Robotics
- Simulations
- Spheros'
- Atmospheric Ratios
- Measurement
- Geometry
- PTC Onshape
- Fluids
- Data Analysis

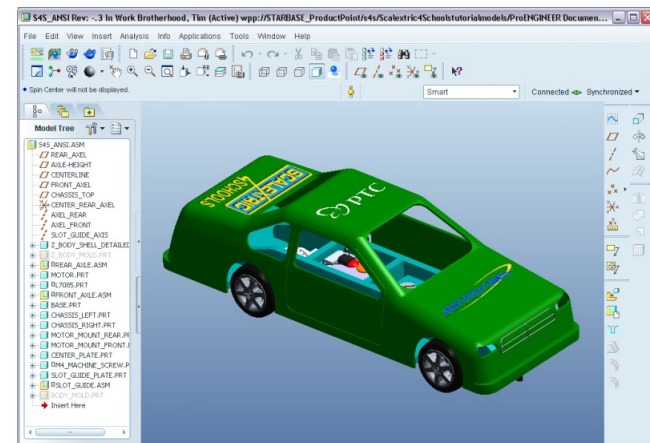


Over 90 lesson plans



STARBASE 2.0

- After school mentoring initiative (middle school levels).
- Meetings conducted at school. Meetings are weekly or bi-monthly with a STEM Coach.
- STARBASE helps to provide STEM Coaches for a school, coordinates STEM Coach training, and develops STEM activities.
- Each sites decides their own STEM activities.
- One activity was where students design, make and race their own slot cars using PTC Creo 3D CAD and Product Point software, budgeting, marketing, shipping, and logistics and manufacturing.





Program Efficacy

- 35% gain in knowledge (nationwide pre/post test comparison)
- Attitudes of participants shift dramatically toward the positive
- Youth leave with a sense of empowerment



“One student ... wanted to come so badly that his entire family chose to stay in Detroit rather than vacation in Mexico....” – Teacher

“I have noticed less struggle getting my child up and ready for school on days he attends DoD STARBASE.” – Parent

“I liked... learning things that I thought I wouldn’t ever learn in my life.” – Student

“The strength at DoD STARBASE is definitely teamwork.” –Teacher

“There is a young man in my [class] who comes from... a VERY ROUGH school. This has been life changing for him. To see that school and learning can be a safe and enjoyable experience.” – Teacher

“STARBASE was the best trip ever in my whole life. I will find a way back!!!!” – Student



FY 23 STARBASE Demographics

FY2023 Student Participants – (Basic Academies Only)	94,425
<u>Military or at-risk category</u>	
Military Affiliated	5,533
Low-Income	58,293
Disabilities	12,981
ELL/ESL	12,310
<u>Ethnicity Information</u>	
Hispanic /Latino	24,343
Not Hispanic /Latino	70,082
<u>Race Information - Not Hispanic/Latino Students</u>	
American Indian or Alaskan Native	2,009
Asian	3,520
Black or African American	15,109
Native Hawaiian or other Pacific Islander	3,520
White	42,439
More Than One Race	4,747
Not Reported or Chose Not to Identify	919



Program Impacts are published in the DoD STARBASE Annual Report (formerly a required report to Congress). The report includes the following elements:

Executive Summary, Program Overview, Program Elements, Program Oversight, Fiscal Analysis, Student Assessment (knowledge and attitude), Participating Teacher Survey, STARBASE Advanced Program elements, Letters of support, etc.

The electronic version of the report is posted on the DoD STARBASE website. <https://dodstarbase.org/resources/>

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Learn more about all Civil Military Programs:

<https://youtu.be/TMGuYPCivrg>