

"STARBASE IS A TERRIFIC PROGRAM FOR OUR NAVY AND FOR THE COMMUNITIES IN WHICH WE SERVE. THE PROGRAM HIGHLIGHTS MANY OF THE ACTIVITIES WE DO EVERY DAY IN THE NAVY IN A WAY THAT GETS STUDENTS EXCITED ABOUT MATH, SCIENCE, AND GOAL-SETTING."

— ADMIRAL GARY ROUGHEAD,
CHIEF OF NAVAL OPERATIONS



ASSISTANT SECRETARY OF DEFENSE
1500 DEFENSE PENTAGON
WASHINGTON, DC 20301-1500

RESERVE AFFAIRS

FORWARD from the Assistant Secretary of Defense for Reserve Affairs

The DoD STARBASE Program continues to be a valued and relevant DoD youth outreach program in local communities. It is designed to increase the student's interest in science, technology, engineering and mathematics (STEM) and will help build and enlarge the talent pool of potential workers needed to support the DoD workforce consisting of civilian and military personnel. In FY 2010, the DoD STARBASE Program operated at 60 locations in 34 states, the District of Columbia and Puerto Rico. Military commanders (Active, Guard and Reserve) collaborated with 1,086 schools from 387 school districts, serving approximately 64,000 students. Since 1993 more than 609,000 students have participated in the program.

The 2010 DoD STARBASE Report highlights the changes to the curriculum to continue to meet the Department's expectations. The report further discusses the linkages established to expand and strengthen the relationships between the military commands, public schools, and non-governmental organizations. These successful relationships allow the program to effectively collaborate and provide a worthwhile experience for the participating students. Reaching out and tearing down walls has advanced the culture of educating and developing our nation's youth in both the military and civilian communities.

In addition to its challenging STEM curriculum, the program is exposing students to positive role models within the military services. This facet of DoD STARBASE, and the support it receives from senior military leadership, are key to student success. Comments within this report from Admiral Gary Roughead, Chief of Naval Operations, Brigadier General Martin Whelan, Director, Nuclear Support Directorate, Defense Threat Reduction Agency, and Brigadier General John Walsh, Adjutant General of Montana, provide insights into the value of the program. Also in the report are observations from Michael M. Dunn, President and Chief Executive Officer of the Air Force Association and Dr. Chris Oram, Superintendent of the National School District, National City, CA. They provide an industry and education perspective of the DoD STARBASE Program, explaining why they are strong supporters of the program.

The DoD STARBASE Program integrates DoD into the surrounding communities and enhances the DoD influence in those communities. It also allows DoD to develop shared conditions with the community that will provide valuable educational opportunities to students. The DoD STARBASE Program leverages community resources and is a productive investment in the future of our youth.

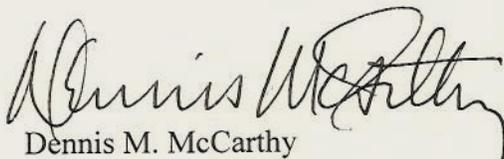

Dennis M. McCarthy



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TODAY'S AMERICAN YOUTH ARE FULL OF CURIOSITY, EXCITEMENT AND TALENT. THEY HAVE EXTRAORDINARY OPPORTUNITIES AVAILABLE TODAY THAT WERE NOT AFFORDED TO THOSE WHO CAME BEFORE, BUT IN ORDER TO TAKE FULL ADVANTAGE OF THOSE OPPORTUNITIES, THEY MUST HAVE A STRONG SCIENTIFIC AND MATHEMATICAL ACADEMIC FOUNDATION. STARBASE HELPS OUR YOUTH BUILD THAT FOUNDATION.

A Letter from ADM GARY ROUGHEAD, USN, Chief of Naval Operations

A unique educational initiative, the STARBASE program enables students to explore the workings of the world around them, while building on their interests and abilities to prepare them for life and learning in the information age. To be successful in our technologically advanced world, America's students must develop strong reading, writing, and mathematical skills. They must be fluent in the use of information technologies, and in the application of problem-solving skills to overcome complex challenges.

STARBASE academies focus on elementary students, primarily fifth graders, and motivate them to explore science, technology, engineering and math (STEM). The academies build knowledge and self-esteem, which in turn helps them become successful, productive citizens and future leaders.

Naval Education and Training Command manages and operates the STARBASE academies located at naval facilities. Termed STARBASE-Atlantis, the Navy's 15 academies build on the legacy of the first activity opened at Naval Air Station Pensacola, Florida, in September 1994. The academics fully embrace the vision of the STARBASE program, giving students the opportunity to come aboard Navy facilities to see, learn and grow. Today there are 60 STARBASE academies where staff members inspire more than 65,000 students annually.

STARBASE participants study the physics of flight, computer-assisted design, naval ships and submarines, advances in unmanned systems, and the art of the possible in space. The STARBASE curriculum meets or exceeds national standards in STEM education, and exposes students from diverse backgrounds to a unique, exciting learning environment. The classes show students the relevance of a STEM education, and motivate them through hands-on discovery and exploration to consider fields of learning they might not have been exposed to previously.

As the keynote speaker for the 2010 Florida A&M University commissioning ceremony in Tallahassee, Florida, I had the welcome opportunity to meet with a young man who attended the STARBASE-Atlantis academy at NAS Pensacola as a fifth grader. Today, Midshipman Westin M. Giles is pursuing his dream of excellence and leadership in the Navy, while earning a degree in graphic design through a Naval Reserve Officer Training Corps scholarship.

I see the education and positive mentoring provided through the STARBASE program as a way to challenge our youth to reach their extraordinary potential. Regardless of whether a young STARBASE participant considers military service as an option in the future, educational programs like this one help empower young Americans to reach new heights academically in the STEM fields, building expertise the nation will need more of going forward.

I have witnessed the changing nature of information – how we gather it, how we process it, how we exchange it and how we use it in naval operations and, more fundamentally, in our daily lives. As the STARBASE program continues to grow, I am confident it will strengthen our young men and women, challenge them to think creatively, and shape them into the nation's future innovators. Because of the foundation laid by STARBASE, generations of young Americans can pursue their dreams and will achieve more for our common future.





A DoD STARBASE GRADUATE PROFILE



Westin Marele Giles heard about the great experiences with the hands-on science and technology that his friends had at DoD STARBASE-Atlantis in Pensacola, Fla. Since he did not have a chance to participate in the program at school, he attended a 2003 open enrollment summer academy. Looking back on the experience, Westin realized that DoD STARBASE not only nourished his love for science, technology, and math, but it also inspired him to pursue a career in the Navy. He describes the academy as “setting me on a path for life-long experiences.”

Throughout his middle school years, Westin remembered the hands-on science experiments, and the building and launching of his own rocket. He dreamed of flying helicopters as a navy pilot. In high school, he had a chance to begin to act on his dreams. He joined the Escambia High School Navy Junior Reserve Officer Training Corp as a freshman and served throughout high school. He was promoted to the level of Ensign and held the staff position of Supply Officer. He selected his academic courses carefully, enrolling in math and science courses, including advanced placement math, honors anatomy and physiology, and college algebra that would prepare him for college.

In 2009 he was awarded a National NROTC scholarship to attend Florida Agricultural and Mechanical University. During his first commissioning ceremony, he met the Navy’s Chief of Naval Operations, Admiral Gary Roughead, who inspired and encouraged him. Following the completion of his first year of college, he participated in Career Orientation and Midshipman Training, an active duty summer program for midshipman. Midshipman Giles reported, “I enjoyed some first-in-my-lifetime experiences, such as Marine Week, the midnight rides on the surface ships, and the ‘angles and dangles’ underwater on the submarine. I also learned a lot about the structure of the U.S. Navy and Marine Corps and how they benefit each other through a real-life perspective.”

He will continue to make his STARBASE dreams a reality in college as he works to earn his commission as a Naval Officer and then to attend flight school where his goal is to fly helicopters. He plans to serve his country proudly until he has given his all to his Navy career. Then there will be one more dream to fulfill, a second career in graphic arts – possibly designing the helicopters of the future.





THE DOD STARBASE PROGRAM IS AN EXCITING, HANDS-ON, APPROACH TO INTRODUCING YOUNG ENERGETIC STUDENTS TO THE POSSIBILITIES OF DISCOVERY THROUGH ENRICHMENT OF SCIENCE, TECHNOLOGY, ENGINEERING AND MATH SKILLS. I HAVE BEEN LUCKY ENOUGH TO BE INVOLVED WITH STARBASE SINCE ITS EARLY INCEPTION AND HAVE WATCHED THE PROGRAM GROW FROM AN IDEA TO CATALYST OF EXPLORATION.

A Letter from

BRIG GEN MARTIN WHELAN, USAF

*Director, Nuclear Support Directorate,
Defense Threat Reduction Agency*

The DoD STARBASE program is an exciting, hands-on approach to introducing young energetic students to the possibilities of discovery through enrichment of science, technology, engineering and math skills. I have been lucky enough to be involved with STARBASE since its early inception and have watched the program grow from an idea to a catalyst of exploration.

STARBASE opens the student's minds to the possibilities of space, aviation and science as fields of study that are easily within their grasp. STARBASE is the seed that will grow to yield our next crop of engineers, scientists and explorers, so it is critical for DoD to support and sustain this community partnership.

As a child I grew up on a military base and was exposed to the excitement of aviation and space travel. I remember where I was when Astronaut Neil Armstrong stepped onto the moon, when John Young and Bob Crippen flew the first space shuttle into space; and when Dick Rutan and Jeana Yeager flew non-stop around the world without refueling. This same spirit of adventure, discovery and the support for learning are embodied in the hands-on approach we see in STARBASE. The partnership between the military and the communities served by STARBASE have the added benefit of teaching our children about the great opportunities they can have working in these exciting fields and serving our great nation.

My father was an airman and an educator who was an early mentor to the STARBASE program. My family has taken up his cause and has been involved in STARBASE programs in four states. I have personally worked with the STARBASE students at Minot Air Force Base in North Dakota and have been enriched by their energy to learn and their infectious desire to conquer new challenges in aviation and space.

My personal experiences as an engineer on the space shuttle program, a satellite engineer, and an Air Force officer have all been enabled because of my early exposure to the adventures of science. As my son enters the work force as an engineer on space launch vehicles, I am encouraged to see the investments we have made in our future scientists and engineers will keep our nation in the forefront of discovery. The DoD STARBASE program serves a vital role of introducing students to the possibilities of science and continue to attract new talent to our leadership positions.

My special thanks to all who have contributed to this great experiment called STARBASE and I encourage you to continue to grow this exciting program.



A Letter from

BG JOHN E. WALSH, USA

Adjutant General of the Montana National Guard

Mastering math and science is more important today than ever before. There is truly a clear need for our youth to achieve success in both math and science in order to succeed in their education and to be successful in their future careers. Recent studies indicate that our nation's youth are falling short in math and science and that this shortfall has the potential for producing negative effects on our economy, our future workforce, and our nation's security. Our nation depends on a strong, competitive workforce and a citizenry equipped to function in a complex world. Studies also indicate that students who take rigorous mathematics and science courses are much more likely to go to college than those who do not. Those students who graduate from high school with a strong grasp of science and mathematics have an advantage in academics in higher education as well as in the job market. We need to continue to develop and incorporate programs into our children's curriculum at an early age that enhances our young students' enjoyment for math and science. There is one program that is addressing this crisis head-on: the DoD STARBASE program.

The DoD STARBASE program is unique in that it provides students with a hands-on experiential approach to learning with the guidance of trained teachers and experienced military personnel who make learning fun, practical, and relevant. The purpose of the DoD STARBASE program is to change the attitude and increase the knowledge and skills of our youth in the areas of math, science, and technology. The program is based on partnerships between our military, our school districts and our local communities. Studies indicate that the fifth grade is a critical point in mathematics and science education. Achievement at an early stage in our children's education clears the way for them to take rigorous high school mathematics and science courses which are keys to college entrance and success in the labor force. However, by the time most students reach the eighth and ninth grades, they lag so far behind in the classes they take that getting on the road to college is difficult. And again, the DoD STARBASE program is addressing this crisis head on.

The STARBASE program is providing our young students with an environment that encourages self-esteem, personal growth, individual achievement, and strong character by interacting with strong role models. The feedback that I receive from students, teachers and parents has been extremely positive in their views of the program's success and what the program has done to change the attitude of our youth about math and science. The program is highly rated and validated by its popularity, community acceptance and support. As a host of the STARBASE program in Montana, I am a strong advocate of the program as the result of its effectiveness and the impact the program has had in achieving my community relations objectives. The soldiers and airmen who participate in the program have seen firsthand how the program has promoted a positive view of the military in our local community. The program is providing a mechanism for involving community leaders, teachers, and parents along with military personnel on our local military installations.

STARBASE is putting the fun back into learning! Our young students are discovering solutions to real scientific problems and are experiencing math and technology as essential tools in the process. They experiment with rockets, gliders, wind tunnels, vacuum pumps, and many other new and innovative educational tools. Our students have the opportunity to explore aircraft, map the surface of Mars, program rovers and perform missions in space. They conduct computer simulations and use engineer software to design and manufacture aerospace equipment. I wish that I would have had a program such as STARBASE to encourage my interest in math and science when I was growing up!

Long after students complete the program, I receive comments and thank-you cards from students and parents about the STARBASE program. Students fondly recall many of their experiences in the program. Recently, I received a letter from a parent referring to how her son was able to assist his younger sister with a school project based on his STARBASE experience. Teachers often tell me how their students' are able to recall their time at STARBASE and how they were able to apply what they learned in the program to the new concepts they are being taught. I honestly believe that the DoD STARBASE program is having a positive impact on the lives of our young students that have the opportunity to attend the program. My only disappointment with the DoD STARBASE program is that we are not able to touch all fifth grade students throughout the United States and territories.



A Letter from
CHRIS ORAM, Ed.D.
Superintendent of the National School District

I am writing this letter in support of the STARBASE-Atlantis program. I am currently the superintendent of the National School District in National City, Calif. I have been a teacher and administrator in our District for more than 30 years. In my many years in the district I would be hard-pressed to think of a more valuable and effective program than STARBASE-Atlantis.

We have been working with the STARBASE program for the past 10 years. During that time, this experience has become one of the highlights of the year for our fifth graders. This program has provided our students access to an exciting hands-on learning experience that supports the development of science and math concepts in an extremely stimulating and motivating environment. The opportunity to go on the naval base and interact with military personnel is an experience that our students never forget.

We have been extremely fortunate to have an extended relationship with the STARBASE program in our county. The STARBASE staff has always been extremely responsive and of the highest quality. We are facing extremely difficult economic conditions in our district, but we always will find a way to support our students' participation in this outstanding program.

Thank you for continuing to support the STARBASE program. This is the kind of program that not only supports our students' love of learning, but also serves as an outstanding outreach program for our military to the community that it serves. I hope that the Department of Defense will continue to make the STARBASE program a priority in the future.





I BELIEVE THERE IS AN URGENT NEED TO CULTIVATE STUDENT ACHIEVEMENT IN STEM CURRICULUM AT EVERY LEVEL OF EDUCATION. WE MUST CHALLENGE, EXCITE, AND INSPIRE STUDENTS WHO WILL BECOME THE ENGINEERS AND DESIGNERS SUSTAINING OUR INFORMATION-AGE ECONOMY AND FUTURE SECURITY APPARATUS.

A Letter from

MICHAEL M. DUNN

President and CEO, Air Force Association

As Head of the Air Force Association, I could not be more enthusiastic about the Department of Defense's STARBASE program.

In partnering with local schools, STARBASE is an afterschool mentoring program that combines science, technology, engineering and mathematics (STEM) curriculum with activities designed to cultivate creativity and problem-solving skills in middle school students, and soon, high school students.

I believe there is an urgent need to cultivate student achievement in STEM curriculum at every level of education. We must challenge, excite, and inspire students who will become the engineers and designers sustaining our information-age economy and future security apparatus. STARBASE provides DoD the opportunity to spark student interest in STEM subjects at an early enough point in their education to create a long-term desire to pursue these skills in their lives.

I have visited several STARBASES. I wish everyone could do so. To see the excitement, vibrance and learning take place is awe-inspiring. In one experiment the elementary students actually grasped Bernoulli's principle—something that is usually first taught in high school.

STARBASE is one of the primary tools DoD uses to contribute to the ongoing, national effort intended to close the serious achievement gap the U.S. has with competing nations, and to perpetuate our long-term security and prosperity.

Clearly, this is an important national security issue as well as a great opportunity to expose students to military men and women who are valuable role models. As military members work with local schools to inspire and develop students, they provide a valuable relationship at a critical point in students' lives as they transition from elementary to middle school and from middle school to high school.

The Air Force Association believes that a focus on STEM education is crucial for the future of America's competitive industrial base as it relates to a strong national defense. We applaud the efforts of the STARBASE program.



An Issue of NATIONAL IMPORTANCE

“THE REASON MY ADMINISTRATION HAS PUT SUCH A FOCUS ON MATH AND SCIENCE EDUCATION – BECAUSE DESPITE THE IMPORTANCE OF INSPIRING AND EDUCATING OUR CHILDREN IN THESE FIELDS, IN RECENT YEARS THE FACT IS WE’VE BEEN OUTPACED BY A LOT OF OUR COMPETITORS. ONE ASSESSMENT SHOWS THAT AMERICAN 15-YEAR-OLDS RANKED 21ST IN SCIENCE AND 25TH IN MATH WHEN COMPARED TO THEIR PEERS AROUND THE WORLD.... IT IS UNACCEPTABLE TO ME, AND I KNOW IT’S UNACCEPTABLE TO YOU, FOR US TO BE RANKED ON AVERAGE AS 21ST OR 25TH – NOT WITH SO MUCH AT STAKE. WE DON’T PLAY FOR SECOND PLACE HERE IN AMERICA. WE CERTAINLY DON’T PLAY FOR 25TH.”

PRESIDENT BARACK OBAMA
White House Science Fair, October 18, 2010



As foreign nations expand their capabilities, the need for diverse approaches and yet-to-be realized innovative capacities becomes apparent. Our national defense and security depends upon a diverse pool of world-class STEM talent. DoD STARBASE is an innovative, academically challenging, and exciting program that encourages students' interest in the fields of science, technology, engineering and math (STEM).

The director for Defense Research and Engineering, Zachary J. Leminos, summed up DoD's interest in STEM education when he said, "A STEM-literate citizenry is critical if the nation is to compete more effectively in the global marketplace. The production of foreign STEM talent is growing exponentially, and U.S. institutions of higher education are facing greater competition for talent. In addition, global access to leading technology allows competitors to field capabilities in dramatically shorter time frames than in the past. Those challenges affect U.S. security interest, domestically and internationally, and they affect DoD's ability to optimize discovery and innovation."¹

Troubling signs that our students are falling behind other countries in STEM emerged in national and international tests. In the 2006 Programme for International Student Assessment (PISA) comparison, American students ranked 21st out of 30 countries in science literacy among students from developed countries and 25th out of 30 in math literacy. On the 2009 National Assessment of Educational Progress, widely considered to be the nation's report card, fourth graders showed no signs of progress for the first time since 1990 and eighth graders tallied only modest evidence of progress. American students' lack of interest in math and science continues at the graduate-level, too, where less than 10 percent of graduate degrees are conferred in engineering, mathematics, and computer science. This places our country 20th internationally in terms of the share of graduate degrees in these critical areas.² The problem is compounded by the fact that 40 percent of U.S. doctoral students in engineering, mathematics, and computer science are foreign nationals. In several fields it is more than half.³ This is particularly troubling for DoD as it requires security clearances for many employees in the STEM fields.

At the same time that U.S. students are losing interest in STEM fields, foreign nations are expanding their educational capabilities. For instance, in 1985, China granted about the same number of first engineering degrees as the United States, but granted four times as many in 2005.⁴ In addition, a comparison of college graduation rates for all fields among members of the Organization for Economic Co-operation and Development

(OECD) showed that as graduation rates increased in other countries, the United States fell from first place in 1995 to 14th in 2007.⁵

Gen. Victor E. Renuart, USAF(Retired), former Commander, North American Aerospace Defense Command and U.S. Northern Command, wrote the following:

"If we do not have a professional force, educated by quality programs in math, science and engineering, we will not be up to the challenge of tomorrow. Officers and enlisted members of our Armed Forces will require an ability to solve complex problems with limited information in complex situations and our school systems must prepare these young men and women for that environment. The partnership among local military installations, school districts, and the surrounding communities created by participation in the DoD STARBASE Program ensures all are valued and equal stakeholders in the education of our children and that we are all accountable for the product: well-educated, articulate young men and women who are ready to take on the environment they will see in their future."⁶

This partnership assures a continuum of quality learning opportunities. The DoD STARBASE program reaches young students at a critical point in their educational careers. The overwhelming numbers of students served through DoD STARBASE are in fifth grade, and represent groups that are underrepresented in STEM careers such as minorities and females. Fifth grade is regarded as a critical juncture when students begin to lose interest in STEM subjects. DoD STARBASE captures students' interest in STEM through a dynamic hands-on curriculum that challenges the students' intellect and captures their imagination.

This year, DoD STARBASE broadened its outreach by piloting a structured, academically rich mentoring program for middle school students at five sites called DoD STARBASE 2.0. Volunteers from the military, educational and STEM communities worked closely with students as they explored STEM careers and completed stimulating STEM projects. Many students need role models to visualize themselves in STEM careers. Both of these programs, DoD STARBASE and DoD STARBASE 2.0 foster student interest in STEM fields, reduce the risk of individuals dropping out of the STEM track, and inspire future leaders.

Through these collaborative and focused programs, DoD is investing in the country's future by building STEM skills, interests and abilities in youth.

¹ Department of Defense, STEM Education and Outreach Strategic Plan, "Message from the Director," 2010.

² U.S. Department of Education, National Center for Education Statistics, Higher Education.

³ "A Commitment to America's Future: Responding to a Crisis in Mathematics and Science Education," January 2005; National Science Foundation, Science & Engineering Indicators, 2004.

⁴ Department of Defense, STEM Education and Outreach Strategic Plan 2010, p. 2.

⁵ Ibid.

⁶ Gen. Victor E. Renuart, "A General's Perspective," 2008 DoD STARBASE Annual Report, p. 8.





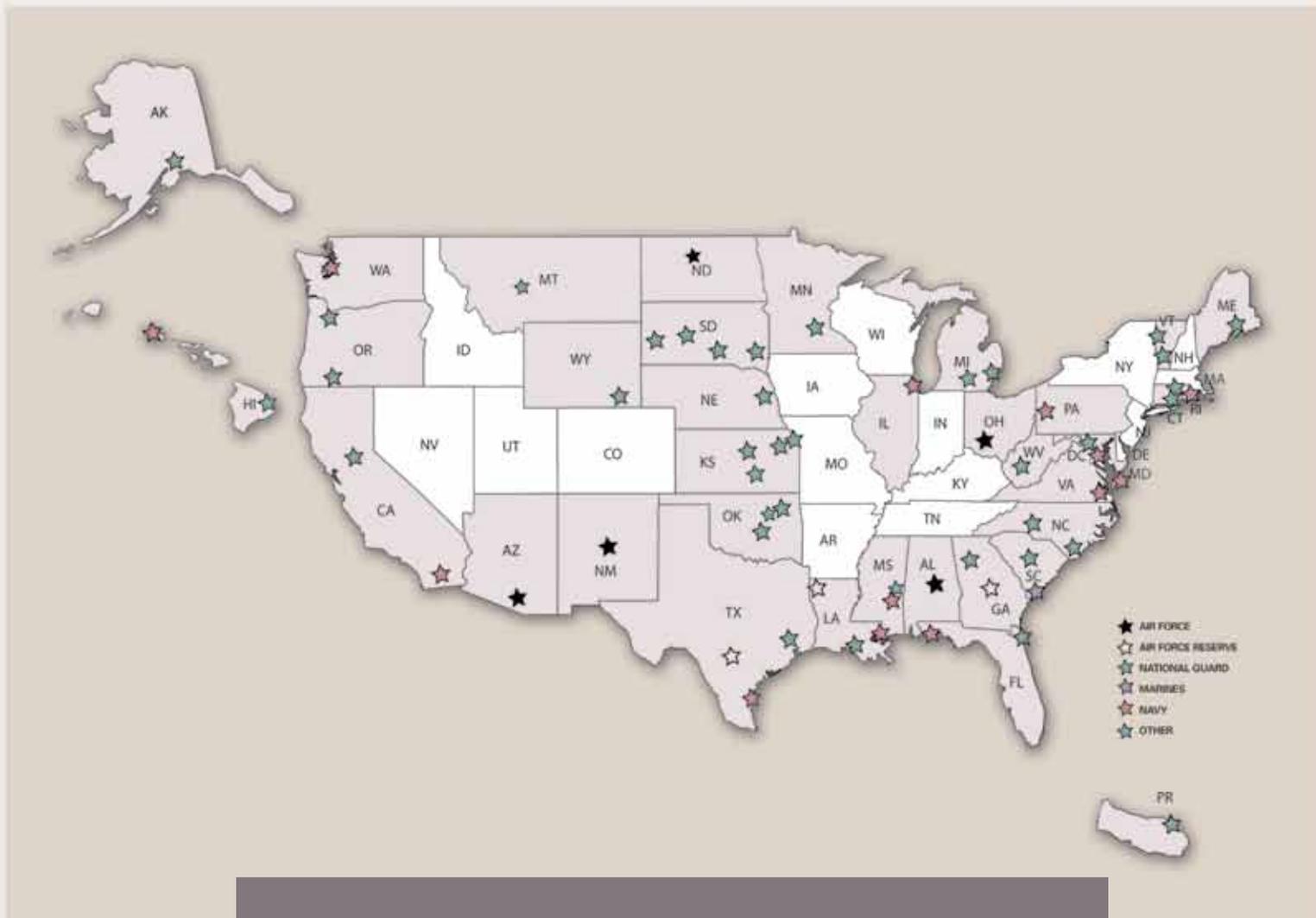
Vision and Mission Statements
of DoD STARBASE

VISION STATEMENT

TO RAISE THE INTEREST AND IMPROVE THE KNOWLEDGE AND SKILLS OF AT-RISK YOUTH IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS, 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 20-25 HOURS OF AN EXEMPLARY INSTRUCTION, USING A COMMON CORE CURRICULUM THAT MEET OR EXCEED THE NATIONAL STANDARDS. WE WILL NURTURE A WINNING NETWORK OF COLLABORATORS AND BUILD MUTUAL LOYALTY.



DoD STARBASE AT A GLANCE

- 60 DoD STARBASE locations in 34 states plus the District of Columbia and Puerto Rico
- 4 outreach programs to American Indians in MS, OK, and SD
- Number of students since 1993 609,380
- Number of students served in 2010 64,380
- Cost of program \$17,937,000
- Average cost per academy \$320,303.57
- Average cost per student \$278.61

A History of CONTINUED EXCELLENCE

DoD STARBASE originated at Selfridge Air National Guard Base (ANGB) as Project STARS. The curriculum, designed by Barbara Koscak, engaged students in science, technology and math through the use of hands-on activities based on the physics of flight. Under the guidance of Brig. Gen. David Arendts, 127th Wing Commander at Selfridge ANGB, students were invited to the base to witness the application of scientific concepts to the “real world”. National Guard personnel demonstrated the use of science, math, engineering and technology in their fields of expertise and served as role models.

In 1993, the U.S. Congress appropriated funds for DoD STARBASE and expanded the program to seven states. Today, it has grown to 60 locations in 34 states, the District of Columbia and Puerto Rico.

Over the years, the program’s inquiry-based curriculum was refined and expanded to include computer-assisted technology and scientific frontiers such as nanotechnology. The original goals of maximum student participation through challenging and exciting activities that facilitate learning led to the development of curriculum enhancements.

2010 was a year of significant change for DoD STARBASE. The curriculum committee created a standardized, cutting-edge, researched based curriculum that met national standards. The standardized curriculum will ensure a more accurate assessment of curriculum outcomes. In addition, five sites piloted an after-school mentoring program, STARBASE 2.0, to promote continued interest in STEM during middle school years.



The DoD STARBASE CURRICULUM



In the fall of 2010, DoD STARBASE academies across the United States opened their doors with a newly standardized and enriched curriculum. The new curriculum is “more researched-based, more cutting-edge and more valid,” according to curriculum committee member Gail Whittemore-Smith, who is also the director of the Texas STARBASE site.

The curriculum continues to be inquiry-based and to hold the students’ interest through challenging hands-on, mind-on activities. The activities, clearly specified in lesson plans, adhere to the standards, objectives and approved activities designated by the curriculum committee for each of the six content areas. This ensures that every child who enters a DoD STARBASE academy receives the platinum standard in STEM education.

The curriculum still includes favorite investigations such as Eggbert, Rocketry and Bernoulli’s Principle Activities. In the Eggbert activity, students design restraint systems to keep an egg named Eggbert from cracking. During the Rocketry activity, they build and launch a rocket, which provides them with an excellent opportunity to investigate and observe all of Newton’s three laws in operation. Bernoulli’s Principle Activities allow students to investigate how the motion of a fluid affects pressure. These old favorites have been updated to align with the national standards for teaching the Engineering Design Process, Newton’s Three Laws of Motion, and Fluid Mechanics and Aerodynamics. The curriculum is rigorous, innovative and designed to prepare students for the challenges

of tomorrow. Engineering components, such as designing space modules using professional engineering software and printing student designs on a 3-D computer, continue to be highlights of the DoD STARBASE experience. Innovations in technology are introduced using nanotechnology and the exploration of nano-engineered materials, as well as reading satellite maps provided by the National Geospatial-Intelligence Agency during the Top Secret Mission activity. Content on substance abuse awareness and teamwork is no longer required as greater emphasis is placed on the STEM subjects.

The students are engaged and involved in the curriculum. They conduct scientific experiments, role-play, and are involved in simulations of real-world activities. Through hands-on, mind-on activities, they learn concepts that exceed expectations in a traditional classroom setting. Vocabularies expand as students’ knowledge grows. Words such as cartography, exothermic reaction, meniscus, quadrant, and potential energy are examples of the extensive and standardized vocabulary used at a DoD STARBASE academy.

“At STARBASE, we want students to have a premier experience. We provide them with opportunities that are not and usually cannot be provided in a traditional classroom. STARBASE students will use a 3-D computer to print their designs, weigh objects on a triple-beam balance and use engineering software to create their own designs,” said the program’s founder Barbara Koscak.

The new curriculum is a success in the eyes of James Dettman, a teacher in Rapid City, South Dakota. He expressed his appreciation of the program saying that without the DoD STARBASE program, “I would be stuck using a text book or guided reading materials. . . I would like to do more experiments in the classroom; however, time and resources do not always permit that luxury. Research shows that when students get to ‘do’ or ‘demonstrate’ their learning, their retention rate increases dramatically.”

THE CURRICULUM CONTINUES TO BE INQUIRY-BASED AND TO HOLD THE STUDENTS' INTEREST THROUGH CHALLENGING HANDS-ON, MIND-ON ACTIVITIES. THE ACTIVITIES, CLEARLY SPECIFIED IN LESSON PLANS, ADHERE TO THE STANDARDS, OBJECTIVES AND APPROVED ACTIVITIES DESIGNATED BY THE CURRICULUM COMMITTEE FOR EACH OF THE SIX CONTENT AREAS. THIS ENSURES THAT EVERY CHILD WHO ENTERS A DoD STARBASE ACADEMY RECEIVES THE PLATINUM STANDARD IN STEM EDUCATION.

DoD STARBASE CURRICULUM

Physics: 3.5 hours

- A. Newton's Three Laws of Motion
- B. Fluid Mechanics and Aerodynamics

Chemistry Sciences: 3.5 hours

- A. Building Blocks of Matter
- B. Physical and Chemical Changes
- C. Atmospheric Properties

Technology: 4.0 hours

- A. Innovations
- B. Navigation and Mapping

Engineering: 4.0 hours

- A. Engineering Design Process (EDP)
- B. 3-D Computer-Aided Design (3.0 hrs as mandated by OASD/RA)

Mathematics Operations & Applications: 2.0 hours

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

STEM Careers: 1.5 hours

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



DoD STARBASE 2.0 After-School Mentoring EXTENDING THE DOD STARBASE EXPERIENCE

Students graduate from a DoD STARBASE academy with a strong interest in STEM. To help nurture this interest, the Department of Defense created STARBASE 2.0, a structured after-school mentoring program for middle-school students that uses a relationship rich approach and stimulating STEM activities. Using the successful DoD STARBASE model, the mentoring program relies on collaboration between the local military installation, school districts, and surrounding communities.

The after-school mentoring program was piloted in FY 2010. During the pilot phase, the first 12 months were spent in program development, the creation of training materials, the training of program directors and mentor coordinators, and recruitment and training of mentors.⁷ In January 2010, five academies matched the students and mentors and launched the program.⁸ The intended outcome was to increase STEM interests and knowledge, school attachment, and career awareness.

Sherry Pawelko director of STARBASE Nebraska said, “Many kids grow up loving science and math, but sometimes along the way



they lose that passion,” “this program keeps kids thinking about those topics and offers them opportunities they might not otherwise have. The team mentoring component promotes positive life skills—

leadership, goal setting, self esteem, etc.—and provides youth experiences with mentors passionate about STEM.”

The academies recruited mentors from the military, academic, and civilian communities. Mentors included classroom teachers, college students, and retired and active-duty military. Julia Webster’s experiences as the mentoring program coordinator for STARBASE Oklahoma were typical of the four sites that successfully completed the program.⁹ She described this year as a good beginning. “We had 42 middle school scholars start the program and 39 of them stayed with the program through May.” Webster divided the scholars into three clubs—Curiosity, Spirit, and Opportunity—named after Mars Rovers. There were three to four adult mentors in each club and they met with their students twice a month.

Hamilton Middle School in Oklahoma hosted the mentoring program and provided volunteer mentors and classroom space. Webster reported that the school staff were enthusiastic about the program and frequently told her that DoD STARBASE 2.0 was “giving something to our students that we can’t.” She said that there is tremendous interest from other schools to expand the program, which they are planning to do. Six additional sites¹⁰ will add the mentoring program in FY ‘11.

A mentor from Georgia commented, “It’s great for kids to see the results of their hard work... STARBASE 2.0 helps them develop STEM interests and abilities they otherwise would not have known that they had.” Ninety-two percent of mentors completed the program and many will continue to mentor in the coming school year.

The best testament for the program came from a group of seventh-grade students at Hamilton Middle School who completed STARBASE 2.0 in the spring. The students, now eighth graders, contacted their assistant principal and requested that the program expand to include eighth graders—a wish that was granted! Thanks to STARBASE 2.0, these students are leaving their at-risk label behind them.

⁷ Program materials and training were developed by Dare Mighty Things in Portsmouth, New Hampshire.

⁸ The mentoring program was piloted at STARBASE Robins (Georgia), STARBASE Nebraska, Starbase Wright-Patterson (Ohio), STARBASE Oklahoma, and STARBASE South Dakota’s Project Nova 1.

⁹ The STARBASE NOVA 1 had internal and external problems and the program was discontinued.

¹⁰ STARBASE Kingsley in Klamath Falls Oregon, STARBASE South Dakota Rapid City, STARBASE Michigan Battle Creek, STARBASE North Dakota, STARBASE Montana and STARBASE-Atlantis San Diego.

STARBASE 2.0 CURRICULUM

Map It!

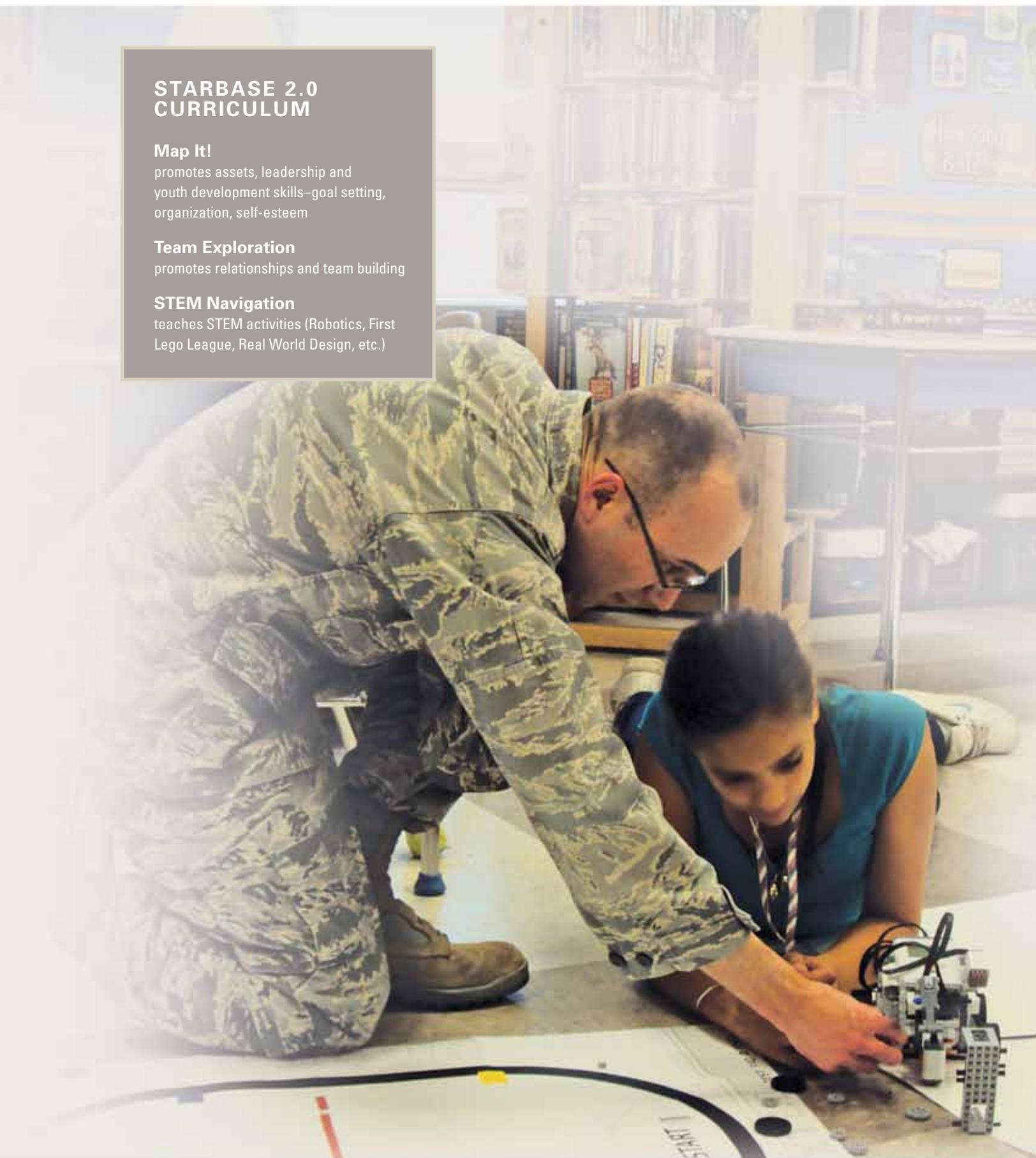
promotes assets, leadership and youth development skills—goal setting, organization, self-esteem

Team Exploration

promotes relationships and team building

STEM Navigation

teaches STEM activities (Robotics, First Lego League, Real World Design, etc.)



Collaborations EXPAND IN 2010

In order to inspire, develop, and attract a world-class STEM talent pool to develop innovative solutions for the nation's current and future challenges, DoD's STEM Education and Outreach strategic plan includes leveraging networks of collaborators, scientific bodies, and teaching groups to enhance STEM awareness.¹¹ DoD STARBASE currently collaborates with agencies and organizations such as the National Geospatial-Intelligence Agency, the Civil Air Patrol, the Arnold Air Society, the Air Force Association, and National Aeronautical Space Administration. The following stories are examples of how the collaborators share their passion, real-world applications of STEM and career knowledge with the students and teachers participating in the DoD STARBASE program.

THE NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

The relationship between National Geospatial-Intelligence Agency (NGA) and DoD STARBASE began in the spring of 2008 when NGA was seeking educational outreach opportunities that went beyond the work they were already doing with local schools in the Washington, D.C., Northern Virginia, and St. Louis, Mo. areas. Vice Adm. Robert B. Murrett was a driving force behind this endeavor. "It is a fundamental obligation of the leadership of NGA to develop and sustain programs that will ensure a robust, skilled, engaged, and diverse workforce to carry out the geospatial-intelligence mission," Vice Adm. Robert B. Murrett stated. NGA and DoD STARBASE are a perfect fit. DoD STARBASE is an established and successful



IN ORDER TO INSPIRE, DEVELOP, AND ATTRACT A WORLD-CLASS STEM TALENT POOL TO DEVELOP INNOVATIVE SOLUTIONS FOR THE NATION'S CURRENT AND FUTURE CHALLENGES, DOD'S STEM EDUCATION AND OUTREACH STRATEGIC PLAN INCLUDES LEVERAGING NETWORKS OF COLLABORATORS, SCIENTIFIC BODIES, AND TEACHING GROUPS TO ENHANCE STEM AWARENESS.

program that NGA believes could increase awareness and interest in geospatial-related sciences and the NGA mission. Rather than try to reach students one school at a time, NGA saw DoD STARBASE as a cost-effective way to reach tens of thousands of students.

NGA provided specially designed evasion charts that are used to teach DoD STARBASE students how to describe location and movement using common language and geometric vocabulary. One evasion chart, printed on weather proof Tyvek®, has a mini survival map of Hawaii on one side and a map of Washington, D.C., on the other. The maps are an integral component to the curriculum lesson on technology. After the lesson, the students take the evasion charts home and continue to explore and learn long after they leave DoD STARBASE.

NGA works with NJVC® in printing evasion charts for the U.S. military. NJVC® donates printing time and the ink for the DoD STARBASE charts and NGA donates the Tyvek® material and shipping costs. "This has been an incredibly cost-effective way for our organization to reach about 55,000 students during one school year. The feedback to date has been very positive, and with the curriculum that the STARBASE team developed for this second year, I know the students are going to love it!" remarked Barbara McGrath, deputy director of Congressional Affairs for NGA.

THE CIVIL AIR PATROL

The Civil Air Patrol (CAP) is a nonprofit, humanitarian organization incorporated by the U.S. Congress in 1946 as the Official Auxiliary of the United States Air Force. The three major missions of CAP are emergency services to provide search and rescue, disaster relief, and homeland security; youth development for ages 12 to 20; and nationwide promotion of aerospace as the foundation for

maintaining national security for the future. The CAP identified DoD STARBASE's quality program as aligned with CAP's objectives to perpetuate STEM curriculum and career options to the youth of America. In an effort to accomplish their common mission, CAP collaborates with DoD STARBASE to provide supplemental STEM programs and products to the academies and to the teachers



and students who attend the academies. The collaborative benefit to CAP is the increased public awareness of CAP opportunities available to educators for classroom enrichment programs, and to students for youth development and aerospace career exploration programs. In addition, DoD STARBASE is able to provide a benefit to CAP's Drug Demand Reduction effort by serving youth living near military bases with the drug-free message.

ARNOLD AIR SOCIETY

The Arnold Air Society (AAS) is a professional, honorary service organization advocating the support of aerospace power. Founded in 1947 to help train future Air Force leaders, the society focuses on high moral, physical, and mental attitudes. A strong emphasis is placed on service and providing opportunities for officer candidates to participate in campus and community service activities that demonstrate the close relationship between civilian and military institutions.¹²

Continued on page 22

¹¹ Department of Defense, 2010. STEM Education and Outreach Strategic Plan, p. 7.

¹² Arnold Air Society and Silver Wings. 2010. About the Arnold Air Society. Retrieved from <http://arnold-air.org/aas/>

The collaboration between STARBASE-Battle Creek and the Arnold Air Society began in 2009 when Cadet Colonel Donald Kinnee, AAS Area VI commander, contacted Bruce Medaugh, STARBASE-Battle Creek Director and Air Force Association Battle Creek chapter president, to discuss a possible joint community service project between the two organizations. These discussions led to the idea of AAS cadets volunteering at STARBASE-Battle Creek. This symbiotic relationship has benefited both organizations and all individuals involved.

STARBASE-Battle Creek appreciates the willingness of the AAS Cadets to mentor students in the classroom and the computer lab; the cadets even helped sharpen pencils and clean desks at the end of the day. Some cadets participated as guest speakers who shared what it took to become an AAS cadet or an Air Force officer. An added benefit to DoD STARBASE was a matrix, developed and published by the cadets, which outlined the AAS and Silver Wings¹³ squadrons and chapters that are located near DoD STARBASE academies. They also wrote a set of procedures to assist the 200-plus squadrons and chapters nationwide to make contact with DoD STARBASE academy leaders. This information provides opportunities for additional DoD STARBASE–Arnold Air Society and/or Silver Wings collaborations.

The cadets' DoD STARBASE experience also influenced the AAS and Silver Wings to select STEM as the theme for the Joint National Project for 2010-2011. As a result, the 4,000 members of AAS and Silver Wings, and more than 144 AFROTC detachments and 900 colleges and universities nationwide are, this year, focusing their combined community service efforts on encouraging school age students to accept the challenge of engaging in the study of science, technology, engineering and mathematics.

The cadets' interaction with DoD STARBASE instructors will assist them in learning to interact with professionals in non-military careers. Their personal ability to organize grew through their interaction with DoD. The final benefit for the cadets was the excitement they felt when they departed DoD STARBASE—the opportunity to “give back” to the community and share their interest in the subjects that are vital to this nation's future.

AIR FORCE ASSOCIATION

Michael Dunn, the president and chief executive officer of the Air Force Association (AFA), believes that there is an urgent need to cultivate unparalleled student achievement in science, technology, engineering, and mathematics curriculum at every level of education and that work must be done to make STEM careers a rewarding and attractive option. Since DoD STARBASE supports these objectives, there is a natural alliance between AFA and DoD STARBASE.

STARBASE Martinsburg in West Virginia has collaborated with their local AFA chapter since 2007. Through this relationship, the AFA introduced the Martinsburg academy staff to several schools to elicit their students' and staff's participation in the DoD STARBASE program. In one school, the interest in the DoD STARBASE curriculum is so strong that the parents and community members volunteer to transport the students to and from the facility across state lines.

The local chapter acts as a resource in STEM. “I could go on and on about how we here in Martinsburg benefit from this partnership. It truly is a blessing to our program,” said Sherra Triggs, the director of STARBASE Martinsburg.

STARBASE Wright-Patt collaborated with the Wright Memorial Chapter of the AFA to conduct two grant-writing workshops for 50 local educators on October 1 and 2, 2010. The AFA sponsors \$250 Educator Grants through their national program each year. Interested teachers came to the STARBASE computer lab with their general grant ideas and received submission assistance and advice from AFA volunteers that allowed them to complete the entire online process in only 2.5 hours. This grant application opportunity for teachers was enhanced when STARBASE Wright-Patt offered their computer lab for use in the workshop. Ohio has placed either 1st or 2nd in the country in the number of grants awarded through this national AFA program, and more than 80 percent of the recipients last year had attended the AFA/STARBASE grant-writing workshop.

¹³ While AAS and Silver Wings are separate organizations, they have highly complementary missions. The focus of the Arnold Air Society mission is to build strong officers for the United States Air Force. Silver Wings also focuses on leadership development, and both organizations work together to further their goals. AAS and Silver Wings. 2010. About Silver Wings. Retrieved from <http://arnold-air.org/sw/>.

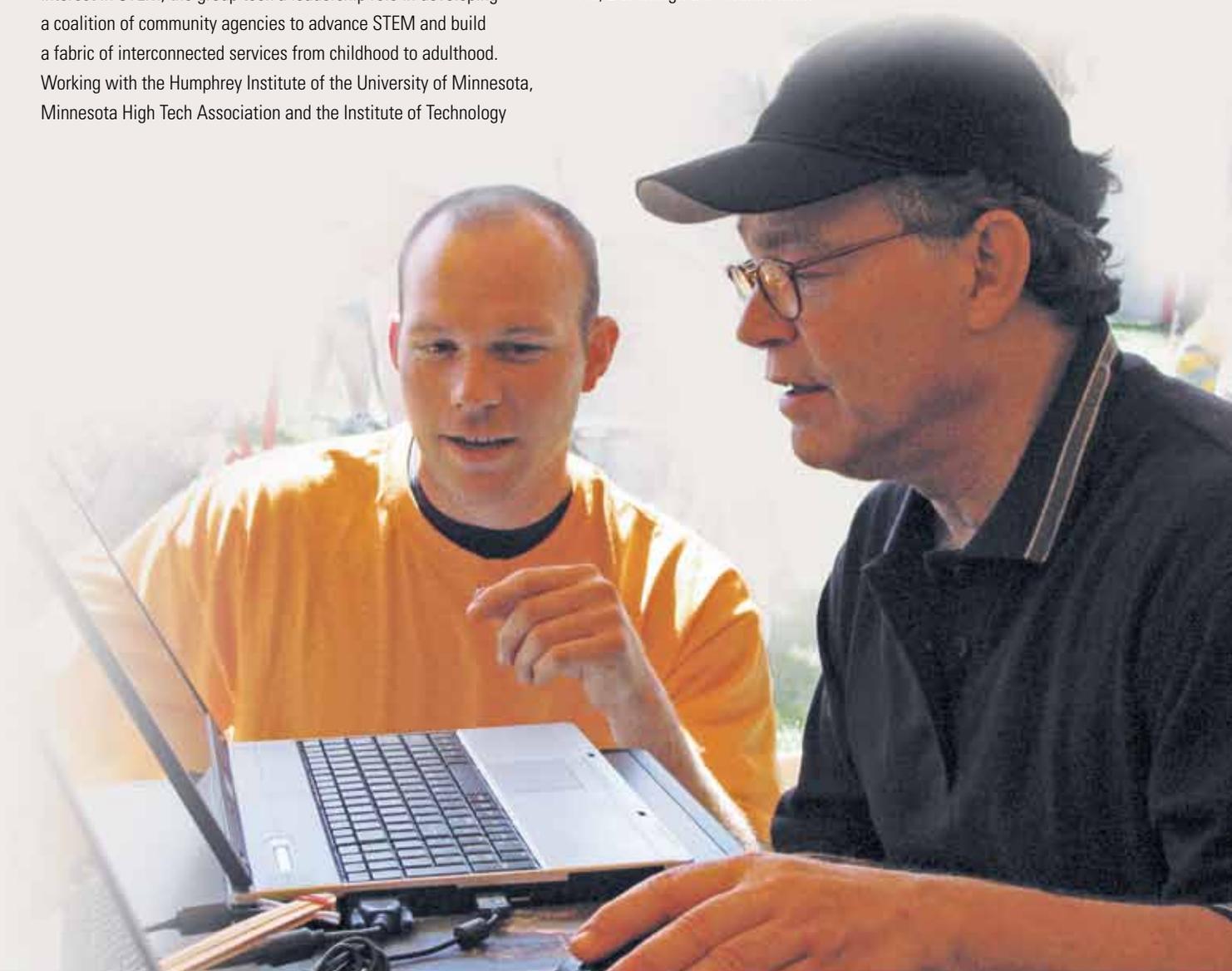
MINNESOTA BUILDS COMMUNITY CONSORTIUM

DoD leadership made a priority of expanding and strengthening relationships with collaborators to leverage resources. They continue to encourage programs to move forward and replicate the relationship established between STARBASE One at the Selfridge Air National Guard Base in Michigan, the Michigan National Guard, and the community.

In Minnesota, Kim Van Wie, academy director at STARBASE Minnesota, the MN National Guard, and the board members of STARBASE Minnesota, Inc., wanted to keep students enthusiastic about STEM after experiencing STARBASE Minnesota. Realizing that it would require community resources to nurture the students' interest in STEM, the group took a leadership role in developing a coalition of community agencies to advance STEM and build a fabric of interconnected services from childhood to adulthood. Working with the Humphrey Institute of the University of Minnesota, Minnesota High Tech Association and the Institute of Technology

Alumni Society, a half-day working meeting on "Building a Community of Practice in STEM" was convened in September 2009, followed by a second meeting of more than 115 STEM leaders at Medtronic on April 16, 2010.

During the April workshop, representatives from more than 80 STEM organizations worked diligently in breakout groups to establish Minnesota network regions, expand business involvement, develop a case statement, build a database and portal for communications, develop strategies for engaging underrepresented groups, define metrics, and plan public relations activities. One outcome was declaring a STEM Day at the Minnesota State Fair, where 22 STEM organizations had booths. U.S. Senator Al Franken visited the STARBASE Minnesota booth, and spent time learning how to use Pro/E to design the "Frank Plane."



Within the year since the initial meeting, a statewide organization, now called MN STEM Network has evolved. Van Wie hopes that by increasing the appeal of STEM in the state and strengthening collaboration among STEM practitioners, an extensive web of services will support students and their families before and long after their time at DoD STARBASE.

NATIONAL AERONAUTICAL SPACE ADMINISTRATION

The mission of the National Aeronautics and Space Administration (NASA) is to pioneer the future in space exploration, scientific discovery and aeronautics research. NASA conducts this work through four organizations called mission directorates. NASA's Space Operations Mission Directorate is responsible for providing space exploration services to both NASA customers and to other partners in the United States and throughout the world. Since 2006 NASA's major education goals have been:

- Strengthening NASA and the nation's future workforce
- Attracting and retaining students in science, technology, engineering and mathematics, or STEM, disciplines
- Engaging Americans in NASA's mission¹⁴

¹⁴ NASA. 2010. About NASA. Retrieved from http://www.nasa.gov/about/highlights/what_does_nasa_do.html

This past year, STARBASE Robins and the Museum of Aviation, located at Robins Air Force Base in Warner Robins, Georgia, submitted a proposal to support NASA's Summer of Innovation Capacity Building. Wesley Fondal, director of STARBASE Robins, proposed combining and "scaling up" STARBASE Robins' existing summer Engineering and Robotics Academy, with STARBASE 2.0, a mentoring program for middle-school students. The ultimate goal of the proposal is to provide a stimulating program that will increase the knowledge and interest of students in STEM curriculum, careers, and career pathways and expose students to professionals in STEM fields. Fondal also hoped that the plan would benefit teachers in the delivery of STEM curriculum.

NASA awarded the grant citing the strength of the mentor approach. By collaborating with NASA, STARBASE Robins will now be able to put together a strategic plan that will put the academy in an opportune position to leverage other sources of funding to support the STARBASE 2.0. Obtaining additional resources from other stakeholders will allow for an expansion of the STARBASE 2.0 to help meet the demand for the mentoring program in the middle Georgia area.



DoD STARBASE ACCOLADES

WHAT STUDENTS SAY

"I liked that we did the experiments instead of just watching teachers do it. It was so fun to actually do the experiments."

–STARBASE Atlantis-San Diego, San Diego, CA

"Coming to STARBASE made me see how fun all this stuff can be. I won't be as scared to take more math and science in high school. I know I need it if I want to design fighter jets."

– STARBASE Wright-Patterson, Wright Patterson Air Force Base, OH

"STARBASE is the best place to learn about science. We did science experiments with expanding marshmallows, hair dryers and astronaut eggs. STARBASE is an awesome place to try out laws and principles that we don't do everyday. I wish I never had to graduate."

– STARBASE North Dakota, Minot Air Force Base, ND

WHAT PARENTS SAY

"STARBASE has strengthened my daughter's confidence and her abilities in math and science. She thought she was bad at math. This experience helped her learn that not only is she not bad at math, but she has interests and abilities in the areas of math and science. It has been neat to see the transformation."

– STARBASE Minnesota, St. Paul, MN

"My son really enjoyed STARBASE. He was always excited about going. He would come home and tell us about it—and the very best thing was his understanding of the science. We are very impressed with the program."

– STARBASE Nebraska, Lincoln, NE

"This is a wonderful program provided in a state-of-the-art facility, and an amazing testament to tax dollars at work. My kids enjoyed the experience immensely and I was extremely impressed with the curriculum, materials, and teacher."

– STARBASE One, Selfridge ANG Base, MI

WHAT EDUCATORS SAY

"Students were exposed to technology that engaged them. Students, high achieving and low achieving, were appropriately challenged to use critical thinking skills, and all students experienced success. It is very exciting to watch the students become so engrossed in scientific and mathematic work."

– STARBASE Louisiana, Barksdale, LA

"We are looking forward to the transition into the middle school mentoring program."

– STARBASE Montana, Fort Harrison, MT

"I have taught in numerous cities and states, and the program that you offer far outweighs anything that I have experienced. The activities that you offered the students were age appropriate, yet challenged them to be active listeners, deep thinkers and problem solvers. You have opened up the door to the future for them, and as a classroom teacher, I am very grateful."

– STARBASE South Dakota, Rapid City, Rapid City, SD

"Awesome program! I looked forward to coming to STARBASE as much as my students did."

– STARBASE Hawaii, Keaau, HI

WHAT MILITARY VOLUNTEERS SAY ¹⁵

"I have spoken to all of our local school superintendents and they are all very positive about STARBASE. I believe it has a huge effect on the local school populations, not only in learning science and math, but also in getting a favorable impression of the military."

"It thrills me to be part of any winning TEAM or program. Without a doubt this is a winning TEAM. Any time you can help the students of today, who will be the leaders of tomorrow—how can you not be affected in a positive manner?"

"Great program for strengthening military/community relations. Awesome opportunity for military members to mentor youth."

¹⁵ Opinions were selected from anonymous responses to the 2010 Military Volunteer Survey. Further results of this survey are provided in the assessment section.

2010 DoD STARBASE REPORT



Executive SUMMARY

Section 2193b, Title 10, United States Code authorizes the DoD STARBASE program. The authorizing legislation requires the Secretary of Defense to submit an annual report to Congress on the conduct and effectiveness of the program.

Due to recent changes in the core curriculum, a national test on student performance and attitudes was not conducted in 2010. The tests were revised during this time period and will be piloted in FY 2011. The FY 2010 assessment process obtained information via structured interviews, questionnaires, program visits, and conversations with program participants. Interviews and/or questionnaires were received from 208 military volunteers, 1,637 teachers, and all DoD STARBASE directors.

HIGHLIGHTS

- Collaborations between the local military base, schools, and surrounding communities enhanced and strengthened the program.
- The majority of the students attending the program this year were fifth graders.
- The average class size for the 2010 program year was 23.63 students.
- The DoD STARBASE program conducted 2,518 classes this program year, serving 1,086 schools across the country.
- The majority of the academies, 68.4%, served school districts within a 50-mile radius of the program site.
- The number of Hispanic or Latino, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander students increased since 2001.
- The gender composition is 49% female and 51% male.
- Contractor affiliations make up the majority, 45.6%, of the employment relationships.
- Part-time employees increased from 25% to 26% while full-time employees decreased from 75% to 74% in FY 2010.
- The overall staff turnover rate in FY 2010 was 16%.
- On the average it took 15 to 19 weeks to replace a staff member in FY 2010.
- A total of 9,219 volunteers contributed 110,331 hours to the program.
- Not-for-profit organizations supported the academies in obtaining \$749,450.
- The curriculum was standardized and enhanced, and a major new initiative (STARBASE 2.0) was implemented.
- The average cost per academy was \$320,303.57.
- The average number of students served by an academy increased to 1,069.68; the average cost per student was \$278.61.
- On average, staff costs accounted for 83.3% of each academy budget.
- Student performance and attitudinal tests will undergo substantial change in FY 2011.
- Overall, teachers had positive attitudes about the DoD STARBASE experience for themselves, their students, and their students' families. Additionally, the teachers find the DoD STARBASE experience useful beyond the DoD STARBASE program and use the materials in their curriculum. They also noticed improvements in students' attitudes about school and themselves.
- Staff members who attended the training for the pilot, STARBASE 2.0, were positive in their evaluation of the training and materials provided. Over the past decade, major initiatives for program operations, curriculum upgrades, compliance adherence, cost effectiveness, web site improvement, and assessment rigor were implemented as a result of reported considerations.

Each section of the following report provides an assessment of the program's progress and describes the unanticipated and/or unresolved issues that emerge in program operations. The report is organized as follows:

- Program Overview
- Program Oversight
- Fiscal Analysis
- Assessment Results
- Considerations
- Appendices
- DoD STARBASE Program Directory

The PARTICIPANTS

DoD STARBASE programs operate under the auspices of the Department of Defense through the Office of the Assistant Secretary of Defense for Reserve Affairs (OASD/RA). Collaborations between the local military base, schools, and surrounding communities enhance and strengthen the program.

THE MILITARY

The military houses and supports DoD STARBASE programs.¹ Through this relationship, DoD STARBASE academies access resources and services that most school systems cannot. Classroom space, utilities, and security are the primary services provided by the base. State-of-the-art equipment and technology are also provided. DoD STARBASE operates at the discretion of the base commanders who view this program as a venue for their military personnel to positively interface with their community. Military personnel are encouraged to volunteer their time to the program as mentors, expert speakers, tour guides, and other support activities.

Military volunteers are guest lecturers who explain the use of STEM in different careers and act as base tour guides demonstrating the application of abstract concepts in their missions. They provide unique experiences and informative experiences for the students. Since the academies are located in different branches of the military, this experience is highly varied. Students may discuss how chemical fires are extinguished, learn how the injured are transported, explore the cockpit of an F-18 or the interior of a C-130, or see what life is like in a submarine. What is constant is the natural excitement the students experience in the presence of a military volunteer.



THE SCHOOL DISTRICT

School districts enter a formal agreement with the military base hosting the program, which includes commitments on availability of students, targeting at-risk children, transportation, student lunches, a designated time of instruction, and providing teachers as monitors. School districts provide the students who participate in the DoD STARBASE program, the benefits to the participating schools are numerous. Many elementary teachers do not have the time, educational background, and/or resources to cover STEM topics appropriately and simply cannot match the DoD STARBASE experience. The school's required curriculum is enhanced and students are better prepared for state tests as the standardized DoD STARBASE curriculum is aligned with national and many state standards.

THE COMMUNITY

There is a long-standing history of community participation in the DoD STARBASE program. Public and private organizations support and enhance the program's curriculum and operation. This often involves community leaders who volunteer their time by serving on boards, assisting with gaining access to community facilities and/or raising financial support. Community leaders perceive DoD STARBASE as promoting an interest in science, math, engineering, and technology that will enhance the future of their community. They also view the program as benefiting the community by promoting better life choices, problem-solving skills, and future job opportunities.

¹ Most of the 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 or in a military unit tenant.

The PROGRAM ELEMENTS

The Department of Defense Instruction (DoDI) outlines the guidelines and operational requirements for the DoD STARBASE program. The DoDI covers operational requirements such as budget, desired grade level, class size, scheduling hours, curriculum topics and coverage, the number of students, the desired target population, documentation requirements, testing, and program location. A number of administrative activities such as documentation and supporting responsibilities are also included. Any exceptions to the DoDI requirements, by an academy, must be requested, in writing, from OASD/RA through the service representative.

GRADE LEVEL

The DoD STARBASE program is authorized to serve students kindergarten through grade 12. Because of the dramatic drop 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. Some academies provided programs to other grade levels, but the majority of the students attending the program this year were fifth graders.² Each academy is encouraged to bring its total program commitment to the fifth grade.

CLASS SIZE

Smaller class size is particularly important to the inquiry-based, instructional approach used at DoD STARBASE academies. The DoDI guidelines require two STARBASE teachers per class or an average teacher to student ratio of 1:15 with 20 to 35 students as acceptable class sizes. The average class size for the 2010 program year was 23.63 students. Six academies reported averages below 20 students.³ The highest reported average class size is 29.4 students.

CLASS SCHEDULE

The DoD STARBASE program conducted 2,575 classes this program year, serving 1,086 schools across the country and 387 school districts. DoD STARBASE academies may schedule four-day or five-day programs as long as 20 to 25 hours of curriculum is completed. As in the past, the overwhelming choice is the five-day program, which provides more options and depth of content coverage; however, some academies prefer the four-day program. More than 56,000 students attended the five-day program making up 94.8% of the student body.

**DoD STARBASE 2008-2010
School System Demographics⁴
Exhibit 1**

	2008	2009	2010	Annual Change	Percent Annual Change
Number of Students	54,106	58,879	59,902	+1,023	+1.74%
Number of Classes	2,327	2,569	2,575	+6	+23%
Number of Schools	973	1,254	1,086	-168	-13.4%

² 50% serve only the fifth grade.

³ DoD STARBASE sites in District of Columbia, Maine, Minnesota, Mississippi-Choctaw, Vermont-Rutland, Vermont-South Burlington reported averages less than twenty students.

⁴ Numbers shown are for four- and five-day programs and do not include other programs.

PROGRAM SERVICE AREA

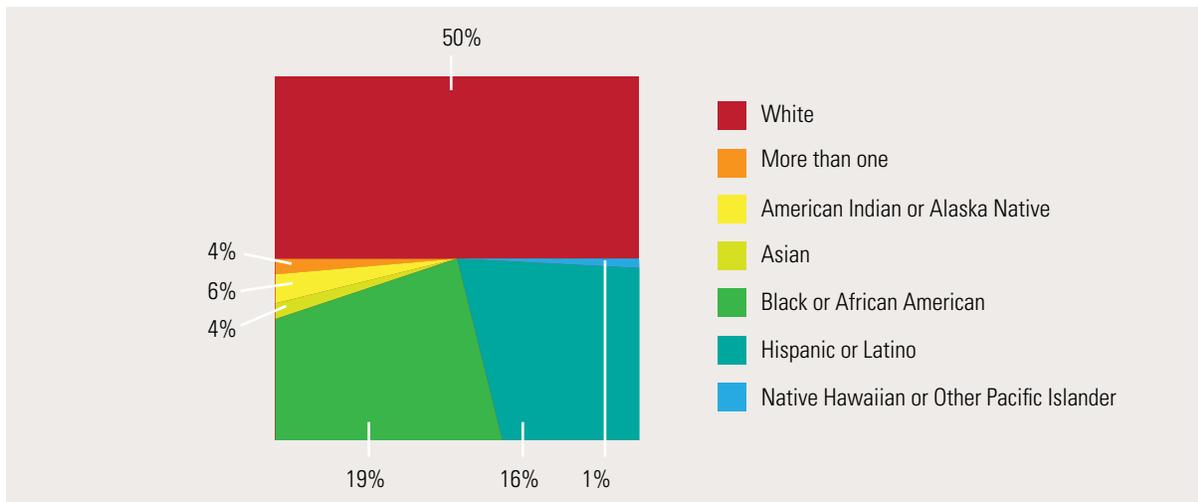
The majority of the academies (68.4%) serve school districts within a 50-mile radius of the program site. Academies that go beyond a 50-mile radius generally have made special accommodations to reach more students, such as the Native American outreach programs.

RACIAL COMPOSITION

The following table shows the racial composition of the DoD STARBASE student population over the past ten years (see Exhibit 3). Hispanic or Latino students along with the American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander display positive growth in the program since 2001. The Hispanic or Latino and American Indian or Alaskan Native student population demonstrate the greatest increase with a net gain of 5% and 3% and an overall total student profile of 16% and 6% respectively.

The black or African American and the white student population have experienced the greatest net decline since 2001 with -6% and -4% respectively. These two student groupings are also the largest segment of the total student population with 50% for the white students and 19% for the black or African American students (see Exhibit 2).

**Racial Composition of
DoD STARBASE Student Population 2010
Exhibit 2**



Racial Composition of Students 2001–2010
Exhibit 3

Race/Ethnicity	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
American Indian/ Alaskan Native	3%	4%	4%	5.5%	5%	6%	5%	4%	6%	6%
Asian/ Native Hawaiian or Other Pacific Islander	4%	5%	5%	4%	4%	5%	4%	5%	5%	5%
Black or African American	25%	27%	27%	23%	22%	21%	23%	21%	19%	19%
Hispanic or Latino	11%	14%	15%	15%	16%	15%	17%	16%	16%	16%
White	54%	47%	46%	47%	48%	49%	47%	50%	50%	50%
More Than One Race	3%	3%	3%	6%	3%	5%	5%	4%	5%	4%

GENDER COMPOSITION

While there are a few academies where the balance between females and males are over-represented by one gender or the other, the overwhelming majority is well-represented by both genders. On the whole, the balance is the same as in previous years with 49% female and 51% male.

EMPLOYMENT AFFILIATION

Employment affiliation is an important organizational relationship for each academy. When a program is initially installed, careful consideration is given to the affiliation relationship because it has profound influence on budget management, cost of operation, personnel practices, staff retention, procurement practices and reporting requirements. The primary employment affiliations are federal, state, and contractor agencies. The employees' affiliation determines their salary administration, hiring requirements, benefits, personnel policy and practices, and reporting relationships. The DoDI provides general guidelines on personnel models, salary parameters, and position descriptions, but differences in local administration produce wide variances in operation.

Contractor affiliations make up the majority (45.6%) of the employment relationships. However, over the past several years there has been movement toward state affiliations (see Exhibit 4). Since 2006 state employees have increased by 3% and federal employees have decreased by 2%. Federal and state affiliations often provide retirement and health benefits and carry higher employee costs, increasing an academy's personnel cost. This uses a greater portion of the academy's operating budget.

2006–2010 Employment Affiliations
Exhibit 4

Organizational Affiliation	Number of Employees				
	2006	2007	2008	2009	2010
Federal Employee	54	60	61	66	60
State Employee	69	78	86	91	95
Contract Employee	110	105	120	135	130
Total Employees	233	243	267	292	285

ACADEMY STAFFING MODEL

The DoDI outlines the prototypical staffing model for an operating academy. It includes broad guidelines on pay scale for each staff position. This model is the basis for an annual budget for each academy. Personnel costs are the major ongoing expenditure for an academy.

The staffing model includes four full-time paid staff equivalent positions: a director, a deputy director/program instructor, a program instructor, and an office manager/administrative assistant. Determination of starting salaries is the prerogative of the local sponsor. The suggested pay scale equivalencies of the above positions in the DoDI are GS 12-13, GS 11-12, GS 9-11, and GS 6-9. The sponsor and the academy manager must be judicious in balancing high qualification requirements with entry-level payroll requirements.

Several academies have adjusted the prototype staffing model. The primary reason for this adjustment is budget management issues. On average, staff costs account for 83.3% of an academy's budget. Balancing fiscal management and integrity in an academy's operation is a constant concern for academy directors.

The most common personnel changes in the staffing model are additions to instructional staff and classroom support. Some academies restructure the administrative position to include instruction. Other academies have used the following solutions: hire part-time instructors, establish job-sharing positions, consolidate job tasks, limit benefits, eliminate the deputy director position in favor of two instructors, eliminate the administrative position, and hire retirees who require fewer benefits. If an academy changes its personnel model it must submit a written request for a waiver to OASD/RA.

The following chart (Exhibit 5) describes the academies' staffing profile for the 2010 fiscal year for full- and part-time personnel. Part-time employees increased to 26% in 2010 from 25% in 2009, while full-time employees decreased in 2010 to 74% from 75% in 2009.

2010 Academy Staffing Profile
Exhibit 5

Position	Number of Staff	Full-Time	Part-Time
Director	50	48	2
Deputy-Director	47	43	4
Instructor	113	79	34
Office Manager	51	37	14
Other	24	5	19
TOTAL	285	212	73

As the above chart demonstrates, there are fewer staff directors than academies. Some directors manage more than one academy, hence the lower number of director positions. Overall, the objective for the academy director is to protect and increase instructional time.

STAFF DEVELOPMENT

There are more than 100 instructors in the DoD STARBASE program who need ongoing training to be current in program content, methodologies and new curriculum. Eighty-one percent of the academies offer staff development opportunities. Regional and national professional association programs, university offerings, online training, visits to other academies, and in-service workshops are all used in professional development. While almost all instructors are experienced in math, science, and technological applications, ongoing professional development keeps teachers up-to-date on emerging technology tools for the classroom, new curriculum resources, and instructional modalities.

Academies typically train new staff on-the-job. New instructors, prior to teaching at STARBASE, observe experienced instructors who also serve as mentors. After initial training, new instructors are observed by other instructors or the directors before they begin teaching independently. Continued mentoring is conducted by the director or the deputy director. Employee handbooks, teacher aids, curriculum guidelines, academy visitations, testing materials and a variety of other materials are available through the academy, the DoD STARBASE website and other academies.

Continuing education and staff development are also available for the director. DoD STARBASE directors attend an annual conference sponsored by the OASD/RA. The Professional and Curriculum Development Committees of DoD STARBASE design and develop workshops for national and regional delivery on computer-assisted design and curriculum updates. The next national director/instructor conference is planned for the summer of 2011.

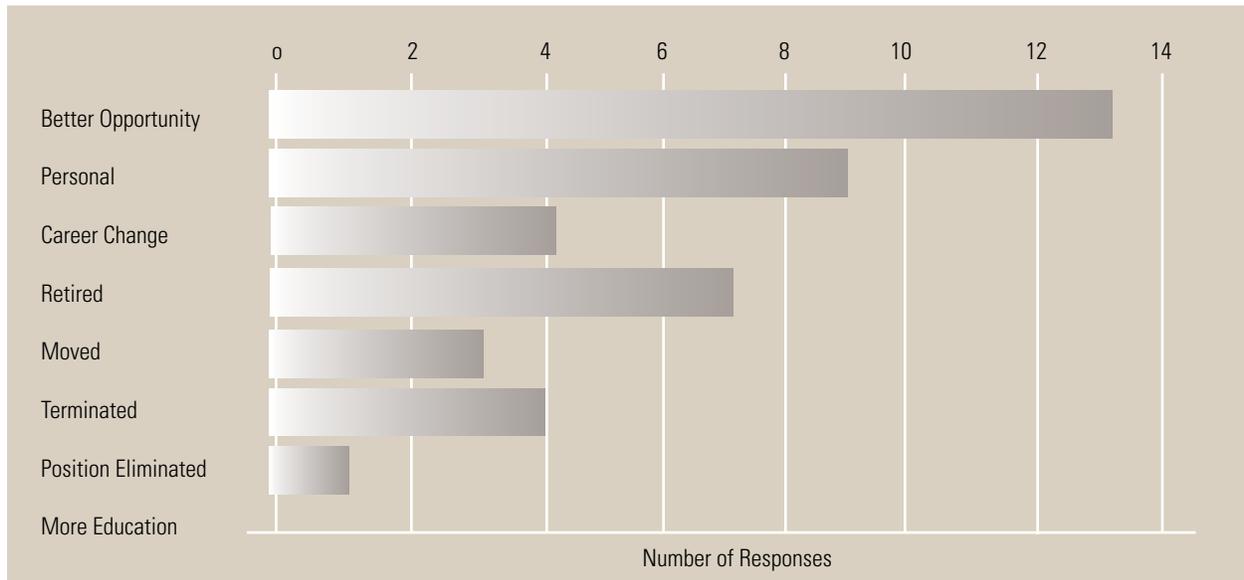
STAFF CHANGES AND DEPARTURES

There were 45 staff changes out of 285 staff positions in FY 2010. The majority (58%) of these changes were at the instructor level. Office manager positions were the next highest with an 18% turnover rate, followed by directors and deputy directors at 11% and 7%. The overall turnover rate in FY 2010 was 16%, which is the highest turnover rate since fiscal year 2005 (see Exhibit 6). Of those staff members who left the program, 30% indicated that better opportunities were the prime reason for their decision to leave DoD STARBASE and 27% cited personal reasons for leaving (see Exhibit 7).

Staff Departure Rate FY 2003-2010
Exhibit 6

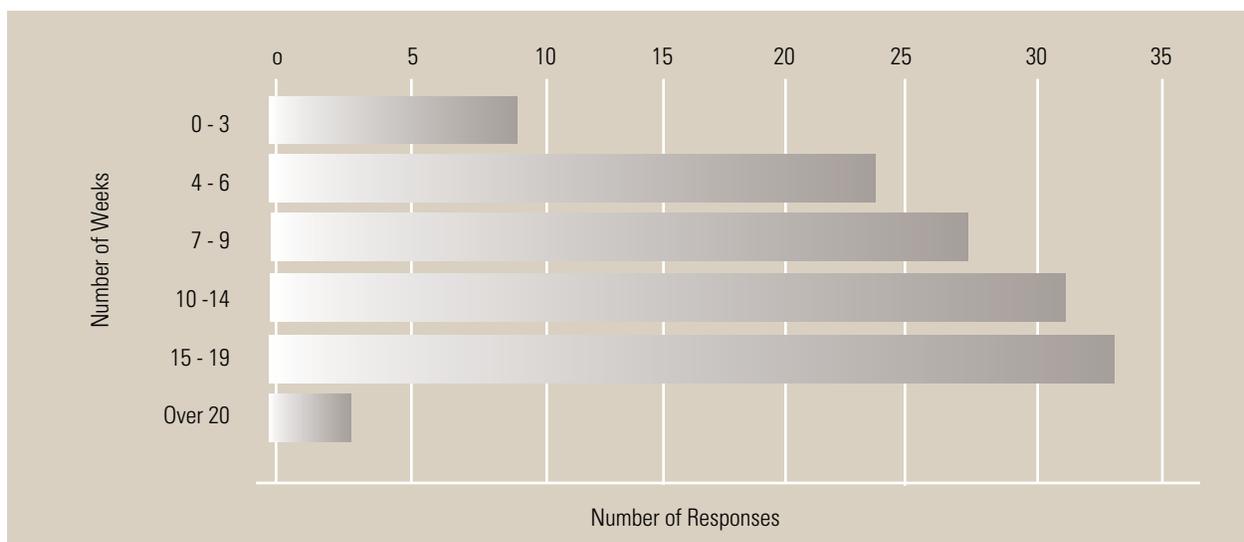
Fiscal Year	2003	2004	2005	2006	2007	2008	2009	2010
Number of Staff	168	238	231	233	243	267	292	285
Number of Departures	10	30	39	36	37	34	34	45
Turnover Rate	6%	13%	17%	15%	15%	13%	12%	16%

**Reasons for Staff Departure
Exhibit 7**



On average, it took 15 to 19 weeks to replace a staff member in FY 2010 (see Exhibit 8). This timeframe has increased considerably from 0-3 week average reported in 2009. This is a dramatic increase in the amount of time for job replacement. The Navy academies, averaged 44.1 weeks to fill six vacancies (three other positions remain open), the National Guard academies averaged 6.3 weeks to fill 26 vacancies, and the Air Force academies averaged 2.7 weeks to fill six positions. Several of the Navy positions were advertised as temporary positions so that candidates could be placed on probationary status in an effort to improve hiring practices which were placing strains on existing program budgets.

**Time to Fill a Vacant Position 2009
Exhibit 8**



VOLUNTEERS

Volunteers are an essential participant group in the program. They not only provide essential services such as presenters of technical and real life skills in the program's content areas but they also serve as board members, advisors, tour guides, instructor aids, and a wide variety of daily support services. Volunteers include military personnel, teachers, parents, and community leaders. All academies reported using volunteers.

The academies documented 9,219 volunteers who contributed a total of 110,331 hours to the program (see Exhibit 9). Military personnel accounted for 3,116 volunteers or an average of 55 volunteers per academy. Parents added 3,845 volunteers with a total of 49,900 hours and teachers added 34,091 hours with 1,638 volunteers. Other community and volunteer groups added 5,338 hours through 620 volunteers.

**2010 Volunteer Participation
Exhibit 9**

	Volunteers	Hours	Average Participants Per Academy	Average Hours Per Academy
Military	3,116	21,002	54.67	368.45
Teachers	1,638	34,091	28.24	598.09
Parents	3,845	49,900	67.46	875.45
Other ⁵	620	5,338	23.85	205.33

NOT-FOR-PROFIT ORGANIZATIONS

Not-for-profit organizations are a popular resource for academy support.⁶ Board members provide guidance, access to community resources, fundraising, and other activities to enhance individual academies. In FY 2010, the not-for-profit organizations supported the academies in obtaining \$749,450. Funding sources included state and federal funds, grants, and donations. The amounts per academy varied from \$1,000 to \$280,000.

DoD takes no position regarding not-for-profit organizations. Most of the not-for-profits were established before 2001 when the program was piloted and ongoing financial support was uncertain. Today, a well-functioning and productive not-for-profit organization is an outstanding resource that enhances the students' experience at the DoD STARBASE program.

⁵ Other volunteers include: STEM groups, firefighters, board members, AFRL, etc.

⁶ The Secretary of Defense and the secretaries of the military departments are authorized under Section 2193 (b) subparagraph (f) to accept financial support as well as other types of support from not-for-profits and other private sector organizations.

2010 Use of Not-for-Profits by Military Component
Exhibit 10

Military Component	# Academies	# Not-for Profits	% Academies With Not-for-Profits
Air Force	5	2	40
Air Force Reserve	3	3	100
Marine Corps	1	1	100
National Guard	34	23	68
Navy	13	0	0
Total	56	29	52*

*Percentage of all academies with not-for-profits.

Services Provided by Not-For-Profits 2005–2010
Exhibit 11

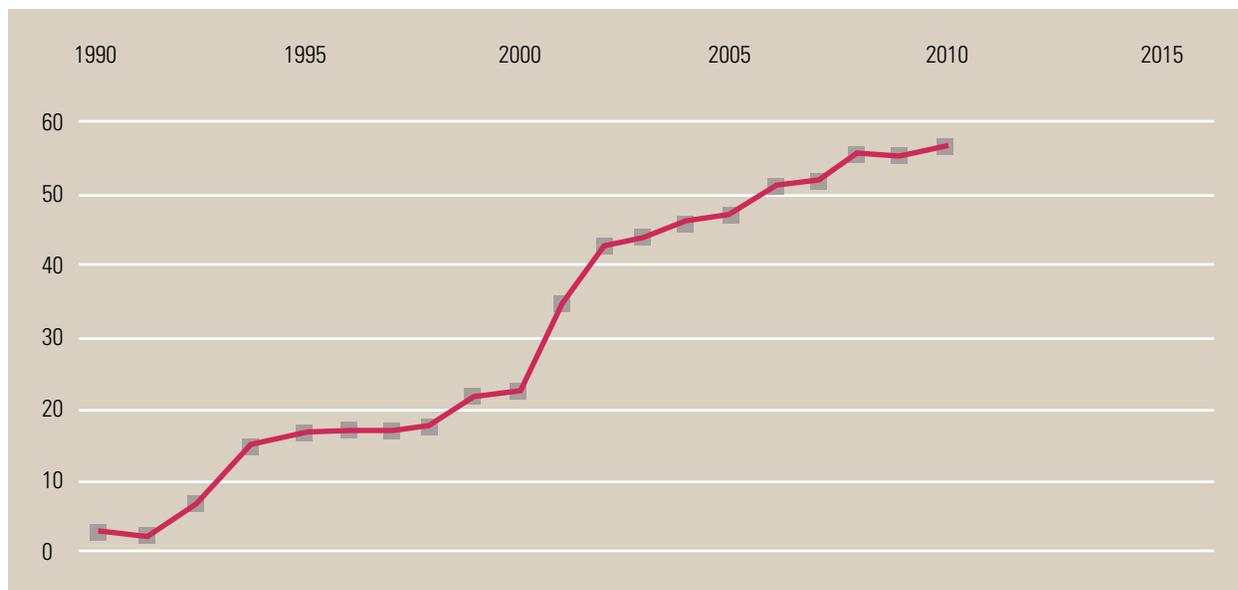
Service	2005	2006	2007	2008	2009	2010
Marketing/Fundraising	80%	68%	72%	83%	80%	76%
Grant Writing/Submissions	57%	42%	38%	65%	57%	55%
Program Planning/Review	47%	58%	52%	76%	57%	48%
Budget Planning and Review	47%	58%	41%	52%	43%	34%
DoD Compliance Review	27%	52%	52%	45%	33%	34%
Review of Potential Staff	23%	23%	38%	48%	47%	34%
Subcontractor Relations	23%	23%	27%	31%	13%	31%
Other	27%	13%	21%	10%	33%	34%



Program GROWTH

There are currently 56 DoD STARBASE academies. The number of academy locations did not grow this year, but the student population increased by 1.73% over the 2009 program year. This increase of 1,023 students brings the student population to 59,902 students for the 2010 academic year.⁷ The DoD STARBASE program now has reached more than 609,380 students⁸ since 1993.

DoD STARBASE Program Growth 1991–2010
Exhibit 12



Once an academy is established and operating, there is often demand for the academy to serve more students. While the demand for adding programs is constant and persistent, the availability of funds limits growth. This year, the DoD STARBASE program conducted 2,575 classes which is not significantly different from the 2,569 classes held in FY'09.

Some of the academies (31.15%) offer additional programs beyond the four-day or five-day program offered during the academic year. These supplemental programs do not meet the prescribed DoDI curriculum; academies offer these programs in addition to the required DoDI minimum class/students requirements. All programs focus on STEM content and serve as an outreach to the community. This year's offerings are rich and varied as the following examples demonstrate:

- Collaboration with Auburn University's BEST program to offer junior high students a one-day program on robotic engineering, logic, artificial design and space travel (STARBASE Maxwell, Alabama)
- A joint meeting with CAP Aerospace Education, for two hours a month in the evenings (STARBASE Hawaii, Keaau)
- Collaboration with 21st Century Schools to offer an after-school program to two elementary schools twice a month (STARBASE Alaska, Anchorage)
- Collaboration with the Folsom Cordova Unified School District and the Elk Grove Unified School District in California to provide five-day STEM programs to 2,363 students (California STARBASE, Sacramento)

⁷ This number does not include students attending a summer or supplemental DoD STARBASE program.

⁸ Total number of students attending a four-day, five-day, summer or supplemental DoD STARBASE program.

- Collaboration with AVETEC, Inc., to support a summer scholars program for three days at the STARBASE facility (STARBASE Wright-Patterson, Ohio)
- Summer programs on basic and advanced robotics and CAD (STARBASE Kingsley, Oregon)
- PTC ProE Manufacturing/Communication classes for seventh graders (STARBASE Portland, Oregon and STARBASE South Dakota Rapid City)
- Two summer classes on ProE CAD design and manufacturing, geocaching, mapping and engineering (STARBASE Atlantic-Newport, Rhode Island)
- Summer camps for children of military dependents were hosted by several academies

This year 4,478 students attended a supplemental program comprising 6.7% of the total student body. This is a decrease from 2009 where 6,520 students, or roughly 10 % of the student body, attended a supplemental program.

In addition, the after school mentoring program, DoD STARBASE 2.0, was piloted this year in five states reaching approximately 200 students. Six additional sites will start the program in FY'11 to reach even more students.

Critical EVENTS

Fiscal Constraints: Budget cuts at the state and local levels forced schools to make difficult choices that affected DoD STARBASE academies and are likely to continue in the next fiscal year. Examples of the impact are larger class sizes that require increased supplies and computers, teacher furlough days when classes were cancelled, and the rising cost of transportation that forced the cancellation of some classes.

Mandatory Testing: Statewide testing with its high-stakes implications for schools continues to reduce the number of public schools who are willing to attend academies during the testing months of March and April. Academies confronted with this problem often serve private and homeschooled children during this time. This will continue to be an issue in the next year.

Weather: Severe winter storms affected academies across the United States causing the cancellation and, in many cases, the rescheduling of classes.

Personnel: The loss of personnel and the length of time to secure permanent replacements is a frustration for academy directors. In addition, at least one program lost supplemental teaching staff provided by local school districts due to budget cuts.

Facility Damage and Renovations: Academies reported wide-ranging facility issues including vandalism, temporary moves while facilities underwent renovation, a runway repair that relocated pilots and planes, and the loss of office space. For the most part, academies report these issues were resolved in the current year.

Program OVERSIGHT

COMPLIANCE

The Office of the Assistant Secretary of Defense for Reserve Affairs (OASD/RA) has the overall responsibility for the management of the DoD STARBASE program. The responsibilities are comprehensive and include:

- Program funding
- Overall management of program installation and administrative operation
- Developing and implementing regulatory guidelines
- Monitoring program compliance with regulations
- Assessing the program's effectiveness in meeting stated goals and objectives
- Insuring effective installation of new programs
- Coordinating activities and responsibilities between the participant groups and sponsors
- Submitting an annual report to Congress on program performance
- Providing administrative oversight as needed

From 1993 to 2000, DoD STARBASE was a pilot program. During this period, each academy operated with a certain degree of independence. While there were common characteristics in the core curriculum topics, and basic delivery techniques, there was variability in operational procedures, core curriculum emphasis, and content.

In the fall of 1999, DoD STARBASE received Congressional authorization and funding to make STARBASE a permanent DoD program under the management of OASD/RA. OASD/RA immediately developed a basic set of operating procedures, practices, and policies regulating the DoD STARBASE program under the DoDI 1025.7. The policies and best practices, used in the existing academies, guided the development of the manual. The DoDI directed the number of classes, classroom hours, student numbers, target student population, participant eligibility, site location, core curriculum, fiscal and property audits, reporting requirements, and basic instructional methodology. Both documents are available on the website and available to all staff. Policies and practices are enforced through reporting requirements, compliance visitations to academy sites, audits and corrective action when required by the OASD/RA office. These procedures are briefly described in the following section.

COMPLIANCE PROCEDURES

Over the last decade, OASD/RA designed and developed a compliance program to ensure that academies adhere to the DoDI requirements. The review process is refined each year and is currently being upgraded and integrated with academy performance requirements described in the assessment section, Changes in Accessing Academy Performance. During the fiscal year, the curriculum was enhanced, standardized and aligned with national standards; a professional mentoring program, STARBASE 2.0 was piloted, collaboration with other STEM programs expanded and linkages with other STEM agencies grew. These initiatives are integrated with compliance and performance requirements that require revisions in reporting requirements and compliance enforcement. All of these changes will be addressed in the current program year.

Compliance visitations are conducted at least once every three years. The visitation process involves a two-to four-day review of documents (including audits) and classroom observation. Interviews are conducted with staff, school administration, base commander, and other participant groups as needed. A meeting is conducted with the director, and the base commander to review the visitation results and any corrective action that may be required. A written report is sent to the OASD/RA upon completion of the visitation. OASD/RA may share the visitation report with the academy and, if necessary, the participant sponsor. If corrective action is required, a schedule and expectation of results is discussed. Occasionally, a follow-up visitation is scheduled to elevate the completion of compliance adherence. Academies are also visited at the time of installation. An orientation is provided to academy personnel on the DoDI requirements, common practices, testing and reporting protocols, and OASD/RA expectations/documentation.

In 2010, most academies are in full compliance with the DoDI's basic requirements. Each year there are a few academies that have difficulty meeting some requirements such as: maintaining the number of classes, class size, conducting timely property and fiscal audits or meeting reporting requirements on schedule. A few others do not submit requests for waivers from OASD/RA for periodic exceptions to the DoDI. Academy activities are monitored by OASD/RA using techniques such as site visitations, audits, and director questionnaires.

As in past years, the most frequent violation is the lack of reporting to the OASD/RA when exceptions are needed. There are unanticipated events, such as vandalism or severe weather, that impact academy activities and thus require waivers, that are usually approved. The next most frequent violation is failure to meet the requirement for property and fiscal audits every three years. Academies should consider formally requesting an audit, for the record, six months prior to the end of the three-year period. There are a few instances where student minimum requirements are not met. This data stimulates consideration of expansion to other school systems and the evaluation of other options.

With the integration of the academy assessment process, academies must meet all of the DoDI requirements to obtain Level I status that is the basic academy performance level. It is currently under consideration that if an academy does not meet Level I, or corrective action requirements, the academy will be placed on probation and the OASD/RA manager will recommend further action. Each service arm representative also will be provided the compliance results and next steps.

Visitations, academy self-reporting, and academy performance applications are effective compliance instruments that affect the quality of the program delivery. The status of compliance adherence by the DoD STARBASE academies is one measure of the quality of the program. In addition, standardized applications in selected areas, such as in program delivery and curriculum content, allow for improving the reliability and validity of student testing and program assessment.

CHANGES IN ASSESSING ACADEMY PERFORMANCE

The 2009 DoD STARBASE Annual Report (pages 78-79) introduced a proposed academy performance assessment system using three-tiered levels (I, II and III) of program performance. The proposed assessment system was introduced as a "consideration" to be implemented during the 2010-2011 academic year. The system will be field-tested on three levels of program activity: Level I identifies an academy that meets basic adherence to DoDI requirements; Level II is a step-higher and reflects desirable operational applications; and Level III, the highest step, reflects an academy with advanced strategic, program design with downstream linkages for promoting student performance in STEM-related activities. This assessment system will require the attainment of these objectives and their maintenance and sustainability over time.

These performance criteria, as presently constructed, are based on a comprehensive review of the DoD STARBASE program over several years of operation and cover all areas of program activity. There are several other areas, especially in the operations area and in strategic applications, designed by the specific academies, that will be revised during the 2010-2011 program year and most likely into the future. Steering committee review and OASD/RA program manager oversight will determine appropriateness and fit to the overall mission of the program.

The considerations leading to this assessment process came from several sources: academy staff, steering committees, school administrators, base commanders, teachers, the assessment process, program participants, volunteers, and service arm managers. Over time, critical events, growth considerations, fiscal implications, new technologies, and linkages with the organizations and agencies in the STEM community highlighted the need to take these relationships and events into consideration as the DoD STARBASE community matured. This process will continue.

This first year of application will start with field testing a range of activities that can be attained and validated by all academies in Levels I and II. Level I activities, which are basic DoDI operational requirements, will be the first set of activities validated. Level II activities will involve a set of defined operational and fiscal program applications to be derived during this first year of operation. Level III will require greater consideration, review, and control by the assessment and committee review process since these activities will apply considerations of

sufficient magnitude and will impact academy performance, utilization, and team transportability to other academy sites.

This assessment system will encourage each of the 56 DoD STARBASE academies to strive for higher levels of performance. Additional criteria will be added to each of the performance levels as program enhancements are generalized to all program sites. The assessment of Level status will be obtained through several venues: self-reporting, visitations, periodic interviews and surveys. All academies are in Level I conditional status until visitations and reporting documentation is completed. It is expected that a number of academies will obtain Level II status within the current program the year.

The proposed performance levels are described as follows:

Level I: The Basic/Fully Operating Academy

A Level I academy meets all DoDI requirements and operating guidelines stipulated by OASD/RA. These include required program activities such as student numbers, classes, hours, core curriculum content, basic operation, target student population, required documentation and reporting requirements of budget and fiscal responsibilities. New academies should attain Level I status within two years of installation.

Level II: The Advanced Performing Academy

The second level of academy performance requires prior Level I status and documentation of a number of activities recommended by OASD/RA and steering committees on program delivery, curriculum and program operations. Considerations of recommended activities include participant group involvement, program enhancements, operational efficiencies, administrative practices, linkages with STEM related programs that enhance student participation, fiscal management, and contingency planning.

Considerations by OASD/RA include:

- Budget Management Plans: These include the design and development of a budget management plan identifying particular areas of financial concern and operational activities that plan for managing budget short-falls. The design of an impact assessment plan on operations, staffing considerations, and program delivery of budget expense increases and/or reductions are also included. This assessment plan would identify program capabilities, program adjustments, alternative activities/contingencies and proactive/reactive plans of action under various conditions.
- Program Budget Revisions: Develop budget reviews of expenditures on an ongoing basis (monthly or quarterly) and pro-rate over the program year to identify short-falls, surpluses, and adjustments. If corrective action is required, the academy director will report the desired and appropriate action to OASD/RA and service arm manager. This budget review process differs from the budget management plan in that it is ongoing and dynamic throughout the fiscal year.
- Management Succession Plan: This involves the development of a leadership succession plan that includes academy documents; scheduling commitments; list of contact names, addresses and phone numbers; property inventories; personnel records; financial and budget documents; strategic plans; curriculum and lesson plans; and all documents relative to program operations. These will be compiled in a format that is readily transferred from one director to another staff member in case of emergency or change in leadership. If a leadership change occurs, the new director, after review of the materials, would sign off on the documents' completeness and availability.
- Personnel Management Plan: Installing a personnel management plan is increasingly important as STEM-related skills, certification and curriculum application become imperative. Fiscal management of employee costs are also critical as turnover, position replacement and hiring make in-house training and grade-level positioning more important in staffing models.
- Equipment and Physical Resource Assessment Inventories: An annual equipment and physical resource review to identify upgrades and replacement is essential for timely and effective delivery of program instruction as well as the safety of students. Budget considerations and program upgrades are linked to the inventory and the results are forwarded to service arm and OASD/RA program managers. Periodic audits of property will be incorporated into these assessments.

- Annual Review of “Children-At-Risk” Target Population: The periodic, or annual, review of the student population served should be documented and reported at the completion of the program year.
- Staff Development Personnel Plan: Is consistent with the personnel management plan that specifies training requirements, math and science credentials, and certification status. This plan includes turnover strategies and replacement tactics for each position along with fiscal management objectives. These items should be developed with the service arm managers. This plan should be consistent and supportive of the Personnel Management Plan.

Other operational and program development activities that require attention on Level II will emerge as visitations and steering committee reviews are conducted and identify key concerns across academy sites. The OASD/RA program manager will review the considerations for inclusion after field-testing and observation.

Level III: The High-Performing Academy

The third level of academy performance requires prior Level I and Level II status before pursuing any program enhancement initiatives. Enhancements may include self-committing to an activity (or activities) that advance the core curriculum, delivery system, linkages with other STEM-related activities approved by the appropriate steering committee and the OASD/RA program manager such as the DoD STARBASE 2.0 mentoring program. These enhancements must reflect some measure of magnitude, demonstrate transportability to other academy sites, incorporate DoD STARBASE basic concepts, show sustainability over program years, and validate improvement in student performance. Consideration to programs that improve operational activities, higher-level problem-solving techniques; time-sensitive improvements and efficiencies, and program delivery could be included in assessment of Level III activities. These considerations should be incorporated into a strategic plan for review by committee and program manager.

It is expected that before these levels are formally applied, they are reviewed for academy-wide application, appropriate level designations, the temporal period in which they can be successfully attained, the fairness and equity in installation in all academies given local resources and capabilities, the level of magnitude in affecting the academy upgrade in performance, and position for downstream sustainability. These criteria require some manner of field-testing and careful review with recommendations to the OASD/RA program manager.

The objective of installing the Level I-III program is for each academy to develop strategies and plans of action to achieve higher levels of performance. These plans should be attained in a reasonable period of time as stipulated and agreed on by each specific academy and the oversight committee. The above lists of criteria are only suggestions but are not exhaustive since participant and collaborative relationships are numerous. There have been several initiatives presented in prior Directors’ and Professional Development conferences that can be explored for consideration.

It is not expected that all the academies will install all of these considerations immediately, only that they seek to attain higher levels of performance in the near term. Available resources and current condition of each academy’s status will determine the timeline for them to attain Level II and III status.



Fiscal ANALYSIS

A Congressional appropriation to the Department of Defense funds the operation of DoD STARBASE. The Office of the Assistant Secretary of Defense for Reserve Affairs (OASD/RA) oversees the program and administers the funds. In 2010, the total program budget was \$20,000,000 OASD/RA allocated \$17,937,000 for academy operations, which is the amount used for the analysis in this report. In total, 89.7% of the congressionally appropriated funds went to academy operations. The remainder of the appropriations was used in: evaluation/assessment activities, academy staff development and training programs, and overall program design and development activities.

Cost per Academy/Student 2004–2010

Exhibit 13

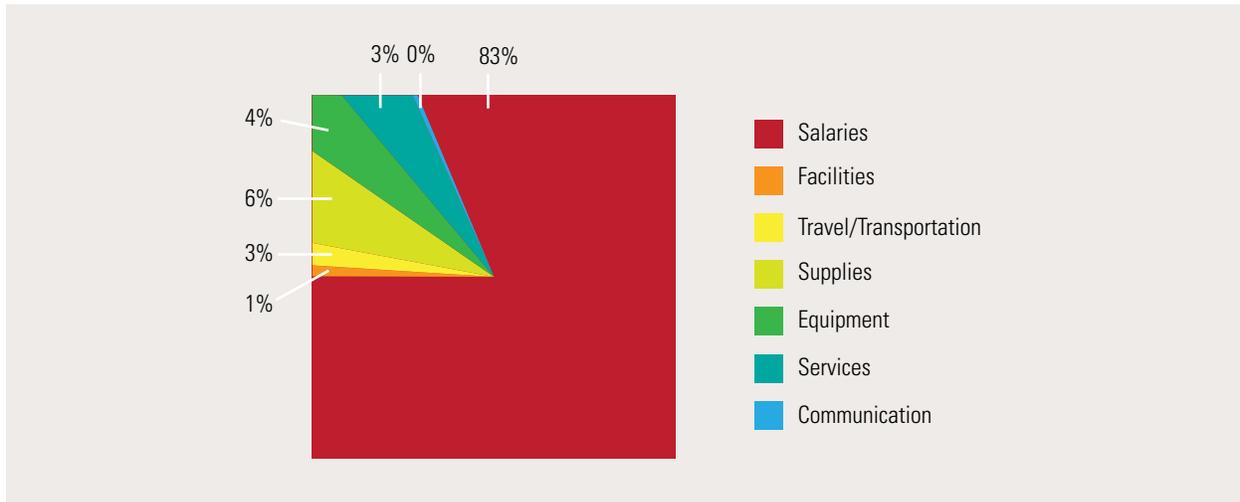
Year	Average Cost Per Academy	Average Number of Students Per Academy*	Average Cost Per Student
FY'04	\$272,469	932	\$292.35
FY'05	\$273,040	1,042	\$262.03
FY'06	\$293,584	1,002	\$293.00
FY'07	\$301,773	1,010	\$298.79
FY'08	\$310,895	949	\$327.60
FY'09	\$317,638	1,051	\$302.22
FY'10	\$320,303.57	1,070	\$299.44

*Averages include students attending a four- or five-day program.

In 2010, the average cost per academy was \$320,303.57. This is a less than 1% increase from 2009 and a 17.6% increase from the average cost per academy in 2004. The average student population increased to 1,069.68 students per academy this year with an average cost per student of \$299.44. This is a less than 1% decrease from the 2009 average cost per student and 2.4% more than the average cost per student in 2004. If the students attending a summer and/or a supplemental program are included, the average number of students per academy increases to 1,150 and the average cost per student is \$278.61. Supplemental programs typically occur during the summer months, after DoDI requirements have been met, and vary in length and curriculum.

Operational costs differ between academies. Overall expenditures of DoD funds allocated to each program site are shown in the Exhibit 14. Staff costs range from 61% to 98% of the academy budget and on average account for 83.3% of the academy budget. Attention to employee hiring at the high end of pay-grade levels is under examination.

**2010 Academy Expenditures of DoD Funds
Exhibit 14**



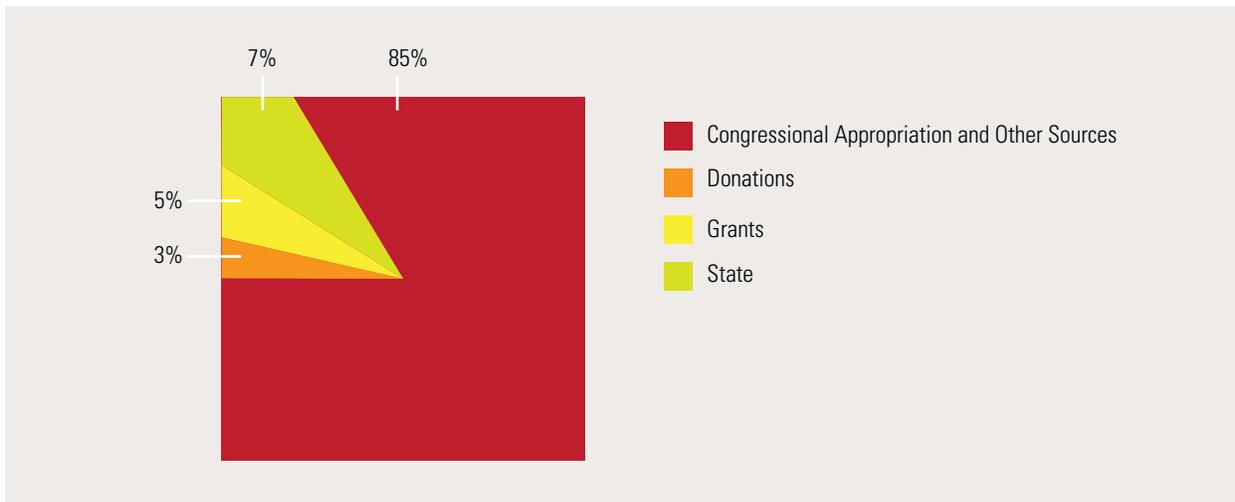
Several factors contribute to the cost variances including geographic location, outreach programs and salary scales used by the sponsoring affiliate. OASD/RA reviews each academy's budget and tries to maintain an equitable distribution of funds. The following exhibit compares the average cost per academy by the military affiliation.

**2010 Average Cost per Academy by Military Affiliation
Exhibit 15**

Military Affiliate	Number of Academies	Average Cost Per Academy
Air Force	5	\$306,000.00
Air Force Reserve	3	\$313,833.33
Marine Corps	1	\$327,000.00
National Guard	34	\$318,677.53
Navy	13	\$331,554.81

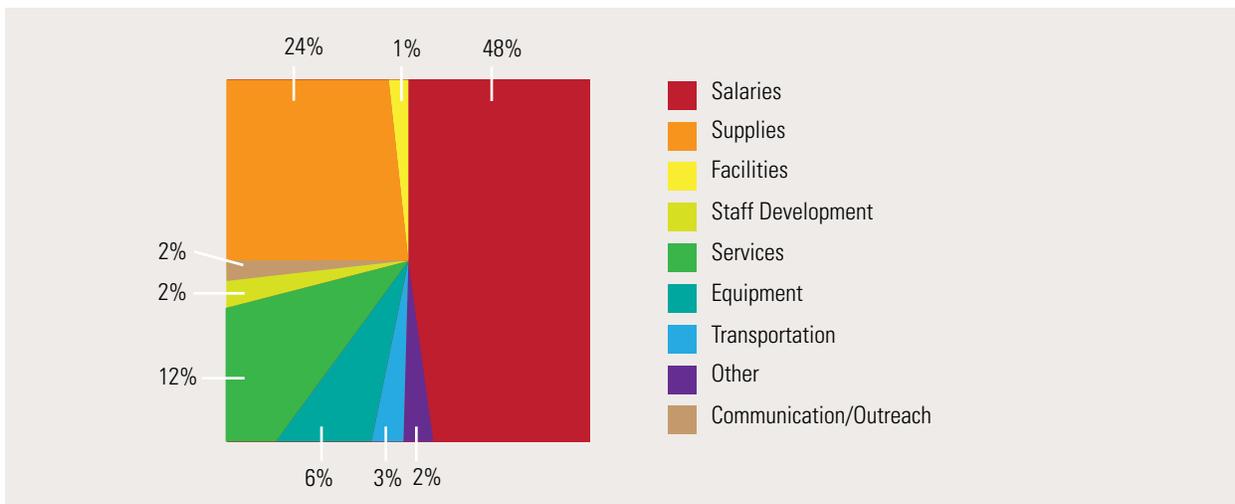
Nineteen of the 56 academies secured supplemental funding from non-DoD sources. The total raised in supplemental funding was \$2,663,793.29. Although this is 2% higher than funds raised in 2009, it should be noted that this amount includes a \$1.9 million one-time Congressional appropriation received by one academy for building redesign and expansion. The average raised by other academies was \$13,000 through state allocations, grants and donations. The monies received by these sources were \$192,023.46, \$138,400.00, and \$86,842.00 respectively.

Source of Supplemental Funding 2010
Exhibit 16



Excluding the one-time Congressional appropriation, the largest supplemental funding expenditure was for staff salaries (\$310,901.68), followed by supplies (\$155,222.89) and services (\$78,635.11) as shown by Exhibit 17 below.

Expenditures of Supplemental Funds 2010
Exhibit 17



Student ASSESSMENT

CHANGES IN STUDENT KNOWLEDGE, SKILLS, AND ATTITUDINAL TESTING

Student performance and attitudinal tests will undergo substantial change in FY 2011. These changes are driven by recent changes in the core curriculum with an emphasis on specific performance objectives in each of the content areas. In addition, the assessment team has replaced a number of simple knowledge items with problem-solving application items. The objective is to build a pool of test items with appropriate degrees of difficulty to allow the development of multiple tests over the program year. This procedure improves testing reliability and helps to reduce instructors' teaching to the tests since there is some variability in testing options without injury to the testing instruments.

The major objectives in item changes will be to include greater coverage of the new core curriculum, focused on increased math and problem-solving applications, reduce and/or eliminate simple knowledge items, and incorporate subject matter objectives as they relate to STEM and the core curriculum content. At present, there are 33 items in the performance test and it is most probable that the number of items will be increased to 35 or 36.

The new core curriculum is results-driven with specific student outcomes in each of the program content areas. There is greater emphasis on math, science, technology, and engineering than in prior years along with an increased emphasis on the use of standardized lesson plans and clearly articulated learner results. The testing will cover many of those results and will also apply items to capture where the students are upon entry into the program and on completion of the program. On average, the academies have an average mean score of 60% upon entry and near 80% at the completion of the DoD STARBASE program.

The test will continue to be administered pre- and post- DoD STARBASE participation. The pre-program test score provides the baseline for determining whether or not program objectives are obtained through the program experience. All prior testing indicates that the test results are significantly different from pre- to post-assessment. On average, over the past eight years, the average gap scores increased above 5.5+ from pre- to post- on a 32-item test. In 2009, the pre- and post-test scores were the highest in the program's history. The gap scores, or score differences between pre- and post-test, indicates that while the students come into the program with some basic knowledge and skills, their depth of knowledge and skills increased through participation in the curriculum.

Substance abuse prevention and teamwork are no longer taught in the new curriculum. While these topics may be covered by the DoD STARBASE instructors, they do not have universal standardized delivery across all sites. In addition, the test items had low item difficulty and deficiencies in problem-solving application. Thus, the following items will be removed from the test along with several additional items currently under review:

- Item 1:** Drinking alcohol may decrease our bodies' ability to do easy things. (T/F)
- Item 4:** Negative actions may make it hard for you to reach your goals. (T/F)
- Item 8:** Which of the following is it NOT a team (MC)
- Item 27:** What should you do if you have something you want to do, or something you want to be in life? (MC)
- Item 28:** Which of the following can damage an individual's dreams? (MC)

The changes in student tests are driven by a common curriculum and the desire for standardization in content and unit outcomes. The DoD STARBASE curriculum committee enforces this standardization by reviewing each academy's lesson plans before approving installation. The committee also reviews those test items undergoing changes and suggests refinements. The assessment team will field-test new test questions for reliability, degrees of difficulty, and validity of content prior to including the questions in the standardized test. It is expected that this field test will be conducted during the first part of the 2011 calendar year with a sample set of academies selected by region, service arm, and the length of time in operation. Hopefully there will be sufficient time remaining in the program year to obtain a round of testing from all of the DoD STARBASE academies in this coming reporting period.

Teacher ASSESSMENT

OVERVIEW

Teachers are a key participant group in the DoD STARBASE program. Their role in the program is multifaceted: they serve as critical observers of student behavior and performance before, during, and after the DoD STARBASE experience; they influence student expectations about the program experience; they link the program to parents, school administrators and the community; and they serve as monitors and facilitators of the curriculum. In these roles, they serve as an “expert panel group” on the impact of the DoD STARBASE program.

The assessment instruments used in this study are only a part of this process, since teachers have opportunities to express their observations during the program year. Teachers are encouraged to provide candid and critical feedback on the strength of the program and identify areas of needed improvement. After the program, teachers are asked to document changes in school culture, curriculum, instructor methodologies, and the use of DoD STARBASE materials.

Teachers have consistently been strong advocates and promoters of the program within their school systems. Most of the teachers are long-term participants in the program. Those teachers are in a position to report on downstream results, linkages to other STEM activities, and provide referrals to other programs that reinforce the attitude and skills that DoD STARBASE learned at the academy. The DoD strategy is to bridge a number of STEM-related experiences for the students and teachers are critical to this process.

ASSESSMENT APPROACH

Classroom teachers participating in the DoD STARBASE program were invited to complete the *DoD STARBASE Teacher Survey* online⁹ from August 2009 to July 2010. Each academy was requested to provide at least 10 completed teacher surveys. A copy of the current *DoD STARBASE Teacher Survey* is in the appendix. This year, 1,637 teachers responded to the survey as compared to 1,497 in 2009, for a 9.1% increase.

The teacher assessment obtains basic demographics on the teachers, such as years of experience, grade level taught, military base familiarity/ experience and years participating in the DoD STARBASE program. In addition, several items canvas the impact of DoD STARBASE in the school system, the curriculum, use of DoD STARBASE materials, impact on state testing and community awareness. The survey also asks teachers their personal views about the DoD STARBASE program and curriculum, and the programs impact on them and their instructional modalities.

TEACHER DEMOGRAPHICS

As in previous years, the teaching cohort is an experienced group. The majority (78.1%) have five or more years of teaching experience while 16.5% have two to four years of experience and 5.4% are first-year teachers. This experience quotient further denotes the “expert panel group” attribute.

The experienced teacher group, those with 11 years or more teaching experience, accounted for 53.2% of the respondents. This was a slight increase over last year’s 52.3% respondents. For those with five years or more experience, the total accounted for 90.9% of the survey respondents. In addition, 62.5% have had multiple years of DoD STARBASE participation

The target grade for DoD STARBASE is the fifth grade. The majority (76.7%) teach fifth grade. This is more than a 9% increase over last year’s survey results. The tables that follow illustrate the respondents on teaching experience, grade level taught, prior military base experience, and years of DoD STARBASE involvement.

⁹ The survey results were analyzed by Vangent, Inc. who provided the key assessment results.

While the majority of teacher participants have had repeated years with DoD STARBASE, a substantial number (614 or 37.5%) are new to the program. In addition, 299 (18.3%) of the teachers had no prior military base experience. Thus, the DoD STARBASE program provides the first exposure to a military base for many teachers.

Teacher Demographic Profile
Exhibit 18

Response	Frequency	Percent
Grade Taught		
Grade 3	5	0.3%
Grade 4	110	6.7%
Grade 5	1,255	76.7%
Grade 6	123	7.5%
Grade 7	3	0.2%
Grade 8	9	0.5%
I am a special class teacher	27	1.6%
I am a teaching assistant	33	2.0%
I am an administrator	5	0.3%
Other	67	4.1%
Ever visit a military base prior to your current STARBASE involvement?		
Never, this is my first STARBASE program	299	18.3%
Yes, for prior STARBASE programs only	400	24.4%
Yes, for activities not related to STARBASE	468	28.6%
Yes, for STARBASE and non-STARBASE activities	451	27.6%
Other	19	1.2%
Number of years with STARBASE		
This is my first year	614	37.5%
2-4 years	680	41.5%
5-7 years	241	14.7%
8-10 years	70	4.3%
11-15 years	26	1.6%
Over 15 years	6	0.4%
Number of years teaching		
This is my first year	88	5.4%
2-4 years	270	16.5%
5-7 years	208	12.7%
8-10 years	199	12.2%
11-15 years	279	17.0%
Over 15 years	593	36.2%

DOD STARBASE'S IMPACT ON THE SCHOOL SYSTEM

DoD STARBASE is not a replacement program for school systems' STEM curriculum. It's designed to enhance and expand many STEM concepts taught in schools while introducing new tools, technologies, and experimental applications. Teachers recognize these DoD STARBASE attributes in their responses to several items in the surveys and during interview schedules. The survey asked several questions regarding the use of materials provided by the academies and behaviors resulting from their involvement with the program. They included:

1. The schools' communication with the community about DoD STARBASE
2. Teachers' use of DoD STARBASE materials in the classroom
3. Assigning students DoD STARBASE take-home activities
4. Teacher recommendations to other teachers, principals and school systems
5. Whether DoD STARBASE helps in meeting state performance requirements

All of the responses to the above questions were positive, but were particularly strong on items that were under the direct responsibility of the teacher (i.e. items 2 through 5). All items reflected at the same level as last year or slightly above last year's assessment. More than half (52%) of the teachers reported that their schools communicated formally to parents and the community about the DoD STARBASE program. The remaining responses were equally divided with 23% reporting no formal communication and 25% indicating they did not know whether or not there was formal communication to increase community awareness (see Exhibit 19 below).

Sixty-four percent of the respondents used the materials and applications provided by the academy in their curriculum; another 62% assigned the materials for home study/follow-through activities. The ratings take a more dramatic jump in their referral of the program to other teachers, administrators and school systems at an 89% rate. Most of the teachers (96%) responded that they use DoD STARBASE content to help fulfill state requirements. These ratings indicate substantial involvement in influencing the school system, but most particularly upon teacher involvement and validation in the process.

DoD STARBASE'S Impact on the School System

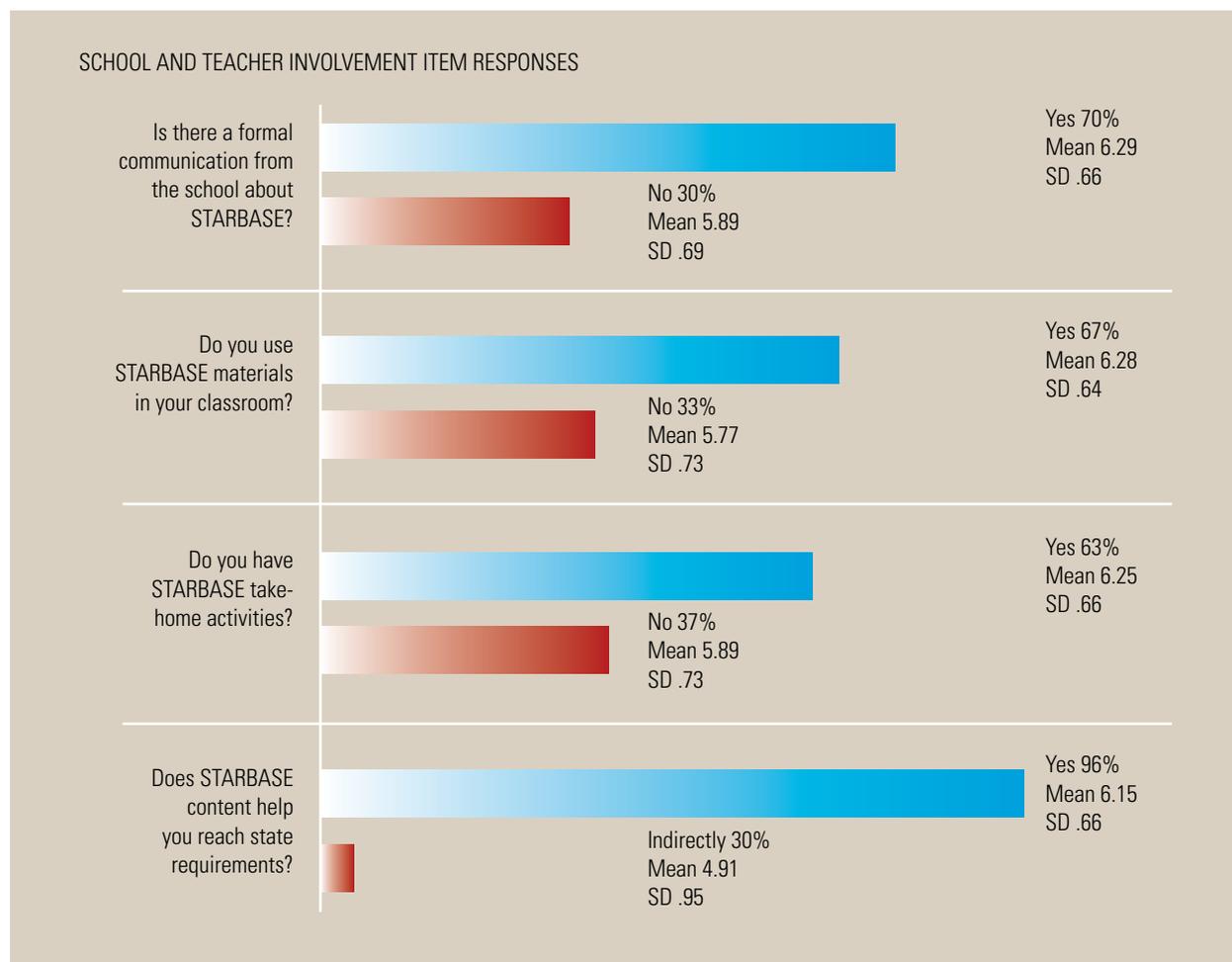
Exhibit 19

Item	Positive (Yes) Responses 2009	Positive (Yes) Responses 2010
Is there formal communication from the school that raises community awareness of the DoD STARBASE program?	50.5%	52.0%
Do you use DoD STARBASE materials/applications in your classroom?	62.7%	64.0%
Do you have DoD STARBASE take-home/follow-through activities beyond your regular classroom presentations?	62.5%	62.0%
Have you recommended STARBASE to other teachers, principals or school systems?	89.5%	89%
In your view, does DoD STARBASE content and concepts help you reach your state's requirements?	95.7%	96%

SCHOOL AND TEACHER INVOLVEMENT AND TEACHER ATTITUDINAL RATINGS

The analysis compared four items from school and teacher involvement (i.e. formal communication, use of STARBASE materials, teacher referrals, and meeting state standards) to the mean teacher attitudes across all attitudinal survey items. The analysis found that the more involved and invested the school and teachers were with the program, the higher the teacher program attitudes and ratings. Ratings were scored on a seven-point scale, with a low rating being 1 “strongly disagree” to a high rating of 7 as “strongly agree.” For example, schools that promoted DoD STARBASE through formal communications had higher teacher ratings (6.29) than schools that did not have formal communication plans (5.89). In addition, teachers who utilized DoD STARBASE materials in class and for home activities responded more favorably (6.28 and 6.25 respectively) than teachers who did not utilize the materials (5.77 and 5.89 respectively). Also, and more dramatically, when teachers perceive that the program helps them reach state requirements, their attitudes are much more positive (6.15 as compared to 4.91). Thus, involvement equates highly with significantly higher attitudinal rating scores.

School and Teacher Involvement Items and Teacher Attitudinal Ratings
Exhibit 20



Note: The mean teacher attitudes are the average response to the attitude items for teachers with three or less missing responses.

OVERALL MEAN RATINGS OF TEACHER ATTITUDINAL ASSESSMENT (2001-2010)

There are 36 attitudinal items in the teacher survey. The teacher respondents were asked to rate each of the items on a seven-point Likert Scale from strongly disagree (1) to strongly agree (7) based on their observations and experiences with the DoD STARBASE. The analysis grouped the items into four areas to evaluate the effectiveness of the program:

1. Science, technology, engineering and math
 2. Perception about the military
 3. Citizenship and pro-social attitude
 4. Overall effectiveness of STARBASE
-
- Combined overall assessment**

For this opening assessment, the overall mean ratings over the past decade were compared with this past year, which had the highest overall rating of 6.27 on a seven-point scale (see Exhibit 21 below).

Overall Mean Ratings of Teacher Attitudinal Assessment (2001-2010)

Exhibit 21

	Year									
Summative Mean Ratings	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	6.24	6.13	6.10	6.15	6.18	6.00	6.08	6.12	6.00	6.27

TEACHER ATTITUDES BY STARBASE EVALUATION FACTORS

Teachers gave higher ratings on all items than they had in 2009. The ranges for 2009 and 2010 were 5.53-6.85 (2009) and 5.67-6.84 (2010) with gap differences of 1.32 and 1.17 respectively for each year. The overall mean scores of 6.10 in 2009 and 6.27 in 2010 reflect the improvement in ratings.

When grouping the 36 attitudinal items into four areas of evaluation: STEM, military, citizenship/pro-social, and program effectiveness for the past four years, there is a gradual increase in all four areas. This is also reflected in the overall effectiveness index that increased from a 6.08 overall rating in 2007 to 6.26 in 2010 for a positive gap difference in the rating of +.18. The highest improvement rating among the four groups was in STEM with the greatest gap difference of +.22. This item was 5.95 in 2007 and 6.17 in 2010 (see Exhibit 22 below).

Average Mean Ratings and Gap Difference Scores by Assessment Group Factors (2007–2010)

Exhibit 22

	Year				
Factor ____ Items	2007	2008	2009	2010	Gap Difference (+ -)
Overall Index	6.08	6.14	6.24	6.26	+.18
STEM	5.95	5.92	6.10	6.17	+.22
Military	6.27	6.36	6.36	6.37	+.10
Citizenship/Pro-Social	5.89	6.00	6.06	6.07	+.18
Effectiveness	6.25	6.27	6.41	6.42	+.17

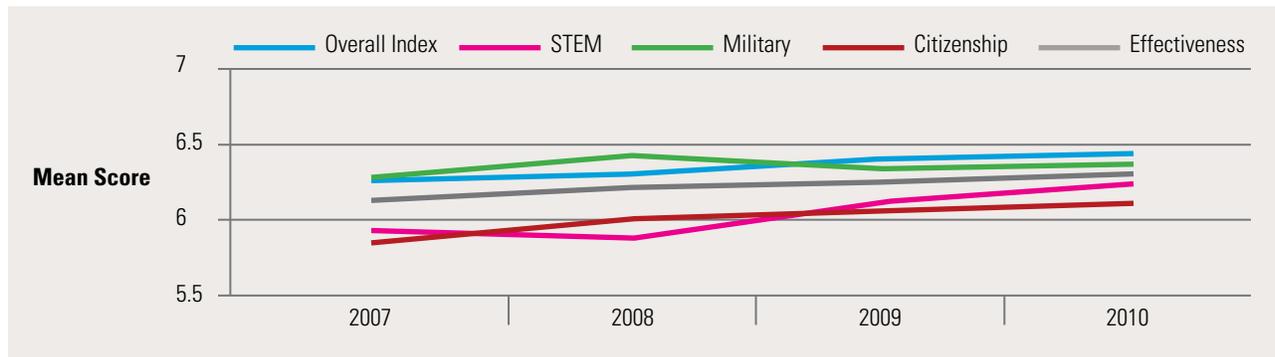
The ratings by the teachers indicate positive experiences for themselves, students and their students' families. They also indicate the program's value and materials usefulness in their school curriculum and in follow-up programs. Improvements in the students' attitudes about themselves, school, and their environment were positively noted. The highest rated items included: instructors are good role models, teachers looking forward to participation, student sharing program experiences, and the overall positive influence of the program on the students.

The greatest improvement over the past five years was in math. Teachers indicated their concerns with mathematics on previous surveys; the curriculum committee responded to this concern by introducing mathematics operations and applications to the core curriculum and by integrating mathematics throughout the lesson plans.

Positive pro-social attitudes rankings include positive role models, building and maintaining self-esteem; and a "can-do" attitude. Formable perceptions of the military are often linked to military personnel as good role models and the students' engagement of being on a military base. Citizenship and pro-social positive behavior and self-confidence has been exhibited by the students as perceived by the teachers. The overall effectiveness index and its steady positive increase from 6.08 in 2007 to 6.26 in 2010 demonstrates the steady increase in teacher ratings over the last several years. For a full display of all items for each factor, see the appendix.

The following chart demonstrates the shift of key performance factors over the last four years. Note the movement of STEM item factors from 5.92 in 2008 to 6.17 in 2010 with an overall program effectiveness from 6.25 to 6.42 in 2010.

Shift of Key Teacher Performance Factors from 2007-2010
Exhibit 23



TEACHER ATTITUDINAL RATINGS ON STEM ACTIVITIES

Six items in the teacher attitudinal survey relate to STEM activities. They are primarily focused on the teachers' perceptions of how DoD STARBASE affects student behavior and understanding in the areas of math, science and technology. A seven-point scale measured the attitudinal ratings with seven being the highest positive rating. All the mean scores are rated 5.57 or above with three of the scores well above six. The mean score on the combined STEM items is 6.17. The science-related items are consistently a little higher than the math-related ratings, but the math ratings improved over the past five years. Teachers value the DoD STARBASE STEM experience for their students and for themselves. The school administrators, when asked during our briefing sessions about their views of the program, consider DoD STARBASE an essential part of their schools' STEM education plan and something they cannot replicate in their own program with the quality and complexity that DoD STARBASE provides. See the following Exhibit 24 for the STEM-related ratings over the past five years (2006-2010).

Teachers' Perceptions of Student Interests and Behavior Related to Math, Science and Technology (STEM) 2006-2010
Exhibit 24

Items	2006 Mean Score	2007 Mean Score	2008 Mean Score	2009 Mean Score	2010 Mean Score
More Interested in Learning About Math	5.39	5.30	5.70	5.67	5.77
More Interested in Learning About Science	6.39	6.37	6.45	6.54	6.54
Student Ask More Questions About Technology	5.54	5.60	5.72	5.90	5.90
STARBASE Has Helped Improve Students' Understanding of Science	6.41	6.38	6.46	6.61	6.60
STARBASE Has Helped Improve Appreciation of How Math Can be Applied to a Variety of Situations	5.19	5.93	6.07	6.12	6.23
After STARBASE Attendance There Is Increased Participation in the Science Fair	N/A	N/A	5.14	5.53	5.78
Combined STEM Mean Score	5.93	5.94	5.92	6.06	6.17

CONSISTENCY OF TEACHER OVERALL RATING (2003-2009)

The average mean, on teacher attitudinal assessment, across all items remains consistently high. Over nearly a decade of applying this assessment process, the average mean ratings have always been above the six-point level on a seven-point scale from 2003 to the present (see Exhibit 25 below). Teachers are key advocates of DoD STARBASE who value the key attributes of the program's content, methodology, and results. This year the overall mean attitudinal rating was the highest of the decade at 6.26.

Average Mean Rating of Teacher Attitudinal Assessment on Program Attributes and Student Performance (2003–2010)
Exhibit 25

Year	2003	2004	2005	2006	2007	2008	2009	2010
Overall Mean Rating	6.10	6.15	6.18	6.00	6.08	6.12	6.10	6.26



TEACHER ATTITUDINAL RATINGS OVER THE LAST SEVEN YEARS: THE TOP RATINGS

The highest rated attitudinal items are tightly clustered this year. Only two of the teacher attitudinal ratings had a mean below six on a seven-point scale at 5.80 and 5.75 respectively. While the ratings are tightly clustered, two items moved up in the rankings higher than in previous years: "STARBASE curriculum supports our state standards" and "the students enjoyed being on a military base." The top 14 ratings included the program's influence on the students, principals, parents and themselves.

Top 14 Teacher Ratings Over a Seven Year Period (2003-2010)
Exhibit 26

Item	2004	2005	2006	2007	2008	2009	2010
The STARBASE instructors are good role models for the students.	6.75	6.72	6.68	6.61	6.76	6.84	6.84
I look forward to my classes continued participation in the STARBASE program.	New Item	New Item	New Item	New Item	6.79	6.85	6.83
The STARBASE experience will be a positive influence on students in coming years.	New Item	6.70	6.68	6.68	6.76	6.84	6.83
The children enjoy sharing their STARBASE experience with others.	6.74	6.68	6.68	6.70	6.81	6.83	6.83
The STARBASE experience has been a positive influence on me personally.	New Item	6.65	6.59	6.64	6.58	6.76	6.73
The STARBASE curriculum supports our state standards.	6.75	6.63	6.60	6.64	6.59	6.70	6.71
STARBASE reinforces many positive behaviors I try to teach my students.	6.71	6.67	6.63	6.64	6.70	6.71	6.69
The students enjoyed being on a military base.	6.70	6.52	6.37	6.38	6.50	6.61	6.63
Parents are delighted that their children are participating in STARBASE.	6.52	6.48	6.49	6.43	6.43	6.63	6.62
The students admire their STARBASE instructors.	6.59	6.58	6.49	6.45	6.60	6.63	6.61
STARBASE has helped improve the students' understanding of science.	6.40	6.52	6.41	6.38	6.46	6.61	6.60
The students talk about STARBASE long after the program has ended.	6.57	6.53	6.47	6.47	6.62	6.61	6.59
More interested in learning about science.	6.44	6.41	6.39	6.37	6.45	6.54	6.54
My principal is a strong advocate of STARBASE.	6.27	6.37	6.34	6.30	6.33	6.41	6.42

COMPARISON ACROSS SERVICE ARMS

Across the different branches of the military, there are differences in the teachers' ratings of attitudinal items. Many of the items are statistically significant and may be of interest to academies operating under the different branches. A few items that demonstrate significant differences between the service arm sponsors are:

- Teachers who attended the one Marine academy responded more favorably across all items except for improved understanding of science;
- Teachers who attended academies sponsored by the Air Force responded the least favorably to encouraging others, cooperating with each other, participation in the Science Fair, and to understanding of science;
- Teachers who attended the National Guard academies responded the least favorably to comfort with military personnel for both students and teachers; and
- Teachers who attended the Navy academies responded closest to the mean on all items.

This is not a comparison between the service branches since all items rated very high on the Likert scale, but it will provide each academy an identification of relative areas that they may want to improve upon in future planning and content emphasis. The hazard in presenting organizational differences is drawing improper comparisons rather than identifying areas for further improvement. The data should be viewed from the perspective of program improvement.

KEY TEACHER CORRELATIONS

Correlation analysis on teacher characteristics is conducted to determine and identify trends that are related to other survey items including teacher years of service, grade levels taught, years with the DoD STARBASE program and other indicators. There are several significant correlations between the number of years of teaching experience and years of DoD STARBASE involvement with a number of the survey items. They include:

- Teachers with more teaching experience indicate their students have more positive attitudes and behaviors;
- Teachers with more years of DoD STARBASE involvement tend to report more positive attitudes across many of the attitudinal survey items than teachers with less DoD STARBASE experience;
- Teachers who have been in the STARBASE program longer are more likely to report increased participation in the Science Fair; and
- Teachers of higher grade levels are not as positive regarding their students sharing their experiences and enjoying being on a military base as compared with the teachers in lower grades.

Overall, the correlation indicates that the more experienced teachers are more likely to build excitement about DoD STARBASE among students and will facilitate and encourage discussion about the program and lessons. In short, they become more involved as facilitators. Their commitment and involvement is a key ingredient of the program's success with the students.

DRIVERS OF OPINION

As in past years, an analysis is conducted entitled "drivers of opinion." These related attitudinal clusters identify a rank-ordered list of non-overlapping predictors. The analysis identifies a list of target attitudes entitled "a driver"; thus, when a "driver" is present, a set of attitudes is also present. The practitioner (i.e. instructor and the program developer), can use these "drivers of opinion" to improve target attitudes. For example, the "drivers" can be used to prioritize the delivery of instruction and determine the list of attitudes that support and/or influence instruction. When matched with a similar set of "drivers" for the student population the potential for reinforcing attitudes increases.

The following tables present a rank-ordered list of non-overlapping survey items that are statistical predictors of the first attitude (i.e. if the conditions in the list are present, the likelihood of the target attitude will also be present). These lists can prioritize action items for improving target attitudes.



Several repeating drivers suggest obtaining a broad influence on the target attitudes. A select few of these repeating drivers include:

- More interested in learning about science – building an interest in science that the teachers can observe may increase teacher attitudes about students' learning of math and science and teachers' positive view of the program.
- More comfortable making decisions – the more the teachers sense that students are comfortable making decisions, the more positive they will be about students' learning, comfort with military, and students' futures.
- My principal is a strong advocate of STARBASE – increasing the support of the school's principal for DoD STARBASE may increase a teacher's attitudes about students' understanding of science, positive influence of the program, and reinforcement of positive behaviors.
- The children enjoy sharing their STARBASE experiences with others – as teachers hear the students talking about DoD STARBASE with others, they may better understand what the children have learned and the impact of the program (learning science, reinforcement of positive behaviors, and long-term positive influence).
- The STARBASE experience has been a positive influence on me personally – when teachers feel that DoD STARBASE is a positive influence on them, they are also more likely to feel that it reinforces positive behaviors, will be a positive influence on students, and look forward to students' participation.

Each of these conditions describes how an instructor utilizes the drivers when the condition presents the application of the accompanying attitudinal clusters. The following are a few of the ranked-ordered list of survey items of the target attitudes:

Teacher Drivers of Key Target Attitudes

Exhibit 27

Target Attitude	Drivers of Target Attitude
<p>More comfortable with military personnel All respondents (n=536)</p>	<ul style="list-style-type: none"> • More comfortable making decisions • Because of my participation in STARBASE, I am more comfortable with military personnel • The students enjoyed being on a military base • More goal oriented • More excited about learning
<p>STARBASE has helped improve the students' understanding of science All respondents (n=536)</p>	<ul style="list-style-type: none"> • STARBASE has helped to improve appreciation of how math can be applied to a variety of situations • More interested in learning about science • The children enjoy sharing their STARBASE experiences with others • My principal is a strong advocate of STARBASE • STARBASE has helped improve the climate for participative learning in the classroom
<p>More interested in learning about math All respondents (n=536)</p>	<ul style="list-style-type: none"> • STARBASE has helped to improve appreciation of how math can be applied to a variety of situations • Better at following directions • More comfortable making decisions • More interested in learning about science • More willing to try new things • Students who attend STARBASE perform better on standardized state assessments
<p>STARBASE reinforces many positive behaviors I try to teach my students All respondents (n=536)</p>	<ul style="list-style-type: none"> • The students talk about STARBASE long after the program has ended • The STARBASE curriculum supports our state standards • The children enjoy sharing their STARBASE experiences with others • STARBASE has helped improve the climate for participative learning in the classroom • The STARBASE instructors are good role models for the students • My principal is a strong advocate of STARBASE • More interested in learning about science • I use the resources STARBASE provides to teachers • The STARBASE experience has been a positive influence on me personally
<p>The STARBASE experience will be a positive influence on students in coming years All respondents (n=536)</p>	<ul style="list-style-type: none"> • The STARBASE experience has been a positive influence on me personally • The children enjoy sharing their STARBASE experiences with others • The students enjoyed being on a military base • The STARBASE instructors are good role models for the students • My principal is a strong advocate of STARBASE • More interested in learning about science • I would like more STARBASE resources to take back to my classroom • The students talk about STARBASE long after the program has ended
<p>More excited about their futures All respondents (n=536)</p>	<ul style="list-style-type: none"> • More excited about learning • More goal oriented • The students talk about STARBASE long after the program has ended • More comfortable making decisions • After STARBASE attendance, there is increased participation in the Science Fair
<p>I look forward to my classes' continued participation in the STARBASE program All respondents (n=530)</p>	<ul style="list-style-type: none"> • The STARBASE experience has been a positive influence on me personally • The STARBASE curriculum supports our state standards • The children enjoy sharing their STARBASE experiences with others • After STARBASE attendance, there is increased participation in the Science Fair • More interested in learning about science • Students who attend STARBASE perform better on standardized state assessments

SUMMARY OF TEACHER ASSESSMENT

As a key participant group, teachers are one of the most important providers of feedback on what works and what does not, and what needs to be considered for the DoD STARBASE program to be more effective. They observe the program on a daily basis, track the effect upon students during and after the program's application, and serve as an "expert panel" in the use of instructional modalities and a "results expectation" to program objectives. They are critical observers of the program and their feedback is an essential element to the DoD STARBASE assessment process.

This year the teachers were positive on almost all items surveyed. They demonstrated strong positive attitudes concerning the influence of the DoD STARBASE experience for themselves, their students, student families, and the school environment. Their advocacy of the effectiveness of the program is generally across the board. Their acknowledgments of linkages to state educational requirements and the unsolicited recommendations by the participant teachers to other teachers, principals and school systems are important for future planning. For example, 96% of the teachers indicated that the DoD STARBASE program helps them to meet state requirements and 89% referred DoD STARBASE to other teachers, principals and school systems. The data also indicates that those teachers who use the DoD STARBASE program's materials for the classroom and for take-home activities are more positive about the program than those teachers who did not use the materials.

Over the past several years teachers have been consistently positive about the overall program. This year's ratings show increased approval and support for the STEM content in the revised curriculum.

Military Volunteer SURVEY RESULTS

Military volunteers are active participants in the delivery of the DoD STARBASE curriculum. They apply academic concepts to the world of work and serve as role models for students. Parents, educators, and community leaders appreciate the volunteers' outreach to DoD STARBASE students and grow in their understanding of the responsibilities and operations of the military.

Working directly with academy staff, students, and teachers, the volunteers are in a unique position to evaluate the effectiveness of the program and its effect on the community. An online survey asked volunteers to evaluate the impact of the program on the community and on themselves. This year, 297 volunteers started the survey and 208 completed the survey, a significant improvement from the 133 respondents in 2009. Service branch respondents included 121 National Guard, 53 Navy/Navy Reserves, 55 Air Force/Air Force Reserves, six Marines, and three from the Coast Guard.

Eighty-four percent of respondents described DoD STARBASE as "making a difference in their community" with 75% indicating the program was "making a significant or strong difference." The written comments from the volunteers state that the program is highly respected and creates a better understanding of the military's mission in the community. Sixteen percent stated that they did not have an opinion due to insufficient knowledge of the community.

The primary roles of military volunteers are tour guides (32%), classroom presenters (28%), and experiment facilitators (18%). The volunteers state that the volunteer experience is rewarding as it gives them "a great sense of personal pride in being a role model for youth" and "a sense of personal satisfaction and accomplishment."

When asked how to improve the program, the overwhelming response was that the program needed to be expanded to serve more students in more locations. The second most frequent response was to publicize the program more within the military and the community. One volunteer suggested that interested students return to the base and shadow military members for longer periods.

The best indicator of the volunteers experience with and impression of the DoD STARBASE program is that 99% recommend the experience to other members of the military.

DoD STARBASE 2.0 ASSESSMENT

Background

At the request of the OASD-RA program manager two post-training assessments were conducted in August 2010. The overall objective was to identify training experiences best suited for the installation and operation of the DoD STARBASE 2.0 after school STEM program. These experiences may prove helpful to subsequent training sessions on best practices, lessons learned, key challenges and effective installation of the DoD STARBASE 2.0 after-school STEM program.

The first pilot group consisted of five DoD STARBASE sites. Training took place in the early part of August 2009 followed by the installation process, creation of STEM club teams and full club operation over the next several months. All five pilot sites went through the full cycle of training, installation, operations and planning for the next program year before interviews for this assessment were conducted. The second pilot group, seven attendees in all, were interviewed shortly after their training experience in August 2010 and prior to the installation and program implementation process. As one would expect, the responses varied between the two pilot groups but each was useful in documenting training experiences for future trainees and facilitators.

Assessment Summary

Dare Mighty Things, Inc., (DMT), the mentoring trainer team, conducted its own assessment of the training experience via a paper-and-pencil survey instrument that focused on the attendees' responses to specific elements and effectiveness of the training on activities related to installing and operating the mentoring program. The results of this assessment showed positive responses from the attendees regarding the value of the training and the material provided.

Several months after the DoD STARBASE 2.0 STEM program was up and running, The SPECTRUM Group (TSG) was directed by the OASD-RA program manager to examine the experiences and challenges of the DoD STARBASE sites that installed and operated a mentoring program; in addition, their plans for the coming year were reviewed. This assessment consisted of a structured interview process with staff members who installed, trained, organized, scheduled, obtained school commitments and resources, and delivered the program. The analysis focused on tracking the experiences and challenges faced by the academies and the adjustments made to overcome those challenges. The assessment also documented staff suggestions for installing future mentoring programs.

Since only five sites participated in the first training sessions, caution should be taken in attaching too much value to these observations and generalizations. However, common experiences and challenges proved consistent enough to suggest "lessons learned" to peers that are considering the STEM program. Almost all of the programs that have gone through training plan to continue to offer the STEM program. One exception is the Native American program in South Dakota (NOVA) that experienced a serious staff problem when the instructors resigned in the middle of the program year.

Assessment Approach

A structured interview schedule was used to obtain the results outlined in this assessment with the following advantages:

- Respondents had fully completed all phases of the first pilot.
- Director and the coordinators could easily respond to those program elements that created challenges and paths of resolution.
- Respondents could expand on those events that they felt were critical to program success and those that needed adjustment. Details could then be explained and given greater understanding and clarification.
- Respondents were in the planning stages for the next program year and details on those plans, school demand, and expected numbers and commitments in FY10 were obtained.

All the topical areas that DMT covered in their assessment as well as those areas described above provided the topical outline for the interviews. The difference is that greater detail and understanding on specific issues and challenges as well as lessons learned and transportability to other program sites could be obtained.

All interviews were conducted during the first two weeks in August with three TSG interviewers who coordinated the content of the interview schedules, topics and probes. People at all five pilot sites (Georgia, Nebraska, Ohio, Oklahoma and South Dakota) were interviewed. In most instances, the directors and coordinators were interviewed. Interviews lasted approximately 90 minutes and a few as long as two hours. The respondents were candid and committed to moving to next year's program year. The NOVA experience is currently on hold and discussions on future application to that environment are under review.

Site-specific considerations and challenges were provided in a separate report. The observations and considerations that are potentially useful to other sites and to trainers and program designers are provided in the following sections on observation and findings.

The First Pilot: August 2009

Each of the pilot sites made several adjustments based on their local experiences and lessons-learned. The observations attempt to capture the challenges that each site encountered as well as the solutions they applied. In addition, observations were noted on unanticipated events; resources obtained from participant groups; understandings on participant requirements; staff and skill requirements of trainers, mentors and coordinators; financial assistance; time and schedule requirements; curriculum effectiveness; changes in future applications, impact on current DoD STARBASE commitments; and a number of other operational considerations and program adjustments in future program cycles.

General Observations:

- The four operating pilot STEM programs (Nebraska, Georgia, Oklahoma and Ohio) demonstrated positive installation. Each faced different sets of challenges in installation, coordination, school support, financing and staff resources.
- Oklahoma and Ohio had part-time coordinators paid for with non-DoD funds. Sites without this support relied on existing staff. All sites recommended using a part or full-time coordinator as the responsibilities taxed existing resources. Each program indicated a strong commitment to next year's program. There was school/community demand for program continuance and, in some cases, expansion above this year's effort.
- Piggy-backing existing after-school programs enhanced the ease of installation; access to trained mentors; scheduling with transportation systems; and access to teacher oversight.
- Careful attention to the Memorandum of Understanding (MOU) process was an essential characteristic in program installation and performance. The MOU must provide a clear and explicit understanding of the roles of each participant, resources, and expectations at each phase of the program. In some cases the MOU included financial and in-kind resources, background and transportation support, mentor recruiting, teacher coverage and facilities. In the case of NOVA, the lack of attention to this process proved to be detrimental.
- Financial, in-kind support, staff assignments, supplies, and overall commitment by the participant schools and the community were present, in some form, in each of the pilot sites. The continuance of these activities is an essential element of sustainability in the coming years. Each program site spent significant time and effort in obtaining and nurturing participant group involvement. All pilot groups indicate the need to keep the participants well-informed through feedback about the importance of their contributions and the positive impact they have on the students.
- Sites that had an existing pool of military volunteers were able to use existing background checks to speed-up the installation and vetting of the mentor pool.
- Feedback to all participants (students, mentors, schools, military, parents, etc.) proved to be an important element in adjustments, corrective action, enhancing commitments, coordination and reinforcing program objectives.

- Most of the directors and coordinators indicated a desire to revise the curriculum to reflect more STEM-related applications. MAP-IT, for some mentors, took too much time and “flattened” student involvement. Some coordinators felt the mentors needed more time and skill development in selected areas.
- School demand for the STEM program appears strong across all pilot programs; there is desire to expand the number of students and schools. Expansion would require more space, staff coordination, financial support and a greater mentor pool. A few directors are seeking additional financial support from the schools and other participant groups. Only one site has committed to aggressive expansion and mentor pool development.
- Creating a mix within the mentor group to match mentor experience and skills with program content and student needs, proved to be essential for program operation. Some sites felt it is important to include a trained teacher, as well as a STEM expert in each mix. Volunteers needed to have an understanding of students developmental and cultural needs/experiences.

Program Characteristics of Successful Installation and Operation:

Successful installation and operation of the STEM program had the following characteristics:

- Financial/in-kind support by participant groups (schools, community, base, industry, etc.)
- Strong school commitment shown by: pay for teacher coordinators, providing supplies, background checks, mentor recruitment, etc.
- Full-time or dedicated coordinator
- Pre-existing pool of military volunteers
- Alliance with after-school or existing outreach programs
- School coordinator designee
- MOU secured and clearly articulated
- Feedback to all participants (students, mentors, schools, parents, etc.)
- Periodic rewards and recognition to students/participants
- Experienced mentors (classroom teachers and STEM experts)
- Use of a team of mentors
- Committed to sustainability
- Desire to revise curriculum
- Financial coverage essential to meeting sustainability
- Aggressive participant group involvement

The Second Pilot: August 2010

It should be noted that although respondents were positive about the value of the program, their views as professional educators, trainers, and instructional design personnel provide the basis of their observations.

General Observations:

While there were varying degrees of expectations and experiences by individual participants, there were several points that most respondents agreed upon:

- There was good information and useful principles on mentoring applications, installation guidance, site selection, and training instruction materials. The material and applications were designed for easy installation;
- The “Scaletric” activity showed promise in meeting STEM requirements;
- The training session, materials and generic mentoring concepts, applications, and principles prepared them for installation and operations;

- Training time should be reduced to roughly three to three-and-a-half days as sessions tended to collapse during the last day-and-a-half. Information in several presentations was repeated. Suggestions included starting the training earlier in the day and keeping the presentations at a higher tempo;
- The view that applications should be linked with specific STARBASE-related practices rather than using big brother/big sister references;
- Program needs more one-on-one opportunities to discuss situations unique to individual sites;
- Pre-training and other overall experiences such as the site visits, newsletters, website, sister academy contacts, etc. provided a rich venue of materials, experiences, and information for installation;
- Respondents expressed a willingness to help others through visitations, materials and general guidance;
- There is a need for STEM-related applications and training aids. They felt that this would come from other academies as the program unfolds;
- A part-time or full-time coordinator is recommended if this program grows in size based on school-community demand, which is strong. All of the programs report the program will be sustainable into the next program year;
- Action plans and the time to develop them during the training was less than desirable (e.g., South Dakota indicated that the first phase of training was given more time in this activity and it was very useful in the installation process, and in developing community and participant relationships);
- The scheduling of this training session was too close to the start of the school year, which made it difficult to obtain commitments to start a new initiative;
- Follow-on activities focused on sharing and describing experiences in installation and operation of the programs, common challenges, problem solving, materials, adjustments, etc.;
- The lessons learned need to be systematically compiled, agreed-upon and distributed after review by either committee and/or program managers; and
- Presentation materials, as they relate to STARBASE applications, could be refined if experienced educators/instructors provided input and review.

Considerations

Considerations are presented in two parts: the first with the fully installed programs that had close to a full year of operation and are now planning for their second year; the second part are those that are currently in the start-up process. The differences in considerations are self-evident.

Considerations from the First Pilot Group Experiences:

- Site selection of school system and community requires careful assessment of school demand, support, facilities, in-kind support, existing after-school programs, potential pool of mentors, school coordinator, etc.
- Application of an MOU process that identifies each program participants' roles, responsibilities, requirements and resources is essential.
- On-going mentor training may be required if the mentor pool is not sufficient to meet deployment/absentee ratios.
- Incorporation of Levels I-III performance indicators (Level III) for successful installation and sustainability of the STARBASE 2.0 program.
- Expansion of participant group involvement using some or all of the following: linking to other student programs in STEM, financial/in-kind support, mentor recruitment, school certification, etc.
- A dedicated coordinator is essential to installation and sustainability.
- The pool of volunteers should profile military personnel, STEM experienced individuals, and teachers.

- Feedback system to all participant groups on corrective action, progress, next steps, enhancements, training aids, encouragements and thanks, etc.
- Mentors should be teamed by mixing appropriate levels of skill and experience.
- Sustainability should be determined and expressed before pilot program year is completed to lock in commitments, resources and requirements.
- An assessment of personnel requirements, plans for coordination and training, sources of support and level of commitment should be developed during this program year.
- The curriculum committee should examine curriculum change in content and STEM applications.
- Content areas should have some standardization in lessons learned, training applications, and assessments.

Considerations from the Second Pilot Group Experiences:

- Reduce the length of the training schedule to three or three-and-a-half days by lengthening the program day, reconfiguring breakout sessions, reviewing the sessions to avoid repetition, increasing tempo of presentations and reviewing areas of content coverage.
- Ground the material to fit DoD STARBASE practices/challenges through review by panel of academy directors/instructors for examples and applications.
- Identify academy sites that are willing and able to provide assistance to other academies in the training and installation of their mentoring programs.
- Link the successful installation and sustainability of the mentoring program to each academy's strategic plans for performance Level III criteria.
- Select key observations that were gleaned from the first-phase experience to share with participants such as use of the MOU process, implications of the feedback process, linkages to other participant groups, etc.
- Clarify the "Scaletic" activity.
- Linking the mentoring program to other participant groups.
- Provide sufficient time for developing individual action plans during the training session by each participant.
- The potential of developing the organization of academy teams from the pilot groups should be examined to assist academies without mentoring programs, to develop mentoring programs. This would facilitate the creation of new STEM programs in a cost-effective manner.
- Consider the use of pre-training preparation materials prior to program attendance including the use of reports, handouts, exercises, planning documents and key issues/challenges that the trainers can respond to during the program.

The respondents identified the challenges that most of the DoD STARBASE sites will be faced with when introducing the STEM program in their communities. The pilot academies suggestions reflect the conditions under which most academies will expand their programs. Expansion includes the range of activities and expansion to additional grade levels or schools. This demand must be accompanied by corresponding in-kind resources and services since most academies are limited in their own funding and resources. Demand tends to increase as the program proceeds and must be managed to avoid over-commitment.

The Minnesota STARBASE Student Participant Study

Background:

There has been strong interest in assessing the long-term impact of the DoD STARBASE program on students' social, academic, behavioral and technical skills as they progress to high school graduation. Beginning with the 2008-09 academic year, researchers from the Wilder Foundation¹⁰ conducted a two-phased effect study on a sample of STARBASE Minnesota students enrolled in the 10th, 11th or 12th grade in the Saint Paul Public Schools. The 442 former STARBASE students were matched with a control group of 442 non-STARBASE students for comparison. The results of this study, while limited in its generalizations to academy-wide considerations, provide several suggestions for linking applications and assessment methods to downstream evaluation research. The study, to date, has value for suggested considerations to the national program, its participants, and collaborators.

Study Approach:

The analysis utilized several methodologies to obtain significant results between the STARBASE participants and the control group. Analysis assessed downstream school performance and activities of graduates who attended more than one program compared to the control as well as graduates who attended only one STARBASE program. Surveys and available school records were the primary data collection instruments.

Findings and Results:

The performance results were mixed. Overall, the majority of former DoD STARBASE students indicated that the program had an impact on their schoolwork and STEM-related activities over their school career. Comparisons with the control group indicated that STARBASE graduates demonstrated greater interests in technology and joining the military. As for future educational and career plans, there were no significant differences noted. However, for students who had participated in multiple programs, significant differences between the control group and single participants emerged in understanding STEM activities. These differences, while significant, were not substantial but suggestive that additional exposure had positive results. This finding has strong suggestive considerations for building collaborative and linked relationships with other STEM-related program operations. This finding has led to a more focused study in the second phase of the Minnesota based study where STEM inventories and tracking of students will be conducted to learn more about opportunities and program gaps in the local STEM community.

When comparing the participants with the control group on school records, the DoD STARBASE graduates held higher grade averages in science; completed 10th grade algebra II; and had better high school attendance. Those students who attended more than one DoD STARBASE program attained several more positive indicators than those attending only one program as well as those in the control group. Overall, the multiple program participants demonstrated more positive results.

Overall, the results suggest that increased or repetitive involvement¹¹ in DoD STARBASE has positive effects on STEM activities, military-related indicators, selection of STEM-related careers, and several school performance activities. Based on ratings of military-related items, students who attended multiple DoD STARBASE programs show increased interest in a military career and in technology.

¹⁰ Katie Broton, Dan Mueller.

¹¹ STARBASE Minnesota offers a program for fourth- and sixth-grade students, thus many students attend two academies.

Implications, Considerations and Next Stage in Phase II:

The following considerations are based on the study results:

- Identify, organize and link those activities that reinforce the positive DoD STARBASE experience with various participating groups in downstream activities;
- Identify school systems' use of materials, methodologies, curriculum, instructional applications, and inventories of resources and programs in the community;
- Provide guidance for school decision-makers and administrators on using resources in follow-up activities (e.g. the inventories that Minnesota is developing; the KIOSE system for information distribution; website applications, etc.);
- Follow-up mentoring applications and their link to STARBASE 2.0;
- Review military youth programs that involve students in STEM-related subject-matter areas and how the military uses that expertise in defense-related career activities;
- Link STEM-related agencies/companies in the community that have an interest in the pools of talent that these programs provide and explore activities of mutual interest;

It is becoming clear that to position the positive results that DoD STARBASE academies obtain during the program experience, several initiatives and follow-up activities must be established. This involves developing a set of initiatives with each of the existing key participants to obtain down-stream results. The Wilder Research Study on the STARBASE Minnesota participants substantiates the need for sustaining activities during the first phase of their study. The Wilder Research group is now conducting Phase II of their study that will be reported in March 2011.

The initiatives of classroom teacher training, refresher courses, materials development, and website applications are some of the considerations. Mentoring with STARBASE 2.0, computer-aided design applications, instructor training, and core curriculum upgrades are important program enhancements; however, it is also important for academies to mobilize community groups to explore external and community resource to sustain the DoD STARBASE experience.





CONSIDERATIONS

A Decade's Review of PROGRAM PROGRESS

Each year the Annual Report includes a section entitled “Considerations.” The considerations are suggestions for program improvement; they are designed for review by DoD STARBASE personnel, sponsors, program collaborators, participants, public officials, school administrators, and parents. Over the past decade, the report has submitted more than 150 considerations. These considerations are driven by multiple sources.¹² The range of considerations reflects the interests and concerns of all involved parties. Major initiatives of program operations, curriculum upgrades, compliance adherence, cost effectiveness and assessment rigor were implemented as a result of these considerations.

The areas of curriculum and program content, operational considerations, and compliance concerns captured the greatest number of suggested enhancements. Staff development, website applications, program evaluation and assessment, and STEM-related activities with other participant groups also generated program improvement.

CURRICULUM AND PROGRAM CONTENT

Curriculum and program content was, by far, the most consistently mentioned topical area over the past decade. As the number of DoD STARBASE academies grew, the need to develop standardization in basic concepts, constructs, content and instructional modalities for program consistency became important considerations. In addition, greater attention on STEM content led to major enhancements and demands in curriculum initiatives. A few key initiatives over the past decade in curriculum and program content included:

- A major revision of the DoD STARBASE core curriculum across all academies emphasizing experiential, problem-solving, STEM content with specific program objectives in student performance that had outcome results-oriented objectives;
- The training of all instructional and management staff in new curriculum with installation plans for fall 2010;
- The installation of a curriculum committee and regional representatives, to review/approve curriculum and guide academies in its installation;
- The incorporation of the successful installation of the core curriculum into the Academy Performance Assessment Program (Levels I through III) to recognize higher levels of academy performance;
- The installation of new technologies i.e. computer-assisted design (CAD) and other techniques to upgrade scientific application and engineering problem-solving;
- The expansion of STEM education to other grade levels through an after-school mentoring program (STARBASE 2.0);
- Changes in student testing and performance assessment to reflect the changes in the core curriculum and the emphasis on problem-solving applications; and
- Overall staff development concentrated on curriculum improvements, instrument modalities and standardization of core applications.

¹² Sources include the analysis of student and teacher performance assessments; documentation of academy operations; surveys of school teachers/administrators; military volunteers and post commander assessments; volunteer surveys; compliance audits and site visitations; periodic evaluation studies on program enhancements; and input from program sponsors, collaborators and participant groups.

DODI COMPLIANCE

As the number of academies increased, the Department of Defense Instruction 1025.7 (DoDI) was introduced and basic performance criteria were established. In addition, DoD introduced several assessment measures to augment compliance including:

- Compliance visitations to assess each academy's coverage of DoDI requirements and operational efficiencies;
- The development of a corrective action plan to bring noncompliant sites into full and timely compliance;
- The establishment of a self-assessment reporting system on key compliance issues and their current status on a real-time basis;
- The need to submit a written request to OASD/RA for a waiver or exception for any temporary and/or commitment deviation from required compliance;
- The integration of compliance adherence and/or operational requirements into the academy performance assessment program (i.e. Levels I–III);
- The development of inventory documentation for on-site inspection;
- The presentation of DoDI requirements, policy procedures, operational improvements at Directors' Conferences, on website communications, et al;
- The development of a follow-up system for required corrective action that uses visitations and/or reporting for validation of the completion of the corrective action;
- The establishment of a visitation briefing to sponsor partners (i.e. base commander, superintendent of schools) during compliance visitation;
- The establishment of a rotation system for compliance visitations to meet a required three-year minimum assessment;
- The development of a management succession plan that includes the full documentation of DoDI policies/practices requirements;
- The design, development and publication of a Directors' Operational Manual covering basic compliance and operational requirements; and
- Publication of the DoDI and the Directors' Operational Manual on the website.

The compliance issues are well-integrated with the academy performance assessment, curriculum applications and desired (often required) operational practices. Strong academy compliance is the current mode, but continued reinforcement remains important.



OPERATIONS

The third major area of considerations is operations, the boundaries of which are ever-expanding and integrated with curriculum and compliance.

- A standardized budget planning process;
- Equipment status inventories;
- An annual assessment of the number of children-at-risk served;
- Data collection schedule and initiatives;
- Exit interviews upon staff turnover;
- Management succession plans/documentation;
- Job descriptions for defining staff duties/responsibilities as well as performance assessment;
- Review of ADA requirements at each site;
- Creation of data collection procedures for teacher/volunteer assessments;
- Website utilization by academy and other participating groups;
- The establishment of a financial approval system for expenditures, reporting and sign-off;
- Streamline budget planning and financial reporting;
- Encouraging third-party relationships and linkages to downstream collaborations in the STEM community;
- Use of Directors' Conference and Professional Development Conference as a venue for best practices, policy adherence, new procedures and clarifications on program requirements;
- A full inventory of up-to-date required documents and program commitments in a "ready-to-review" manual for visitations, succession planning and future planning.

WEBSITE

- The design and development of the DoD STARBASE website over the past decade has become an essential instrument for information distribution and data collection with all program participants as well as interested public. One area of the site is dedicated to staff applications such as program management, information distribution, collection and exchange and operational imperatives. Another is presently focused on information and program applications to students, teachers, the public, and collaborative organizations.

This list is not exhaustive but it reflects the essential initiatives and their integration with other areas of program operation. Enhancements in specific areas such as the introduction of new technologies, the role of non-profit organizations, collaborations, the use of volunteers, strategic planning and fiscal applications are all topics that deserve discussion but, as indicated, these were divided into the three dominant activity areas. In summary, the use of considerations in the assessment process over the past decade played a critical role in program development and enhancements.

CONSIDERATIONS FOR THE 2010 PROGRAM YEAR

A comprehensive review of the DoD STARBASE program is the basis for the following considerations. This year's considerations highlight suggestions for the development and implementation of a structured process to measure individual academy's performance and aligning them in three progressive levels. The intent of this section is to enhance the program.

Fiscal

- Consider emphasizing DoDI requirements for fiscal/property audits and the process for the sponsoring military branch to ensure documentation. This includes a suggestion to modify the DoDI so that new academies will have an audit after the second program year. The modification would also state that academy non-compliance would result in loss of Level I status and potential probationary status.
- Consider a Level II requirement for program directors to have a well-designed and up-to-date (monthly) fiscal file that includes documentation of all financial transactions and balances. Directors' documentation should include budget over-runs, anticipated shortfalls and, when needed, self-initiated action plans to obtain fiscal integrity. If there are fiscal issues, a plan of action for recovery should be included. An academy with a strong fiscal plan for improvement of academy services should be considered for Level III performance assessment.

Program Operations

- Consider modifying DoDI to include newly established performance levels linking compliance with the DoDI to assess academy performance at Levels I, II and III.
- Consider tasking the Operations Committee to develop an ongoing tracking of equipment technology requirements. This would include recommendations, cost, replacement, and maintenance for equipment and technology for all academies and a list of the most commonly experienced activities/events that are reported to OASD/RA such as: change of status, corrective action, upgrades, etc. In addition, identify the method of sending the information to OASD/RA

Collaborations²

- Collaborations and linkages to STEM-related programs and activities are becoming more critical in DoD STARBASE objectives. Consider including those relationships when assessing academy performance at Level III.
- As agencies establish collaborations and linkages, consider having program directors capture the experiences with a structured interview process, to document and share with other academies lessons learned and best practices.
- Consider as a Level III requirement that each director develop an inventory of STEM-related programs in each academy's community to provide interested students, teachers and community members.
- Consider as a Level III requirement having each director conduct a self- assessment of the existing programs and services offered by other STEM-related agencies prior to initiating a new activity.

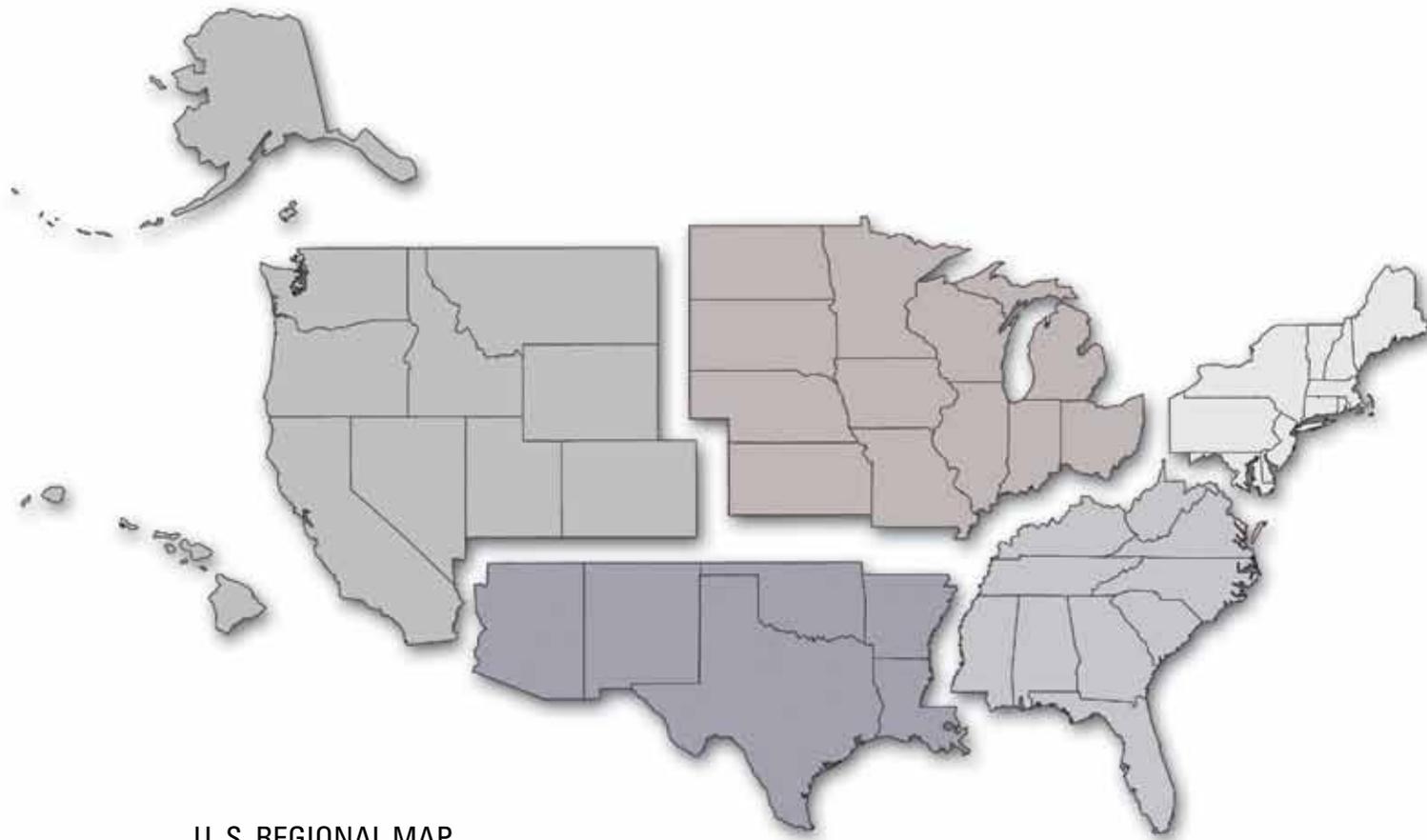
Human Resources

- Consider tasking the Operations Committee with reviewing the current process to recognize staff, community partners and military volunteers for service at DoD STARBASE programs and determine what actions may be taken to improve the process.

² Considerations on the DoD STARBASE 2.0 Mentoring program are found in the assessment section of this report under DoD STARBASE 2.0 Assessment.



APPENDICES



U. S. REGIONAL MAP

West

Washington
Montana
Oregon
Idaho
Wyoming
California
Nevada
Utah
Colorado
Hawaii
Alaska

South

Arizona
New Mexico
Oklahoma
Texas
Arkansas
Louisiana
Puerto Rico

East

Maine
New Hampshire
Vermont
Pennsylvania
New York
Rhode Island
Connecticut
New Jersey
Delaware
Maryland
District of Columbia
Massachusetts

Midwest

North Dakota
South Dakota
Nebraska
Kansas
Minnesota
Iowa
Wisconsin
Illinois
Michigan
Indiana
Ohio
Missouri

South East

West Virginia
Virginia
Kentucky
Tennessee
Mississippi
Alabama
Georgia
Florida
North Carolina
South Carolina

INTRODUCTION

It is time to compile the information for the 2010 DoD STARBASE Annual Report to Congress. The data not only documents your academy's operational activities, but it also identifies key issues, challenges, and concerns that potentially affect future program development. All information requested is for Federal FY10 activities (October 1, 2009-September 30, 2010) unless otherwise indicated. Your cooperation and timely response is essential to the successful completion of this report to Congress by the end of this calendar year. As required by 10 USC 2193b, OASD/RA shall submit an annual report to Congress on the program which shall contain a discussion of the design and conduct of the program and an evaluation of the effectiveness of the program. Paragraph 6.16.1 of DoDI 1025.7 states DoD support for a STARBASE Academy may be terminated because a STARBASE Academy fails to provide data necessary for the compilation of the annual Congressional report. Before returning the questionnaire, review each item for completeness and/or explain the data's unavailability.

The due date is on or before September 28, 2010.

PLEASE LOG IN

E-mail address:

Password:

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INSTRUCTIONS

This questionnaire is divided into six sections. To answer the questions under each section, click on the appropriate link below.

Green fields are required.

White fields are optional.

Red fields have experienced an error.

Gray fields are locked—do not enter values into these fields.

- [Academy Information](#)
- [Academy Statistics](#)
- [Curriculum](#)
- [Operations](#)
- [Financial Information](#)
- [Supporting Materials and Suggestions](#)

Academy Information

1. Please provide this information as you would like it to appear in the annual report and participant directories.

Name of Academy

Academy Director

Military Affiliation

Military Location

Address 1

Address2

City

State

Zip

Telephone Number

DSN

Fax Number

Fax DSN

Email Address

Website Address

Base Commander

Name

Address 1

Address 2

City

State

Zip

Telephone Number

Email Address

2. FY'10 Statistics
(Do not use commas when entering data. You must fill in each box.)

Type of Program

Number of Schools

Number of Classes

Number of Students

5-Day

4-Day

Other

Total 4- and 5-Day Programs

Academy Information

2a. Briefly describe the type of program(s) taught outside the 4- or 5-day program, if applicable

Questions 3 through 9 refer only to 4- or 5-day curriculum-based programs.

3. FY'10 Average Class Size

4. FY'10 Grade Levels
(this information is required)

K	1	2	3	4	5	6	7	8	9	10	11	12
<input type="checkbox"/>												

5. FY'10 Demographics

Female	Males	Total
<input type="text"/>	<input type="text"/>	<input type="text"/>

6. FY'10 Ethnicity
(Please enter a 0 for ethnic groups with no students)

American Indian or Alaskan Native	Asian	Black or African American	Hawaiian Native or Pacific Islander	Hispanic or Latino	White	Multi-Racial	TOTAL
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

7. Total Number of Students Who Are Economically Disadvantaged

Number	Percentage
<input type="text"/>	<input type="text"/>

8. Have you correlated your curriculum with your state's standards?

9. FY'10 Locally Administered Pre/Post Text Raw Data

Number of Test Questions	Average Number of Answers Correct		Change	
	Pretest	Post-Test	Point Gain	% Gain
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

10. Indicate out of the 20-25 required hours, the estimated hours devoted to each topic. (Complete each box, you may use 0)

Curriculum Topic	Embedded Hours	Experiential	Hours Lecture
Sample Topic	0.25	1.25	1.25
Fluid Mechanics and Aerodynamics			
Building Blocks of Matter			
Physical and Chemical Changes			
Atmospheric Properties			
Innovations			
Navigation and Mapping			
Engineering Design Process			
3-D Computer Aided Design			
Numbers and Number Relationships			
Measurement			
Geometry			
Data Analysis			
STEM Careers on Military Facilities			
Personal Investigation			
Column Totals			
Other (Lunches, Breaks, etc.)			
Grand Total (Must equal 20 for 4-day academies and 25 for 5-day academies: Does not include embedded hours).			

10a. Out of the 20-25 required hours, how many are dedicated to PTC?

10b. Out of the 20-25 required hours, how many are spent on math? If it is embedded, please explain in question 10c.

10c. If a topic is embedded in other topical areas, please explain.

10d. If this coverage is different from last year, please identify and explain.

Academy Information

11. Out of the 20-25 required hours per class, indicate the number of hours spent at each location.

Military	Non-military	Do you have a waiver?
<input type="text"/>	<input type="text"/>	<input type="text"/>

12. Do you have a staff training program?

12a. If Yes, please describe.

13. Do you provide training to local teachers?

13a. If yes, please estimate the number of hours contributed to each topic.

Topic	Estimated Hours	When Do You Provide This Training?
Sample Topic	4	Late Spring
Continuing Education Workshops	<input type="text"/>	<input type="text"/>
Local, State, National Conference Workshops	<input type="text"/>	<input type="text"/>
Student-Teacher Workshops	<input type="text"/>	<input type="text"/>
Experiential Training for Student Teachers	<input type="text"/>	<input type="text"/>
Methods Courses through Local Universities	<input type="text"/>	<input type="text"/>
Other (Please describe below)	<input type="text"/>	

14. Over this past year, how often did you share/obtain materials/lessons learned with other academies?

Share

Obtain

15. Do you provide additional curriculum materials to schools/teachers?

15a. If yes, were they used?

15b. If yes, what materials did you provide?

16. What are your TOP three primary sources of materials, teaching aids, curriculum, and other program operation procedures?

17. FY'10 Staffing

Position	Number Full-Time	Number Part-Time	Status
Program Instructor	1	1	State Employee
Director	<input type="text"/>	<input type="text"/>	<input type="text"/>
Deputy Director/ Program Director	<input type="text"/>	<input type="text"/>	<input type="text"/>
Program Instructor	<input type="text"/>	<input type="text"/>	<input type="text"/>
Sec./Admin. Asst./ Office Mgr.	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other Position (List)	<input type="text"/>		

Academy Information

17a. If your current staffing does not reflect the DoDI personnel model, do you have a waiver?

18. FY'10 Personnel Funded by Non-DoD Cash Donations (If none, please enter 0 in the Position field)

Position	Total Number
<input type="text"/>	<input type="text"/>

19. Staff Changes From Last Reporting Cycle (If none, please enter 0 in the first Position field)

Position	Reason for Departure	On approximately what date did they leave?	Has the vacancy been filled?	Weeks to Fill Vacancy
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

20. Volunteer Activity (Please estimate the number of volunteers and volunteer hours committed in FY'10)

Volunteer Group	Number of Volunteers	Number of Hours
Military	<input type="text"/>	<input type="text"/>
Teachers	<input type="text"/>	<input type="text"/>
Parents	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	

21. Current Program Service Area

If other, please explain

22a. If your current staffing does not reflect the DoDI personnel model, do you have a waiver?

Transportation	<input type="text"/>
Duplication/Printing	<input type="text"/>
Audiovisual Equipment	<input type="text"/>
Teachers as Monitors	<input type="text"/>
Educational Supplies	<input type="text"/>
Communications	<input type="text"/>
Lunches	<input type="text"/>
Graphics	<input type="text"/>
Computers	<input type="text"/>
Other (Please specify below)	<input type="text"/>

23. In what year was your last property audit conducted?

<input type="text"/>	<input type="text" value="Please schedule an audit ASAP."/>
----------------------	-------------------------------------------------------------

Who was the auditing agent?

24. Do you have a real property listing on file?

24a. Does it include all non-expendable property or just property at a certain dollar amount?

25. In what year was your last fiscal audit conducted?

<input type="text"/>	<input type="text" value="Please schedule an audit ASAP."/>
----------------------	-------------------------------------------------------------

Who was the auditing agent?

Academy Information

26. Did you give STARBASE presentations to community groups?

26a. Please list which groups and how often.

Group	How Often
Superintendent of Schools	<input type="text"/>
Principal	<input type="text"/>
Base Commander	<input type="text"/>
Community Leaders	<input type="text"/>
Other	<input type="text"/>

27. Do you have a non-profit organization?

27a. If yes, what is the function of the board of directors? (Mark all that apply with an "X"). Please note that the DoDI, para 5.3.6 state that "At no time will such a local non-profit organization assume any fiduciary or legal decision-making responsibility in place of either the DoD Component or the local commander."

	X	Top 3 Functions
Selection of schools	<input type="text"/>	<input type="text"/>
Review of potential staff personnel	<input type="text"/>	<input type="text"/>
Budget planning and review	<input type="text"/>	<input type="text"/>
Review of recommendation of subcontractor relationships	<input type="text"/>	<input type="text"/>
Grant writing/submissions	<input type="text"/>	<input type="text"/>
Program planning/annual review	<input type="text"/>	<input type="text"/>
Fundraising/marketing of program	<input type="text"/>	<input type="text"/>
Compliant with DoDI policies and review	<input type="text"/>	<input type="text"/>
Other (Please specify)	<input type="text"/>	

28. Please indicate which of these core documents you have on file.

Document	On File?
Staff/Students Schedules	<input type="checkbox"/>
Curriculum Outline	<input type="checkbox"/>
Program Operations Manual	<input type="checkbox"/>
Program Director's Guide	<input type="checkbox"/>
Local/State Testing Data	<input type="checkbox"/>
FY10 Strategic Plan/Program Goals	<input type="checkbox"/>
Memorandums of Understanding (MOU)	<input type="checkbox"/>
Minutes of Board Meetings	<input type="checkbox"/>
Bylaws and Articles of Incorporation	<input type="checkbox"/>
Voluntary Participation Form	<input type="checkbox"/>
Hold Harmless Agreement	<input type="checkbox"/>
Emergency Health Form	<input type="checkbox"/>
Public Affairs Release	<input type="checkbox"/>
Incident Report Form	<input type="checkbox"/>
Parent/Guardian Acknowledgment of Responsibility for Property Damage	<input type="checkbox"/>
A written waiver from OASD/RA for academies located at non-military facilities.	<input type="checkbox"/>

29. Over this past program year, have there been any events that have had an effect on your program's operation (e.g. Homeland Security, Iraq information, staff turnover, weather, etc.)?

30. If yes, please briefly explain the event(s) and the effect on the program.

30a. If yes, what residual consequences, if any, will the event have in the FY'11 program year?

New Sites Only: Did you receive a Program Director's Guide?

New Sites Only: Do you have a program operations manual?

Financial Information

31. FY'10 Academy Income (Do not use commas when entering data. You must fill in each box.)

DoD Income (\$)	Additional Income (\$)	Total Income (\$)
<input type="text"/>	<input type="text"/>	<input type="text"/>

32. FY'10 DoD Cash Expenditures (October 1, 2009 - September 30, 2010) (Do not use commas when entering data. You must fill in each box.)

Category of Expenditure	Amount Expended (\$)	Percentage of Total
Staff	<input type="text"/>	<input type="text"/>
Facilities/Furnishings	<input type="text"/>	<input type="text"/>
Transportation/Travel	<input type="text"/>	<input type="text"/>
Supplies	<input type="text"/>	<input type="text"/>
Equipment	<input type="text"/>	<input type="text"/>
Contract Services	<input type="text"/>	<input type="text"/>
Communications/Outreach	<input type="text"/>	<input type="text"/>
Total	<input type="text"/>	<input type="text"/>
Staff Detail (include benefits)	<input type="text"/>	<input type="text"/>
Program Director	<input type="text"/>	<input type="text"/>
Deputy Director/Program Instructor	<input type="text"/>	<input type="text"/>
Program Instructor	<input type="text"/>	<input type="text"/>
Office Manager	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
Total	<input type="text"/>	<input type="text"/>

33. FY'10 Additional Income Expenditures (non-DoD funds expenditures) (Do not use commas when entering data. You must fill in each box.)

Category of Expenditure	Amount Expended (\$)	Percentage of Total
Staff Salaries		
Staff Development		
Facilities/Furnishings		
Transportation/Travel		
Supplies		
Equipment		
Services		
Program/Curriculum Development		
Communications/Outreach		
Other		
Total		

34. FY'10 Source of Additional Income (Do not use commas when entering data. You must fill in each box.)

Source of Funding	Amount (\$)	Percentage of Total
Grants		
Donations		
State		
Other (Please Specify Below)		
Total		

35. FY'10 In-Kind Donations (non-cash gifts: e.g. classroom space, copies, printing, etc.) (Do not use commas when entering data. You must fill in each box.)

Donation	Source of Donation	Estimated Dollar Value
Facilities		
Furnishings		
Supplies		
Transportation/Travel		
Services		
Equipment		
Communications/Outreach		
Other		
Total		

36. FY'11 Projected Other Income (provide best estimate) (Do not use commas when entering data. You must fill in each box.)

Source of Funding	Amount (\$)	Percentage of Total
Grants		
Donations		
State		
Other (Please Specify Below)		
Total		

Supporting Materials & Suggestions

37. Please provide a complete list of the school districts that your site serves. Note: Please enter the full district name. For example, enter "North South Central Public Schools" rather than just "North South Central."

38. Please provide a complete list of the schools that your site serves. For each school please select the district and school type from the drop-down menu and provide the mailing address, phone number and principal's name. Please record the phone number in the format from the example. If you do not use this format, the data will not save. Note: Please enter the full school name. For example, enter "Horace Mann Elementary School" rather than just "Horace Mann."

School	District	Type	Principal's Name	Address	City	State	Zip	Phone
<input type="text"/>								

39. Please provide any suggestions regarding curriculum, operational concerns, or program imperatives.

STARBASE TEACHER QUESTIONNAIRE

All information gathered by this questionnaire is for development purposes. The information you provide will help us to continue to improve the STARBASE program. Please provide honest feedback about various issues presented in this questionnaire. We are collecting information from all of the STARBASE programs.

Completed questionnaires will be tallied by an agency outside of your school and outside of STARBASE. Individual responses will be strictly confidential and will not be released to your school or to any STARBASE representative.

This questionnaire contains a total of 41 questions and should take less than 15 minutes to complete. If you have any questions about this survey, please call 1-312-242-4378.

Thank you

Please enter today's date

Please enter the name of your school

What is your school's address?

Street

City, State

Zip Code

What is the name of your principal or contact person?

What grade do you teach?

other

With what STARBASE location do you work?

other

STARBASE TEACHER QUESTIONNAIRE

Select the appropriate response for each item below.

Did you ever visit a military base prior to your current STARBASE involvement?

- Never, this is my first STARBASE program
 - Yes, for prior STARBASE programs only
 - Yes, for activities not related to STARBASE
 - Yes, for STARBASE and non-STARBASE activities
 - Other
-

How many years have you brought students to STARBASE?

- This is my first year
 - 2-4 years
 - 5-7 years
 - 8-10 years
 - 11-15 years
 - Over 15 years
-

How many years have you been a teacher?

- This is my first year
- 2-4 years
- 5-7 years
- 8-10 years
- 11-15 years
- Over 15 years

Is there formal communication from the school that raises community awareness of the STARBASE program?

- Yes
- No
- Don't Know
-

Do you use DOD STARBASE materials/applications in your own classroom?

- Yes
- No
-

Do you have DOD STARBASE take home/follow through activities beyond your classroom presentation?

- Yes
- No
-

Have you recommended STARBASE to other teachers, principals, or school systems?

- Yes
- No
-

In your view, does the DOD STARBASE content and concepts help you reach your state requirements?

- Helps reach state requirements
- Only indirectly helps meet state requirements
- Doesn't help reach state requirements
- Doesn't fit with state requirements at all

	Disagree					Agree	
11. My School Board is very involved in supporting STARBASE.	<input type="checkbox"/>						
12. The STARBASE Instructors are good role models for the students.	<input type="checkbox"/>						
13. I have included many STARBASE resources in my curriculum.	<input type="checkbox"/>						
14. The students admire their STARBASE Instructors.	<input type="checkbox"/>						
15. The STARBASE curriculum supports our state standards.	<input type="checkbox"/>						
16. The children enjoy sharing their STARBASE experiences with others.	<input type="checkbox"/>						
17. Parents are delighted that their children are participating in STARBASE.	<input type="checkbox"/>						
18. The students enjoyed being on a military base.	<input type="checkbox"/>						
19. The STARBASE experience will be a positive influence on students in coming years.	<input type="checkbox"/>						
20. The STARBASE experience has been a positive influence on me personally.	<input type="checkbox"/>						
21. Students who attend STARBASE perform better on standardized state assessments.	<input type="checkbox"/>						
22. I look forward to my classes' continued participation in the STARBASE program.	<input type="checkbox"/>						
23. After STARBASE attendance, there is increased participation in the Science Fair.	<input type="checkbox"/>						



HISTORICAL COMPARISONS ACROSS YEARS

	2010 N =1,637		2009 N =1,497		2008 N =231		2007 N =222	
	Mean	Std Deviation	Mean	Std Deviation	Mean	Std Deviation	Mean	Std Deviation
Overall Index	6.26	0.70	6.24	0.69	6.14	0.76	6.08	0.81
STEM-Science, Technology, Engineering, & Math	6.17	0.82	6.10	0.82	5.92	0.90	5.95	0.91
STARBASE has helped improve the students' understanding of science	6.60	0.75	6.61	0.74	6.46	0.88	6.38	0.94
More interested in learning about science	6.54	0.79	6.54	0.82	6.45	0.83	6.37	0.91
STARBASE has helped to improve appreciation of how math can be applied to a variety of situations	6.23	1.03	6.12	1.10	6.07	1.12	5.93	1.18
The students ask more questions about technology	5.90	1.18	5.90	1.16	5.72	1.25	5.60	1.35
After STARBASE attendance, there is increased participation in the Science Fair	5.78	1.52	5.53	1.52	5.14	1.58	NA	NA
More interested in learning about math	5.77	1.29	5.67	1.32	5.70	1.27	5.43	1.31
Military/Military Personnel/Military Careers	6.37	0.76	6.36	0.78	6.36	0.80	6.26	0.89
The STARBASE instructors are good role models for the students	6.84	0.59	6.84	0.60	6.76	0.69	6.61	0.98
The students enjoyed being on a military base	6.63	0.78	6.61	0.85	6.50	0.99	6.38	1.15
The students admire their STARBASE instructors	6.61	0.83	6.63	0.83	6.60	0.85	6.45	1.02
More comfortable with military personnel	5.96	1.23	5.92	1.28	6.02	1.18	5.98	1.27
Because of my participation in STARBASE, I am more comfortable with military personnel	5.95	1.49	5.91	1.50	5.90	1.47	5.85	1.39
Citizenship and Pro-social Attitudes	6.07	0.89	6.06	0.90	6.00	0.95	5.89	0.93
STARBASE reinforces many positive behaviors I try to teach my students	6.69	0.74	6.71	0.69	6.70	0.64	6.64	0.80
More willing to try new things	6.24	0.97	6.22	1.01	6.13	1.08	6.05	0.98
More excited about learning	6.18	1.02	6.18	1.02	6.06	1.09	5.97	1.08
More confident about what they can accomplish	6.13	1.01	6.10	1.03	6.10	1.00	6.00	1.04
More excited about their futures	6.06	1.06	6.06	1.07	6.10	1.08	5.90	1.17
More willing to cooperate with each other	6.05	1.06	6.05	1.09	5.92	1.16	5.86	1.09
Better at working in groups	6.04	1.09	5.99	1.12	5.95	1.17	5.85	1.17
More likely to encourage each other	6.01	1.09	6.02	1.10	5.91	1.15	5.83	1.12
More comfortable making decisions	5.84	1.10	5.83	1.11	5.77	1.15	5.66	1.11
More goal oriented	5.82	1.16	5.86	1.11	5.79	1.15	5.66	1.16
Better at following directions	5.67	1.26	5.66	1.29	5.63	1.33	5.41	1.30
STARBASE Effectiveness/Impact	6.42	0.65	6.41	0.64	6.27	0.71	6.25	0.82
The children enjoy sharing their STARBASE experiences with others	6.83	0.51	6.83	0.56	6.81	0.53	6.70	0.80
The STARBASE experience will be a positive influence on students in coming years	6.83	0.51	6.84	0.51	6.76	0.60	6.68	0.79
I look forward to my classes' continued participation in the STARBASE program	6.83	0.59	6.85	0.58	6.79	0.65	NA	NA
The STARBASE experience has been a positive influence on me personally	6.73	0.70	6.76	0.69	6.58	0.95	6.64	0.93
The STARBASE curriculum supports our state standards	6.71	0.75	6.70	0.76	6.59	0.90	6.64	0.8
Parents are delighted that their children are participating in STARBASE	6.62	0.77	6.63	0.80	6.43	0.96	6.43	1.05
The students talk about STARBASE long after the program has ended	6.59	0.85	6.61	0.84	6.62	0.88	6.47	0.97
My principal is a strong advocate of STARBASE	6.42	1.07	6.41	1.08	6.33	1.07	6.30	1.16
I would like more STARBASE resources to take back to my classroom	6.32	1.20	6.30	1.24	6.03	1.46	6.02	1.44
STARBASE has helped improve the climate for participative learning in the classroom	6.18	1.06	6.18	1.05	6.09	1.12	5.91	1.12
I use the resources STARBASE provides to teachers	6.06	1.42	6.10	1.42	6.04	1.38	5.98	1.43
Students who attend STARBASE perform better on standardized state assessments	6.05	1.21	5.94	1.28	5.57	1.42	NA	NA
My school board is very involved in supporting STARBASE	5.88	1.52	5.73	1.66	5.53	1.55	5.59	1.58
I have included many STARBASE resources in my curriculum	5.75	1.52	5.82	1.51	5.57	1.59	5.59	1.57

Bolded items represent statistically significant difference in means

2010 MILITARY VOLUNTEER SURVEY

This brief questionnaire is one part of the national assessment of the DoD STARBASE program. Your experiences and observations are an important part of the assessment. Your candid responses and timely cooperation is appreciated. Results of the assessment are presented in an Annual Report to Congress.

Thank you for completing the survey and for being a DoD STARBASE volunteer!

My service branch is:

- Air Force
- Air Force Reserve
- Marines
- National Guard
- Navy
- Navy Reserve

Volunteer activity (check all that apply):

- Tour Guide
- Teacher Aide
- Presenter
- Facilitate Experiments (ex. rockets, computer simulator, etc.)
- Administrative Support
- Other

Please estimate how many hours you volunteered with DoD STARBASE during the current academic year.

- less than five hours
- six to nine hours
- 10 to 25 hours
- 26 to 50 hours
- 51 to 75 hours
- 76 to 100 hours
- more than 100 hours



To what degree has the military made a difference in the community as the sponsor of the program?

- Strong difference
- Significant difference
- Some difference
- Very little difference
- No difference
- Don't know

Please discuss DoD STARBASE's influence or lack of influence on your community.

Please discuss any feedback about the program that you have heard about the program from military personnel, community leaders, parents and/or community members.

Please discuss how your involvement in DoD STARBASE affects you.

If asked, would you recommend others volunteer their time to DoD STARBASE?

- yes
- no

Please select the DoD STARBASE location where you volunteer.

Do you have any comments or suggestions to improve DoD STARBASE?

GLOSSARY

Academy: See DoD STARBASE Academy.

Adjusted data: Data derived from the same academies that were operating last year so that comparisons can be made on the internal growth of the program.

After-school programs: Center-or school-based programs regularly scheduled at least once each month during after school hours.

Alternative education provider: A public or private school designed for children who do not function well in the traditional school setting. This may include continuation high schools or schools that fall outside the categories of regular, special education or vocational education.

American Indian or Alaska Native: A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

Appropriations: Budget authority provided through the Congressional appropriation process that permits federal agencies to incur obligations and to make payments.

Asian: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

At-risk: Being at-risk means having one or more family background, or other factors, that have been found to predict a high rate of school failure at some time in the future. This "failure" generally refers to dropping out of high school before graduation but also can mean being retained within a grade from one year to the next. The risk factors include having a mother, whose education is less than high school, living in a single-parent family, receiving welfare assistance, and living in a household where the primary language spoken is other than English.

At-risk youth: Students at risk are those who have characteristics that increase their chances of dropping out or falling behind in school. These characteristics may include being from a single-parent household, having an older sibling who dropped out of high school, changing schools two or more times other than the normal progression (e.g., from elementary to middle school), having C's or lower grades, being from a low socio-economic status family, or repeating an earlier grade.

Black or African American. A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American."

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 20-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 math, science, or technology to the students.

Computer-aided design (CAD): The use of computer technology to aid in the design and especially the drawing of a part or product. It is both a visual and symbol-based method of communication whose conventions are particular to a specific technical field.

Conferences: DoD STARBASE holds two conferences a year to provide professional development to the DoD STARBASE directors and instructors.

Core curriculum: DoD STARBASE core curriculum is comprised of the 13 following areas:

- 1) Teamwork;
- 2) Properties and States of Matter;
- 3) Properties of Air;
- 4) Bernoulli's Principle;
- 5) Aircraft Control Surfaces and Components;
- 6) Four Forces of Flight;
- 7) Newton's Laws of Motion;
- 8) Space Exploration;
- 9) Development, Innovation, and Uses of Technology;
- 10) Avoiding Substance Abuse;
- 11) Goal setting;
- 12) Model Rocketry; and
- 13) Flight Simulation.

Current expenditures: Expenditures for operating DoD STARBASE Academies, excluding capital outlay. These expenditures include such items as salaries for school personnel, fixed charges, student transportation, books and materials, and energy costs.

Current Expenditures per pupil: Current expenditures for the DoD STARBASE Academies divided by the total number of participating students.

Disability: Physical, mental, or sensory impairments that render major life activities more difficult.

DoD: Department of Defense.

DoD components: Those Department of Defense 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 1025.7.

DoD STARBASE core curriculum: The fixed course of study referenced in the DoDI taught by all DoD STARBASE academies. (See also core curriculum.)

DoD STARBASE program: The DoD STARBASE program is authorized by Title 10 United State Code Section 2193b as a DoD science, math, and technology education improvement program. The Office of the Assistant Secretary of Defense for Reserve Affairs 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: The location of a DoD STARBASE Academy where the program is taught.

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: An elementary/secondary school with one or more grades of K-8 that does not have any grade higher than grade 8.

Elementary/secondary school: Elementary/secondary schools include regular schools (i.e., schools that are part of state and local school systems and private elementary/secondary schools, both religiously affiliated and nonsectarian); alternative schools; vocational education schools; and special education schools. Subcollegiate departments of postsecondary institutions, residential schools for exceptional children, federal schools for American Indians or Alaska Natives and federal schools on military posts and other federal installations are not included in the definition of elementary/secondary school.

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

Ethnicity: The minimum categories for data on race and ethnicity for federal statistics, program administrative reporting, and civil rights compliance reporting are listed as follows: American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, White

Expenditures: Charges incurred, whether paid or unpaid, that are presumed to benefit the current fiscal year.

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: 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 2008 begins on October 1, 2007 and ends on September 30, 2008.

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 work necessary for graduation, usually including grades 10, 11 and 12 (in a 6-3-3 plan) or grades 9, 10, 11, and 2 (in a 6-2-4 plan).

Hispanic or Latino. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. The term, “Spanish origin,” can be used in addition to “Hispanic or Latino.”

Inner city location: Central section of a city, which is usually older and more densely populated.

Inquiry-based learning: A student centered educational approach that 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.

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

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

Mathematics: 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 a 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 separately organized and administered school between the elementary and senior high schools. When called a "junior high school," a middle school usually includes grades 7, 8, and 9 (in a 6-3-3 plan) or grades 7 and 8 (in a 6-2-4 plan.) In some districts, however, a middle school spans grades 5 to 8 or grades 6 to 8.

Minority: Any individual or racial/ethnic group that is not categorized as White, Hispanic or Latino.

Nanotechnology: The science of manipulating materials on an atomic or molecular scale especially to build microscopic devices.

National school lunch program: Established by President Truman in 1946, the program is a federally assisted meal program operated in public and private nonprofit schools and residential child care centers. To be eligible, a student must be from a household with an income at 185 percent of the poverty level for reduced-price lunch or 130 percent of the poverty level for free lunch.

Native Hawaiian or Other Pacific Islander: A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

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

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

OASD/RA: Office of the Assistant Secretary of Defense/Reserve Affairs

Operational academies: An academy that is processing students.

Participant: A DoD STARBASE student. Participant also refers 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.

Percentile (score): A value on a scale of zero 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.

Pro E (Pro/ENGINEER): is the standard software used in 3D product design by engineers. It was created by Parametric Technology Corporation (PTC) and was the first successful, parametric, feature-based, associative solid modeling software on the market. The application runs on Microsoft Windows and Unix platforms, and provides solid modeling, assembly modeling and drafting, finite element analysis, and NC and tooling functionality for mechanical engineers.

Program year: The DoD STARBASE program year is the same as the government fiscal year, October 1–September 30.

Public school: An institution that provides educational services for at least one of grades 1-12 (or comparable upgraded levels), has one or more teachers to give instruction, is located in one or more buildings, receives public funds as primary support, and is operated by an education or chartering agency. Public schools include regular, special education, vocational/technical, alternative, and public charter schools. They also include schools in juvenile detention centers, schools located on military bases and operated by the Department of Defense, and Bureau of Indian Affairs-funded schools operated by local public school districts.

Rural location: The population and territory outside any urbanized area and the urban part of any place with a decennial census population of 2,500 or less.

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: The 12-month period of time denoting the beginning and ending dates for school accounting purposes, usually from July 1 through June 30.

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: An elementary/secondary school with one or more of grades 7-12 that does not have any grade lower than grade 7.

Site: See DoD STARBASE site.

Socio-economic disadvantage: A term used to describe economically deprived, poor, poverty stricken, or disadvantaged individuals or groups. (See also Socio-economic status.)

Socio-economic status: A measure of an individual or family's relative economic and social ranking based on such factors as father's education level, mother's education level, father's occupation, mother's occupation and family income.

STEM: Science, Technology, Engineering, and Math

Supplemental programs: These are programs that for one reason or another (e.g. below minimum hours, do not cover the 13 core curriculum areas, etc.) do not meet DoDI standards. They are more diverse than traditional DoD STARBASE programs, are often conducted during the summer months and are specially designed to reach students who do not fall under the targeted “participant” schools or are in response to requests by members of the community to serve “hard-to-reach” children. Supplemental programs are initiatives that go beyond the normal operation and obligations of the academy. In many cases, supplemental programs are established in response to the demand created by the popularity and success of the DoD STARBASE program within the community.

Teacher certification: License granted by states for teachers to teach a given subject. In 2002, all states required a bachelor’s degree that included subject matter as well as pedagogical studies; all but 10 states required basic skills tests in reading, mathematics, or general knowledge; and 31 states required subject-matter examinations.

Tuition and fees: A payment or charge for instruction or compensation for services, privileges, or the use of equipment, books, or other goods.

White: A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.



STATISTIC LIST

The following section provides a list of the statistical formulas that were used to calculate the data presented in this report.

1. Mean: average value of a variable

$$\bar{X} = \sum X / N$$

\bar{x} = the sample mean; \bar{x} is generally represented by an x with a bar or line over the top

$\sum X$ = the sum of all values of X

N = the sample size

2. Standard deviation: measure of the average deviation of each score from the mean

$$s = \left[\frac{\sum (x_i - \bar{x})^2}{n-1} \right]^{1/2}$$

n = the sample size.

3. t-test: tests the difference between two means

$$t = \frac{\bar{X}_1 - \bar{X}_2}{s_{\bar{x}_1 - \bar{x}_2}}$$

$s_{\bar{x}_1 - \bar{x}_2}$ = the standard deviation of the difference between the two variables

4. Pearson's Correlation: determines the relationship between two variables

$$r_{12} = \frac{[\sum Y_1 * Y_2 - \sum Y_1 * \sum Y_2 / N] / (N-1)}{s_{y_1} s_{y_2}}$$

Y = the values of the variables

s = the standard deviation of the variables

5. Regression Equation: determines what combination of variables can best predict the outcome for the dependent variable

$$Y = a + b_1 * X_1 + b_2 * X_2 + \dots + b_p * X_p$$

Y = the predicted value of the dependent variable.

a = the intercept value of Y when X=0.

b = the regression coefficients for the predictors.

X = the value of the predictor variable

DIRECTORY OF DoD STARBASE ACADEMIES



ALABAMA

Montgomery

STARBASE Maxwell

Start Date: 2004

Service Component: Air Force

Military Location: Maxwell Air Force Base

Address:

60 West Maxwell Boulevard

Building 835/Basement

Montgomery, AL 36112

Tel: 334.953.4821

Fax: 334.953.4626

Director: Marvin (Chip) Haughton, Jr.

Email: Marvin.Haughton@maxwell.af.mil

School Districts & Schools

District: Autauga County Public School District

Autaugaville School

Billingsley School

Daniel Pratt Elementary School

Pine Level Elementary School

Prattville Intermediate School

District: Elmore County Public School District

Eclectic Middle School

Holtville Middle School

Millbrook Middle School

Wetumpka Middle School

District: Montgomery Area Home School Association

Maxwell Area Home School Association

District: Montgomery County Public School District

Bear Exploration School

Blount Elementary School

Carver Elementary School

Catoma Elementary School

Dalraida Elementary School

Dannelly Elementary School

E.D. Nixon Elementary School

Flowers Elementary School

Floyd Elementary School

Forest Avenue Academic Magnet School

Garrett Elementary School

Harrison Elementary School

Head Elementary School

Highland Avenue Elementary School

MacMillan International Academy

Morningview Elementary School

Paterson Academy of Creative Education

Peter Crump Elementary School

Pintlala Elementary School

T.S. Morris Elementary School

District: Department of Defense Elementary School System (DODESS)

Maxwell AFB Elementary School

ALASKA

Anchorage

STARBASE Alaska

Start Date: 2002

Service Component: Air National Guard

Military Location: Alaska National Guard, Fort Richardson

Address:

P.O. Box 5185

Building 60728/60730

Fort Richardson, AK 99505

Tel: 907.384.6351

Fax: 907.384.6350

Director: Shanna McPheters

Email: shanna.mcpheters@alaska.gov

Website: starbasealaska.org

School Districts & Schools

District: Anchorage School District

Abbott Loop Elementary School

Aquarian Charter School

Aurora Elementary School

Baxter Elementary School

Chinook Elementary School

Chugach Optional School

Chugiak Elementary School

Denali Montessori School

Eagle River Elementary School

Government Hill Elementary School

Lake Otis Elementary School

Orion Elementary School

Rabbitt Creek Elementary School

Rogers Park Elementary School

Taku Elementary School

Tudor Elementary School

Tyson Elementary School

Ursa Major Elementary School

Willow Crest Elementary School

District: Matsu School District

Colony Middle School
 Firedance Academy
 Teeland Middle School
 Wasilla Middle School

ARIZONA

Tucson**STARBASE Arizona**

Start date: 2005
 Service Component: Air Force
 Military Location: Davis-Monthan AFB
 Address:
 5355 E. Granite St.
 Tucson, AZ 85707
 Tel: 520.228.7827
 Fax: 520.838.8687
 Director: Margaret Cole
 Email: margaret.cole@starbaseaz.com

School Districts & Schools***District: Amphitheater Public School District***

F.O. Holaway Elementary School
 Harelson Elementary School
 Helen Keeling Elementary School
 Lulu Walker Elementary School
 Painted Sky Elementary School
 Nash Elementary School
 Rio Vista Elementary School

District: Sunnyside Unified School District

Liberty Elementary School
 Gallego Basic Elementary
 Rosemarie Rivera Elementary School

District: Tucson Unified School District

Borman Elementary School

District: Vail School District

Acacia Elementary School
 Sycamore Elementary School

District: Charter School

Tucson Country Day School

CALIFORNIA

Sacramento**California STARBASE**

Start Date: 1993
 Service Component: Army Guard
 Military Location: California National Guard, Sacramento
 Armory
 Address:
 8400 Okinawa St., Suite 1
 Sacramento, CA 95828
 Tel: 916.387.7405
 Fax: 916.387.8309
 Director: John Lamb
 Email: castarbase@sbcglobal.net
 Website: www.starbaseca.org

School Districts & Schools***District: Elk Grove Unified School District***

Anna Kirchgater Elementary School
 Arlene Hein Elementary School
 Barbara Comstock Morse Elementary School
 Charles Mack Elementary School
 David Reese Elementary School
 Edna Batey Elementary School
 Florence Markofer Elementary School
 Florin Elementary Elementary School
 Herman Leimbach Elementary School
 Isabelle Jackson Elementary School
 John Reith Elementary School
 Prairie Elementary School
 Raymond Case Elementary School
 Roy Herburger Elementary School
 Samuel Kennedy Elementary School
 Sierra Enterprise Elementary School
 Union House Elementary School

District: Elverta Joint School District

Elverta Elementary School

District: Folsom Cordova Unified School District

Blanche Sprentz Elementary School
 Carl H. Sundahl Elementary School
 Cordova Gardens Elementary School
 Cordova Lane Elementary School
 Cordova Meadows Elementary School
 Cordova Villa Elementary School
 Empire Oaks Elementary School
 Folsom Hills Elementary School

Gold Ridge Elementary School
 Natoma Station Elementary School
 Navigator Elementary School
 Peter J. Shields Elementary School
 Rancho Cordova Elementary School
 Riverview Elementary School
 White Rock Elementary School
 Williamson Elementary School

District: Loomis Union School District

Franklin Elementary School
 H. Clark Powers Elementary School
 Loomis Grammar School
 Penryn Elementary School
 Placer Elementary School

District: Newcastle Elementary School District

Newcastle Elementary School

District: Ophir Elementary School District

Ophir Elementary School

District: Robla School District

Bell Avenue Elementary School
 Glenwood Elementary School
 Main Avenue Elementary School
 Robla Elementary School
 Taylor Street Elementary School

District: Sacramento City Unified School District

David Lubin Elementary School
 Maple Elementary School
 Martin Luther King Jr. K-8 School
 Phoebe A. Hearst Elementary School

District: San Juan Unified School District

Oakview Community Elementary School

District: Twin Rivers Unified School District

F.C Joyce Elementary School
 Creative Connections Arts Academy
 Madison Elementary School

District: Private

St. John Vianney Catholic School

San Diego

STARBASE Atlantis-San Diego Academy

Start Date: 1998
 Service Component: Navy
 Military Location: Naval Base San Diego
 Address:

3975 Norman Scott Road
 San Diego, CA 92136

Tel: 619.556.7589

Fax: 619.556.9310

Director: Nicholas Jordan

Email: nicholas.jordan@navy.mil

School Districts & Schools

District: Chula Vista Elementary School District

Harborside Elementary School
 Lillian J. Rice Elementary School
 Silver Wing Elementary School
 Vista Square Elementary School

District: National School District

El Toyon Elementary School
 Ira Harbison Elementary School
 Olivewood Elementary School

District: San Diego Unified School District

Jefferson Elementary School
 Porter-North Campus Elementary

CONNECTICUT

Hartford

STARBASE Hartford

Start Date: 2001
 Service Component: Air National Guard
 Military Location: Bradley Air National Guard Base
 Brainard Airport
 Address:

251 Maxim Road
 Hartford, CT 06114

Tel: 860.728.0090

Fax: 860.728.3293

Director: Melissa Vanek

Email: melissa.vanek@yahoo.com

Website: <http://www.starbase-ct.com>

School Districts & Schools

District: East Hartford Public School District

- Anna E. Norris Elementary School
- Franklin H. Mayberry School
- Gov. William Pitkin Elementary School
- Hockanum Elementary School
- John A. Langford Elementary School
- Joseph O. Goodwin Elementary School
- Robert J. O'Brien Elementary School
- Silver Lane Elementary School
- Thomas S. O'Connell Elementary School
- Woodland School

District: Hartford Magnet Schools

- Capital Preparatory Magnet School

District: New Britain Public Schools

- Holmes Elementary School

Waterbury

STARBASE Waterbury

Start Date: 2003
 Service Component: Air National Guard
 Military Location: Naugatuck Community College
 Address:
 750 Chase Parkway
 Waterbury, CT 06708
 Tel: 203.575.8271
 Fax: 203.575.8018
 Director: Melissa Vanek
 Email: melissa.vanek@yahoo.com
 Website: <http://www.starbase-ct.com>

School Districts & Schools

District: Waterbury Public School District

- Barnard Elementary School
- Brooklyn Elementary School
- Bucks Hill Elementary School
- Bunker Hill Elementary School
- Carrington Elementary School
- Chase Elementary School
- Driggs Elementary School
- Generali Elementary School
- John G. Gilmartin Elementary School
- Hopeville Elementary School
- F.J. Kingsbury Elementary School
- Maloney Magnet Elementary School
- Regan Elementary School

- Rotella Interdistrict Magnet School
- Sprague Elementary School
- State Street School
- B.W. Tinker Elementary School
- Walsh Elementary School
- Washington Elementary School
- Wendell Cross Elementary School
- Wilson Elementary School

District: Waterbury Non-Public Schools

- Children's Community School
- Our Lady of Mount Carmel Elementary School

District: Watertown Public School

- Polk Elementary School

DISTRICT OF COLUMBIA

Washington

STARBASE Atlantis – Washington Navy Yard

Start Date: 2001
 Service Component: Navy
 Military Location: Washington Navy Yard
 Address:
 645 Rickover St. S.E.
 Building 21, Suite 102
 Washington, DC 20374
 Tel: 202.433.0531
 Fax: 202.433.0534
 Director: Nalo Washington
 Email: nalo.washington@navy.mil

School Districts & Schools

District: District of Columbia Public School Systems

- Amidon-Bowen Elementary School
- Ludlow-Taylor Elementary School
- Plummer Elementary School

FLORIDA

Jacksonville

STARBASE Florida, Inc
 Start Date: 1994
 Service Component: Air National Guard
 Military Location: 125th Fighter Wing, Florida Air National Guard, Jacksonville International Airport

Address:

14300 FANG Drive
 Jacksonville, FL 32218
 Tel: 904.741.7320
 Fax: 904.741.7324

Director: Gregory Stritch
 Email: gregory.stritch@ang.af.mil

School Districts & Schools***District: Duval County Public School District***

Alimacani Elementary School
 Cedar Hills Elementary School
 Hendricks Avenue Elementary School
 Holiday Hill Elementary School
 Lone Star Elementary School
 Oak Hill Elementary School
 S.P. Livingston Elementary School
 Sallye B. Mathis Elementary School
 Windy Hill Elementary School

Pensacola**STARBASE Atlantis – NAS Pensacola**

Start Date: 1994

Service Component: Navy

Military Location: Naval Air Station Pensacola

Address:

6490 Saufley Field Road
 Pensacola, FL 32509-5237

Tel: 850.452.8287

Fax: 850.452.8288

Director: Donna Eichling

Email: deichling@aol.com

Website: www.netc.navy.mil/comunity/starbase/sa.html

School Districts & Schools***District: Escambia County Public School District***

Allie Yniestra Elementary School
 Brentwood Elementary School
 Ensley Elementary School
 George S. Hallmark Elementary School
 Jim Allen Elementary School
 Myrtle Grove Elementary School
 Navy Point Elementary School
 Oakcrest Elementary School
 Spencer Bibbs Elementary School
 Warrington Elementary School

District: Private School

East Hill Christian Elementary School
 St. Paul Catholic Elementary School

Whiting Field**STARBASE Atlantis – Whiting Field**

Start Date: 1994

Service Component: Navy

Military Location: Naval Air Station Whiting Field

Address:

NAS Whiting Field
 Building 2943
 Milton, FL 32570

Mailing Address:

6490 Saufley Field Road
 Pensacola, FL 32509

Tel: 850.623.7516

Fax: 850.623.7660

Director: Donna Eichling

Email: deichling@aol.com

Website: www.cnmc.navy.mil/WhitingField/programs/
 TenantActivities/StarbaseAtlantis/index.htm

School Districts & Schools***District: Escambia County Public Schools***

Escambia Westgate Academy School

District: Santa Rosa County Public School District

Bagdad Elementary School
 Bennett C. Russell Elementary School
 Berryhill Elementary School
 Central Elementary School
 Chumuckla Elementary School
 East Milton Elementary School
 Holley-Navarre Intermediate School
 Jay Elementary School
 Oriole Beach Elementary School
 Pea Ridge Elementary School
 S.S. Dixon Intermediate School
 W.H. Rhodes Elementary School

GEORGIA

Marietta

Peach State STARBASE
Start Date: 2001
Service Component: Air National Guard
Military Location: Georgia National Guard, Dobbins Air Reserve Base
Address:
1484 Patrol Road
Dobbins ARB, GA 30096
Tel: 678.655.4667
Fax: 678.655.4667
Director: Bill Wells
Email: Bill.Wells4@us.army.mil

School Districts & Schools

District: Atlanta Public School System

Grove Park Elementary School
Stanton Elementary School
Usher Elementary School
White Elementary School
Woodson Elementary School

District: Cobb County School District

Birney Elementary School
Brown Elementary
Harmony Leland Elementary School
Hollydale Elementary School
Mableton Elementary School
Milford Elementary School
Russell Elementary School

District: Homeschool

Georgia – EPH

District: Private School

Legacy Academy

Warner Robins

STARBASE Robins

Start Date: 1996
Service Component: Air Force Reserve
Military Location: Robins Air Force Base
Address:
P.O. Box 2469
Warner Robins, GA 31099
Tel: 478.926.1769
Fax: 478.926.1770
Director: Wesley Fondal
Email: wesley@starbaserobins.org
Website: www.starbaserobins.org

School Districts & Schools

District: Bibb County School District

Alexander II Magnet School
Bruce Elementary School
Burghard Elementary School

District: Houston County School District

Lindsey Elementary School
Linwood Elementary School
Miller Elementary School
Morningside Elementary School
Parkwood Elementary School
Pearl Stephens Elementary School
Shirley Hills Elementary
Tucker Elementary School
Westside Elementary School

District: Private School

Christian Fellowship Academy
Twiggs Academy

HAWAII

Keaau

STARBASE Hawaii – Keaau

Start Date: 2008

Service Component: Air National Guard

Military Location: National Guard Armory, Keaau

Address:

16-512 Volcano Highway

P.O. Box 256

Keaau, HI 96749

Phone Number: 808.982.4298

Fax Number: 808.982.4241

Director: Robert J. Roman

Email: starbasehi@gmail.com

Schools & School Districts

District: Kea'au - Ka'u – Pahoa (KKP) Complex

Hawaii Academy of Arts and Science

Ke Kula o Nawahiokalaniopu'u

Keaau Elementary School

Keonepoko Elementary School

Mountain View Elementary School

Naalehu Elementary School

Pahala Elementary School

Pahoa Elementary School

District: Waiakea Complex

Waiakea Elementary School

District: Other (private school)

Haili Christian School

St. Joseph Elementary

Pearl Harbor

STARBASE Atlantis – Hawaii

Start Date: 2002

Service Component: Navy

Military Location: Joint Base Pearl Harbor-Hickam, Ford Island, TSD Bldg 39, Room 234

Address:

1130 Bole Loop

Ford Island, Bldg 39, Room 234

Pearl Harbor, HI 96860

Tel: 808.472.7389

Fax: 808.472.7389

Director: Joseph P. Barrett

Email: joseph.p.barrett@navy.mil

School Districts & Schools

District: Oahu Central School District, Aiea- Moanalua-Radford Complex Area

Admiral Chester W. Nimitz Elementary School

Aliamanu Elementary School

Alvah A. Scott Elementary School

Lt. Col. Horrace Meek Hickam Elementary School

Major General William R. Shafter Elementary School

Makalapa Elementary School

Mokulele Elementary School

Pearl Harbor Elementary School

Pearl Harbor Kai Elementary School

District: Leeward Oahu School District, Campbell-Kapolei Complex Area

Ewa Elementary School

Iroquois Point Elementary School

District: Leeward Oahu School District, Pearl City-Waipahu Complex Area

Lehua Elementary School

District: Private School

Christian Academy

Holy Family Catholic Academy

Our Savior Lutheran School

Pearl Harbor Christian Academy

St. Anthony Catholic School

St. Elizabeth Catholic School

St. Mark Lutheran School

ILLINOIS

Great Lakes

STARBASE Atlantis–Great Lakes

Start Date: 2001

Service Component: Navy

Military Location: Naval Station Great Lakes

Address:

2221 MacDonough Drive

Bldg. 617, Room 122

Great Lakes, IL 60088

Tel: 847.688.2509

Fax: 847.688.3136

Director: Mr. Corey J. Palmer

Email: corey.palmer@navy.mil

School Districts & Schools

District: North Chicago School District #187

A.J. Katzenmaier Elementary School
Forrestal Elementary School
Greenbay Elementary School
North Elementary School
South Elementary School

District: Zion Elementary School District #6

Beulah Park Elementary School
East Elementary School
Elmwood Elementary School
Shiloh Park Elementary School
West Elementary School

KANSAS

Kansas City

STARBASE Kansas City

Start Date: 2008
Service Component: Air National Guard
Military Location: HQ HHS
Address:
100 S. 20th Street
Kansas City, KS 66102
Tel: 913.279.7858
Fax: 913.279.7859
Director: Jeff Gabriel
Email: director@kansasstarbase.org
Website: www.kansasstarbase.org

School Districts & Schools

District: Archdiocese of Kansas City

John Paul II Catholic School
St. Agnes Catholic School
St. Patrick Catholic School
Xavier Catholic School

District: Basehor-Linwood Public Schools - USD 458

Basehor Elementary School
Linwood Elementary School

District: Kansas City Public Schools - USD 500

Emerson Elementary School
Eugene Ware Elementary School
Lindbergh Elementary School
McKinley Elementary School
Stony Point South Elementary School
Thomas A. Edison Elementary School

District: Lawrence Public Schools - USD 497

Kennedy Elementary School

District: Shawnee Mission Public Schools - USD 512

Nieman Elementary School
Santa Fe Trail Elementary

District: Private

Gensis Christian Academy
Great Plains Home School
Heritage Christian Academy
Kansas City Christian Elementary School

Salina

STARBASE Salina

Start Date: 2008
Service Component: Air National Guard
Military Location: National Guard Armory
Address:
2929 Scanlan Ave.
Salina, KS 67401
Tel: 785.822.6602
Fax: 785.822.6600
Director: Jeff Gabriel
Email: director@kansasstarbase.org
Website: www.kansasstarbase.org

School Districts & Schools

District: Archdiocese of Salina

St. Mary's Catholic School
St. Teresa Catholic Elementary

District: Chapman Public Schools - USD 473

Blue Ridge Elementary School
Chapman Middle School
Enterprise Elementary School

District: Clifton-Clyde Public Schools - USD 224

Clifton-Clyde Middle School

District: Lincoln Public Schools - USD 298

Lincoln Elementary School

District: North Ottawa County Public Schools – USD 239

Minneapolis Grade School

District: Salina Public Schools - USD 305

Coronado Elementary School
Heusner Elementary School

Schilling Elementary School
Stewart Elementary School
Sunset Elementary School

District: Soloman Public Schools - USD 393
Solomon Elementary School

District: Southern Cloud Public Schools - USD 334
Glasco Elementary School

District: Sylvan Public Schools - USD 299
Lucas-Sylvan Unified Elementary School

District: Twin Valley Public Schools - USD 240
Bennington Grade School
Tescott Grade School

District: Other
Elyria Christian School
McPherson Area Home School
Salina Christian Academy

Topeka

STARBASE Topeka
Start Date: 1994
Service Component: Air National Guard
Military Location: Forbes Field Air National Guard Base
Address:
5920 SE Coyote Dr.
Topeka, KS 66619
Tel: 785.861.4709
Fax: 785.861.4127
Director: Jeff Gabriel
Email: jeff.gabriel@kstope.ang.af.mil
Website: www.kansasstarbase.org

School Districts & Schools

District: Archdiocese of Kansas City
Christ the King Elementary

District: Auburn-Washburn - USD 437
Indian Hills Elementary
Pauline South Intermediate School

District: Burlingame Public Schools - USD 454
Burlingame Elementary School

District: Kaw Valley - USD 321
Rossville Elementary School

District: Mill Creek Valley Public Schools - USD 329
Alma Grade School
Maple Hill Grade School

District: Mission Valley Public Schools - USD 330
Mission Valley Elementary School

District: Santa Fe Trail Public Schools - USD 434
Carbondale Attendance Center

District: Seaman Public Schools - USD 345
Logan Elementary School
Rochester Elementary School
West Indianola Elementary School

District: Topeka Public Schools - USD 501
Linn Elementary School
Lowman Hill Elementary School
Maude Bishop Elementary School
McEachron Elementary School
Ross Elementary School
Scott Computer Technology Magnet School
Whitson Elementary School

District: Wamego Public Schools - USD 320
West Elementary School

District: Other
Cair Paravel Latin School
Topeka Catholic Home School
Topeka Lutheran School

Wichita

STARBASE Wichita
Start Date: 1993
Service Component: Air National Guard
Military Location: McConnell Air Force Base
Address:
52870 Jayhawk Drive
Topeka, KS 67221
Tel: 316.759.7096
Fax: 316.759.7094
Director: Jeff Gabriel
Email: Director@kansasstarbase.org
Website: www.kansasstarbase.org

School Districts & Schools

District: Archdiocese of Wichita
All Saints Catholic School

District: Augusta Public Schools - USD 402

Garfield Elementary School
Robinson Elementary School

District: Bluestem Public Schools - USD 205

Bluestem-Leon Elementary School

District: El Dorado Public Schools - USD 490

Lincoln Elementary

District: Mulvane Public Schoos - USD 263

Mulvane Grade School

District: Newton Public Schools - USD 373

South Breeze Elementary

District: Wichita Public Schools - USD 259

Allen Elementary School
Caldwell Elementary School
College Hill Elementary School
Gammon Elementary School
Jackson Elementary School
Mueller Elementary School

LOUISIANA

Barksdale

STARBASE Louisiana

Start Date: 1999
Service Component: Air Force Reserve
Military Location: 917th Wing, Barksdale Air Force Base
Address:

1000 Davis Ave East
Barksdale AFB, LA 71110

Tel: 318.529.3521

Fax: 318.529.3631

Director: Kathy Brandon

Email: kathy.brandon@barksdale.af.mil

School Districts & Schools

District: Bossier Parish School District

Apollo Elementary School
Bossier Elementary School
Carrie Martin Elementary School
Central Park Elementary School
Kerr Elementary School
Meadowview Elementary School
Plantation Park Elementary School
Princeton Elementary School

Stockwell Elementary School

Waller Elementary School

District: Caddo Parish School District

Barret Paideia Elementary School
Caddo Heights Math/Science Elementary School
Central Elementary School
Mooringsport Elementary School
Oil City Environmental Science Magnet Elementary School
Shreve Island Elementary School
Werner Park Elementary School

District: Cafe Home School Group

Home School Students

District: Catholic Diocese of Shreveport

St. John Berchmans Cathedral School

Pineville (formerly New Orleans)

Pelican State STARBASE

Start Date: 1999
Service Component: Air National Guard
Military Location: Louisiana National Guard,
Camp Beauregard
Address:

609 F Street
Pineville, LA 71360

Tel: 318.290.5252

Fax: 318.290.5937

Director: Cheryl L. Arbour

Email: cheryl.arbour1@us.army.mil

School Districts & Schools

District: Archdiocese of Alexandria Parochial Schools

Our Lady of Prompt Succor School
Cabrini Elementary School

District: Home School Association of Central Louisiana, C.C.H.S.A.

District: Rapides Parish Public Schools

Acadian Elementary School
Cherokee Elementary School
D.F. Huddle Elementary School
Glenmora Elementary School
L.S. Rugg Elementary School
Martin Park Elementary School
Mary Goff Elementary School
Northwood High School
Paradise Elementary School

Peabody Montessori Elementary School
 Pineville Elementary School
 Ruby Wise Elementary School
 W.O. Hall Math and Science Elementary School

MAINE

Bangor

STARBASE Maine

Start Date: 2001
 Service Component: Air National Guard
 Military Location: Air National Guard Base Bangor
 Address:
 105 Maineiac Ave.
 Building 510
 Bangor, ME 04401
 Tel: 207.990.7505
 Fax: 207.990.7150
 Director: Michele Barnes
 Email: michele.barnes@ang.af.mil

School Districts & Schools

District: Alternative Organizational Structure 91

Trenton Elementary School

District: Brewer School Department

State Street Elementary School

District: Dedham School Department

Dedham Elementary School

District: Diocese of Portland

All Saints Catholic School

District: Hermon School Department

Hermon Middle School

District: Orrington School Department

Center Drive Elementary School

District: Reconsolidation School Unit 22

George B. Weatherbee School
 Leroy H. Smith School

District: Reconsolidation School Unit 24

Beech Hill Elementary School

District: Reconsolidation School Unit 25

Bucksport Middle School
 Orland Consolidated School

District: Reconsolidation School Unit 26

Asa C. Adams School
 Glenburn Elementary School

District: Reconsolidation School Unit 63

Holbrook Elementary School

District: Reconsolidation School Unit 87

Caravel Middle School

District: Union 93

Surry Elementary School

MARYLAND

Patuxent River

STARBASE Atlantis – Pax River

Start Date: 2006
 Service Component: Navy
 Military Location: Naval Air Station Patuxent River
 Address:
 47253 Whalen Road, Ste 102
 Building 588, Room 102
 Patuxent River, MD 20670-1463
 Tel: 301.342.2789
 Fax: 301.342.5457
 Director: Julie Guy
 Email: Julie.guy@navy.mil

School Districts & Schools

District: Calvert County Public School District

Barstow Elementary School
 Calvert Elementary School
 Mutual Elementary School

District: St. Mary's County Public School District

Chesapeake Public Charter School
 Greenview Knolls Elementary School
 Lexington Park Elementary School
 Park Hall Elementary School
 Town Creek Elementary School
 White Marsh Elementary School

District: Other

Father Andrew White School
 Little Flower School
 St. Michael's School

MICHIGAN**Battle Creek****STARBASE Battle Creek**

Start Date: 2006
 Service Component: Air National Guard
 Military Location: Battle Creek Air National Guard Base
 Address:
 3595 Mustang Ave.
 Building 6909
 Battle Creek, MI 49037
 Tel: 269.969.3219
 Fax: 269.969.3251
 Director: Bruce Medaugh
 Email: BMedaugh@STARBASEBattleCreek.org

School Districts & Schools

District: Albion Public School District
 Harrington Elementary School

District: Battle Creek Public School District

Dudley Elementary School
 Fremont Elementary School
 Franklin Elementary School
 21st Century Community Learning Center
 Valley View Elementary School

District: Bellevue Community School District

Bellevue Elementary School

District: Delton Public School District

Delton Kellogg Middle School

District: Home School

Home School

District: Lakewood Public School District

Clarksville Elementary School
 Sunfield Elementary School
 West Elementary School
 Woodland Elementary School

District: Parchment Public School District

Parchment North Elementary School

District: Pennfield Schools

Dunlap Elementary School

District: Thornapple Kellogg School District

Page Elementary School

District: Three Rivers Community School District

Park Elementary School

Selfridge**STARBASE One**

Start Date: 1991
 Service Component: Air National Guard
 Military Location: Selfridge Air National Guard Base
 Address:
 P.O. Box 450082
 27310 D Street Building 1051
 Selfridge ANG Base, MI 48045
 Tel: 586.239.4884
 Fax: 586.239.5751
 Director: Rick Simms
 Email: rsimms@starbaseone.org
 Website: www.STARBASEOne.org

School Districts & Schools**District: Anchor Bay School District**

Ashley Elementary School
 Lighthouse Elementary School
 Naldrett Elementary School

District: Charter School – Detroit

Plymouth Educational Center

District: Detroit Public School District

Bates Academy
 Bunche Elementary School
 Clippert Academy
 Emerson Elementary School
 Golightly Educational Center
 Hutchinson Elementary
 Malcolm X Academy
 Nolan Elementary
 O.W. Holmes Elementary-Middle School

District: Home Schools

Enrich Home School

District: L'Anse Creuse Public School District

Carkenord Elementary School
 South River Elementary School
 Yacks Elementary School

District: Lamphere Schools

Hiller Elementary School

District: Mount Clemens Public School District

Seminole Academy

District: New Haven Public School District

New Haven Elementary School

District: Private Schools

Our Lady Star of the Sea Catholic School
 St. Germaine Catholic School
 Trinity Lutheran School

District: Taylor Public School District

Eureka Heights Elementary School
 Fischer Elementary School
 Holland Elementary School
 Moody Elementary School
 Myers Elementary School
 Taylor Parks Elementary School

Keewaydin Community School
 Floyd B. Olson Middle School
 Pillsbury Community Elementary School
 Richard R. Green Central Park School

District: Minneapolis Charter Schools

Sojourner Truth Academy

District: Minneapolis Parochial Schools

Risen Christ School

District: St. Paul Charter Schools

Achieve Language Academy
 Community of Peace Academy
 Concordia Creative Learning Academy

District: Saint Paul Parochial Schools

Maternity of Mary—St. Andrew Catholic School
 Saint Agnes School
 St. Jerome's Catholic School
 St. Matthew's School
 St. Peter Claver School
 St. Rose of Lima School

District: St. Paul Public School District

American Indian Magnet Elementary School
 Ames Elementary School
 Como Park Elementary School
 Farnsworth Aerospace Magnet Elementary School
 Four Seasons A+ Elementary School
 Franklin Music Magnet Elementary School
 Frost Lake Magnet School of Technology
 and Global Studies
 Hayden Heights Elementary School
 Galtier Science and Mathematics Technology
 John A. Johnson Achievement Plus Elementary School
 Phalen Lake Hmong Studies Magnet School
 Prosperity Heights Elementary School
 Sheridan Elementary School
 World Cultures Magnet School

MINNESOTA***Minneapolis/St. Paul*****STARBASE Minnesota**

Start Date: 1993

Service Component: Air National Guard

Military Location: 133rd Airlift Wing, Minnesota Air National
 Guard Base

Address:

659 Mustang Avenue

St. Paul, MN 55111

Tel: 612.713.2530

Fax: 612.713.2540

Director: Kim Van Wie

Email: kvanwie@stabasemn.org

Website: www.starbasemn.org

School Districts & Schools***District: Minneapolis Public School District***

Andersen United Elementary School
 Emerson Spanish Dual Immersion Learning School
 Jefferson Community School

MISSISSIPPI

Choctaw

STARBASE Mississippi – Choctaw

Service Component: Navy
 Military Location: Naval Air Station Meridian
 Address:
 266 Industrial Blvd.
 Choctaw, MS 39350
 Tel: 601.663.7592
 Fax: 601.662.7593
 Director: Pam Litton
 Email: pam.litton@navy.mil

School Districts & Schools

District: Choctaw Tribal Schools

Bogue Chitto Elementary School
 Conehatta Elementary School
 Pearl River Elementary School
 Red Water Elementary School
 Standing Pine Elementary School
 Tucker Elementary School

Gulfport

STARBASE Atlantis–Gulfport

Start Date: 2001
 Service Component: Navy
 Military Location: Naval Construction Training Center
 Address:
 5510 CBC 8th Street
 Building 386
 Gulfport, MS 39501
 Tel: 228.871.3735
 Fax: 228.871.3468
 Director: Keith Agee
 Email: Keith.Agee@navy.mil

School Districts & Schools

District: Harrison County School District

Bel-Aire Elementary School
 Crossroads Elementary School
 D'Iberville Elementary School
 Lizana Elementary School
 Lyman Elementary School
 North Woolmarket Elementary School
 Orange Grove Elementary School
 Pineville Elementary School
 Saucier Elementary School

Three Rivers Elementary School
 West Wortham Elementary & Middle School
 Woolmarket Elementary School

District: Gulfport School District

Anniston Elementary School
 Bayou View Elementary School
 Central Elementary School
 Gaston Point Elementary School
 Pass Road Elementary School
 Twenty-Eighth St. Elementary School
 West Elementary School

District: Long Beach School District

Harper-McCaughan Elementary School

District: Pass Christian School District

Delisle Elementary School
 Pass Christian Elementary School

Meridian

STARBASE Atlantis–Meridian

Start Date: 2002
 Service Component: Navy
 Military Location: Naval Air Station Meridian
 Address:
 266 Rosenbaum Avenue
 Meridian, MS 39309
 Tel: 601.679.3809
 Fax: 601.679.3812
 Director: Pam Litton
 Email: pam.litton@navy.mil

School Districts & Schools

District: Lauderdale County School District

Northeast Middle School

District: Meridian Public School District

Crestwood Elementary School
 T.J. Harris Elementary School
 Oakland Heights Elementary School
 Parkview Elementary School
 Poplar Springs Elementary School
 West Hills Elementary School

District: Other

Calvary Christian School
Lamar Elementary School
Russell Christian Academy
St. Patrick School

MONTANA

Helena**STARBASE Montana**

Start Date: 2007
Service Component: National Guard
Military Location: Fort Harrison
Address:
1956 Mt. Majo Street
Fort Harrison, MT 59636
Tel: 406.324.3727
Fax: 406.324.3735
Director: Michael Stone
Email: mstone@bresnan.net

School Districts & Schools

District: East Helena Public School District
Radley Elementary School

District: Helena Public School District

Broadwater Elementary School
Bryant Elementary School
Central Elementary School
Four Georgians Elementary School
Hawthorne Elementary School
Jefferson Elementary School
Jim Darcy Elementary School
Kessler Elementary School
Rossiter Elementary School
Smith Elementary School
Warren Elementary School

District: Montana City Public School District
Montana City Elementary School

NEBRASKA

Lincoln**STARBASE Nebraska**

Start date: 2002
Service Component: National Guard
Military Location: Air National Guard Base Lincoln

Address:

Penterman Armory Room 201
2400 NW 24th Street
Lincoln, NE 68524

Tel: 402.309.1044

Fax: 402.309.1045

Director: Sherry Pawelko

Email: spawelko@starbasene.org

Website: www.starbasene.org

School Districts & Schools

District: Catholic Diocese of Lincoln
St. Patrick's Elementary School

District: Heartland Homeschool Association
Heartland Homeschool Association

District: Lincoln Christian Schools
Lincoln Christian Elementary School

District: Lutheran Schools of Lincoln
Good Sheperd Elementary School
Messiah Lutheran Elementary School
Trinity Lutheran Elementary School

District: Lincoln Public School District
Everett Elementary School
Hartley Elementary School
Holmes Elementary School
Huntington Elementary School
Lakeview Elementary School
McPhee Elementary School
Norwood Park Elementary School
Prescott Elementary School
Riley Elementary School
Saratoga Elementary School
West Lincoln Elementary School
Zeman Elementary School

NEW MEXICO

Albuquerque**AF STARBASE La Luz**

Start Date: 2003
Service Component: Air Force
Military Location: Kirtland Air Force Base
Address:
P.O. Box 9556
Albuquerque, NM 87119

Tel: 505.846.8042
Fax: 505.846.8932
Director: Ronda Cole
Email: ronda.cole@kirtland.af.mil
Website: <http://www.vs.af.mil/LaLuz/>

School Districts & Schools

District: Archdiocese of Santa Fe

Holy Child Catholic School
Our Lady of the Annunciation School
Our Lady of Fatima School
St. Therese Catholic School
Queen of Heaven Catholic School

District: Albuquerque Public Schools District

Cleveland Middle School
Ernie Pyle Middle School
Jimmy Carter Middle School
Madison Middle School
Sandia Base Elementary School
Truman Middle School
Van Buren Middle School
Washington Middle School

District: Belen Consolidated Schools District

La Merced Elementary School

District: Bernalillo Public Schools District

Bernalillo Middle School

District: BIA–Southern Pueblos Agency

San Felipe Pueblo Elementary School

District: Grants-Cibola County Schools

Mesa View Elementary School

District: Los Lunas Public Schools

Mesa View Elementary School
Peralta Elementary School

District: Magdalena Municipal Schools

Magdalena Elementary School

District: Moriarty-Edgewood School District

South Mountain Elementary School

District: Rio Rancho Public Schools

Eagle Ridge Middle School

District: Socorro Consolidated Schools District

Cottonwood Valley Charter School

District: Other

Christ Lutheran School
Menaul School

NORTH CAROLINA

Charlotte

STARBASE North Carolina- Charlotte

Start Date: 1993

Service Component: Air National Guard

Military Location: 145th Airlift Wing, NC Air National Guard

Address:

4930 Minuteman Way
Charlotte, NC 28208

Tel: 704.398.4819

Fax: 704.398.4822

Director: Barbara Miller

Email: Barbara.miller.ctr@ang.af.mil

School Districts & Schools

District: Brunswick County Public Schools

Jesse Mae Monroe Elementary School

District: Catawba County Public Schools

Catawba Elementary School

District: Charlotte-Mecklenburg Public School System

Hidden Valley Elementary School
Pineville Elementary School
Selwyn Elementary School
Smith Academy of International Languages
Windsor Park Elementary School
Winget Park Elementary School

District: Davidson County Public Schools

Liberty Drive Elementary School

District: Lincoln County Public Schools

Rock Springs Elementary School

District: Rowan County Public Schools

Faith Elementary School

District: Stanly County Public Schools

Aquadale Elementary School

District: Warren Public Schools

Mariam Boyd Elementary School

Kure Beach**STARBASE North Carolina-Fort Fisher**

Start Date: 2004

Service Component: Air National Guard

Military Location: NC National Guard Training Center

Address:

116 Air Force Way

Kure Beach, NC 28449

Tel: 910.251.7332

Fax: 910.252.7335

Director: Barbara H. Miller

Email: Barbara.miller.ctr.@ncchar.ang.af.mil

School Districts & Schools**District: Bertie County Schools**

Kitty Hawk Elementary School

Windsor Elementary School

District: Brunswick School District

Bolivia Elementary School

Lincoln Elementary School

Southport Elementary School

Supply Elementary School

Town Creek Elementary School

Waccamaw Elementary School

District: Duplin School District

Belville Elementary School

Warsaw Elementary School

District: Johnston School District

East Clayton Elementary School

District: New Hanover School District

Blair Elementary School

Carolina Beach Elementary School

Codington Elementary School

Forest Hills Elementary School

Freeman Elementary School

Mary C. Williams Elementary School

Pine Valley Elementary School

Winter Park Elementary School

Wrightsville Beach Elementary School

NORTH DAKOTA**Minot****STARBASE North Dakota**

Start Date: 2008

Service Component: Air Force

Military Location: Minot Air Force Base

Address:

101 C Street

North Plains Elementary School

Minot AFB, ND 58704

Tel: 701.727.3334

Fax: 701.727.3328

Director: Matthew Balas

Email: matthew.balas@minot.k12.nd.us

Website: www.starbasend.org

School Districts & Schools**District: Glenburn Public School District**

Glenburn Public School

District: Kenmare Public School District

Kenmare Public School

District: Lewis & Clark Public School District

Lewis & Clark Berthold Public School

Lewis & Clark Plaza Elementary School

District: Max Public School District

Max Public School

District: Minot Catholic Schools

Little Flower Elementary School

District: Minot Public School District

Bel Air Elementary School

Bell Elementary School

Dakota Elementary School

Edison Elementary School

Lewis & Clark Elementary School

Lincoln Elementary School

Longfellow Elementary School

McKinley Elementary School

North Plains Elementary School

Perkett Elementary School

Roosevelt Elementary School

Sunnyside Elementary School

Washington Elementary School

District: Nedrose Public School District
Nedrose Public School

District: Our Redeemer's Christian School
Our Redeemer's Christian School

District: South Prairie Public School District
South Prairie Public School

District: Surrey Public School District
Surrey Public School

District: United Public School District
Burlington-Deslacs Elementary School

OHIO

Wright-Patterson

STARBASE Wright-Patterson

Start Date: 2004
Service Component: Air Force
Military Location: Wright-Patterson Air Force Base
Address:
DET1 AFRL/WSC
2130th 8th Street
WPAFB, OH 45433
Tel: 937.904.8622
Fax: 937.904.8033
Director: Kathleen Schweinfurth
Email: Kathleen.schweinfurth@wpafb.af.mil
Website: <http://edoutreach.wpafb.af.mil>

School Districts & Schools

District: Beavercreek City School District
Parkwood Elementary School

District: Fairborn City School District
Fairborn Intermediate School

District: Huber Heights City Schools
Kitty Hawk Elementary School
Monticello Elementary School

District: Mad River Township School District
Spinning Hills Middle School

District: Miamisburg City Schools
H.V. Bear Elementary School

District: Springfield City School District
Horace Mann Elementary School
Kenwood Elementary School
Kinder Elementary School
Parkwood Elementary School
Simon Kenton Elementary School
Snowhill Elementary School
Snyder Park Elementary School
Warder Wayne Elementary School

OKLAHOMA

Oklahoma City

STARBASE Oklahoma – Oklahoma City

Start Date: 2001
Service Component: Air National Guard
Military Location: 137th Fighter Wing, OK Air National Guard, Will Rogers Air National Guard Base
Address:
5920 Air Guard Drive
Oklahoma City, OK 73179
Tel: 405.686.5950
Fax: 405.686.5229
Director: Pamela Kirk
Email: pamela.kirk@ang.af.mil
Website: www.starbaseok.org

School District & Schools

District: Arapaho Public School District
Arapaho-Butler Elementary School

District: Archdiocese of Oklahoma City
Bishop John Carroll School
St. Philip Neri Catholic School
Trinity Christian Academy

District: Bethany Public School District
Bethany Elementary School

District: Burns Flat-Dill City Public School District
BFDC Will Rogers Elementary School

District: Cheyenne Public School District
Cheyenne Elementary School

District: Christian Schools
Lawton Christian Academy

District: Clinton Public School District

Washington Elementary School

District: Cyril Public School District

Cyril Elementary School

District: Duncan Public School District

Plato Elementary School

District: Elgin Public School District

Elgin Elementary School

District: Elk City Public School District

Grandview Elementary School

District: Erick Public School District

Erick Elementary School

District: Fletcher Public School District

Fletcher Elementary School

District: Flower Mound Public School District

Flower Mound Elementary School

District: Hammon Public School District

Hammon Elementary School

District: Indianhoma Public School District

Indianhoma Elementary School

District: Lawton Public School District

Almor West Elementary School
 Cleveland Elementary School
 Country Club Heights Elementary School
 Geronimo Road Elementary School
 Pioneer Park Elementary School
 Sheridan Rd Elementary School
 Sullivan Village Elementary School
 Swinney Elementary School

District: Leedey Public School District

Leedey Elementary School

District: Merritt Public School District

Merritt Elementary School

District: Midwest City-Dell City Public School District

Dell City Elementary School

District: Millwood Public School District

Millwood Arts Academy
 Millwood Elementary School

District: Mountain View Public School District

Mountain View-Gotebo Elementary School

District: Oklahoma City Public School District

Hawthorne Elementary School

District: Piedmont Public School District

Piedmont Elementary School
 Stone Ridge Elementary School

District: Private Schools

Mercy School

District: Putnam City Public School District

Harvest Hills Elementary School

District: Sentinel Public School District

Sentinel Elementary School

District: Sterling Public School District

Sterling Elementary School

District: Union City School District

Union City Elementary School

District: Western Heights Public School District

Council Grove Elementary School
 Greenvale Elementary School
 Winds West Elementary School

Tulsa**STARBASE Oklahoma–Tulsa & NAI**

Start Date: 1993

Service Component: Air National Guard

Military Location: 138th Fighter Wing, Tulsa ANG Base

Address:

9131 E Viper Street
 Tulsa, OK 74112

Tel: 918.833.7757

Fax: 918.833.7769

Director: Pam Kirk

Email: pamela.kirk@ang.af.mil

Website: www.starbaseok.org

School Districts & Schools

District: Anderson Public School District

Anderson Elementary School

District: Barnsdall Public School District

Barnsdall Elementary School

District: Braggs Public School District

Braggs Elementary School

District: Bryant Public School District

Bryant Elementary School

District: Catoosa Public School District

Cherokee Elementary School

District: Chouteau-Mazie Public School District

Chouteau Elementary School

District: Christian School

Rejoice Christian Academy

District: Diocese of Tulsa

All Saints Catholic School

Sts. Peter & Paul Catholic School

Saint Joseph's Catholic School

St. Pius X Catholic School

District: Gore Public School District

Gore Elementary School

Gore Upper Elementary School

District: Kansas Public School District

Kansas Elementary School

District: Kinta Public School District

Kinta Elementary School

District: Locust Grove Public School District

Locust Grove Elementary School

District: Midway Public School District

Midway Elementary School

District: Muskogee Public School District

Ben Franklin Science Academy

Creek Elementary School

Grant Foreman Elementary School

Harris Jobe Elementary School

Pershing Elementary School

Sadler Arts Academy School

Tony Goetz Elementary School

Whittier Elementary School

District: Norwood Public School District

Norwood Elementary School

District: Private School

Deborah Brown Community School

United Methodist Boy's Ranch

District: Pryor Public School District

Jefferson Elementary School

Lincoln Elementary School

Washington Elementary School

District: Okay Public School District

Okay Elementary School

District: Oktaha Public School District

Oktaha Elementary School

District: Osage Public School District

Osage Elementary School

District: Salina Public School District

Salina Elementary School

District: Sand Springs Public School District

Pratt Elementary School

District: Shady Grove Public School District

Shady Grove Middle School

District: Tahlequah Public School District

Woodall Elementary School

District: Tenkiller Public School District

Tenkiller Elementary School

District: Tulsa Public School District

Alcott Elementary School

Greeley Elementary School

Hawthorne Elementary School

Jackson Elementary School

McKinley Elementary School

Lindbergh Elementary School

Owen Elementary School

Peary Elementary School

Roosevelt Elementary School
Springdale Elementary School

District: Webbers Falls Public School District
Webbers Falls Elementary School

OREGON

Klamath Falls

STARBASE Kingsley

Start Date: 1993
Service Component: Air National Guard
Military Location: Oregon Air National Guard
173rd Fighter Wing
Kingsley Field
Klamath Falls, OR
Address:
302 Bong Street, Suite 19
Klamath Falls, OR 97603
Tel: 541.885.6472
Fax: 541.885.6196
Director: Marsha Beardslee
Email: marsha.beardslee@gmail.com

School Districts & Schools

District: Home School Group
Home School Group

District: Hosanna Christian School
Hosanna Christian School

District: Klamath County School District

Bonanza Schools
Chiloquin Elementary School
Ferguson Elementary School
Henley Elementary School
Keno Elementary School
Merrill Elementary School
Peterson Elementary School
Shasta Elementary School
Stearns Elementary School

District: Klamath Falls City School District

Conger Elementary School
Fairview Elementary School
Mills Elementary School
Pelican Elementary School
Roosevelt Elementary School

Portland

STARBASE Portland

Starting Date: 1993
Service Component: Air National Guard
Military Location: Jackson Armory/Portland Air National
Guard Base
Address:
5266 NE Cornfoot Road
Portland, OR 97218
Tel: 503.916.5404 ext. 71061
Fax: 503.916.2795
Director: Marilyn Sholian
Email: Msholian@pps.k12.or.us
Website: www.mil.state.or.us/starbaseor/starbasepdx/
starbase.html

School Districts & Schools

District: Community Transitional School
Community Transitional School

District: Damascus Christian School
Damascus Christian

District: David Douglas School District
Mill Park Elementary School

District: Portland Public School District

Alameda Elementary School
Capitol Hill Elementary School
Chief Joseph Elementary School
Duniway Elementary School
Forest Park Elementary School
Grout Elementary School
Harrison Park Elementary School
Lee Elementary School
Maplewood Elementary School
Marysville Elementary School
Sabin Elementary School
Scott Elementary School
Vestal Elementary School
Woodmere Elementary School

PENNSYLVANIA

Pittsburgh

STARBASE Atlantis–Pittsburgh

Start Date: 2002

Service Component: Navy

Military Location: Naval Operational Support Center - Pittsburgh

Address:

625 East Pittsburgh/McKeesport Blvd.

North Versailles, PA 15137

Tel: 412.673.0801 ext. 135

Fax: 412.673.1381

Director: Ken C. Mechling, Jr.

Email: starbase.ken.mechlingjr@comcast.net

Website: www.starbase-atlantis-pittsburgh.org

School Districts & Schools

District: California Area School District

California Intermediate Middle School

District: Diocese of Pittsburgh School District

Good Shepherd School

Saint Bernadette School

Saint Bartholomew School

Saint Irenaeus School

Saint Joseph School

Word of God School

District: East Allegheny School District

Logan Middle School

District: McKeesport Area School District

Centennial Elementary School

District: Monessen City School District

Monessen Elementary Center

District: Penn Hills School District

Linton Middle School

District: Pittsburgh Public School District

Urban League of Greater Pittsburgh Charter School

PUERTO RICO

Carolina

STARBASE Puerto Rico

Start Date: 1995

Service Component: Air National Guard

Military Location: Puerto Rico National Guard, Muñiz AFB

Address:

200 Jose A. Santana Ave.

Muñiz ANG Base

Carolina, PR 00979

Tel: 787.253.7502

Fax: 787.253.2513

Director: Idabells Matos

Email: idabells.matos@ang.af.mil

School Districts & Schools

District: Barceloneta Educational Region

Escuela Elemental Imbery

District: Cabo Rojo Educational Region

Escuela SU Antonio Acaron Correa

District: Caguas Educational Region

Escuela Mercedes Palma

Escuela SU Mercedes Palma

District: Canovanas Educational Region

Escuela Domingo Nieves Ortiz

Escuela Eugenio Maria De Hostos

Escuela Pedro Gutierrez

District: Carolina Educational Region

Escuela Jose Severo Quinones

Escuela Manuel Febres Gonzalez

District: Comerio Educational Region

Escuela Elemental Pinas Arriba

Escuela Ines M Mendoza

Escuela Oscar Porrata Doria

District: Corozal Educational Region

Escuela Fidel Lopez Colon

District: Guayama Educational Region

Escuela Gerardo Cautino Vazquez

District: Humacao Educational Region

Escuela Antonia Saez Torres

District: Las Piedras Educational Region

Escuela Maita Lucca Military Academy

District: Morovis Educational Region

Escuela SU David Colon Vega

District: Naguabo Educational Region

Escuela Jose R Agosto

District: Penuelas Educational Region

Escuela Tallaboa Alta

District: Rio Grande Educational Region

Escuela La Ponderosa

District: San Juan Educational Region

Escuela Alejandro Tapia Y Rivera
 Escuela Abelardo Diaz Alfaro
 Escuela Colegio Maria Auxiliadora
 Escuela Luis Rodriguez Cabrero
 Escuela Salvador Brau
 Escuela Republica De Brasil
 Escuela Villa Granada Elemental
 Escuela Villa Granada Intermedia
 Escuela William D. Boyce

District: Rio Grande Educational Region

Escuela Carmen L. Feliciano Carreras

District: Toa Alta Region

Escuela Abelardo Diaz Alfaro

District: Toa Baja Region

Escuela Basilio Milan Hernandez
 Escuela Maria Libertad Gomez

RHODE ISLAND

Newport**STARBASE Atlantis–Newport**

Starting Date: 2004

Service Component: Navy

Military Location: Naval Station Newport

Address:

440 Meyerkord Ave.

Perry Hall Room 012

Newport, RI 02841

Tel: 401.841.4072

Fax: 401.841.4075

Director: Patrick F. Rossoni

Email: patrick.rossoni@navy.mil

School Districts & Schools**District: Fall River Public School District**

Atlantis Charter School

District: Middletown Public School District

Joseph H. Gaudet Middle School

District: Newport Public School District

Thompson Middle School

District: North Kingstown Public School District

Hamilton Elementary School

Quidnessett Elementary School

District: Other

The Pennfield School

St. Philomena Elementary School

SOUTH CAROLINA

Beaufort**STARBASE MCAS Beaufort**

Start Date: 1999

Service Component: Marine Corps

Military Location: Marine Corps Air Station Beaufort

Address:

P.O. Box 55013

Bldg 660

Beaufort, SC 29904

Tel: 843.524.1320

Fax: 843.524.1326

Director: Wendell Roberson, Sr.

Email: starbasemcas1@embarqmail.com

Website: www.starbasebeaufort.com

School District & Schools**District: Beaufort County School District**

Beaufort Elementary School

Joseph S. Shanklin Elementary School

Lady's Island Elementary School

Mossy Oaks Elementary School

Okatie Elementary School

Port Royal Elementary School

Michael C. Riley Elementary School

Red Cedar Elementary School

Shell Point Elementary School

District: Colleton County School District

Bells Elementary School
 Cottageville Elementary School
 Edisto Beach Elementary School
 Forest Hills Elementary School
 Hendersonville Elementary School
 Northside Elementary School

District: DoD School System

Bolden Elementary School

District: Hampton County School District 1

Fennell Elementary School
 Hampton Elementary School

District: Hampton County School District 2

Estill Elementary School

District: Jasper County School District

Ridgeland Elementary School

District: Parochial/Private Schools

Agape Christian Academy
 Beaufort Academy
 St Gregory the Great Catholic School
 St. Peter Catholic School

District: Alternative Juvenile Justice Program

Beaufort Marine Institute

Columbia**STARBASE Swamp Fox**

Start Date: 2001

Service Component: Air National Guard

Military Location: McEntire Joint National Guard Base

Address:

1325 South Carolina Road

Stop #39

Eastover, SC 29044

Tel: 803.647.8126

Fax: 803.647.8195

Director: John Motley

Email: john.motley.1@ang.af.mil

Website: www.scstarbase.org

School Districts & Schools**District: Archdiocese of Charleston**

St. John Neumann Catholic School
 Saint Joseph Catholic School

St. Martin de Porres Catholic Elementary

St. Peters Catholic School

District: Richland County School District 1

A.C. Moore Elementary School
 Bradley Elementary School
 Forest Heights Elementary School
 Gadsden Elementary School
 Hopkins Elementary School
 Horrell Hill Elementary School
 South Kilbourne Elementary School
 Webber Elementary School

District: Richland County School District 2

North Springs Elementary School

District: Sumter County School District 2

F. J. DeLaine Elementary School
 High Hills Elementary School

District: Independent/Non-affiliated School

Barclay School
 Home School Group
 Timmerman School

SOUTH DAKOTA

Rapid City**STARBASE Rapid City**

Start Date: 2002

Service Component: National Guard

Military Location: SD National Guard, Camp Rapid

Address:

Building 123

2823 West Main Street

Rapid City, SD 57702

Tel: 605.737.6083

Fax: 605.737.6082

Director: Sarah Jensen

Email: sarah@sdstarbase.org

Website: <http://www.sdstarbase.org/>

School Districts & Schools**District: Cheyenne River BIA School 20302**

Cheyenne Eagle Butte Upper Elementary School

District: Crow Creek Tribal School 34301

Crow Creek Elementary Tribal School

District: Custer School District 16-1Custer Elementary School
Fairburn Elementary School
Hermosa Elementary School
Spring Creek Elementary School**District: Douglas School District 51-1**

Vandenburg Elementary School

District: Dupree School District 64-2

Dupree Elementary School

District: Enemy Swim Tribal School

Enemy Swim Day School

District: Mobridge School District 62-3

Mobridge Elementary School

District: Rapid City Area School District 51-4Black Hawk Elementary School
Canyon Lake Elementary School
General Beadle Elementary School
Horace Mann Elementary School
Knollwood Heights Elementary School
Rapid Valley Elementary School
Robbinsdale Elementary School
South Park Elementary School
Valley View Elementary School**District: Sitting Bull Tribal School**

Sitting Bull Elementary School

District: St. Joseph's Indian School 32305

St. Joseph's Elementary School

District: Timber Lake School District 20-3

Timber Lake Elementary School

District: Tiospaye Topa School System 20303

Tiospaye Topa Elementary

District: Wall School District 51-5

Wall Elementary School

District: Yankton School District

Webster Elementary School

District: OtherHome School Association
Little Wound School
St. Francis Indian School**Sioux Falls****STARBASE Sioux Falls**

Start Date: 1994

Service Component: National Guard

Military Location: SD Army & Air Guard Bases

Address:

801 W. National Guard Drive
1201 West Algonquin
Sioux Falls, SD 57104

Tel: 605.367.4930

Fax: 605.367.4926

Director: Vonny Revell

Email: vonny@sdstarbase.org

School Districts & Schools**District: Browns Valley School district**

Browns Valley Elementary School

District: Garretson Public School District

Garretson Public School

District: Marty Indian School

Marty Indian School

District: Rosholt School District

Rosholt Elementary School

District: Saint Francis Indian School

Saint Francis Indian School

District: Sisseton School DistrictNew Effington Elementary School
Sisseton Elementary School
Wilmot Elementary School**District: Sioux Falls Public School District**Cleveland Elementary School
Garretson Elementary School
Hawthorne Elementary School
Hayward Elementary School
Jefferson Elementary School
Laura B. Anderson Elementary School
Longfellow Elementary School
Lowell Elementary School

Renberg Elementary School
Robert Frost Elementary School
St. Lambert Elementary School
Terry Redlin Elementary School

District: Todd County School District

He Dog School
Klein School
Lakeview School
Littleburg School
Okreek School
Rosebud Elementary School
South Elementary School
Spring Creek School

District: Wagner Community Schools

Wagner Middle School

District: White River School District

Andes Central Elementary
Norris Elementary School
White River Elementary School

TEXAS

Corpus Christi

STARBASE Atlantis—Corpus Christi

Start Date: 2006
Service Component: Navy
Military Location: Naval Air Station Corpus Christi
Address:
11001 D Street
Building 60
Corpus Christi, TX 78419
Tel: 361.961.5318
Fax: 361.961.3566
Director: Crystal Trujillo
Email: crystal.trujillo@navy.mil

School Districts & Schools

District: Corpus Christi Independent School District

Casa Linda Elementary School
Lamar Elementary School
Prescott Elementary School
T.G. Allen Elementary School
Zavala Elementary School

District: Diocese of Corpus Christi

St. Patrick Catholic School
St. Pius X Catholic School

District: Flour Bluff Independent School District

Flour Bluff Intermediate School

District: London Independent School District

London Elementary School

Houston

Texas STARBASE

Start Date: 1994
Service Component: Air National Guard
Military Location: Texas National Guard, Ellington Field
Address:
14657 Sneider Street, Bldg. 1055
Houston, TX 77034
Tel: 281.929.2034
Fax: 281.929.2036
Director: Gail Whittemore-Smith
Email: gail.whittemore@ang.af.mil

School Districts & Schools Served

District: Archdiocese of Galveston-Houston

Holy Family Catholic School
Our Lady of Fatima Catholic School
Our Lady of Lourdes Catholic School
St. Mary's Catholic School
St. Rose of Lima Catholic School
True Cross Catholic School

District: Galena Park Independent School District

MacArthur Elementary School

District: Houston Independent School District

Cornelius Elementary School
Gordon Elementary School
Helms Community Learning Center
Law Elementary School
Park Place Elementary School
Pleasantville Elementary School
Sanchez Elementary School
Valley West Elementary School
Wainwright Elementary School

District: La Marque Independent School District

Highlands Elementary School

District: La Porte Independent School District

Rizzuto Elementary School

District: Padadena Independent School District

Genoa Elementary School

Jensen Elementary School
 Morris Fifth Grade Center
 Meador Elementary School

District: Sheldon Independent School District

Carroll Elementary School
 Monahan Elementary School
 Royalwood Elementary School
 Sheldon Elementary School
 Shepherd Intermediate School

District: Home School

Gulf Coast Christian Home Scholars

San Antonio

Starbase Kelly

Start Date: 1995

Service Component: Air Force Reserve

Military Location: Lackland Air Force Base

Address:

203 Galaxy Road Suite 112
 Lackland AFB, TX 78236-0112

Tel: 210.925.3708

Fax: 210.925.3702

Director: Ron Jackson

Email: starbase@clear.net

School Districts & Schools

District: Edgewood ISD

Coronado/Escobar Elementary School
 Perales Elementary School

District: San Antonio Catholic Schools

Little Flower Catholic School
 St. Paul Catholic Elementary School

District: San Antonio ISD

Collins Garden Elementary School
 Graebner Elementary School
 Highland Park Elementary School
 Margil Elementary School
 Maverick Elementary School
 Washington Elementary School

District: South San Antonio ISD

Carrillo Elementary School
 Five Palms Elementary School

District: Southwest ISD

Elm Creek Elementary School
 Sky Harbour Elementary School

VERMONT

Rutland

STARBASE Vermont – Rutland

Start Date: 2001

Service Component: Air National Guard

Military Location: Vermont Army National Guard

Address:

Rutland Armory
 15 West Street
 Rutland, VT 05701

Tel: 802.786.3820

Fax: 802.728.3822

Director: Doug Gilman

Email: douglas.gilman@ang.af.mil

Website: www.starbasevt.org

School Districts & Schools

District: Addison Central Supervisory Union

Ripton Elementary School
 Salisbury Community School
 Shoreham Elementary School

District: Addison Rutland Supervisory Union

Benson Village Elementary School
 Orwell Village Elementary School

District: Approved and Recognized Independent Schools

Christ the King Elementary School
 The Mountain School at Winhall

District: Rutland Central Supervisory Union

West Rutland School

District: Rutland City School District

Rutland Intermediate School

District: Rutland Northeast Supervisory Union

Leicester Central School
 Lothrop Elementary School
 Neshobe Elementary School
 Sudbury Country School
 Whiting Elementary School

District: Rutland South Supervisory Union

Clarendon Elementary School
Wallingford Elementary School

District: Rutland Southwest Supervisory Union

Poultney Elementary School
Wells Village School

District: Rutland-Windsor Supervisory Union

Ludlow Elementary School
Mount Holly Elementary School

District: Southwest Vermont Supervisory Union

Bennington Elementary School
Shaftsbury Elementary School

District: Vermont Recognized Schools

Rutland Area Christian Elementary School

District: Windham Northeast Supervisory Union

Bellows Falls Middle School

District: Windsor Central Supervisory Union

Bridgewater Village Elementary School
Sherburne Elementary School

District: Windsor Southwest Supervisory Union

Cavendish Town Elementary School

South Burlington

STARBASE Vermont – South Burlington

Start Date: 1994

Service Component: Air National Guard

Military Location: Vermont Air National Guard, 158th FW

Address:

100 NCO Drive
South Burlington, VT 05403

Tel: 802.660.5201

Fax: 802.660.5940

Director: Doug Gilman

Email: douglas.gilman@ang.af.mil

Website: www.starbasevt.org

School Districts & Schools

District: Addison Northeast Supervisory Union

Bristol Elementary School

District: Addison Northwest Supervisory Union

Vergennes Union Elementary School #44

District: Approved and Recognized Schools of Vermont

Christ the King Elementary School
St. Francis Xavier School
St. Joseph's School

District: Burlington Public School District

C.P. Smith Elementary School
Integrated Arts Academy at H.O. Wheeler
J. J. Flynn Elementary School

District: Franklin Central Supervisory Union

St. Albans Town Educational Center

District: Franklin West Supervisory Union

Bellows Free Academy Fairfax

District: Grand Isle Supervisory Union

North Hero Elementary School

District: Home School

Home School Group

District: Lamoille North Supervisory Union

Cambridge Elementary School

District: Washington Central Supervisory Union

East Montpelier Elementary School

District: Winooski School District

John F. Kennedy School

VIRGINIA

Norfolk

STARBASE Atlantis–Norfolk

Start Date: 1995

Service Component: Navy

Military Location: Naval Station Norfolk

Address:

1474 Gilbert Street
Building N25 Room 252
Norfolk, VA 23511

Tel: 757.445.5905
 Fax: 757.445.2624
 Director: Laura Bennett
 Email: laura.bennett@navy.mil

School Districts & Schools

District: Norfolk Public School District

Campostella Elementary School
 Coleman Place Elementary School
 Fairlawn Elementary School
 Granby Elementary School
 James Monroe Elementary School
 Lindenwood Elementary School
 Oakwood Elementary School
 Tanner's Creek Elementary School
 Willoughby Elementary School

WASHINGTON

Silverdale

STARBASE Atlantis–Silverdale

Start Date: 2001
 Service Component: Navy
 Military Location: Trident Training Facility Naval Base Kitsap
 Address:
 2000 Thresher Ave.
 Room D-222
 Silverdale, WA 98315
 Tel: 360.315.2671
 Fax: 360.315.2747
 Director: Morrell Yates
 Email: morrell.yates@navy.mil
 Website: https://www.netc.navy.mil/centers/slc/ttfbangor/pers_dev/starbase/starbase.htm

School Districts & Schools

District: Bremerton School District

View Ridge Elementary School

District: Central Kitsap School District

Brownsville Elementary School
 Emerald Heights Elementary School
 Jackson Park Elementary School
 PineCrest Elementary School

District: Chimacum School District

Chimacum Elementary School

District: Concordia Lutheran School

Concordia Lutheran School

District: North Kitsap School District

Pearson Elementary School
 Suquamish Elementary School
 Vineland Elementary School
 Wofle Elementary School

District: Peace Lutheran Elementary School

Peace Lutheran Elementary School

West Virginia

Charleston

West Virginia STARBASE Academy

Start Date: 2001
 Service Component: Air National Guard
 Military Location: 130th Airlift Wing, WV National Guard
 Address:
 1679 Coonskin Drive
 Charleston, WV 25311
 Tel: 304.341.6441
 Fax: 304.341.6445
 Director: Chris Treadway
 Email: wwang.starbase@ang.af.mil
 Website: www.wvstarbase.org

School Districts & Schools

District: Kanawha County School District

Alban Elementary School
 Alum Creek Elementary School
 Belle Elementary School
 Bridgeview Elementary Center
 Cedar Grove Elementary School
 Central Elementary School
 Chesapeake Elementary School
 Clendenin Elementary School
 Cross Lanes Elementary School
 Flinn Elementary School
 Grandview Elementary School
 Holz Elementary School
 Kanawha City Elementary School
 Kenna Elementary School
 Lakewood Elementary School
 Mary Ingles Elementary School
 Midland Trail Elementary School
 Montrose Elementary School
 Overbrook Elementary School

Pinch Elementary School
Richmond Elementary School
Ruffner Elementary School
Ruthlawn Elementary School
Sharon Dawes Elementary School
Shoals Elementary School
Sissonville Elementary School
Weberwood Elementary School

District: Private School

Bible Center Elementary School
Lighthouse Christian Academy
St. Francis of Assisi School

Martinsburg

STARBASE Martinsburg

Start Date: 2002
Service Component: Air National Guard
Military Location: 167th Airlift Wing, Martinsburg
Address:
222 Sabre Jet Blvd.
Martinsburg, WV 25405
Tel: 304.616.5501
Fax: 304.616.5478
Director: Sherra Triggs
Email: sherra.triggs@ang.af.mil
Website: <http://www.wvstarbase.org>

School Districts & Schools

District: Berkeley County Public School District

Eagle Intermediate School
Mill Creek Intermediate School
Mountain Ridge Intermediate School
Orchard View Intermediate School
Potomack Intermediate School
Tomahawk Intermediate School

Fax: 307.772.6017
Director: Brian L. Wright
Email: brianw@starbasewy.org
Website: www.starbasewy.org

School Districts & Schools

District: Laramie County School District #1

Afflerbach Elementary School
Alta Vista Elementary School
Anderson Elementary School
Arp Elementary School
Baggs Elementary School
Bain Elementary School
Buffalo Ridge Elementary School
Cole Elementary School
Davis Elementary School
Dildine Elementary School
Fairview Elementary School
Freedom Elementary
Gilchrist Elementary School
Goins Elementary School
Hebard Elementary School
Henderson Elementary School
Hobbs Elementary School
Jessup Elementary School
Miller Elementary School
Pioneer Park Elementary School
Rossman Elementary School
Saddle Ridge Elementary School
Sunrise Elementary School
Willadsen Elementary School

District: Laramie County School District #2

Albin Elementary School
Pine Bluffs Elementary School
West Elementary School

WYOMING

Cheyenne

STARBASE Wyoming

Start Date: 1994
Service Component: Air National Guard
Military Location: 153rd Airlift Wing, WY National Guard
Address:
217 Dell Range Boulevard
Cheyenne, WY 82009
Tel: 307.772.6161



For more information contact:

Office of the Assistant Secretary of Defense/Reserve Affairs (OASD/RA)
1500 Defense Pentagon
Washington, DC 20301-1500
Phone: 703.693.8630

www.dodstarbase.org