

## 2009 Annual Report

"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."

General Victor E. Renuart, Jr.





# FORWARD from the Assistant Secretary of Defense for Reserve Affairs The Honorable Dennis M. McCarthy

The DoD STARBASE Program is truly a worthwhile endeavor. Through outreach and integrated educational programs, STARBASE is increasing interest in science, technology, engineering and mathematics (STEM) among our nation's youth.

In FY 2009, the DoD STARBASE Program operated at 60 locations in 34 states, the District of Columbia and Puerto Rico. Military commanders partnered with 1,254 schools from 369 school districts, serving approximately 60,000 students. Since 1993, more than 545,000 students have participated in the program.

The 2009 DoD STARBASE Report which follows highlights the important relationships that exist between military commands and public schools with which they are partnering. These successful relationships allow the program to provide a worthwhile experience for the participating students.

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 Rear Admiral Joseph F. Kilkenny, Commander, Naval Education and Training Command, and Major General Tod M. Bunting, Adjutant General of Kansas, provide insights into the value of the program. Also in the report are observations from Lawrence P. Farrell Jr., President of the National Defense Industrial Association (NDIA) and Mr. Edward Swallow, NDIA STEM Division Chairman. They provide an industry perspective of the DoD STARBASE Program, explaining why their associations are strong supporters of the program.

Ultimately, the DoD STARBASE Program is providing valuable educational and collaborative opportunities to participants. It is also opening DoD's door to the next generation of America's leaders. And, in doing so, DoD STARBASE is making an important investment for the future of our nation.

Dennis M. McCarthy

Mannis Woodle

## Table of Contents

	PAGE	Post-Program Analysis of Knowledge and Skills Test 2003-2009	51
NTRODUCTION		Gender Differences on Knowledge Test	
Forward from the Assistant Secretary of Defense for	Reserve	Length of Academy Operation and Knowledge	
Affairs The Honorable Dennis M. McCarthy	•	Performance	53
An Issue of National Importance		High Versus Low Performers on Knowledge Test	
Mission and Vision Statements		Student Attitudinal Results	
DoD STARBASE Map		Pre-Program Attitudinal Ratings	55
DoD STARBASE History		Post-Program Attitudinal Ratings	
Leading the Way With Engaging Curriculum		Shifts in Student Attitudes	
A Letter From Rear Admiral J. F. Kilkenny		Shifts in Military Attitudinal Items	
A Letter From Major General Tod M. Bunting		·	30
Industry Leaders' Perspective		Pre- and Post-Program Ranking and Mean Scores of Student Attitudinal Responses	57
A Superintendent's Perspective		Math and Science Attitudinal Ratings	
A DoD STARBASE Graduate's Perspective		Gender Comparisons and Attitudinal Differences .	
DoD STARBASE Accolades		Prior Experience With the Military	
The Importance of Collaborations	22-23	Students' Prior Knowledge of DoD STARBASE	
		Age and Gender Impact on Attitudes	
2009 ASSESSMENT		Academy Location and Student Attitudes	
Executive Summary	25	Military Service Branches and Attitudes	
The Participants		Differences in Attitudes by Academy Age	
The Military			02
The School Districts	27	Post-Program Student Attitudinal Assessment (2004-2009)	62-63
The Community		Student Assessment Summary	
The Program Elements	28	2009 Teacher Assessment	04
Grade Level	28	Overview	65
Class Size	28	Teacher Demographics	
Class Schedule	28	Teacher Assessment Results	
Program Service Area	30	STARBASE Impact on the School System	
Racial Composition	30		
Gender Composition	31	Yearly Mean Comparisons	
Employment Affiliation	31	Math and Science Attitudinal Ratings by Teachers	
Staffing Model	32	Teacher Attitudinal Ratings Over a Six-Year Period	09
Instructors	33	Teacher Perceptions With Student's Experiences and Attitudes	70
Staff Development	33		
Staff Departures	33	Key Teacher Correlations	
Volunteers	35	Teacher Assessment Summary	
Not-for-Profit Organizations	35	Drivers of Opinion	
Program Growth	37	Drivers of Opinion	/3-/0
Program Oversight	38	CONSIDERATION	77 70
Compliance Procedures			
Compliance Adherence		APPENDICES	
Fiscal Analysis		U.S. Regional Map	
2009 Student Assessment		Additional Data	82
Overview		Teacher Perceptions Compared to	00.00
The Knowledge and Skills Assessment		Student Perceptions	82-83
The Attitudinal Assessment		Tests and Questionnaires	04.07
Instrument Review Process		Pre-Flight and Post-Flight Questionnaire	
Data Collection, Administration and Logistics		2009 Director's Questionnaire	
Analytical Approach		Teacher Questionnaire	
The Analysis and Its Use		Military Volunteer Questionnaire	
Student Demographics		Glossary	
Student Knowledge and Skills Results		Statistical Formulas	
Pre-Program Knowledge		DIRECTORY OF Dod STARBASE ACADEMIES	116-147
Tro Trogram Knowledge	·····-		





## An Issue of National Importance

In national and economic security, the primary contribution often comes from physical scientists, mathematicians and engineers. These are the people who create, manage and generate new methods and ideas for the future that we cannot begin to envision or comprehend today. These future technological breakthroughs will create new jobs in fields that may not even exist today.

The Department of Defense wants to encourage a new generation of scientists and engineers who will apply their talents in support of national security. To nurture creativity and innovation, it is important to expand the pool of students pursuing degrees in science, technology, engineering and math (STEM) related fields. Through the sponsorship of the innovative and challenging DoD STARBASE program, DoD is encouraging students to become involved with STEM subjects at a critical point in their education.

Evaluations of DoD STARBASE consistently show that the program not only increases students' knowledge, but it also changes their attitudes about education. Research is verified by comments from parents, such as the mother in Pittsburgh who wrote. "DoD STARBASE somehow positively encouraged and motivated my unmotivated daughter in both math and science. She is actually trying much harder and is earning better grades in these two challenging subjects thanks to DoD STARBASE. I don't know how you do it, but keep it up!"

Changing attitudes is critical because research shows that students begin to lose interest in STEM subjects as early as fourth grade and as a result, do not select the high school courses that will allow them to pursue STEM careers in college. The 60 DoD STARBASE locations focus on students in the fifth grade to reach students at this critical turning point in their lives. Using a rigorous curriculum, DoD STARBASE shows students that STEM subjects are interesting and exciting and that they can be successful not only in science and math, but in whatever they choose to do.

The 2005 National Assessment of Educational Progress (NAEP), widely regarded as the nation's report card, showed that only 31 percent of U.S. eighth grade students were proficient<sup>2</sup> and only 7 percent<sup>3</sup> were advanced in math. The scores in science and math for high school seniors actually decreased. Fewer than one in five high school seniors are proficient in science and less than one in four is proficient in math.<sup>5</sup>

Improving student performance is a critical mission for our national security, because our students are not mastering these subjects and subsequently trailing their international peers in STEM. Internationally, our eighthgrade students follow students in Singapore, Japan, Hungary, England, Hong Kong, Russian Federation, England, Chinese Taipei and the Republic of Korea in math and science.6

The statistics become even more alarming when

advanced degrees are examined. An analysis of the 2000 U.S. Census showed that although immigrants accounted for only 12 percent of the US workforce, they made up 47 percent of all scientists and engineers with doctorates. Furthermore, 67 percent of all those who entered the fields of science and engineering in the U.S. between 1995 and 2006 were immigrants. Many immigrants cannot get the national



security clearance necessary to work on projects vital to national security.

Through its sponsorship of the DoD STARBASE program, the Department of Defense focuses on children who are underrepresented in the STEM fields. The program opens children's eyes to careers they have never considered, and more importantly, conveys the message that interesting careers in science, technology, engineering and math are within their reach if they focus on achieving their dreams.

A fifth-grade student poignantly summed up the experience: "Before STARBASE, I didn't know I could dream. I didn't know I could dream and be anything I wanted to be. I didn't know. I just didn't know."

<sup>1</sup> President Barack Obama's remarks to the National Academy of Sciences, April 27, 2009.

Proficient represents solid academic performance. Students reaching this level have demonstrated competency over challenging subject matter 8 percent of boys and 6 percent of girls scored at the advanced level.

<sup>4</sup> Advanced represents superior performance.
5 National Assessment of Educational Progress, 2005 and 2008 (online). Available at: <a href="http://nces.ed.gov/nationsreportcard/">http://nces.ed.gov/nationsreportcard/</a>.
6 Trends in International Mathematics and Science Study (TIMMS) 2007.

## The Vision and Mission of DoD STARBASE



## **VISION STATEMENT**

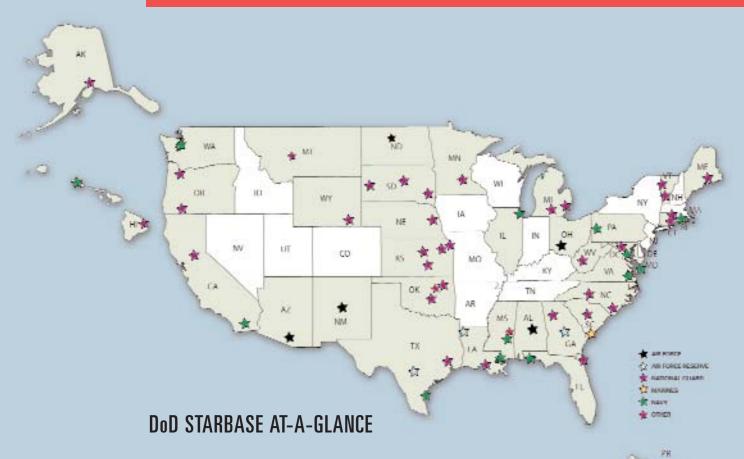
To raise the interest and improve the knowledge and skills of at-risk youth in science, technology, engineering and mathematics, which will provide for a highly educated and skilled American workforce that can meet the advanced technological requirements of the Department of Defense.

## **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.



The curriculum has evolved over the years and now includes an emphasis on all of the STEM subjects—science, technology, engineering and math.



■ 60 DoD STARBASE locations in 34 states plus the District of Columbia and Puerto Rico

■ 3 outreach programs to American Indians in MS, OK and SD

■ Number of Students Since 1993: 545,000■ Number of Students Served in 2009: 65,399

■ Cost of Program: \$17,787,703.40■ Average Cost Per Academy: \$317,637.56■ Average Cost Per Student: \$306.01

## The DoD STARBASE History

The DoD STARBASE program originated at Selfridge Air National Guard Base, Michigan. Barbara Koscak, an elementary school teacher, designed a program to excite her students' interests in math, science and technology through a curriculum built around space and the physics of flight. The challenging curriculum included innovative hands-on projects that included a "wow" factor that immediately engaged students.

In addition to learning the concepts in the classroom, she wanted her students to understand the applications of concepts. She approached the commander of the 127th Fighter Wing at Selfridge Air National Guard Base, Brigadier General David Arendts. Arendts had a strong interest in America's youth and saw the potential in having students spend time on the base where they could see the concepts that they learned in the classroom applied in everyday activities happening on the base. At the same time, they would meet National Guard volunteers who would serve not only as facilitators, but also as role models. The first program, Project Stars, began in the summer of 1990 and relied on teachers who volunteered their time. A grant from the W.K. Kellogg Foundation funded the first year-round program.

The results of the program were impressive and in 1993, Congress allocated funds to the Department of Defense to pilot the program in seven states. The military and educational communities enthusiastically embraced the program, and by year's end, the program had grown to seven active academies. In 1999, Congress reauthorized the program under 10 U.S.C. 2193b as the DoD STARBASE program.

The curriculum has evolved over the years and now includes an emphasis on all of the STEM subjects—science, technology, engineering and math. In addition to doing chemistry, physics and mathematical applications, students now use sophisticated engineering software to create and manufacture their own land, sea, air, and space vehicle/equipment.

The program is under the supervision of the Office of the Assistant Secretary of Defense for Reserve Affairs and has 60 locations in 34 states, the District of Columbia and Puerto Rico.



## Leading the Way With Engaging Curriculum

Albert Einstein's views on instruction and learning in the early 1900s are the essence of 21st century inquiry-based learning. Inquiry implies involvement that leads to understanding. Involvement in learning has been the hallmark of a DoD STARBASE experience.

Involvement in learning implies possessing skills and attitudes that permit you to seek resolutions to questions and issues while you construct new knowledge. The inquiry process begins with gathering information and data through the human senses (seeing, hearing, touching, tasting and smelling) and ends with finding appropriate resolutions to questions and issues. Since humans are born inquisitive, this process is as natural to us as breathing, yet, historically this approach to learning has not been used in school systems.

The traditional approach to learning is focused on mastery of content rather than on the development of skills and the nurturing of inquiring attitudes. This educational approach is teacher-centered, with the focus on the teacher dispensing information. Students are the receivers of this information. Much of the assessment of the learner is focused on the importance of getting the "right answer." Traditional education is more concerned with in-school success than with helping students learn to learn throughout life.

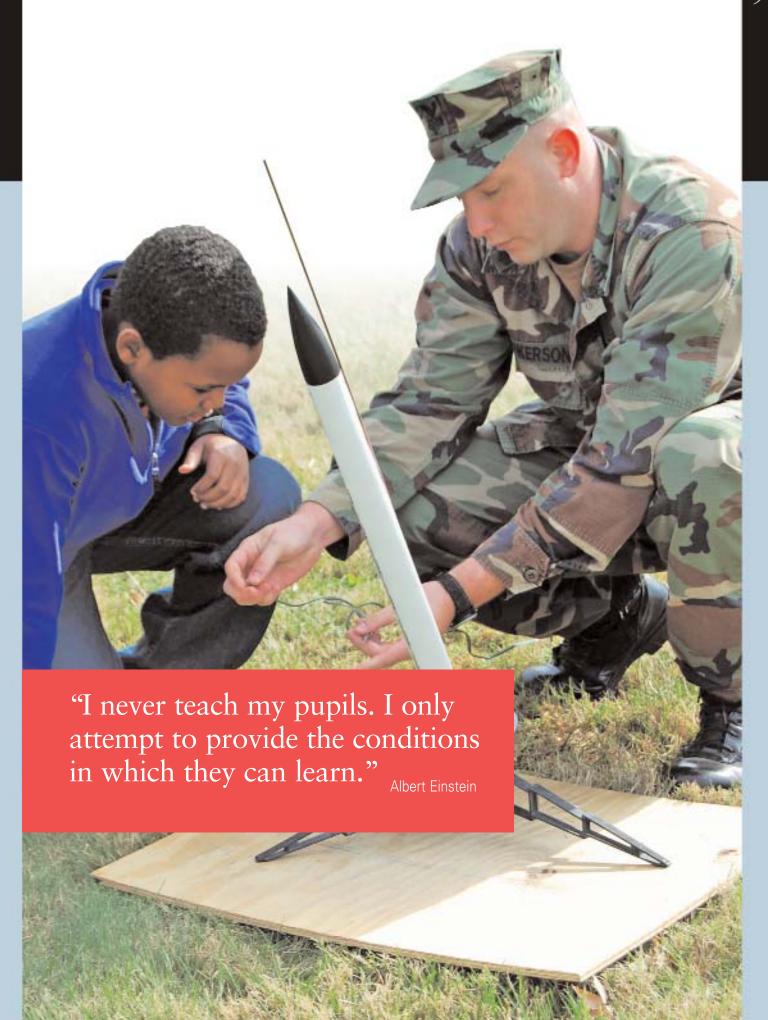
The inquiry approach used by the DoD STARBASE program focuses on using and learning content as a means to develop information-processing and problem-solving skills. This educational approach is student-centered with the focus on the students and the teacher acting as a facilitator. Students are involved in the building of knowledge through active involvement. The more interested and engaged students are during learning, the easier it will be for them to construct indepth knowledge. Learning becomes almost effortless when students are engaged and working on something that reflects their interests and goals.

The DoD STARBASE curriculum consists of objectives relating to 13 core topics that focus on the areas of science, technology, engineering and mathematics (STEM). Each topic is presented through the use of engaging activities. The activities are designed to initiate

inquiry and facilitate student learning. For example, when exploring physics, students use Newton's laws of motion to help them design and construct a rocket. During their exploration of engineering, students design a vehicle strong enough to protect an egg passenger (named Eggbert) upon impact. Using "hands-on, minds-on" activities such as these, students quickly make the necessary connections between the classroom and the outside world.

The DoD STARBASE curriculum is constantly evaluated and revised to maintain its innovative leadership. It was one of the first programs in the country to teach elementary students sophisticated engineering technology for computer-aided design (CAD) and continues to lead the way in elementary science education with new activities using nanotechnology, navigation and mapping.

Over the past year, the DoD STARBASE curriculum committee has worked diligently to update and standardize the DoD STARBASE curriculum. The new DoD STARBASE curriculum reduced the number of topics from 13 to six relating to physics, chemistry, technology, engineering, mathematical operations and applications, and STEM careers. Each topic is linked with a set of standards, objectives and activities. These objectives are closely aligned with the National Science Education Standards. A bank of committee-approved inquiry-based activities is being developed for academies to select from for each of the DoD STARBASE topics. DoD STARBASE directors and teachers gathered in July 2009 for a professional development conference to become skilled at the newly approved curriculum standards, objectives and activities. The standardized curriculum is scheduled to be partially implemented for the 2009–2010 academic year with full implementation planned for the 2010-2011 school year.



As the head of Naval Education and Training, I am pleased to play a significant role in the Department of Defense's STARBASE program. This important program provides incredible benefits toward the development of students and teachers, while addressing the critical national need to increase educational support for science, technology, engineering, and mathematics (STEM) for the neediest children within our communities.

In September 1994, Navy's first DoD STARBASE program opened at Naval Air Station (NAS) Pensacola when DoD authorized the establishment of Navymanaged "STARBASE-Atlantis" Academies. Today, there are 15 programs located throughout the United States.

DoD STARBASE is full of exciting, challenging and fun programs that support the early stages of educational development in the areas of STEM. As a community outreach program, DoD STARBASE engages students at the fifth grade level and builds foundational skills that will benefit students throughout their educational years. Students learn through interactive instructional computer modules, lessons, games, activities and science experiments. They develop the foundational skills for engineering through hands-on learning and activities designed to cultivate their creativity and problem-solving skills, all integrated into the science, math and technology learning experiences.

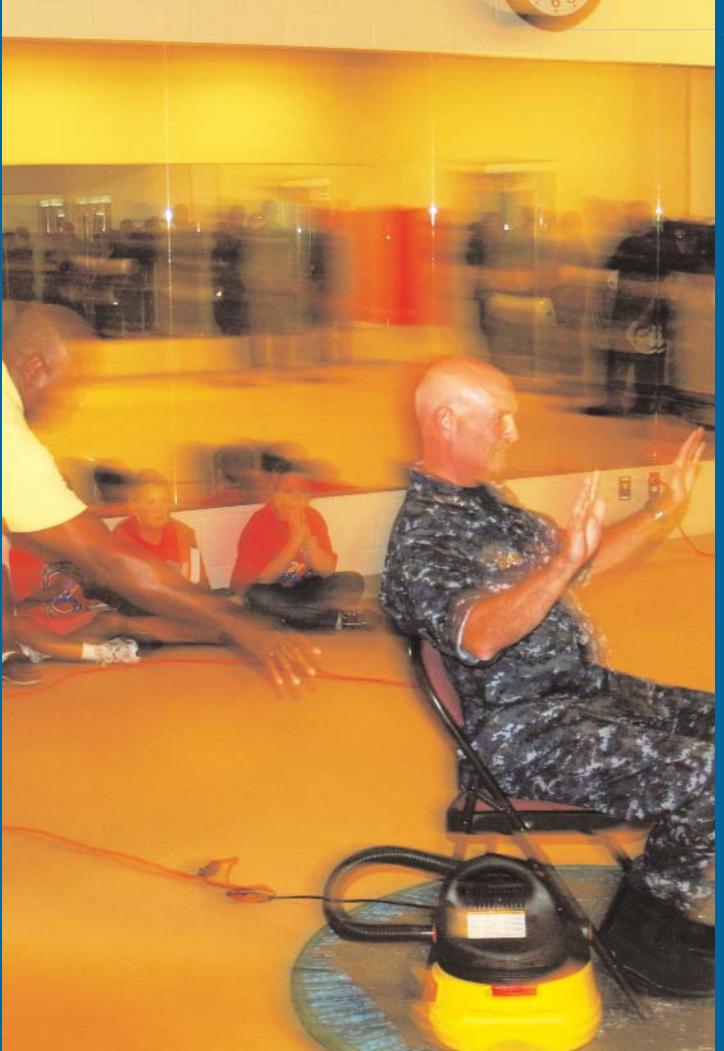


## A Letter from Rear Admiral J. F. Kilkenny Commander, Naval Education and Training Command

The 21st century is characterized by complex technology and advanced systems, all made possible through science, technology, engineering and mathematics. The DoD STARBASE program has incorporated the Pro-Engineering software program into its curriculum to further enhance the engineering piece of STEM to the DoD STARBASE students and help spur interest and participation by students within STEM in their future educational pursuits.

DoD STARBASE puts forth a concerted effort to inspire our students to choose 21st century careers in science, technology, engineering and mathematics and prepare them to succeed no matter what they choose to do in life. This expanded vision of their personal capabilities ultimately benefits the individuals, the country and society as a whole.

There is no greater imperative for the future of the United States than the education of our youth. As the Navy's Program Manager, I am excited to support the vision and mission of an initiative that helps youth fulfill that bright future—the DoD STARBASE program.





## A Letter from Major General Tod M. Bunting Adjutant General of Kansas and Chairman, National Guard Association of the United States



DoD STARBASE is a true treasure for America's youth. I have been involved in the DoD STARBASE program since the very beginning in 1992. With local funding, Kansas demonstrated very effectively that the initial STARS program, developed in Michigan, was portable. This would eventually become today's DoD STARBASE program. At the time I was a lieutenant colonel with the Kansas National Guard's 184th Fighter Wing, and a small team of full-time and traditional Guard members organized the first DoD STARBASE academy in Kansas at McConnell Air Force Base. When the idea was first presented to me, I knew immediately this program would be a great opportunity to make a difference with students in the areas of science, technology, engineering and math. My wife has taught science for 25 years, and we talk often of the missed opportunities for America's youth, particularly in the areas of math and science. As a result of the successes in Michigan and Kansas, the U.S. Congress allocated funds to expand the program to seven states starting in 1993.

Having returned to Kansas to be the adjutant general for the last six years, I am very proud of what the DoD STARBASE program has accomplished since its start in 1992. The Kansas DoD STARBASE program has reached thousands of students in Kansas. With the assistance of the National Guard Bureau and the U.S. Department of Defense, we have the opportunity to reach even more students through locations in Wichita, Topeka, Salina and Kansas City. Kansas' population is disbursed throughout the state unlike many other states where you have large metropolitan areas. For the program to be effective in Kansas, we need the flexibility to be in multiple cities. All four communities have embraced the DoD STARBASE program. It has become an integral part of the schools' education curriculum for science, technology and math.

Again, going back to the beginning of the program in Kansas, we relied heavily on traditional and full-time Guard members to launch the program. The involvement by the men and women of the Kansas National Guard has not wavered from 1992. We have a dedicated staff, both past and present, that have helped make the DoD STARBASE program a success. Not only do the Guard members conduct the many tours that the DoD STARBASE students participate in, but many full-time Guard members volunteer time to instruct in the classroom. What better teacher than a pilot or navigator talking about flight or Bernoulli's Principle, or the importance of knowing math and science to actually fly an aircraft? It is this type of interaction with our youth that will ignite interest in science, technology, engineering and math. When you read many of the statistics and trends in this country regarding students pursuing careers in engineering, science and mathematics, it is very troubling. The DoD STARBASE program can, and has, changed that perception for many students. We have heard countless stories of students in Kansas who have attended a DoD STARBASE academy and now are attending college to pursue a career in the field of science, technology, engineering or math. It sure doesn't take a "rocket scientist" to know that the DoD STARBASE program does make a difference.

## Industry Leaders' Perspective

The National Defense Industrial Association (NDIA) is a strong supporter of the DoD STARBASE program. NDIA views DoD STARBASE as an important first step in exciting and attracting students to learn about science, technology, engineering and mathematics (STEM). The 52 NDIA chapters around the country are energized and engaged in the DoD STARBASE program. Chapters are providing mentors, in-kind donations, and volunteer hours to help make the program successful. NDIA President, Lieutenant General Farrell, USAF (Ret.), and NDIA STEM Division Chairman Edward Swallow believe DoD STARBASE plays an important role in improving the overall relations with the civilian community. "We see STARBASE as an important way for students, parents, teachers and community leaders to see the entire defense team make a positive impact on the communities in which they work and live."



Lt. General Lawrence P. Farrell USAF (Ret.) NDIA President

Edward Swallow NDIA STEM Division Chairman

NDIA sees the long range benefits of DoD STARBASE to their member companies. The program excites students about the kind of work that they do and motivates students to study the subjects needed to be successful in engineering and technology. NDIA views DoD STARBASE as an important long term-program that will benefit their recruiting and retention goals.

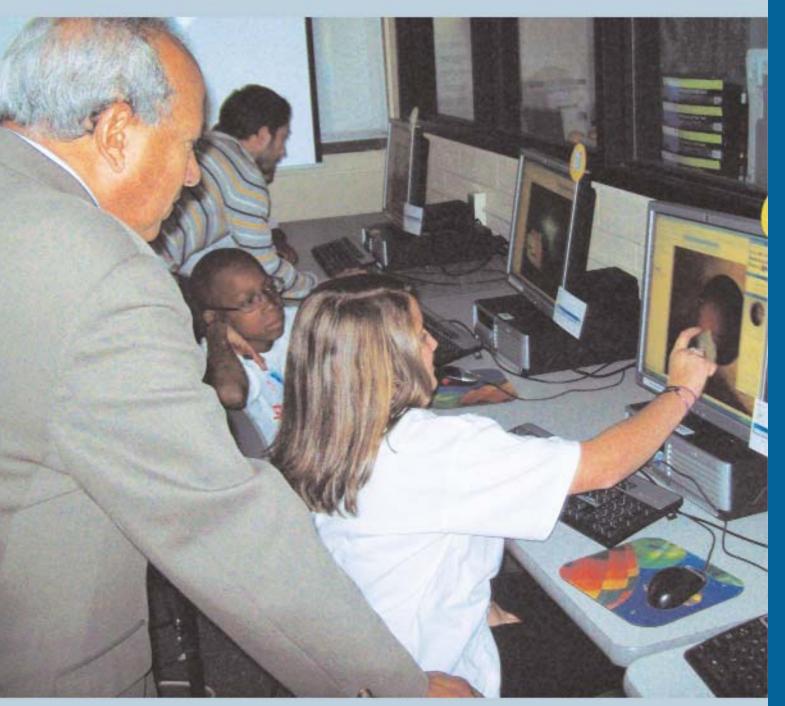
Research conducted by the NDIA STEM Workforce Division has shown that engaging students in fifth grade is critical to getting them on track to take the right math and science classes. In a statement written for the DoD STARBASE annual report, the senior officers wrote, "As an association, we are committed to engaging in issues that affect our industrial base, and there is nothing more critical to the industrial base's capabilities than its human capital. Our engineering needs will grow with time as people retire, and we need to make sure we have an adequate supply of clearable graduates to fill our ranks."

For NDIA's Model Chapter Program, STEM engagement is mandatory and STARBASE presents an outstanding opportunity for volunteer service. In fact, NDIA believes that DoD STARBASE encourages students to pursue STEM subjects and careers better than any other program they have reviewed.

The senior officers were asked about the ways the DoD STARBASE program has impacted their public/community relations and the importance of this impact. They responded, "Our engagement with STARBASE has already paid great dividends in several areas, including several chapters who have used the STARBASE program as a stepping stone to creating other opportunities for dialog on critical workforce and industrial base issues. It provides a common ground and focus that creates effective communications channels between government, industry and the community."

Additionally, NDIA has been able to help associate a number of disparate programs in a complementary fashion. The cross-talk and cross-fertilization among programs has proved beneficial for all parties. Both General Farrell and Mr. Swallow have visited several DoD STARBASE classrooms and were thrilled by the level of excitement, engagement and participation in and by the students. "If we can expand the program to all 50 states and every military base that wants one, we see a program that can create the workforce of tomorrow," said General Farrell.





Dr. Paul Sequeria, assistant superintendent for curriculum and instruction, Waterbury, Connecticut.

## A Superintendent's Perspective

Dr. Paul Sequeria, assistant superintendent for curriculum and instruction, was excited when the DoD STARBASE program was introduced to his school system in Waterbury, Connecticut six years ago. He saw DoD STARBASE as an excellent avenue to make science relevant to the urban child. Since the DoD STARBASE curriculum incorporates science, mathematics and technology, the program fits perfectly with district objectives.

By taking the time to show the students the relevance of what they are learning and allowing them to actively participate in their education Dr. Sequeria believes the DoD STARBASE program has introduced a powerful hands-on concept to teaching. This concept is key to not only instruction, but also to retaining the knowledge learned. In Dr. Sequeria's opinion this is what makes the DoD STARBASE program valuable. "We have observed that our students who participate in the program excel in their thinking and reasoning skills in the classroom," he said.

Waterbury teachers also benefit from the hands-on approach in teaching methodology. Through their participation, teachers develop a framework of integrating different concepts when teaching a lesson. By observing the rudiments of differentiated instruction and how all learning is integrated, they are better able to highlight this concept to orient their students to see how all things are connected in the process of learning.

Through DoD STARBASE collaboration with the Waterbury school district, Dr. Sequeria has seen the community become more involved in the schools. With communications between the school, parents and students, DoD STARBASE has become a household word. "I was, and continue to be impressed with the passion shown by the DoD STARBASE instructors and the support from the administration. This program has exceeded all of our expectations," Dr. Sequeria said.





## A DoD STARBASE Graduate's Perspective

Dena Squyres remembers fifth grade as a turning point in her life. It was the year that she and her class from Woodall School in Tahlequah attended DoD STARBASE Oklahoma in Tulsa. The hands-on science experiments, the encouragement from the teachers to "explore, question and figure things out on your own" was a completely new experience for her. Before going to DoD STARBASE, Dena loved to read novels and poetry. After DoD STARBASE she still enjoyed reading, but she realized that she also loved science.

She vividly recalls a science experiment where the students grew plants in identical containers, but one plant was raised in an environment that included tobacco smoke while the other plant was raised in clean air. The difference in the clean air plant's health made a lasting impact on Dena's career goals and choices. In sixth grade, she joined her school's science club and began entering and winning science contests. She also joined her school's SWAT club (Students Working Against Tobacco) where she was recognized as youth advocate of the year. Although she is now a full-time college student who holds a part-time job at the local hospital, she continues to serve as the adult adviser to her school's SWAT club.

Dena's other favorite DoD STARBASE memories include studying space and building and launching her own rocket. A rocket that she still has today—it's at home under her mother's watchful eye! In high school, she took as many science classes as her high school offered and then took dual-enrollment classes at nearby North East State University. She took general physiology, biology and advanced physiology and anatomy all before graduating from high school! As a high school senior, she received a Gates Millennium Scholarship that is currently paying her tuition and all expenses for up to eight years of higher education.

Dena is now a college sophomore at North East State University on her way to becoming a physician's assistant specializing in pediatrics. Her dream is to open her own health clinic for children of the Cherokee Nation, of which she is a member. She says, "It is important to influence somebody the way I was influenced."



Dena Squyres 2001 DoD STARBASE Graduate

## DoD STARBASE Accolades

## EDUCATORS SAY

"Thank you for giving my students a renewed love of science and the confidence to believe that they are capable of great things that will change our world!" – Pearl Harbor, HI

"I remember going to that initial conference when the proposal to bring STARBASE here was made, and this program has gone way above any expectations or predictions I initially had about STARBASE." – Minot, ND

"STARBASE is a valuable part of our curriculum. The staff is wonderful and gracious in meeting our needs. This program needs to continue." – Charleston, WV

### WHAT STUDENTS SAY

"I just want to thank you for inviting us to STARBASE. We were just students at first. Then the second day we came in the door as scientists." – Sacramento, CA

"Eating lunch is my least favorite thing because we do not learn new things or have fun." – Corpus Christi, TX

"STARBASE is better than Disney world because here you learn stuff." - Maxwell, AL

## WHAT PARENTS SAY

"I feel like STARBASE was tailored to cover just what our kids needed, but with 800 kids a year, I guess it really means the Instructors are just that good!" – Gulfport, MS

"STARBASE has proven to be an enlightening experience and is nothing shy of fantastic opportunity for students to participate in." – Pittsburg, PA

"STARBASE is a very educational program. Very kid friendly and it captures the students' attention and imagination. It keeps the kids wanting to go back again and again." – Keaau, HI

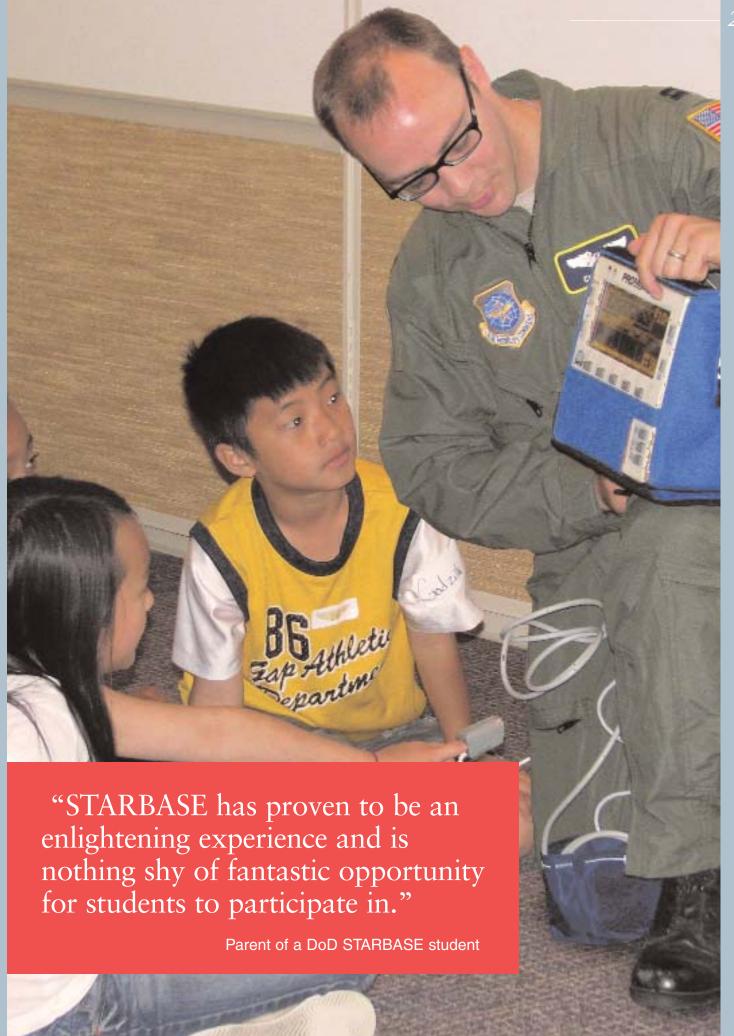
## WHAT MILITARY VOLUNTEERS SAY

"Exposure to military personnel gives the students a chance to see military service in a good light and inspires them to seek opportunities to serve their communities, their state and their nation."

"The program does very good work with those it services; however, it is a small program. To have a larger impact, the size would need to be expanded to serve more youth."

"Every day they come is a much more satisfying day at work for me."





## The Importance of Collaborations

Collaborating with community groups to enhance opportunities for student learning is an important goal for the DoD STARBASE program. Collaborations range from working with small community groups, to major universities and industries. The resources provided are as varied as the locations, but all serve to promote the DoD STARBASE vision of raising interest and improving the knowledge and skills of at-risk youth in science, technology, engineering and math.

#### STARBASE One – a Site that Dazzles and Educates

STARBASE One, located at Selfridge Air National Guard Base in Michigan, offers students several unique learning experiences through resources donated by community members, businesses and grants. "The STARBASE Inc. board members wanted to create a visually stimulating and unique environment for the students," said Barbara Koscak, the former academy director. A visit to STARBASE One confirms that they have been successful in achieving their goal!

Students attending STARBASE One conduct science experiments in the International Space Lab Module, a replica of the space shuttle Destiny, as if they were doing them in space. While at the academy, they climb inside a full-scale space shuttle nose where, surrounded

by a dazzling array of technology, they use flight simulators to "fly" a mission. This amazing experience requires 21 separate computers provided by the board members.

Meanwhile, another group of students is working diligently in the Mission Control Room modeled after Kennedy Space Center's Launch Control center and Johnson Space Center's Mission Control. Their task is to manage simulated Space missions from take-off to the end of the mission.

The Mars Exploration Laboratory takes the students a step further. On the rocky dry terrain of Mars, students program robots to navigate, autonomously, the surface. At a second set of stations, students use an ultrasonic sensor to map a 3-D model of the terrain, gathering and plotting data similar to mapping satellites.

Koscak says support of the program has come from organizations such as: the Officers Wives Clubs, General Dynamics, Chrysler, Siemens, Base Community Council and the Community Foundation for Southeastern Michigan. She said, "Our board members provided over \$1.5 million of support to enhance the program. The reason people have collaborated is that they believe in the program."



#### Ohio's Collaboration With Business Meets Mutual Goals

STARBASE Wright-Patterson in Springfield, Ohio found a powerful ally in Avetec (Advanced Virtual Engine Test Cell Inc.) to expand and enhance the DoD STARBASE experience for students. Avetec's support has benefited the community. Avetec began its collaboration with the program by supporting transportation for Springfield students to attend the academy. Their support rapidly mushroomed to include two part-time teachers and T-shirts for students in addition to the bus transportation.

The collaboration supports DoD's efforts with the development of, and the commitment to, the STEM workforce of the future. Springfield is a heavy-industry community and the DoD STARBASE program is helping the community move from its industrial base to one that could support a technology/engineering sector. The hope is to create a "pipeline" that generates an interest in STEM careers.

Cathy Balas, director of education for Avetec, was instrumental in developing the collaboration with Academy Director Kathleen Schweinfurth. Balas commented that she was impressed by "the STARBASE teachers who are enthusiastic professionals who keep the students at the center of the program." Schweinfurth intends to continue the collaboration that supports their mutual goals of involving students in STEM and preparing them for the jobs of tomorrow.



"The reason people have collaborated is that they believe in the program."

Barbara Koscak

# The 2009 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.

The past annual reports documented the growth, performance, operational effectiveness, and the responses of the key participants in the DoD STARBASE program. The FY 2009 assessment process obtained information via structured interviews, questionnaires, testing, attitude assessment, program visits and conversations with program participants. Twelve academies were visited and assessments were sent to all DoD STARBASE academies. Responses were received from 56 academies and 3,242 students. Interviews and/or questionnaires were received from 133 military volunteers, 1,497 teachers and all DoD STARBASE directors.

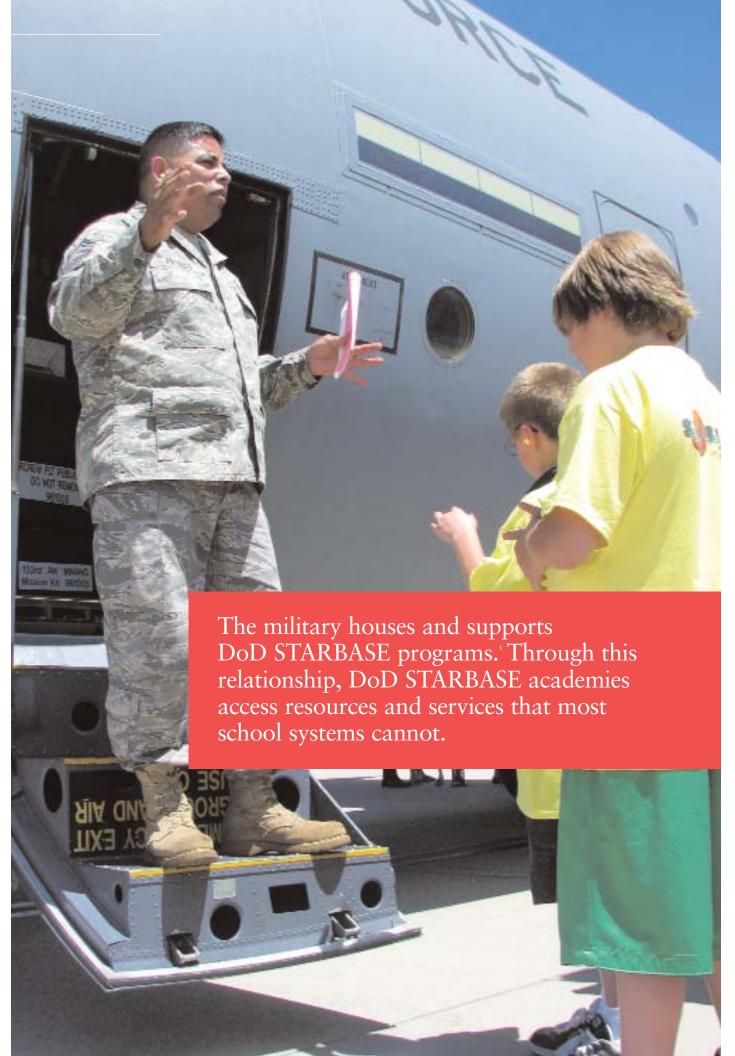
As in previous years, the 2009 DoD STARBASE assessment data indicates that students continue to have positive attitudes regarding DoD STARBASE and show a significant increase in knowledge and application of key DoD STARBASE concepts upon program completion. Classroom teachers also continue to have positive attitudes toward the effectiveness of the DoD STARBASE program.

#### HIGHLIGHTS

- Almost 80 percent of students completing the student assessment were in the fifth grade.
- The sample of students is approximately half girls and half boys.
- Students' attitudes are generally positive before DoD STARBASE, but there are still significant increases after DoD STARBASE. The average ratings on 17 of the attitude items increased significantly post-STARBASE.
- Students' performance on the knowledge assessment increased significantly with an average improvement of almost 5.5 points between pre- and post-administrations.
- There are a number of differences between boys and girls on the assessment. Boys were significantly more positive than the girls post-program assessment on four attitude items. Girls were significantly more positive than boys on 13 attitude items.
- Variations in attitudes and knowledge are reported on prior exposure to military, hearing about DoD STARBASE before attending, military branch, region and academy age.
- Overall, teachers have 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 curriculums. They also notice improvements in their students' attitudes about school and themselves.
- Teacher attitudes were significantly more positive on a number of items this year compared to previous years.

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 that most students would not ordinarily be exposed to. Since the academies are located at 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, but 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. Since DoD STARBASE is aligned with many of the required state and national science objectives, schools are relieved of the burden of meeting those objectives and may focus on other objectives.

#### 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.

## The Program Elements

A 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.

The program did not grow in terms of the number of academy locations this year, but the student population increased by 8.82 percent over the 2008 program year. This is an increase of 4,773 students to bring the student population to 58,879 students for the 2009 academic year. The DoD STARBASE program has now reached more than 545,000 students since 1993.

#### **GRADE LEVEL**

The DoD STARBASE program is authorized to serve students kindergarten through grade twelve. However, 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. Of the more than 58,000 students attending the program this year, all but one academy concentrated on the fifth grade. Some academies provided programs to grade levels contiguous to the fifth grade, but their concentration remains focused on the fifth grade. 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 by DoD STARBASE programs. The DoDI lists 20 to 35 students as acceptable class sizes. The average class size for the 2009 program year was 23.7 students, which is slightly larger than last year's 23 students. Four academies reported averages below 20 students. Two of these academies are Native American outreach programs.

#### **CLASS SCHEDULE**

The DoD STARBASE program conducted 2,569 classes this program year serving 1,254 schools across the country. 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 wider options and depth of content coverage. Some academies prefer the four-day program. More than 2,000 students attended the five-day program schedule or 92.3 percent of the student body.

Many (63.3 percent) of the academies offer additional programs beyond the four-day or five-day program offered during the academic year. Most of these additional programs are offered during the summer months when schools are closed. These summer programs include advanced programs for DoD STARBASE graduates and upper grade levels (6–12); teacher training in DoD STARBASE methods; dependents of military personnel; and robotic academies.

<sup>3</sup> Total number of students attending a four-day, five-day, summer or supplemental DoD STARBASE program



DoD STARBASE 2008-2009 School System Demographics<sup>4</sup> Exhibit 1

	2008	2009	N +/-	% +/-
Number of Students	54,106	58,879	+4,773	+8.82%
Number of Classes	2,327	2,569	+242	+9.42%
Number of Schools	973	1,254	+281	+22.4%

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

#### **PROGRAM SERVICE AREA**

The majority of the academies (71.2 percent) serve school districts within a 50-mile radius of their 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.

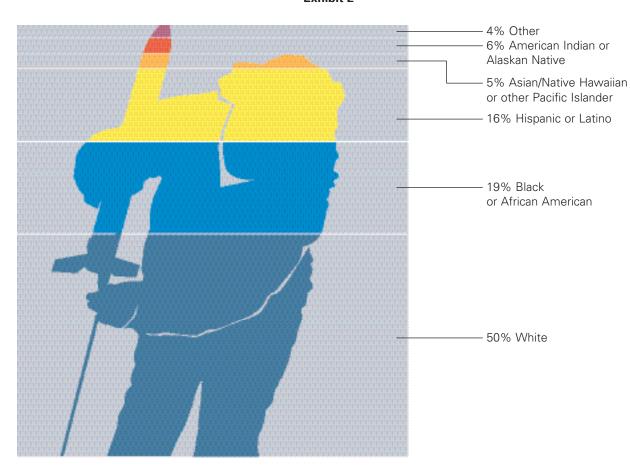
A few academies use teleconferencing and other outreach activities to reach more students. These initiatives do not meet DoDI requirements and are permissible only after the academy has met the required standards.

#### **RACIAL COMPOSITION**

The number of students served by academies has grown over the years and there have been shifts in the racial profile of the program. 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 over the past nine years (see Exhibit 3). The Hispanic or Latino student population demonstrates the greatest increase with a net gain of +5 percent and an overall total student profile of 16 percent. This rate of increase corresponds to the growth of Hispanics and Latinos in the overall demographics in the United States population. The school administrators in those affected areas predict that this trend will continue in their local areas.

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

#### Racial Composition of DoD STARBASE Student Population 2009 Exhibit 2



### Ethnic Composition of Students 2001 – 2009 Exhibit 3

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

#### **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 over whelming majority are well represented by both genders. On the whole, the balance is the same as in previous years with 49 percent female and 51 percent 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 have been the historical organizational relationship; however, there is a movement toward federal and state affiliations (see Exhibit 4) over the past several years. Federal and state affiliations often provide retirement and health benefits and carry higher employee costs, increasing an academy's personnel cost. Thus, this uses a greater portion of the academy's operating budget.

## 2009 Employment Affiliations Exhibit 4

Organizational Affiliation	2005	2006	2007	2008	2009
Federal Employee	52	54	60	61	66
State Employee	69	69	78	86	91
Contract Employee	110	110	105	120	135
Total Employees	231	233	243	267	292

#### **ACADEMY STAFFING MODEL**

The DoDI outlines the prototypical staffing model for the installation of an operating academy. It includes broad guidelines on pay scale for each of the positions. 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, and an office manager/administrative assistant. That is where most academies start at the point of program installation. Determination of the pay scale 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 due to budget management issues. On average, staff costs account for more than 80 percent 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 administrative position, hire retirees (who require fewer benefits and hire at lower grade and step levels).

The following chart (Exhibit 5) describes the academies' staffing profile for the 2009 fiscal year for full- and part-time personnel. Part-time employees increased to 25 percent in 2009 as compared to 20.97 percent in 2008, while full-time employees decrease in 2009 from 79.03 percent to 75.00 percent in 2008.

### 2009 Academy Staffing Profile Exhibit 5

Position	Number of Staff	Full-Time	Part-Time	
Director	54	53	1	
Deputy-Director	48	47	1	
Instructor	105	76	29	
Office Manager	62	39	23	
Other	23	4	19	
TOTAL	292	219	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. There are several academies that do not hire a deputy director, preferring to keep that position at the instructor level with the option to upgrade the position based on job performance. Overall, the objective for the academy director is to protect and increase instructional time.

#### STAFF DEVELOPMENT

With more than one hundred instructors in the DoD STARBASE program, the task of keeping them current in program content, methodologies and new curriculum applications is essential. The vast majority of the academies have staff training (82.5 percent) that is supplemented by professional development programs on computer assisted design applications, and curriculum upgrades. Regional and national professional association programs as well as

certification maintenance requirements are included in ongoing professional development. While almost all instructors are experienced in math, science and technological applications, the introduction of new instruments, curriculum upgrades and instructional modalities requires professional development.

Academies typically train new staff on the job. New instructors, prior to teaching, observe experienced instructors who also serve as mentors. After initial training, new While almost all instructors are experienced in math, science, and technological applications, the introduction of new instruments, curriculum upgrades and instructional modalities requires professional development.

instructors are observed by another instructor or the director 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 techniques and materials are available through the academy, the DoD STARBASE web site and other academies.

Continuing education and staff development are also available for the director. DoD STARBASE directors attend annual conferences and workshops sponsored by the OASD/RA. The Professional and Curriculum Development Committees of DoD STARBASE designed and developed several workshops for national and regional delivery on computer-assisted design and curriculum applications. A national directors' conference is planned for the winter of 2010.

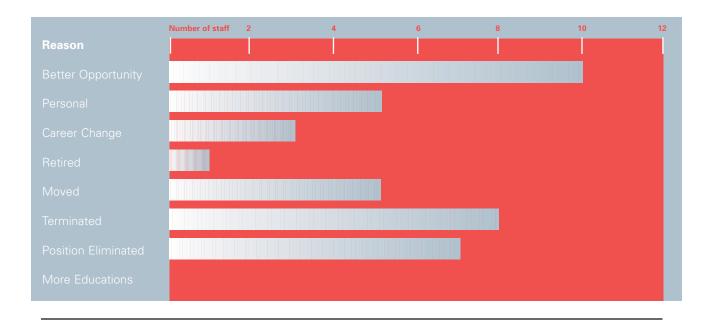
#### **STAFF DEPARTURES**

There were 34 staff changes out of the 292 staff positions in FY 2009. The majority of these were at the instructor and administrative assistant level. The overall turnover rate in FY 2009 is 12 percent which is lower than last year's 13 percent and the second lowest level turnover since fiscal year 2003 (see Exhibit 6). Of those staff members who left the program, 10 (or 29 percent) indicated that better opportunities were the prime reason for their decision to leave DoD STARBASE (see Exhibit 7). When DoD STARBASE instructors move to their participant school systems, they take with them the DoD STARBASE instructional approach and methodology. A few school systems have their instructors spend a year or more teaching in an academy and then move back to the school system. This migration into participant school systems reinforces the relationship between DoD STARBASE and the school system toward a commitment to a common objective for student welfare. Termination and elimination of the position were the next highest reasons for leaving the program.

### Staff Departure Rate FY 2003-2009 Exhibit 6

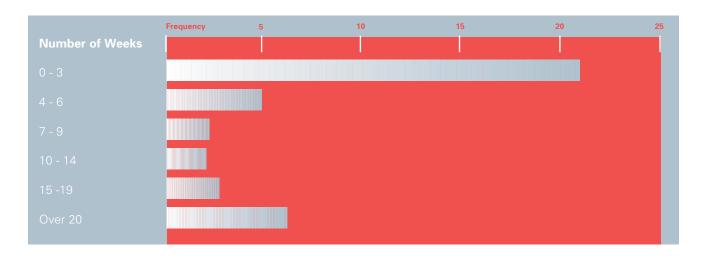
Fiscal Year	2003	2004	2005	2006	2007	2008	2009
Number of Staff	168	238	231	233	243	267	292
Number of Departures	10	30	39	36	37	34	34
Turnover Rate	6%	13%	17%	15%	15%	13%	12%

## Reasons for Staff Departure Exhibit 7



On the average it took 10.25 weeks to replace a staff member in FY 2008. This timeframe was reduced to 7.13 weeks in 2009. This is a dramatic reduction in the amount of time for job replacement from 2007 when the average time was 11.30 weeks. Extensive job posting requirements and setting procedures were noted as the key implements to guide job replacement.

## 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 also serve as board members, advisers, 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 a total of 8,256 volunteers who contributed a total of 101,166.50 hours to the program (see Exhibit 9). Military personnel accounted for 3,180 independent volunteers or an average of 53 volunteers per academy. Parents added 2,903 to the participant volunteer groups with a total of 42,727 hours and teachers added 37,633 hours with 1,759 participants. Other community and volunteer groups added 2,982 hours through 414 participants. There are a few training military bases with temporary assignment personnel that limit both time and availability of military personnel involvement. Even with these limitations, the program's ability to draw active involvement and commitment from these groups is impressive. Future studies will focus on activities that involve participation in after-program activities.

### 2009 Volunteer Participation Exhibit 9

	Volunteers	Hours	Average Participant Per Academy	Average Hours Per Academy
Military	3,180	17,824	53.00	297.07
Teachers	1,759	37,633	29.32	627.22
Parents	2,903	42,727	48.38	712.12
Other <sup>6</sup>	414	2,982	23.00	165.69

### **NOT-FOR-PROFIT ORGANIZATIONS**

Not-for-profit organizations are a popular resource for academy support.<sup>6</sup> Board members provide guidance, access to community resources, funds, and other activities to enhance individual academies. In FY 2009, the not-for-profit organizations supported the academies in obtaining \$800,000. Funding sources included state and federal funds, grants and donations. The amounts per academy varied from \$200 to \$175,000.

DoD takes no position regarding the establishment of 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 can be an outstanding resource that may enhance the students' experience at the DoD STARBASE program.

<sup>5</sup> Other volunteers include: STEM groups, firefighters, board members, AFRL, etc.

<sup>6</sup> 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.

# 2009 Use of Not-for-Profits by Military Component Exhibit 10

Military Component	# Academies	# Not-for-Profits	% Academies With Not-for-Profits
Air Force	5	3	60
Air Force Reserve	3	3	100
Marine Corps	1	1	100
National Guard	34	24	71
Navy	13	0	0
Total	56	31	55*

<sup>\*</sup>Percentage of all academies with not-for-profits.

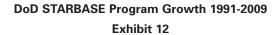
### Services Provided by Not-For-Profits 2005 - 2009 Exhibit 11

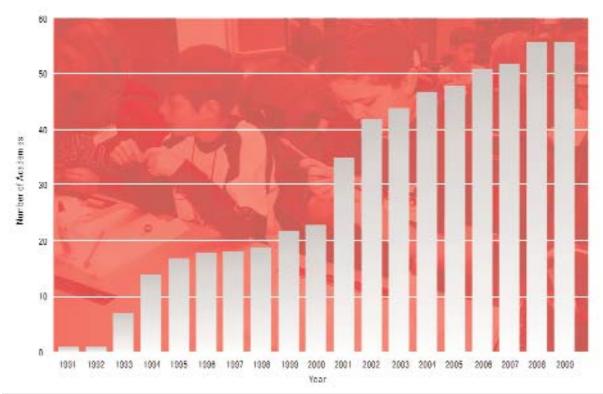
Service	2005	2006	2007	2008	2009
Marketing/Donations	80%	68%	72%	83%	80%
Grant Writing/Advice	57%	42%	38%	65%	57%
Program Planning Advice	47%	58%	52%	76%	57%
Budget Planning Advice	47%	58%	41%	52%	43%
DoD Compliance Advice	27%	52%	52%	45%	33%
Other	27%	13%	21%	10%	33%
Subcontractor Relations Advice	23%	23%	27%	31%	13%

## Program Growth

There are currently 56 DoD STARBASE academies. While the demand for adding programs is constant and persistent, the availability of funds limits growth. Academies respond to demand by adding supplemental programs during the summer months and during available non-scheduled hours. Some school districts are willing to fund additional instructors if space and oversight capability is available. The key in offering expanded capability is the combination of time, money and instructional capability. A number of these programs are considered supplemental since they do not meet all the DoDI requirements in the number of hours of instruction, military site application and total curriculum coverage. If any or all of these conditions exist, they are not included in the official demographics and program statistics/assessment data.

Once an academy is established and operating, there is often demand for the academy to serve more students. Some states respond to this demand by adding new academies managed by the same director. Seventeen states currently have two or more program sites. Balancing demand and growth with available resources is a constant challenge for each academy director.





## Program Oversight

The Office of the Assistant Secretary of Defense for Reserve Affairs (OASD/RA) oversees the program management of the DoD STARBASE program. Responsibilities 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 program 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 and each academy operated with a certain degree of independence in operational procedures, program delivery, classroom hours, location of site, teaching modalities and variation in core-curriculum emphasis. While there were common threads in the 13 core-curriculum topics, instructional theory, and basic delivery techniques, the academies were given flexibility in program and content emphasis, participant group involvement and external support within the community. A wide variance in program profiles and delivery developed as a consequence of these discretions.

In the fall of 1999, DoD STARBASE received congressional authorization and funding to make it a permanent DoD program under the OASD/RA (the Office of the Assistant Secretary of Defense for Reserve Affairs). It was at this point that OASD/RA distributed a set of common policies regulating DoD STARBASE under DoDI 1025.7. The policies developed by OASD/RA were derived from the best practices and lessons learned during the pilot stage of the program. The DoDI outlines the number of classroom hours, participant eligibility, target student population, military-base delivery, core curriculum coverage, fiscal and property audits, and basic instructional methodology. Each academy has access to a copy of the DoDI along with an operation manual. These policies are reviewed and enforced through compliance activities conducted out of the OASD office, which are described in the following section.

### **COMPLIANCE PROCEDURES**

For the most part, the DoD STARBASE academies are in full compliance with the DoDI basic requirements. A few academies struggle with maintaining the number of classes or class size, conducting timely audits, completing reporting requirements on schedule, and submitting and obtaining appropriate OASD/RA waivers for periodic exceptions to the DoDI. OASD/RA developed a compliance program to ensure that academies adhere to and meet DoDI requirements. DoD STARBASE academies may request exceptions to the DoDI and common practices. The request for a waiver must be submitted in written form to OASD/RA.

Academy activities are monitored by OASD/RA using techniques such as site visitations, audits, and director questionnaires. Compliance visitations are conducted on all academies at least once every three years. If non-compliance is recorded and corrective action is required, more frequent visitations may be scheduled for successful remedial action.

The visitation process involves a two- to four-day review of documents (including base auditor results), observation of program delivery, staff interviews, school administration, base commander interviews and other participant group interviews 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 report to the OASD/RA is made 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 also 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 the academy and its personnel on the DoDI requirements, common practices, national scheduling expectations, testing and reporting protocols, and administration expectations/documentation.



### **COMPLIANCE ADHERENCES**

The most frequent violation is the lack of reporting to OASD/RA when exceptions are needed. Corrective actions on these infractions are almost immediate and completed in successful fashion. Audits conducted by the military base or by the sponsoring agency are not always conducted within the required three-year period. Compliance and orientation visitations are not a substitute for the official sponsoring agent fiscal and equipment audits.

audits, and basic instructional methodology.

Four academies fell below the 20 student minimum requirement. Most of these academies work with rural schools which typically have smaller class sizes. Some academies use variations of the staffing model. Academy changes in the staffing model should be requested from the OASD/RA office. This information is important for a number of activities including professional development.

Visitations and academy self-reporting are effective compliance tools, as reflected in the status of near-full compliance by DoD STARBASE academies. Minor issues emerge on a periodic basis and most are corrected in the short-term. Over the past six years, materials have been developed to help academies organize and prepare for reports and visitations.

### 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 2009, the total program budget was \$18,733,000. OASD/RA allocated \$17,787,703.40 for academy operations. This amount is used for the analysis in this report. In total, 95 percent 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.

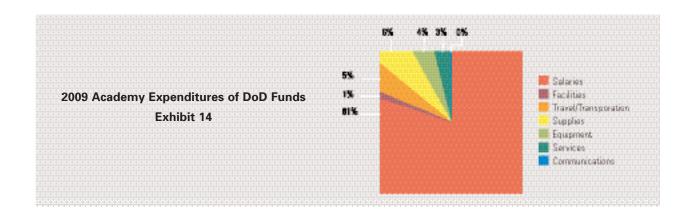
### Cost per Academy/Student 2004-2009 Exhibit 13

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	1,038	\$306.01

 $<sup>\</sup>hbox{$^*$ Averages include students attending a four-day, five-day, summer or supplemental program}.$ 

In 2009, the average cost per academy was \$317,637.56. This is a 2.12 percent increase from 2008 and a 16.58 percent increase from the average cost per academy in 2004. The average cost per student decreased slightly this year to \$306.01. This is a 6.59 percent decrease from the 2008 average cost per student. On the whole, the average costs have remained relatively stable over the past five years and remain around \$300 per pupil.

Operational costs differ between academies. Overall expenditures of DoD funds allocated to each program site are shown in the chart below. Staff costs, on the average, account for 81 percent of the academy budget. For some academies, particularly those operating under federal affiliate sponsorships and subject to standard payroll benefits and annual adjustments, the staffing cost goes well above the average. Attention to employee hiring at the high end of pay-grade levels is under examination.

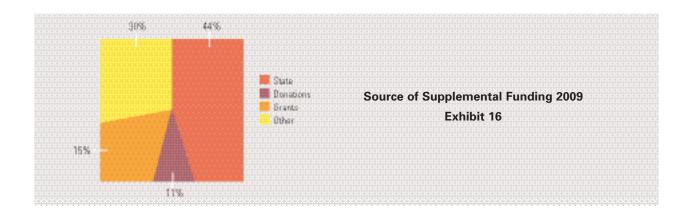


Several factors contribute to the cost variances including geographic location, outreach programs and salary scales used by the sponsoring affiliate. OASD/RA reviews each academy's budget and tries to maintain an equitable distribution of funds. The following exhibit compares the average cost per academy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

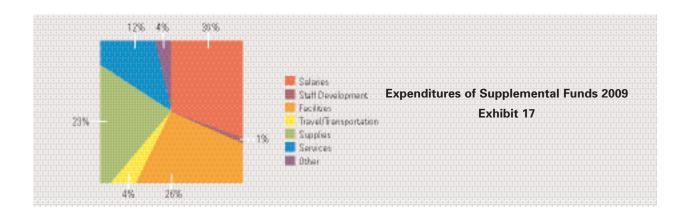
# 2009 Average Cost per Academy by Military Affiliation Exhibit 15

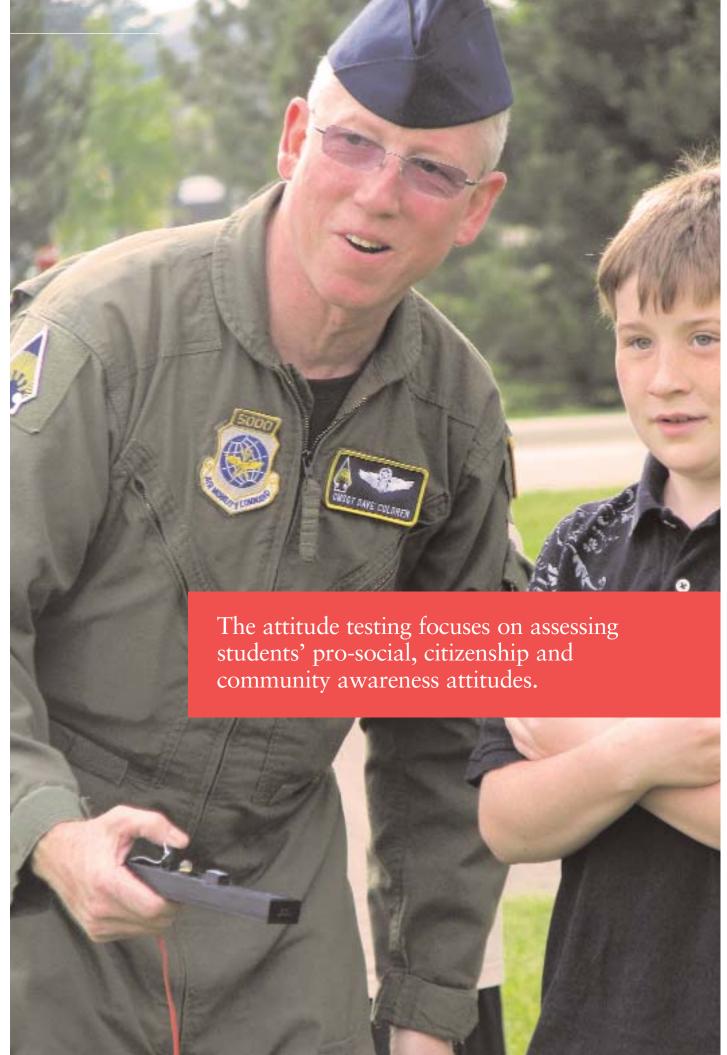
/lilitary Affiliate Number of Academies		Average Cost Per Academy
Air Force	5	\$303,000.00
Air Force Reserve	3	\$294,000.00
Marine Corps	1	\$327,000.00
National Guard	34	\$313,520.61
Navy	13	\$338,769.44

Twenty-one of the 56 academies secured supplemental funding from non-DoD sources. The total raised in supplemental funding was \$910,183.96. The top three funding sources included state allocations, grants and donations. The monies received by these sources were \$412,206, \$133,385, and \$98,116.58 respectively.



The largest supplemental funding expenditure was for staff salaries (\$260,951.19), followed by supplies (\$198,192.62) and facilities (\$175,438.00).





### 2009 Student Assessment

#### **OVERVIEW**

Standardized student and teacher testing have been part of the DoD STARBASE assessment process for the past nine years. Two tests are administered to the students. One test focuses on students' knowledge and skills related to the concepts and content presented during the STARBASE program. The other test focuses on social, citizenship, military and community awareness attitudes. The two tests are given simultaneously prior to the start of the program (pre-program) and then repeated at the program's conclusion (post-program). Each test is designed to track knowledge and attitudinal shifts that correlate with program participation.

The program constructs used in the assessment include:

- Knowledge, skills and problem solving presented in the DoD STARBASE core curriculum
- Attitudes toward math, science and technology
- Citizenship, community awareness and pro-social behavioral attitudes
- Attitudes toward the military, (i.e. personnel, environment and careers)
- Perception of DoD STARBASE experiences and effectiveness
- The program's impact on students and their future behavioral decisions

Each year the content of the assessment is reviewed and additions and/or changes to the items may be made. Only one item was changed from the 2008 attitudinal assessment for the 2009 attitudinal assessment: "I am enjoying coming to a military base" was moved to be administered post-program only.

There are three test items on the knowledge and attitudinal post-tests that are designed to assess rating scale reliability and student understanding of the scales used in each of the tests. Analysis of these items indicates that the students understand the differences in the rating scales and how to use them. These items are not used in the report analysis for student assessments.

There are several challenges in developing a single standardized test for the 56 operating academies, as each academy contains students with a wide range of skills and abilities based on cultural and geographical diversity. Students are entering the program with different foundation knowledge. For example, some students need to learn the concept of gravity and others will start the program with that knowledge. Several scientific and technological concepts are similarly affected. This diversity is compounded by at-risk and special needs students, available resources, funding and curriculum emphasis. To reduce the challenges of these variations, the test design focuses on the fifth grade, at the middle ability level.

The knowledge items for the current assessment were developed to cover a standard curriculum. Observation of instruction over the past several years reveals wide variations in the depth of coverage of the core curriculum. The curriculum committee's initiative to standardize the core curriculum is addressing issues of differences in delivery and curriculum emphasis. Standardization of the curriculum will help address one of the key challenges of administering a common assessment across academies. The curriculum will be partially implemented for the 2010 test administration.

All of the student instruments are designed to be easy-to-read for students with limited English reading. A Spanish version is available. Scan form technology processes the tests at Vangent Inc. Electronic administration of the student test is currently under consideration. Adoption of electronic administration would help in the reliability of the test administration process.

#### THE KNOWLEDGE AND SKILLS ASSESSMENT

At present there are 33 items on the knowledge and skills test. They include true/false, multiple choice, and matching words to images. These items assess 11 of the 13 curriculum areas. (Model Rocketry and Flight Simulation were not included.) When the new curriculum is fully installed, the number of core areas will be reduced but the depth of coverage will increase. For this analysis the 11 curriculum areas are:

- Properties and States of Matter
- Properties of Air
- Bernoulli's Principle
- Four Forces of Flight
- Aircraft Controls, Surfaces and Components
- Newton's Laws of Motion
- Space Exploration
- Development, Innovation and Use of Technology
- Avoiding Substance Abuse
- Goal-Setting
- Teamwork

There is at least one test item for each of the core areas with most areas having multiple items and sometimes combined in imbedded applications to another core area (e.g. math). Currently most items are simple knowledge constructs, although the number of items requiring problem solving and/or application has increased over the life of the test.



### THE ATTITUDINAL ASSESSMENT

The 2009 attitudinal test focused on assessing students' pro-social, citizenship and community awareness attitudes, as well as the students' skills and ability to be successful in personal challenges. Twenty-three attitudinal items are used to obtain attitudinal shifts from pre-program to post-program along with analysis of the following factors:

- Math, science and technology
- The military, military personnel, military careers and the military base
- Community awareness, citizenship and pro-social attitudes
- Program effectiveness
- Program impact

All attitudinal test items apply a seven-point scale from strongly agree to strongly disagree with graphic-enhancing rating directions (i.e. positive and negative faces). The 2009 assessment had one item changed. The item, "I am enjoying coming to a military base," was only used in the post-program attitudinal test. This reduced the preprogram test to 22 items.

The attitudinal assessment process mirrored the same methodology as the knowledge test with pre- and post-program test administration. In addition, the tests were conducted at the same time as the knowledge test. The analytical constructs were the same but included additional approaches as follows:

- Prior experience with the military
- Expanded gender comparisons
- Comparisons with teacher attitudes/program assessment
- Site location analysis
- Attitudinal clusters
- Trends over time and dramatic shifts

#### **INSTRUMENT REVIEW PROCESS**

All tests and data collection instruments are reviewed on an annual basis. This review includes visitations, compliance, operational and participant data collection instruments. Each test is reviewed for readability, reliability, and fit to program delivery. Changes in selected test items and word use have been made over the years. All new items are field tested and item-analyzed on their degree of difficulty before being adding to the test. Concerns about the number of items, length of administration, content coverage, rating scales and the analytic approach are always under question and review. Field staff and instructors provide input and suggestions for changes. Several have influenced the redesign of items and test administration.

The updated and standardized curriculum will be implemented in FY 2010. New items for pre-testing will be developed during the latter part of FY 2010. These items will focus on student performance on the new curriculum standards and objectives. The test will undergo some major revisions in the next two years after full implementation of the new standardized curriculum

The following considerations guide instrument modifications:

- Balancing test item difficulty with a range from easy to difficult items is essential to providing a pre-program baseline to measure shifts in post-program improvement
- Changes in the core curriculum and stated student performance expectations drive the requirement for changes and additions on test items while maintaining the degree of item difficulty and content coverage
- Continual review of curriculum standards, objectives and approved activities requires the rotation of new and/or
  past test items that have similar degrees of difficulty with a view toward balanced coverage of content with a
  small degree of difficulty
- · Replace knowledge-only test items with questions requiring conceptual and/or problem-solving applications

Using these guidelines, the new curriculum will drive several changes in the student testing program. Field testing and item analysis will be conducted over the next year. On line test administration will also be installed.

### DATA COLLECTION, ADMINISTRATION AND LOGISTICS

Test administration was conducted during the winter and early spring period of 2009. As in the past, data collection instruments were sent to each academy with instructions for test administration, sample size, matching requirements, and processing schedules. For this analysis, 56 DoD STARBASE academies submitted useable preand post-program matched data.

The national test is applied to a sample population from each academy. This reduces the intrusiveness of testing on academy scheduling and increases instructional time. The sample is representative of the total student population attending DoD STARBASE during the 2008-2009 academic year. Directions asked instructors to administer the student assessment on the first and last days of the program. In a few cases, classroom teachers administered the pre-program assessment prior to the students coming to the program. Test results were then sent to Vangent Inc. for processing. A total of 6,892 student tests were administered, which resulted in pre- and post-program data for 3,242 students with 94.1 percent matching efficiency. Only students with pre- and post-program assessment data were included in the analysis.

The overall pre-program test indicates that many students enter the program with a broad understanding of some of the concepts taught at DoD STARBASE. The importance of the pre-program assessment is that it provides a normative base from which students can be assessed. The post-program assessment can then demonstrate the degree to which changes in knowledge and attitude occur (i.e. gap) after the conclusion of their experience. As in previous years, the data demonstrates that knowledge and skills significantly increase from pre- to post-program test administration. This year's overall gap score of 5.5 follows this trend.

#### **ANALYTICAL APPROACH**

The analytical focus of the student performance assessment is to document the knowledge and skill shifts that correspond to program participation. Several analytical constructs were utilized to demonstrate which factors influenced shifts on the pre- and post-program comparisons. These included the following analytical considerations:

- age and grade
- gender differences
- test item difficulty
- program strengths
- academy maturity of operation
- high performers verses low performer differences
- difference and trends in performance over time
- identifying "drivers" of preferred student outcomes
- branch of service
- regional comparisons

### THE ANALYSIS AND ITS USE

This report is designed to provide insights into the strengths, needs, opportunities, and considerations to the consumers of the DoD STARBASE program that are varied in their interests and support of the program. For the practitioner it is a warehouse of insight into program delivery, curriculum impact, operational considerations and instructional modalities. Participant groups, such as school systems, see it as a vehicle for supplementing their own program operations and utilizing elements of its operation in their system. Sponsors require validation of their continued support through the documentation of its effectiveness. One section of this report provides insights for the users in the form of considerations that may be reviewed for future decision-making, and application.

The previous analytical constructs demonstrated a wide array of variance in student responses. With 56 academies in operation encompassing varying pools of student talent, experience, resources, length of experience in program operation, curriculum emphasis and a number of other factors, standardization of the core curriculum is a challenge. The use of this analysis is particularly relevant for program remediation, operational considerations, and program improvement.

### STUDENT DEMOGRAPHICS

Of the 3,242 students tested, the gender difference is almost equally split at 49.2 percent boys and 50.2 percent girls.7 Most of the students were fifth graders (79 percent) in the 10 to 11 year old age group (83.7 percent). All regions were wellrepresented in the sample and generally reflect the geographic distribution and location of DoD STARBASE sites. A high percentage of the students participated in the free/reduced lunch program at their school. A strong majority of the academies are sponsored by a participating National Guard Service Arm (60.8 percent). Over half of the students had met military people before coming to DoD STARBASE. Approximately 65 percent of students heard of DoD STARBASE or knew someone who had participated in DoD STARBASE before they attended. The basic demographics are presented in the following charts.



### Demographic Profile of Student Sample Exhibit 18

Item	Frequency	Percent
Age		
8-9	150	4.7
10	1,416	43.7
11	1,296	40.0
12	335	10.3
13	24	.7
Unknown/No answer	21	0.6
Grade		
3	5	.2
4	302	9.3
5	2,562	79.0
6	340	10.5
7	31	1.0
8	1	.0
Unknown/No answer	1	.0
Gender		
Воу	1,594	49.2
Girl	1,629	50.2
Unknown/No answer	19	.6
Region		
East	478	14.7
South East	806	24.9
Midwest	863	26.6
South	547	16.9
West	548	16.9
Sponsoring Branch		
Air Force	123	3.8
Air Force Reserve	230	7.1
Marines	133	4.1
National Guard	1,970	60.8
Navy	786	24.2

# Students' Prior Experience with Military and STARBASE Exhibit 19

Item	Response	Frequency	Percent
I have met military peopl	e before coming to STARBASE		
	No	1,354	41.8
	Yes	1,815	56.0
	Unknown/No answer	73	2.3
	E before I knew I was coming here		
	No	1,198	37.0
	Yes	1,968	60.7
	Unknown/No answer	76	2.3
I know someone that we	ent through STARBASE before me		
	No	1,055	32.5
	Yes	2,108	65.0
	Unknown/No answer	79	2.4

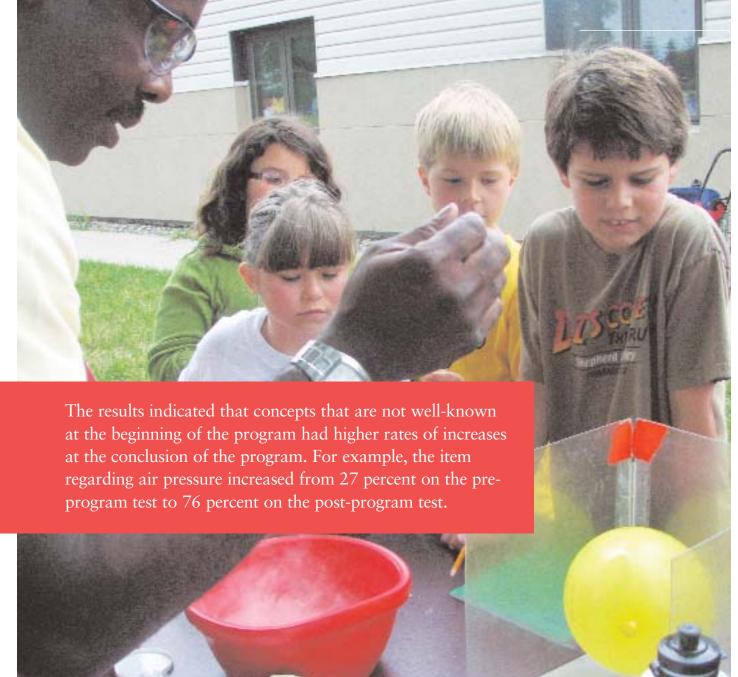
### STUDENT KNOWLEDGE AND SKILLS RESULTS

The scores for the FY 2009 knowledge and skills post-program test were significantly higher than the pre-program test. The gap mean score was +5.47. The pre-program test mean score (21.5) is the highest mean score over the past eight years. The post-program mean score, (26.62) is the highest over the history of the test. (See Exhibit 20.)

### Pre/Post Knowledge Test Mean Scores 2002 –2009 Exhibit 20

Scores	2002	2003	2004	2005	2006*	2007	2008	2009
Pre-Test Mean	18.44	19.12	19.09	17.81	18.02	19.05	20.62	21.15
Post-Test Mean	22.67	24.42	24.25	23.28	24.08	24.31	26.23	26.62
Mean Increases (Gap Score)	+4.23	+5.30	+5.16	+5.47	+6.06	+5.26	+5.61	+5.47

<sup>\*2006</sup> mean scores were adjusted because of higher item numbers.



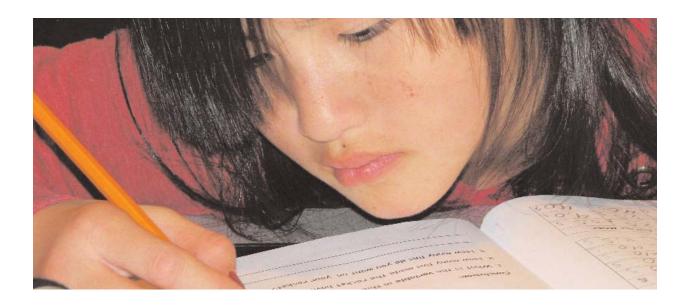
### PRE-PROGRAM KNOWLEDGE

The high pre-program mean score suggests that the students had a good basic understanding of several concepts taught at DoD STARBASE. This is particularly true on such concepts as team-building, goal-directed behaviors and alcohol and drug use (see Exhibit 21). The post-program test scores indicate the students' prior knowledge was not at the depth presented during the DoD STARBASE program experience. The pre-program test scores provide the baseline for determining whether program objectives are obtained through the program experience. The scores on testing constructs, related to core curriculum areas, demonstrated statistically significant increases in student understanding. The results also indicated that concepts that are not well-known at the beginning of the program had higher rates of increases at the conclusion of the program. For example, the item regarding air pressure increased from 27 percent on the pre-program test to 76 percent on the post-program test. This is a gap difference of 49 percent.

Shifts in performance are measured by comparing the pre-program test scores, or the baseline scores with post-program test scores. This creates a shift score at a + or – percentage change. The following chart (Exhibit 21) demonstrates positive shifts across all items.

### Pre/Post Knowledge Test Percent Correct and Shift Change Exhibit 21

Test Item	Pre-Test % Correct	Post-Test % Correct	+/-% Change
Which of the following is not a team?	97	98	+1
Negative actions may make it hard for you to reach your goals	92	95	+3
Which of the following can damage an individual's dreams?	91	95	+4
If you have something you want to do, or something you want to be in life, you should	91	95	+4
Wing	88	94	+6
Which planet has more than 30 moons and thousands of rings?	84	89	+5
Cockpit	83	97	+14
The Earth is the closest planet to the sun	82	89	+7
Drinking alcohol may decrease our bodies' ability to do easy things	80	89	+9
Force that pulls an aircraft down	80	89	+9
What is the largest surface of the 6 foot plate?	79	89	+10
Matter does not take up space	75	88	+13
If you launched two rockets, one with a mass of 50 grams and one with a mass of 100 grams, using the same amount of force, which rocket would go highest?	73	86	+13
Which planet do humans believe they could inhabit in the future?	73	87	+14
Forward movement produced by a propeller, jet, or rocket engine	72	85	+13
Elevator	70	82	+12
Rudder	67	80	+13
Slows the forward movement of an aircraft	65	84	+19
The development of something new or improvement of something already existing is	64	81	+17
Produced by air flow over the wings and the angle of the wing into the wind	63	82	+19
How thick is the earth's atmosphere?	54	78	+24
If you are landing an airplane in a city that is 5,000 feet above sea level and your altimeter reads 5,500 feet, how many feet are you above the groun	nd? 53	72	+19
In what state of matter do molecules have the least amount of energy or motion?	53	73	+20
Which of the following best shows the alignment of horizontal objects?	52	68	+16
What scientific law is operating that makes it important to wear a seat belt?	52	76	+24
Technology usually decreases in cost after many units are sold.	51	73	+22
To move an airplane's nose to the left, you would move the	43	60	+17
What force causes a rocket to launch?	43	59	+16
If the diameter of the circle shown below is 10 feet, what is the radius?	38	67	+29
What is the smallest particle of water?	32	61	+29
One reason an airplane is able to gain lift is because the air moving across the top of the wing.	29	59	+30
The air is composed mostly of what element?	28	68	+40
Air presses down 14.7 pounds on every inch of our bodies. Why don't we feel this pressure?	27	76	+49



The three engineering design and manufacturing items that were introduced with the testing program last year had significantly higher percentile increases of +10, +16 and +29 between the pre-program and post-program test. Overall, the lower the pre-program test score, the higher the post-program test score.

### POST-PROGRAM ANALYSIS OF KNOWLEDGE & SKILLS TEST 2003-2009

The mean post-program test score for 2009 on the knowledge and skills test was 26. On average, the students achieved post-program test scores above 80.7 percent. Last year's post-program mean score was 26.33 for an average student score of 79.5 percent. This year the pre-program test mean score was the highest in program history at 21.15. Overall, this year students demonstrated very high performance from entry to completion of their program.

## Mean Scores on Post-Program Knowledge Test 2003-2009 Exhibit 22

Year	2003	2004	2005	2006	2007	2008	2009
Post-Program Mean Score	24.42	24.25	23.28	24.08*	24.31	26.33	26.62

<sup>\*2006</sup> mean scores were adjusted because of higher item numbers.

The following chart compares 2008 to 2009 on pre- and post-program means, average student scores and gap scores.

### Mean Scores on Pre-Post Program Knowledge and Skills Test 2008-2009 Exhibit 23

Program Year	Pre-Test	Post-Test	Average	Gap Score
	Mean	Mean	Student %	
2008	20.62	26.23	79.5	+5.61
2009	21.15	26.62	80.7	+5.47

### **GENDER DIFFERENCES ON KNOWLEDGE TEST**

Girls improved on the knowledge and skills test over the past six years as shown by the differences in gap scores from 2004 to 2009. The girls had greater performance increases in the pre- and post-program tests than the boys. However, boys have higher mean scores on both the knowledge and attitude pre- and post-program tests.

## Pre- and Post-Program Knowledge Test 2009 Mean Scores by Gender Exhibit 24

Sample Size	Pre-Test Mean Score	Post-Test Mean Score	Individual Gap Difference
Boys (N= 1486)	21.77	26.96	+5.19
Girls (N= 1489)	20.56	26.30	+5.74

The girls' gap score was +.55 higher than the boys gap score. Over the last six years, the girls' gap scores are consistently higher than the boys (see Exhibit 25). The 2009 boys' score dropped .18 points from their 2008 score.

# Gender Gap Score Difference (2004-2009) Knowledge Test Scores Exhibit 25

Gender	2004	2005	2006	2007	2008	2009
Boys	+5.08	+5.33	+5.6*	+5.09	+5.37	+5.19
Girls	+5.25	+5.64	+6.1*	+5.81	+5.80	+5.74
Difference	.17	.31	.49	.72	+.43	+.55

<sup>\*2006</sup> mean scores were adjusted because of higher item numbers.



#### LENGTH OF ACADEMY OPERATION AND KNOWLEDGE TEST PERFORMANCE

To assess differences in student performance that may correspond to the length of time that an academy has been in operation, three groups of academies were considered: mature, established, and new academies. The "mature" group consists of academies that were installed between 1991 and 1996; the "established" groups are those academies that began operations between 1998 and 2001; and the "new" group of academies began operating between 2002 and the present. The number of students in each category was 1,257, 868, and 1,092 respectively. Significant differences occurred across the maturity spectrum with the new group of academies' students earning higher gap and post-program test scores. Last year's analysis demonstrated the same results (see Exhibits 26 and 27).

## Knowledge Test Mean Scores by Length of Academy Operation Exhibit 26

Length of Operation	Sample Size Test Score	Pre-Program Test Score	Post-Program	Gap Score
Mature academies	1,257	20.97	25.79	+4.82
Established academies	868	21.24	26.69	+5.45
New academies	1,092	21.27	27.47	+6.20

<sup>\*</sup>Post- program test means are significantly different across academy age groups.

In 2009, the gap and post-program test scores dropped for the older academies while the newer academies scores increase. A possible explanation is that newer academies are more focused on strict adherence to core-curriculum applications while the mature academies display more enhancements in program delivery. However, this observation requires further investigation. Observational analysis during academy visitations may provide insight into these differences that are too wide to ignore.

### Comparison of Academy Operations and Knowledge Test Mean Scores for 2008 and 2009 Exhibit 26

Length of Operation	20	800	2009		
	Post-Program Test Score	Gap Score	Post-Program Test Score	Gap Score	
Mature Academies	25.56	+4.92	25.79	+4.82	
Established Academies	26.40	+5.91	26.69	+5.45	
New Academies	26.66	+5.99	27.47	+6.20	

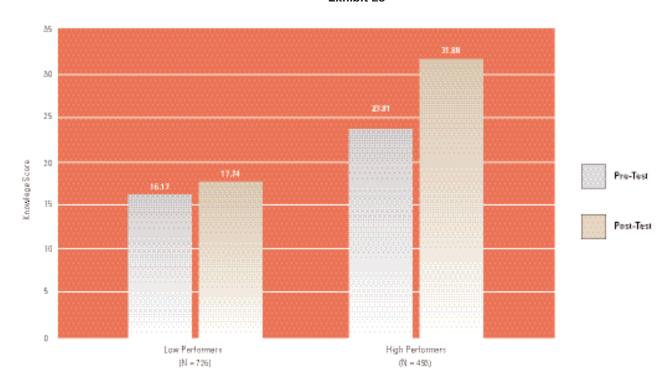
#### HIGH VERSUS LOW PERFORMERS ON KNOWLEDGE TEST

To differentiate between low performers and high performers, the construct used was one standard deviation plus or minus the mean. Students with post-program test scores less than or equal to 21 were designated as low performers and students with post-program test scores greater than or equal to 31 were considered high performers. Using this dichotomy, approximately 15 percent of the students were low performers and approximately 22 percent were high performers. Low performers scored low on both the pre- and post-program test. Their gap score was +1.57. The high performer group had a gap score of +8.07.

Gender differences were also present. Boys accounted for a higher proportion of the high performers at 56 percent while girls accounted for 44 percent of the high performers. In turn, the low performers included 57.5 percent of the girls and 42.5 percent of the boys. This observation is interesting in that girls overall gap scores were significantly higher for the total population. These contradictory results suggest that further investigation is needed.

The results of the high and low performer construct suggest that the DoD STARBASE program has a profound effect on the high-performer group as reflected in their gap score of 8.07. Remedial instruction may be considered with the lower-performing group.

### High Versus Low Performers on Knowledge Test Exhibit 28



#### STUDENT ATTITUDINAL RESULTS

### PRE-PROGRAM ATTITUDINAL RATINGS

There were 3,216 students who responded to both the pre-program and post-program attitudinal tests. The sample is representative of the student DoD STARBASE community and is comparable to the two previous program years. The pre-program responses were positive as the students came into the program with optimistic attitudes toward trying new things and about their future. The pre-program mean score of 5.8, on a seven-point rating scale, indicates that students have high expectations of the program and its potential impact on them. Of the 21 items assessed eight items, or 38 percent, of the mean scores were above the 6.0 and the remainder are all above 5.0. Upon post-program testing, the ratings increased significantly with 13 items above 6.0 and a post-program mean score above 6. The ratings this year were comparable to 2008.

### POST-PROGRAM ATTITUDINAL RATINGS

As previously noted, students have a more favorable attitude about DoD STARBASE, the military, experiencing new things, and their futures after their DoD STARBASE experience. Sixteen items demonstrate significant improvements and all demonstrated some improvement. The post-program test has four additional items that refer to post-program activities and therefore, did not have pre-program scores. The first eight items with the highest ratings are essentially the same as in previous years:

### Highest Ranked Post-Program Attitudes (2006-2008) Exhibit 29

	20	006	20	07	20	08	20	009
Item	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean
STARBASE instructors are kind and helpful.	1	6.61	2	6.51	1	6.61	1	6.57
You can learn a lot by trying things.	3/4	6.51	3	6.47	4	6.51	2	6.51
I think I can graduate from high school.	2	6.53	1	6.54	3	6.54	3	6.50
At STARBASE, I learned a lot of things that I can use. (post only)	3/4	6.51	4	6.46	2	6.55	4	6.49
I think about what I want to be when I grow up.	5	6.36	5	6.39	5	6.36	5	5.36
I am enjoying coming to a military base. (post only)	6	6.28	8/9	6.23	6	6.31	6	6.28
Military people do lots of different things.	7	6.26	8/9	6.23	7	6.28	7	6.24
I like to make new things.	8	6.24	7	6.25	8	6.27	8	6.20

All of the ratings over the past four years are exceptionally high when you consider that they are accomplished on a seven-point scale. The shifts in ranking this year are relatively minor, but overall are relatively stable and rated comparably.

### SHIFTS IN STUDENTS' ATTITUDES

When there are high ratings and high mean scores on the pre-program test, it provides little room for dramatic increases on the post-program test. One set of techniques is to rank and then display relative shifts in scores on each level. Using this method, all of the test items displayed a positive shift. The shifts this year are similar to previous years and range from +.40 to +.13 for the top 10 ranked items (see Exhibit 30).

The Top 10 Ranking of Attitudinal Shifts from Pre-Program to Post-Program 2009

Exhibit 30

Shift Ranking	Attitudinal Item	% Shift
1	Military bases are fun.	+.40
2	I can make my dreams come true.	+.38
3	STARBASE instructors are kind and helpful.	+.30
4	I am good at science.	+.21
5	The military is a good place to work.	+.19
6	Learning is easy for me.	+.17
6	Learning can be fun.	+.17
7	I set goals for myself	+.16
8	I am good at math.	+.14
9	I like science.	+.13
10	You can accomplish a lot in a group.	+.13
10	Military people do lots of different things.	+.13

#### SHIFTS IN MILITARY RELATED ATTITUDES

As shown in the previous chart, the DoD STARBASE program has a positive effect on the perceptions and attitudes of the students. The fourth military-related item, a post-program only item, also had an overall high rating. Student experiences and interactions with military personnel in their work environments have a positive and reinforcing effect upon the students. The same results were obtained in prior studies and are characterized with the same shift increases (see Exhibit 31).

### Attitudinal Shifts on Military-Related Items 2006-2009 Exhibit 31

	20	006	20	07	20	800	20	009
Military Attitudinal Item	Shift	Rank	Shift	Rank	Shift	Rank	Shift	Rank
Military bases are fun.	+.43	2	+.46	1	+.41	1	+.40	1
I am enjoying coming to a military base.	+.31	4	+.37	2	+.34	2	Post Only	6
The military base is a good place to work.	+.24	6	+.32	5	+.18	6/7/8/9	+.19	5
Military people do lots of different things.	+20	8	+21	9	+.15	12	+.13	10

## PRE- AND POST-PROGRAM RANKING AND MEAN SCORES OF STUDENTS' ATTITUDINAL RESPONSES

The following chart displays in greater detail the high attitudinal ratings and mean scores for each test item and the changes in relative terms in ranking and increases at the conclusion of the program.

# Pre- and Post-Program Ranking and Mean Scores of Student Attitudinal Responses Exhibit 32

Pre-Program Attitudinal Item N = 3,216		Post-Program N = 3,216		
Rank	Mean		Rank	Mean
4	6.27	STARBASE instructors are kind and helpful.	1	6.57
1	6.44	You can learn a lot by trying things.	2	6.51
2	6.42	I think I can graduate from high school.	3	6.5
Post Only	Post Only	At STARBASE, I learned a lot of things that I can use.	4	6.49
3	6.32	I think about what I want to be when I grow up.	5	6.36
Post Only	Post Only	I am enjoying coming to a military base.	6	6.28
7	6.11	Military people do lots of different things.	7	6.24
6	6.15	I like to make new things.	8	6.20
5	6.18	You can have fun working in a group.	9	6.18
12	5.77	I can make my dreams come true.	10	6.15
Post Only	Post Only	I would tell my friends to come to STARBASE.	11	6.12
8	6.02	I like to think of new ways to use things.	12	6.02
10	5.83	Learning can be fun.	13	6.00
9	5.86	You can accomplish a lot in a group.	14	5.99
11	5.91	I set goals for myself.	15	5.98
14	5.66	I like science.	16	5.79
13	5.73	I am good at following directions.	17	5.76
15	5.60	I make good decisions.	18	5.73
16	3.34	Learning is easy for me.	19	5.51
17	5.29	I am good at science.	20	5.50
20	5.09	Military bases are fun.	21	5.49
19	5.21	I am good at math.	22	5.35
18	5.26	I like math.	23	5.29
21	5.01	The military is a good place to work.	24	5.2
22	Post Only	*I do not think STARBASE will help me do better in school.	25	1.86
22	Post Only	*STARBASE is boring.	26	1.62

<sup>\*</sup>These items are phrased in an unfavorable manner. If reverse scoring procedures were applied, their overall rankings would be considerably improved. In that case, the next to last item would be ranked ninth for the preprogram survey and 11th for the post-program survey. The last item would be ranked fifth for the post-program survey. Subsequent items would also be displaced accordingly by either one or two ranks.

#### MATH AND SCIENCE ATTITUDINAL RATINGS

Math and science scores demonstrate improvement at the post-program assessment. By far, the item "being good at science" was the highest of the four math and science items. This item was fourth overall in the shift ranking. Three of the four math and science items also displayed high rankings. Liking math remained low in the shift ranking as it has in the past.

# 2009 Math and Science Attitudinal Mean Scores Exhibit 33

Math and Science Attitudinal Item	Pre-Program Mean	Post-Program Mean	Gap Score
l like science.	5.66	5.79	+.13
I am good at science.	5.29	5.50	+.21
I am good at math.	5.21	5.35	+.14
l like math.	5.26	5.29	+.03

There have been some minor fluctuations in the post-program mean scores over the past five years, but they are minor. In most cases, they demonstrate some constancy across the years. "Liking math" is the one item that demonstrates change over time with a range of 5.16 to 5.39 (i.e. a .29 difference).

### Post-Program Attitudinal Mean Scores (2005-2009) Exhibit 34

Math and Science Attitudinal Item	2005	2006	2007	2008	2009
l like science.	5.78	5.72	5.65	5.76	5.76
I am good at science.	5.50	5.53	5.42	5.50	5.50
I am good at math.	5.35	5.28	5.36	5.36	5.36
I like math.	5.39	5.25	5.16	5.32	5.32

The above chart points out that students like science more than they think they are good at science; while the reverse is true in math, where students generally believe they are better in math but like it less. Math's popularity is rated lower than science by this student group.

### **GENDER COMPARISONS AND ATTITUDINAL DIFFERENCES**

Of all the analytical constructs used in the attitudinal assessment, gender is the variable that produces the most significant and pronounced differences. Girls produced higher pre- and post-program attitudinal mean scores than the boys. Girls entered the program with a 5.83 mean while the boys' pre-program mean was 5.77. At the conclusion of the program the girls' mean was 6.04 while the boys' mean was 5.97. However, it should be noted that the gap scores for each were substantial at .20 and .23 respectively. Girls responded more positively on 13 items while the boys were more positive on four items. The boys gave higher responses on math, science, and the military. The girls rated pro-social, interpersonal, the educational process and inspirational items more highly.

# Gender Differences on Pre- and Post-Program Attitudes Exhibit 35

Gender	Sample Size	Pre-Program Mean	Post-Program Mean	Performance Gap Score
Boys	1,451	5.77	5.97	+.20
Girls	1,488	5.83	6.04	+.23

The greatest increase in gap scores for the boys was "I can make my dreams come true" at +.46. The girls largest gap score was +.48 for "military bases are fun," which was the boy's second highest item at +.36. There is agreement on the top-ranked items by both genders but, in different order. All the top 10 ranked attitudinal items were rated above the six-point level on the seven point scale (see Exhibit 36). Only on the items, "I can make my dreams come true," "military people do lots of different things," and "you can have fun working in a group" did the boys have a higher mean rating score.

## Gender Gap Score Difference (2004-2009) Knowledge Test Scores Exhibit 36

Attitudinal Item	Girls′ Rank	Girls′ Mean	Boys' Rank	Boys' Mean	*Gap Difference
STARBASE instructors are kind and helpful.	1	6.64	1	6.51	<+.13
I think I can graduate from high school.	2	6.58	4	6.43	<+.15
You can learn a lot by trying things.	3	6.56	3	6.47	<+.09
At STARBASE, I learned a lot of things that I can u	use. 4	6.50	2	6.48	<+.02
I think about what I want to be when I grow up.	5	6.47	7	6.26	<+.21
I am enjoying coming to a military base.	6	6.29	10	6.10	<+.19
I like to make new things.	7/8/9	6.22	9	6.17	>+.05
I can make my dreams come true.	7/8/9	6.22	6	6.28	<+.06
I would tell my friends to come to STARBASE.	7/8/9	6.22	13	6.02	<+.2
Military people do lots of different things.	10	6.18	5	6.30	>+.12
You can have fun working in a group.	10	6.18	8	6.19	>+.01

<sup>\* &</sup>lt; gap difference favoring girls

As the data suggests, the differences on gender were significant across many of the attitudinal items, but there are areas of agreement both before and after the DoD STARBASE experience on five attitudinal items:

- I like math.
- You can have fun working in a group.
- I like to think of new ways to use things.
- At STARBASE, I learned a lot of things I can use. (post only)
- I am enjoying coming to a military base. (post only)

<sup>&</sup>gt; gap difference favoring boys

Two of the above items were in last year's area of agreement: "I like math" and "I like to think of new ways to use things"; while "I am good at science" and "Military people do lots of different things" dropped out of the gender agreement. The remaining two items are new and are post-program only attitudinal test items. For the most part, boys had higher rankings on military-related items and math and science items; however, the girls increased their ratings in those areas over the years. With such broad-based differences in attitudinal perceptions about themselves, the program, the participants, the experiences, etc., the value is in how these differences and areas of agreement are taken into account in the learning experience and what challenges can be addressed for the practitioner and the program designers.

#### PRIOR EXPERIENCE WITH THE MILITARY

Students that had prior experiences with the military displayed several attitudinal differences from students that had no prior experiences with the military. For the most part the students with prior military contact had positive attitudes and higher scores on the knowledge test. When combined with gender differences, both girls and boys who had prior military contact had more positive attitudinal responses and higher scores in the knowledge test. (See Exhibit 37.)

## Prior Experience with the Military Attitudinal Differences by Gender Exhibit 37

		r Experience Military	Prior Ex With I	Difference Between	
	Pre-Program Mean	Post-Program Mean	Pre-Program Mean	Post-Program Mean	Post- Program Means
Girls	5.73	5.95	5.89	6.10	+.15
Boys	5.54	5.83	5.87	6.04	+.21

## Knowledge Test Differences by Gender and Prior Experience with the Military Exhibit 38

		r Experience Military	Prior Ex With I	Difference Between	
	Pre-Program Mean	Post-Program Mean	Pre-Program Mean	Post-Program Mean	Post- Program Means
Girls	19.80	25.53	21.21	26.96	+1.43
Boys	20.55	25.88	22.50	27.61	+1.73

Students who had prior experience with the military comprised 57.2 percent of the total sample of students in this analysis. Their more positive attitudes, both before and after program involvement, included attitudes about the military, their personal abilities in math science, learning, and dreams about the future.

The results suggest that the degree of exposure and experiences with the military, including the base and the military culture, has a positive impact on the students and their attitudes toward the military. Data in this analysis suggests that conducting the program on base is an important element in improving attitudes about the military. If future testing included data on the amount of military contact by the student during the program, an additional analysis could be done that might provide a deeper understanding of these attitudinal shifts.

#### STUDENTS' PRIOR KNOWLEDGE OF DOD STARBASE

Most of the students (62 percent) who attended DoD STARBASE had prior knowledge of the program. This suggests that teachers, school administrators and students who had previously attended DoD STARBASE talked about the program. The majority of students heard about the program prior to attending DoD STARBASE, and they expressed more positive attitudes than those who had no knowledge. However, at the end of the program the attitudinal rankings and ratings were generally similar. Therefore, students come to the program in a positive mode and leave with an improved attitude regardless of their prior knowledge about DoD STARBASE.

### AGE AND GRADE IMPACT ON ATTITUDES

There are minor differences between age and grade. Over the years, the most consistent factor is that older students are less positive in their attitudinal responses than the younger students. At this target grade level (fifth grade) a slide in attitudes toward the math/science/technology areas occurs at the national level. Assessing attitudes of those who go through DoD STARBASE and those who do not could be addressed in an additional study.

#### **ACADEMY LOCATION AND STUDENT ATTITUDES**

When the academy locations are aggregated into five regions (South, Southeast, Midwest, Southwest, and West) 16 of the 24 items are statistically different. The southern regions have the greatest number of positive item responses and the west has the highest mean scores. Differences on geographic location provided some variation but the differences are, by far, academy and location-specific.

An academy's location provides more variations in attitudes, testing results, operational considerations and organizational behaviors than any other analytical construct. One explanation is that the experiences of students, teachers, academy staff, and the local participants relates to the specific program's resources and sponsor support. The range of knowledge scores across the academies is pronounced and the gap scores go as high as 11.17. As for the attitudinal items all but one item "you can learn a lot by trying things" was significantly different across academy sites.

Each academy seems to place a different emphasis on various parts of the core curriculum. While all academies display positive results in attitudinal and knowledge testing; there are variables in specific content areas. This suggests that academies should examine their own scores and compare them with the normative data to gain a perspective on how their academy matches up on program emphasis. This issue is something the curriculum committee is addressing in its new initiatives on curriculum standardization.



#### **MILITARY SERVICE BRANCHES AND ATTITUDES**

There is general agreement on the top five attitudinal items when the academies are aggregated into military service arm branches; however, the ranking of these items varies in order. The Air Force Reserves and the Marines rank the item "STARBASE instructors are kind and helpful" at sixth and seventh respectfully. The Air Force Reserves elevates the item "I am enjoying coming to a military base" to fourth and the Marines place the item "Military people do different things" at fourth. Students in their affiliate service arm sponsor differ in their views about the military.

## Ranking of Student Post-Program Attitudinal Responses by Service Arm Branch Exhibit 39

Item	Air Force	Air Force Reserve	Marines	National Guard	Navy
At STARBASE, I learned a lot of things I can use.	1	2	3	4	2
You can learn a lot by trying thing	s. 2	1	1	3	4
I think I can graduate from high school.	3	3	5	2	3
STARBASE instructors are kind and helpful.	4	6	7	1	1
I think about what I want to be when I grow up.	5	5	2	5	6
Military people do lots of different things. (Marines)	-	-	4	-	-
I am enjoying coming to a military base. (Air Force Reserve	es)	4	-	-	-

### **DIFFERENCES IN ATTITUDES BY ACADEMY AGE**

In the attitudinal survey, there were more similarities than differences when comparing academies and their years in operation (mature (1989-1996), established (1998-2001), and the new academies (2002-2008)). There was no significant trend between the academy age groups. The correlation between attitudes and performance test results do not seem linked. The differences could be attributable to instructional delivery and/or demographics.

### POST-PROGRAM STUDENT ATTITUDINAL ASSESSMENT (2004-2009)

As previously reported in the pre-program assessment on student attitudes, the students arrive with high expectations and positive attitudes about trying new things, their future, and program experiences. At the conclusion of the program, the results indicate more favorable attitudes about DoD STARBASE, the military, their future and trying new things. Students rated almost all items positively and scores for each item increased on the post-program test. When compared to scores from previous years, the ratings and the gap differences have not shifted drastically. Sixteen of the 22 items displayed significant increases over the pre-program assessment this year. There were four items that were administered in the post-program assessment only. See Exhibit 40.

## 2004-2009 Attitudinal Pre- and Post-Program Mean Scores Exhibit 40

Composite Attitudinal Mean Scores	2004	2005	2006	2007	2008	2009
Pre-Test Mean Score	5.78	5.83	5.81	5.75	5.84	5.80
Post-Test Mean Score	5.97	6.06	6.05	6.00	6.06	6.00
Score Shift +/-	+.19	+.23	+.24	+.25	+.22	+.20

### Post-Program Attitudes 2004-2009 Exhibit 41

Post-Program Attitudes	2004 Mean	2005 Mean	2006 Mean	2007 Mean	2008 Mean	2009 Mean
I like math.	5.33	5.39	5.25	5.16	5.32	5.29
I am good at math.	5.26	5.35	5.28	5.36	5.36	5.35
I like science.	5.67	5.78	5.72	5.65	5.76	5.79
I am good at science.	5.43	5.50	5.53	5.42	5.50	5.50
I am good at following directions.	5.70	5.79	5.82	5.74	5.78	5.76
Learning is easy for me.	5.55	5.54	5.48	5.49	5.48	5.51
Learning can be fun.	6.15	6.12	6.03	5.93	6.02	6.00
You can learn a lot by trying things out.	6.51	6.57	6.51	6.47	6.51	6.51
I think I can graduate from High School.	6.47	6.54	6.53	6.54	6.54	6.50
Military people do lots of different things.	6.29	6.30	6.26	6.23	6.28	6.24
I set goals for myself.	6.07	6.07	6.14	6.09	6.05	5.98
I make good decisions.	5.73	5.79	5.86	5.72	5.83	5.73
STARBASE instructors are kind and helpful.	6.54	6.54	6.61	6.51	6.61	6.57
I can make my dreams come true.	6.17	6.23	6.21	6.28	6.23	6.15
You can accomplish a lot in a group.	6.29	6.10	6.11	5.98	6.05	5.99
You can have fun working in a group.	6.34	6.24	6.20	6.11	6.19	6.18
I like to make new things.	6.29	6.36	6.24	6.25	6.27	6.20
I think about what I want to be when I grow up.	6.38	6.37	6.36	6.39	6.36	6.36
The military is a good place to work.	5.40	5.40	5.38	5.25	5.34	5.20
I am enjoying coming to a military base. (post only)	6.35	6.30	6.28	6.23	6.31	6.28
Military bases are fun.	6.01	5.93	5.94	5.84	5.93	5.49
I do not think STARBASE will help me do better in school.	N/A	1.97	1.98	1.97	1.94	1.86
I like to think of new ways to use things.	6.17	6.13	6.00	6.06	6.10	6.02
At STARBASE, I learned a lot of things that I can use. (post only)	6.53	6.53	6.51	6.46	6.55	6.49
STARBASE is boring. (post only)	1.56	1.64	1.55	1.68	1.59	1.62
I would tell my friends to come to STARBASE. (post only)	6.21	6.15	6.19	6.07	6.23	6.12

<sup>\*</sup>Due to the non-favorable wording, higher mean values reflect lower endorsement levels when reverse scoring is applied. These items are designed for reliability in rating usage and understanding of the rating scales.

#### STUDENT ASSESSMENT SUMMARY

The 2009 annual assessment demonstrated continued positive performance in the knowledge and skills assessment and in the attitudinal assessment. In addition, DoD STARBASE produces a positive shift in almost all items in pre- to post-program assessment. Constructs were developed to find differences across the academies. The constructs that displayed variability were gender, length of academy operation and branch of service sponsorship. The academy's site location continues to bring about the greatest number of variations in test scores and analytical perceptions.

On the results level, academies are alike in curriculum but differences emerge in the emphasis they place in different content areas. Even with a common core curriculum, each academy displays different results because of student demographics, expectations, resources, and form and substance of program delivery. In summary, the following results were found:

- The student's attitudes on assessed constructs were generally positive before entering the DoD STARBASE program. The post-program assessments increased across the board and were statistically significant on 17 of the 22 items.
- Performance on the knowledge/skills assessment was significantly positive with an average gap of almost 5.5 points on the 33-item assessment.
- Boys were significantly more positive than girls on four items, but girls were more positive than boys on 13 of 22 total items.
- Variations and differences in both the knowledge and attitudinal assessments were found in factors such as prior
  experience with the military, military branch sponsorship, academy's years of operation, regional location, hearing
  about DoD STARBASE before attending program, and low and high performers.
- Differences are more pronounced on almost all constructs and performance by academy-specific location.

### 2009 Teacher Assessment

### **OVERVIEW**

Teachers from participating schools attend all classes as monitors and, when asked, as facilitators. They serve as observers of their students' behavior, performance and attitudes both before and after program participation. They provide an independent view on what changes take place in student performance both during the program and back in their school environment. After the program, they are asked to document any changes in the school culture, curriculum, instructor

In these areas of program delivery, content, methods, student responses and results, the classroom teachers serve as a panel of experts.

methodologies and use of DoD STARBASE materials. Because many teachers have participated in the program for several years, they can report on downstream results and the impact of the DoD STARBASE experience on their students, classrooms, teaching methods, and school environment. Most teachers understand the DoD STARBASE methodology, curriculum materials and aids, and teacher instructional modalities. In these areas of program delivery, content, methods, student responses and results, the classroom teachers serve as a panel of experts.

This year 1,497 classroom teachers responded to the survey. Last year's survey responses were much smaller with only 231 teacher surveys. In terms of teaching experience, this year's group is a veteran group. The majority of teachers surveyed (79.2 percent) have five or more years of teaching experience, 15.7 percent have two to four years of experience, and 5.1 percent are first-year teachers.

### **TEACHER DEMOGRAPHICS**



# Teacher Demographic Profile Exhibit 42

tem	Frequency	Percent
Grade Level Taught		
Grade 3	13	.9
Grade 4	122	8.1
Grade 5	1059	70.7
Grade 6	134	9.0
Grade 7	6	.4
Grade 8	11	.7
Special class teacher	29	1.9
Teaching assistant	17	1.1
Administrator	5	.3
Other	101	6.7
Number of Years Teaching		
1 year	77	5.1
2-4 years	235	15.7
5-7 years	189	12.6
8-10 years	213	14.2
11-15 years	233	15.6
Over 15 years	550	36.7
Number of Years with STARBASE		
1 year	713	47.6
2-4 years	513	34.3
5-7 years	202	13.5
8-10 years	39	2.6
11-15 years	28	1.9
Over 15 years	2	.1
ver visit a military base prior to your current STARBASE invo	lvement?	
Never, this is my first STARBASE program	330	22.0
Yes, for prior STARBASE programs only	302	20.2
Yes, for activities not related to STARBASE	447	29.9
Yes, for STARBASE and non-STARBASE activities	349	23.3
Other	69	4.6

### **TEACHER ASSESSMENT RESULTS**

This year, the teachers were asked several new questions about the following:

- The school's communication regarding DoD STARBASE to the community
- Teacher use of DoD STARBASE materials in the classroom
- Assigning students DoD STARBASE take-home activities
- Teacher recommendations to other teachers, principals and school systems
- If DoD STARBASE helps reach state performance requirements.

Over 50 percent (50.5 percent) responded that they communicate about the program to the community. Of the teachers responding, 62.7 percent say that they use DoD STARBASE materials in their classrooms and 62.5 percent have students take home DoD STARBASE materials. A very large majority, 89.5 percent, recommended the program to other teachers and principals in the school system. Almost all of the teachers (95.7 percent) felt the DoD STARBASE content helped students reach state standards. The charts below provide the detail on each of these questions.

#### DOD STARBASE IMPACT ON THE SCHOOL SYSTEM

As shown above, the majority of teachers use DoD STARBASE materials in their classrooms, assign students home-study materials in DoD STARBASE, strongly recommend the program to peers and other school professionals, formally inform the community about DoD STARBASE, and believe that DoD STARBASE helps to meet state educational requirements. Interviews with superintendents confirm these findings. Letters from parents and others visiting DoD STARBASE sites also validate these results. When interviewed, some superintendents indicate that they incorporate the DoD STARBASE program as part of their curriculum and would like to see the program expand to all their school districts.

### DoD STARBASE Impact on the School System Exhibit 43

Item	Response	Frequency	Percent
Is there formal com of the STARBASE p	nmunication from the school that raises community a program?	wareness	
	Yes	756	50.5
	No	343	22.9
	Don't Know	398	26.6
Do you use DoD ST	TARBASE materials/applications in your own classroo	m?	
	Yes	938	62.7
	No	559	37.3
Do you have DoD S	STARBASE take home/follow through activities beyon	d your classroom	presentation?
	Yes	935	62.5
	No	562	37.5
Have you recomme	ended STARBASE to other teachers, principals or scho	ol systems?	
	Yes	1,340	89.5
	No	157	10.5
In your view, does	the DoD STARBASE content and concepts help you re	each your state red	quirements?
	Helps reach state requirements	1,432	95.7
	Only indirectly helps meet state requireme	ents 62	4.1
	Doesn't help reach state requirements	2	.1
	Doesn't fit with state requirements at all	1	.1

#### **YEARLY MEAN COMPARISONS**

The average teacher rating across all items were positive with an overall mean score of 6.10 on a seven-point scale. This is comparable to last year's 6.12. Compared to the last three years, the rating falls in the middle (see Exhibit 44 below).

## Mean Ratings of Teacher Attitudinal Assessment (2003-2009) Exhibit 44

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

The teachers gave high ratings on all items (6.85-5.53). This range is higher than last year when the ratings ran from 6.81 to 5.14. Twenty-four of the 36 items were above a 6.00 rating. This indicates that the teachers highly value the DoD STARBASE program experience for themselves, their students, the school system and the students' families. The positive experience goes beyond the delivery at the DoD STARBASE academy as they also value the material given to them for their classroom, the school system and for home assignments.

#### MATH AND SCIENCE ATTITUDINAL RATINGS BY TEACHERS

The review of teachers as advocates and agents in the school system is reflected in several items rated highly in the survey. For example, teachers believe that students' views about science and math are more positive because of attending DoD STARBASE. The mean score in math was 5.67 and the science mean was 6.54. The math mean was the second highest in the past seven years while, the science mean took a major jump to the highest during that same period (see Exhibit 45).

### Classroom Teachers' Perceptions of Student Interests in Math and Science Exhibit 45

Item	2003 Mean	2004 Mean	2005 Mean	2006 Mean	2007 Mean	2008 Mean	2009 Mean
More interested in learning about math.	5.33	5.58	5.51	5.39	5.43	5.70	5.67
More interested in learning about science.	6.43	6.44	6.41	6.39	6.37	6.46	6.54

The highest rated item in the survey was "I look forward to my classes' continued participation in the STARBASE program" at 6.85 on the seven-point rating scale. It was closely followed by "The STARBASE experience will be a positive influence in coming years" at 6.84. These ratings support the observation that teachers are not only fully committed to the program, but are strong advocates when they indicate their willingness to tell other teachers, administrators and others in the community.

#### TEACHER ATTITUDINAL RATINGS OVER A SIX-YEAR PERIOD

When comparing this year's attitudinal ratings with the past five years, many of the items are generally comparable. The top item this year on "continuing participation in STARBASE" has only been in the survey over the past two years. The top 14 items are shown in the chart below (see Exhibit 46).

### Top Fourteen Teacher Ratings Over a Six-Year Period (2003-2009) Exhibit 46

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

All of the above ranked items (with one exception) enjoyed higher ratings this year. The item that moved up the most to the fifth position from the ninth position was, "The STARBASE experience has been a positive influence on me personally." This statement demonstrates how the program has influenced the school system and also the value that teachers are putting on the program in their professional and personal lives. The above general ranking, with the exception of the new item that was introduced two years ago, is stable and consistent. Teachers rate the program's influence on them, the principals, parents and students in the top 15.

### TEACHERS' PERCEPTIONS COMPARED WITH STUDENTS' EXPERIENCES AND ATTITUDES

Teacher perceptions are in general agreement with students' perceptions in that the program offers: positive presocial advantages, opportunities to build and maintain self-esteem and a "can-do attitude". However, the students' view of their abilities in math and science are lower than that of the teachers who feel the students have improved their interest and understanding of the two topics.

#### **KEY TEACHER CORRELATIONS**

Each year, correlation analyses is conducted on teacher characteristics to determine if there were any trends related to other survey items such as years of teacher service, grade level, years with DoD STARBASE and other indicators. The same observations emerge again this year, as teachers with more experience report that their students are more positive, possessing more pro-social attitudes, more interested in math and science, work well in groups, and talking about the program long after the program has ended. The ratings this year tend to be higher than previous years with a more dramatic increase in the teachers' desire to use more DoD STARBASE resources, as well as teachers already using program resources. Teachers' attitudes about the impact of DoD STARBASE increased with regard to standardized tests, science fairs, parents, personal impact and the long-term effects on the students. In all, teachers' perceptions have taken a strong turn upward from an already strong, positive base. Their commitment and advocacy of the value of DoD STARBASE to the students, the school system and the community is exceptionally strong.

### **TEACHER ASSESSMENT SUMMARY**

Classroom teachers are an important participant group in the DoD STARBASE program. They serve as critical observers, advocates, agents of curriculum transfer, and influencers of program expectations to the students and family members. In these roles, they serve as an "expert panel group" on program impact and assessment. They provide candid feedback on what works and what does not, and what needs to be done to be more effective.

This year, teachers were more positive on almost all items surveyed than in previous years. There was a more dramatic increase by teachers to use more DoD STARBASE resources and materials in their classroom and for home study. They feel the school boards, parents and community are in a more positive position about DoD STARBASE. The impact on them personally was scored much higher, as were their views scores about testing and the long-term impact on students.

### Yearly Comparisons of Average Means of Teacher Attitudes 2006-2009 Exhibit 47

Item	2006 Mean N=374	2007 Mean N=222	2008 Mean N=231	2009 Mean N=1,497
More interested in learning about math	5.39	5.43	5.70	5.67
More interested in learning about science	6.39	6.37	6.45	6.54
More willing to try new things	6.11	6.05	6.13	6.22
Better at following directions	5.55	5.41	5.63	5.66
Better at working in groups	5.90	5.85	5.95	5.99
More confident about what they can accomplish	5.92	6.00	6.10	6.10
More goal-oriented	5.67	5.66	5.79	5.86
More comfortable with military personnel	5.96	5.98	6.02	5.92
More comfortable making decisions	5.68	5.66	5.77	5.83

## Yearly Comparisons of Average Means of Teacher Attitudes 2006-2009 Exhibit 47 (continued)

Item	2006 Mean N=374	2007 Mean N=222	2008 Mean N=231	2009 Mean N=1497
More excited about their futures	5.93	5.90	6.10	6.06
More excited about learning	5.98	5.97	6.06	6.18
More likely to encourage each other	5.89	5.83	5.91	6.02
More willing to cooperate with each other	5.93	5.86	5.92	6.05
The students ask more questions about technology	5.54	5.60	5.72	5.90
STARBASE has helped improve the students' understanding of science	6.41	6.38	6.46	6.61
STARBASE has helped to improve appreciation of how math can be applied to a variety of situations	5.91	5.93	6.07	6.12
STARBASE has helped improve the climate for participative learning in the classroom	5.99	5.91	6.09	6.18
Because of my participation in STARBASE, I am more comfortable with military personnel	5.91	5.85	5.90	5.91
The students talk about STARBASE long after the program has ended	6.47	6.47	6.62	6.61
STARBASE reinforces many positive behaviors I try to teach my students	6.63	6.64	6.70	6.71
I use the resources STARBASE provides to teachers	6.05	5.98	6.04	6.10
I would like more STARBASE resources to take back to my classroom	6.15	6.02	6.03	6.30
My principal is a strong advocate of STARBASE	6.34	6.30	6.33	6.41
My school board is very involved in supporting STARBASE	5.43	5.59	5.53	5.73
The STARBASE instructors are good role models for the students	6.68	6.61	6.76	6.84
I have included many STARBASE resources in my curriculum	5.77	5.59	5.57	5.82
The students admire their STARBASE instructors	6.49	6.45	6.60	6.63
The STARBASE curriculum supports our state standards	6.60	6.64	6.59	6.70
The children enjoy sharing their STARBASE experiences with others	6.68	6.70	6.81	6.83
Parents are delighted that their children are participating in STARBASE	6.49	6.43	6.43	6.63
The students enjoyed being on a military base	6.37	6.38	6.50	6.61
The STARBASE experience will be a positive influence on students in coming years	6.68	6.68	6.76	6.84
The STARBASE experience has been a positive influence on me personally	6.59	6.64	6.58	6.76
Students who attend STARBASE perform better on standardized state assessments			5.57	5.94
I look forward to my classes' continued participation in the STARBASE program			6.79	6.85
After STARBASE attendance, there is increased participation in the Science Fair			5.14	5.53

#### 2009 MILITARY VOLUNTEER SURVEY RESULTS

Military volunteers are an integral part of the DoD STARBASE program. They are role models for students and provide a wide spectrum of services that enrich the students' experience. This survey seeks the expertise of members of the military who have volunteered their time to DoD STARBASE throughout the year. In preparation for the survey, each site was asked to submit a list of volunteers to the survey administrator; 31 sites submitted 340 volunteer names. One hundred and thirty-three individuals submitted completed surveys. The respondents represented all service branches sponsoring academies.

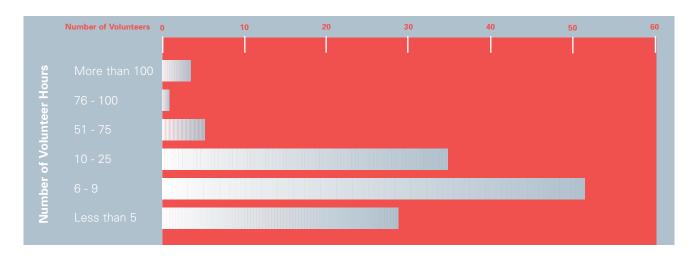
Sixty-seven respondents served as tour guides explaining how they use science, technology, engineering and math (STEM) in their jobs. Tours vary from academy to academy depending on the mission of the host sites. The many topics presented include the history of aviation, medical evacuation, submarine control, handling of munitions and fire containment.

Seventy respondents presented directly to students in the classroom. Presentations again varied by site and expertise and ranged from piloting/maintaining jets to Newton's Laws to substance abuse prevention. Twenty-eight volunteers facilitated experiments for students, 10 provided administrative support, 14 volunteered in the classroom as teacher's aides and 38 responded that they did other tasks.

The volunteers were asked if the "Department of Defense's sponsorship of the STARBASE program has impacted your community." The responses were overwhelmingly positive with 92 percent reporting that the program made a strong difference or some difference in their community. None of the respondents reported that the program made very little difference or no difference.

The following chart indicates the numbers of hours the responding volunteers contributed to DoD STARBASE academies.

# Number of Hours Contributed by Military Volunteers Exhibit 48



When asked if they would "recommend others volunteer their time to DoD STARBASE?" 132 out of 133 volunteers responded "yes." In describing their experiences, they used the word "enjoy" repeatedly and some described increased job satisfaction. Volunteers reported that working with DoD STARBASE gave them a sense of pride in their work and kept their skills sharp. One volunteer noted, "Every day they come is a much more satisfying day at work for me." Serving as role models, influencing the future, and seeing the wonder in students' eyes made volunteering for DoD STARBASE a highlight.

<sup>9</sup> This number compares favorably to the 97 surveys completed in 2007, the 64 surveys completed in 2006, the 141 surveys completed in 2005 and the 131 surveys completed in 2004. The survey was not administered in 2008.

#### **DRIVERS OF OPINION**

Each year an extensive correlation analysis is conducted entitled: "Drivers of Opinion." These are related student attitudinal clusters that provide a rank ordered list of non-overlapping statistical predictors. This analysis reveals a list of target attitudes each termed "a driver." When the driver is present, it is very likely that a set of attitudes are also present. These "drivers of opinion" can be used by the practitioner to predict action items for improving the target attitudes. For example, drivers may be used to prioritize the delivery strategies of instruction and determine the list of attitudes that will support and/or affect instruction. A similar set of "drivers" are also given for the teacher population.

One important caution is that past-program opinion averages may be strongly influenced by knowledge test results. For example: lower performers on knowledge tests are more likely to have less positive attitudes.

There are repeating drivers that have a broader impact on target attitudes. They include:

- "You can have fun working in a group" helping students to build relationships in their work groups can
  potentially increase their positive attitudes toward learning, STARBASE and the military. The latter are cluster
  attributes.
- "I am enjoying coming to a military base" for these students on a military base, the environment of personnel and resources can affect the students' curiosity, enjoyment and attitudes about the military.

## STUDENT DRIVERS OF OPINION:

#### DRIVER: "At STARBASE, I learned a lot of things I can use."

- STARBASE instructors are kind and helpful.
- I like to think of new ways to use things.
- I am enjoying coming to a military base.
- STARBASE is boring.
- You can have fun working in a group.
- You can learn a lot by trying things.
- I do not think STARBASE will help me do better in school.

#### DRIVER: "I would tell my friends to come to STARBASE."

- STARBASE is boring.
- I am enjoying coming to a military base.
- STARBASE instructors are kind and helpful.
- I like to think of new ways to use things.
- I make good decisions.
- You can have fun working in a group
- I do not think STARBASE will help me do better in school.

## DRIVER: "I can make my dreams come true."

- I think I can graduate from high school.
- I set goals for myself.
- I think about what I want to be when I grow up.
- You can accomplish a lot in a group.
- I make good decisions.
- I do not think STARBASE will help me do better in school.
- You can learn a lot by trying things.

## DRIVER: "Military bases are fun."

- I am enjoying coming to a military base.
- The military is a good place to work.
- You can have fun working in a group.
- I am good at math.
- I like science.

#### DRIVER: "Military people do lots of different things."

- The military is a good place to work.
- You can learn a lot by trying things.
- I am enjoying coming to a military base.
- You can accomplish a lot in a group.
- I am good at science.
- I am good at math.
- I like to think of new ways to use things.

## DRIVER: "Learning can be fun."

- You can learn a lot by trying things.
- I like math.
- Learning is easy for me.
- You can have fun working in a group.
- I like to make new things.
- I like science.

#### **TEACHER DRIVERS OF OPINION:**

- DRIVER: "More comfortable with military personnel."
  - 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 willing to try new things
  - Students that attend STARBASE perform better on standardized state assessments.
- DRIVER: "STARBASE has helped improve the students' understanding of science."
  - STARBASE has helped improve the climate for participative learning in the classroom.
  - More interested in learning about science
  - STARBASE has helped to improve appreciation of how math can be applied to a variety of situations.
  - The children enjoy sharing their STARBASE experiences with others.
  - My principal is a strong advocate of STARBASE.
  - I use the resources STARBASE provides to teachers.
- DRIVER: "More interested in learning about math."
  - More willing to try new things
  - STARBASE has helped to improve appreciation of how math can be applied to a variety of situations.
  - More comfortable making decisions
  - More interested in learning about science
- DRIVER: "STARBASE reinforces many positive behaviors I try to teach my students."
  - The students talk about STARBASE long after the program has ended.
  - The STARBASE experience has been a positive influence on me personally.
  - The STARBASE instructors are good role models for the students.
  - More excited about learning
  - The children enjoy sharing their STARBASE experiences with others.
  - The STARBASE curriculum supports our state standards.

#### DRIVER: "The STARBASE experience will be a positive influence on students in coming years."

- The STARBASE experience has been a positive influence on me personally.
- The children enjoy sharing their STARBASE experiences with others.
- The STARBASE instructors are good role models for the students.
- Parents are delighted that their children are participating in STARBASE.

#### DRIVER: "More excited about their futures."

- More excited about learning
- More comfortable making decisions
- More goal-oriented
- Students who attend STARBASE perform better on standardized state assessments.

## DRIVER: "I look forward to my classes' continued participation in the STARBASE program."

- The STARBASE experience has been a positive influence on me personally.
- The children enjoy sharing their STARBASE experiences with others.
- The STARBASE instructors are good role models for the students.
- The STARBASE curriculum supports our state standards.
- The students admire their STARBASE instructors.
- The students ask more questions about technology.

# Considerations

The (performance) considerations are designed to encourage each of the DoD STARBASE academies to higher levels of performance...



The following considerations are based on a comprehensive review of the DoD STARBASE program. This review included 12 site visits; interviews with school administrators, base commanders and key program participants; an analysis of pre- and post-program data from 3,242 students, 1,497 surveys of classroom teachers and 133 surveys of military volunteers; and a questionnaire completed by each program director. These considerations are designed to encourage each of the DoD STARBASE academies to higher levels of performance and align academies into three performance levels (I, II, and III) that may be utilized in the near future. The performance levels are defined as follows:

- **Level I** Basic/fully operating academy: the first level of performance requires full compliance with the DoDI and compliance with operational requirements as stipulated by OASD/RA. These considerations focus on program operations and curriculum development and delivery.
- Level II Advanced performing academy: the second level of performance requires successful completion of Level I and the demonstration of activities that are not specifically outlined in the DoDI, but recommended by OASD/RA and standing committees as desirable for program delivery. Considerations include quality of service, participant group involvement, and program enhancements. These considerations focus on organizational and administrative practices.
- Level III High performing academy: the third level of performance is for academies that successfully meet the standards in Levels I and II, and self-commit to activities that advance the core curriculum, and DoD STARBASE philosophy. Operational enhancements, higher level problem-solving techniques, time-sensitive improvements and efficiencies would also be part of the Level III activities. These considerations focus on strategic planning and participant group activities.

Before any of these considerations are formally applied, they must be reviewed for academy-wide application; the degree and range/scope to be given value at levels I-III; the temporal period in which they can be attained; the qualitative increases that are positively available in each performance area; and the fairness and equity in their use by all academies given their local resources and capability.

The objective is for each academy to develop strategies for higher levels of performance with a reasonable but progressive plan of action that may be attained in a reasonable amount of time. These considerations are not exhaustive, but they are consistent with prior initiatives that have been presented at past Directors' and Professional Development conferences. It is not expected that any academy, or all the academies, will install all of these considerations immediately. The available resources and the positives of each academy's commitments will determine the time and installation required to attain levels II and III. However, the concept encourages each academy to develop a plan of action to proceed forward on the considerations, with a time schedule and an expected set of outcomes.

Assessment of program and results will be obtained through a culmination of self-reporting, visitations, and annual academy surveys. The assessment will be incremental as the aforementioned field-testing of the attainability and values assigned to each activity are obtained in the future assessment process. Some priority emphasis may be given by the OASD/RA office on each of the considerations to keep the performance-level status by each academy. Given the initiatives and expectations developed by the Curriculum Committee this July, several of these proposed considerations may be put into operation in the FY 2010 program year. Future maintenance of performance may require items to be continuously assessed to retain level status. Some assessment needs to be developed to determine when higher academy performance is obtained by each DoD STARBASE site.

#### **Level II Considerations**

Budget Management Plan – DoD is considering requiring each director to design a budget management plan
that identifies potential areas of financial concern and an operational plan for potential budget short-falls; and
the design of an impact assessment plan on the operations, staffing and program delivery if budgets
are increased or reduced. This assessment plan would identify program capability, program adjustments,
alternative plans and contingencies; and, finally, the proactive and reactive plans of action anticipated under
each of the variant conditions.

- Program Budget Reviews DoD is considering requiring each director to review budget expenditures on an ongoing basis (monthly or quarterly) and pro-rate them over the program year to identify short-falls and/or surpluses. If corrective action is required, it would be reported by the director to the program manager.
- Personnel Management Plan DoD is considering requiring each director to install a personnel management
  plan. Upon review of personnel requirements, the director would examine current and downstream conditions
  which affect salary and retention, turnover potential, and future program operations. Posting job performance
  expectations, replacement and grade-level usages in hiring, salary level and generalized job
  description/qualifications would be put in written form. Turnover and new hire situations would take into
  consideration budget management capabilities when grade-level positioning is applied.
- Transfer of Leadership Plan DoD is considering requiring each director to develop a transfer of leadership
  plan. All academy documents, scheduling commitments, list of contact names, addresses and telephone
  numbers, property inventories, personnel records, strategic plans, budgets and financial records, board
  minutes and other documents relative to program operations would be compiled in a format that can be readily
  transferred from one director to another. When leadership transfer is conducted, the new director, after review
  of the materials, would sign off on the documents' availability and completeness.
- Equipment Status Assessment DoD is considering requiring each director to review equipment and identify
  upgrades that are essential to the timely and effective delivery of the program and to assist in the
  training of instructors. This would be linked to the consideration on budget planning. These plans would be
  forwarded to the program manager.
- "Children-at-Risk" Annual Review DoD is considering requiring each director to conduct an annual review
  and assessment of the academy's ability to reach the target population. Each director must obtain
  documentation from participating school systems to verify this status.
- Establish a Staff Development and Staff Personnel Plan DoD is considering requiring each director to create a staff development and staff personnel plan that specifies training requirements, math and science credentials, certification status, turnover strategies, etc.

#### **Level III Considerations**

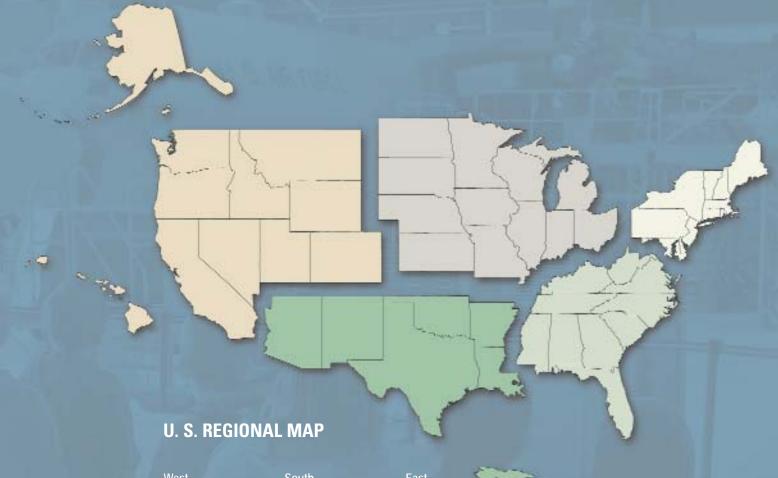
Academy Self-Assessment Program – DoD is considering requiring each director to conduct a self-assessment
that is compatible and supportive of the activities associated with the compliance visitation process. This
would incorporate DoDI requirements, fiscal accountability, key strategic programs, curriculum installation
progress, etc. Site visitations would check for reliability. The program would assist in streamlining the
compliance visitation process. Key areas of program operation would be record and documentation updates,
DoDI adherence, plans of action progress and corrective action requirements/progress.

# Appendices









West
Washington
Montana
Oregon
Idaho
Wyoming
California
Nevada
Utah
Colorado
Hawaii
Alaska

South Arizona New Mexico Oklahoma Texas Arkansas Louisiana Puerto Rico

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

# TEACHER PERCEPTIONS COMPARED TO STUDENT PERCEPTIONS ON SIMILARLY WORDED ITEMS

		Student Survey (post)	Х	SD	Teacher Survey	Х	SD
		I like math	5.29	1.86	More interested in learning about math	5.67	1.32
		I am good at math	5.35	1.57			
Math					Improve appreciation of how math can be applied to a variety of situations	6.12	1.10
		I am good at following directions	5.76	1.34	Better at following directions	5.66	1.29
		Learning can be fun	6.00	1.40	More excited about learning	6.18	1.02
		I make good decisions	5.73	1.24	More comfortable making decisions.	5.83	1.11
		I like science	5.79	1.57	More interested in learning		
	4				about science	6.45	.82
	DCE	I am good at science	5.50	1.48	Improve the students' understanding		
	Scie				of science	6.61	.74
					After DoD STARBASE attendance,		
					there is increased participation		
					in the Science Fair	5.53	1.52
) d		I like to think of new ways to use things	6.02	1.31	More willing to try new things	6.22	1.01
olo		You can learn a lot by trying things	6.51	.88			
chin		I like to make new things	6.20	1.19	After DoD STARBASE, the students ask		
					more questions about technology	5.90	1.16
		Military people do lots of different things	6.24	1.13	Because of my participation at		
					DoD STARBASE, I am more comfortable		
					with military personnel	5.91	1.05
	>				Students appear more comfortable		
	litai				with military personnel	5.92	1.28
	₫	I am enjoying coming to a military base	6.28	1.31	The students enjoyed being on a		
			=		military base	6.61	.85
		Military bases are fun	5.49	1.64	T		
		DoD STARBASE instructors are kind	0.57	07	The students admire their DoD		
		and helpful	6.57	.97	STARBASE Instructors	6.63	.83
		The military is a good place to work	5.20	1.66	The DoD STARBASE Instructors are	0.04	60
		Learning is easy for me	E E 1	1 40	good role models for students	6.84	.60
		Learning is easy for me	5.51	1.43	DoD STARBASE has helped improve the		
٧	2				climate for participative learning		
					in the classroom	6.18	1.05
1 1					More confident about what they	0.10	1.03
	5				can accomplish	6.10	1.03
ocitivita Activitios	3	I set goals for myself	5.98	1.31	More goal-oriented	5.86	1.11
Š		I can make my dreams come true	6.15	1.33	More excited about their futures	6.06	1.07
٥		I think about what I want to be	0.10		Shortes asset their ratares	0.00	,
		when I grow up	6.36	1.18			
		5					

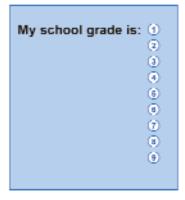
	Student Survey (post)	Х	SD	Teacher Survey	Х	SD
<u>a</u> s	I think I can graduate from high school	6.50	0.98			
o-Social ctivities	You can have fun working in a group	6.18	1.23	More willing to cooperate with		
ro-S				each other	6.05	1.09
Pro Ac	You can accomplish a lot in a group	5.99	1.30	Better at working in groups	5.99	1.12
				More likely to encourage each other	6.02	1.10
	At DoD STARBASE, I learned a lot			The DoD STARBASE experience will be		
	of things that I can use	6.49	1.02	a positive influence on students in		
10				coming years	6.84	.51
ess	I do not think DoD STARBASE will help					
Effectiven	me do better in school	1.86	1.68			
ecti	I would tell my friends to come to			The children enjoy sharing their DoD		
	DoD STARBASE	6.12	1.42	STARBASE experiences with others	6.83	.56
Impact	DoD STARBASE is boring	1.62	1.40	The students talk about DoD STARBASE		
mp				long after the program has ended	6.61	.84
				Students who attend DoD STARBASE		
				perform better on standardized state		
				assessments	5.94	1.28

X= SD=



# Pre-Flight and Post-Flight Questionnaire

ASSIGNED STUDENT NUMBE									
01	U			101	NID.				
Ļ	_	_	_	_	_				
	0								
	0								
	(2)								
	(3)								
	(4)								
	( <u>6</u> )								
(8)	(6)	(8)	⊚	(8)	⊚	Q			
(7)	(7)	7	(7)	7	(7)	Q			
(8)	(8)	(8)	(8)	(8)	(8)	Ģ			
(9)	(9)	(9)	(9)	(9)	(9)	0			







58

57

58

55

54 53

52

51

50

49 48 47

43

42 41

40 39

38

36

35

34

33

32

31

30

29

28

27 26

25

24

23

22

21

20

19

18

17

15

14 13

12

11

9

8

I have met military people before coming to STARBASE. (N) No (Y) Yes
I heard about STARBASE before I knew I was coming here. (N) No (Y) Yes
I know someone that went through STARBASE before me. (N) No (Y) Yes

For each statement, fill in True if you agree or fill in False if you disagree.

#### True False

(F)

- Drinking alcohol may decrease our bodies' ability to do easy things.
- Matter does not take up space.
- if (i) (ii) 3. Earth is the closest planet to the sun.
  - 4. Negative actions may make it hard
    - for you to reach your goals.

      5. Technology usually decreases in cost after many units are sold.
- 6. What is the smallest particle of water?
  - a water molecule
  - B a water atom
  - a water nucleus
  - a water drop
- 7. What force causes a rocket to launch?
  - (A) lift
  - gravity
  - c thrust
  - drag
- 8. Which of the following is NOT a team?
  - A Fire Department
  - (B) Police Force
  - © Military Squad/Platoon
  - Wal-Mart customers

- 9. How thick is Earth's atmosphere?
  - (A) About 10 miles
  - About 25 miles
  - © About 40 miles
  - More than 50 miles
- 10. Air presses down 14.7 pounds on every inch of our bodies. Why don't we feel this pressure?
  - The atmosphere cushions the weight of the air.
  - © Our bodies push out 14.7 pounds on every inch to equalize the pressure.
  - © We are inside a building, so we don't feel it.
  - The air is thinner closer to the ground than up in space.
- 11. The air is composed mostly of what element?
  - A hydrogen
  - (B) helium
  - chlorine
  - nitrogen

Wait for your instructor to read the directions and questions.

PLEASE DO NOT WRITE IN THIS AREA

[SERIAL]

3

5

1

## 63 62 61 80 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40

39

38

37

36

35

34

33

32

31

30

29

28

27

26

25

24

23

22

21

20

19

18

17

16

15

14

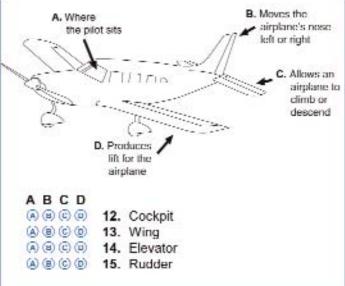
13

12

11

1 -

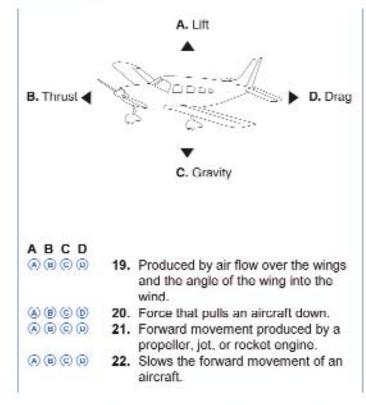
Match each airplane component with the letters from the diagram below.



Select the best answer by filling in the appropriate circle.

- 16. If you are landing an airplane in a city that is 5,000 feet above sea level and your altimeter reads 5,500 feet, how many feet are you above the ground?
  - 500 feet
  - (B) 1,000 feet
  - © 5,000 feet
  - 5,500 feet
- To move an airplane's nose to the left, you would move the....
  - (A) rudder right
  - rudder left
  - (c) left flap
  - (ii) right flap
- One reason an airplane is able to gain lift is because the air moving across the top of the wing....
  - exerts less pressure than the air moving along the bottom.
  - exerts more pressure than the air moving along the bottom.
  - © exerts the same amount of pressure as air moving along the bottom.
  - (b) does not exert any pressure on the wing.

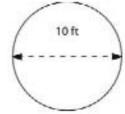
Match each force of flight with the letters from the picture below.



- 23. If you launched two rockets, one with a mass of 50 grams and one with a mass of 100 grams, using the same amount of force, which rocket would go highest?
  - (A) The heavier rocket would go the highest.
  - The lighter rocket would go the highest.
  - (c) The two rockets would go the same height.
  - The heavier rocket would go twice as high as the lighter rocket.
- 24. Which of the following planets has more than 30 moons and thousands of rings?
  - (A) Mercury
  - (B) Pluto
  - © Saturn
  - (ii) Earth
- 25. Which planet do humans believe they could inhabit in the future?
  - (A) Mercury
  - Mars
  - © Saturn
  - Neptune

- 26. What is the development of something new or improvement of something already existing?
  - A gravity
  - (B) inertia
  - (c) technology
  - (b) law
- 27. What should you do if you have something you want to do, or something you want to be in life?
  - (A) Wish for it really hard in order to make it come true.
  - Watch other people on TV to see how they do it.
  - © Do something everyday that will help you reach your goal.
  - Wait for someone to give you what you want.
- 28. Which of the following can damage an individual's dreams?
  - setting goals
  - (s) using illegal drugs
  - © obtaining an education
  - (e) practicing a skill
- 29. What scientific law is operating, that makes it important to wear a seat belt?
  - A Newton's Law of Inertia which explains that the greater the mass of an object, the greater the force needed to accelerate it.
  - (B) Newton's Law of Inertia which explains that an object in motion will stay in motion unless acted upon by an outside force.
  - © Bernoulli's Principle which states that pressure decreases when air moves faster.
  - Bernoulli's Principle which states that air moves faster when an object is curved.
- 30. In what state of matter do molecules have the least amount of energy or motion?
  - (A) solid
  - (B) liquid
  - © gas
  - (ii) plasma

- 31. If the diameter of the circle shown below is 10 feet, what is the radius?
  - (A) 20 feet
  - (B) 15 feet
  - (c) 10 feet
  - (ii) 5 feet

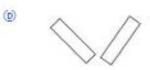


32. Which of the following best shows the alignment of horizontal objects?

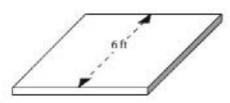








33. What is the largest surface of the 6 foot plate?



- A Edge
- (B) Face
- (c) Axis
- (b) Parts

Wait for your instructor to read the directions and questions.

63 62

61 60

59 58

53 52 51

45 43

> 37 38 35

> 30 29 28

27 25

24 23 22

20 19 18

21

17 16 14

13 12 11

9

# What is your opinion?

63

62 61

80								-
59		(11)			(11)			(11)
58		(~-\)			(-)			(())
57		Strongly	Disagree	Slightly	(?)	Slightly	Agree	Strongly
56		Disagree	Disagree	Disagree		Agree	Agree	Agree
55		(1)	(2)	(3)	(4)	(5)	(6)	(7)
54								7.45.7
53	1.	I like math	(2)	(3)	<b>(4)</b>	(E)	(b)	(7)
52	2.		(2)	(3)	(4)	(3)	(8)	(7)
51		I like science	(2)	(3)	(4)	(E)	( <del>6</del> )	(7)
50		I am good at science	(2)	(3)	(4)	(3)	(6)	(7)
49		I am good at following directions	(2)	(3)	<ul><li>(4)</li></ul>	(E)	( <del>6</del> )	(7)
48		Learning is easy for me	(2)	(3)	(4)	(3)	(B)	(7)
47		Learning can be fun	(2)	(3)	(4)	(b)	( <u>6</u> )	(7)
46	8.	You can learn a lot by trying things	(2)	(3)	(4)	(3)	(6)	(7)
45		I think I can graduate from High School ①	(2)	(3)	(4)	(E)	(6)	(7)
44	10.	Military people do lots of different						
43		things	(2)	(3)	<ul><li>(4)</li></ul>	(e)	(e)	(7)
42	11.	I set goals for myself	(2)	(3)	<ul><li>(4)</li></ul>	(3)	(6)	(2)
41		I make good decisions	(2)	(3)	(4)	(e)	(6)	(7)
40	13.	STARBASE Instructors are kind and						
39		helpful	(2)	(3)	<ul><li>4</li></ul>	(E)	(6)	(7)
38	14.	I can make my dreams come true	(2)	(3)	④ .	(3)	(6)	(7)
37	15.	You can accomplish a lot in a group ①	(2)	(3)	<ul><li>(4)</li></ul>	(B)	(6)	(7)
36	16.	You can have fun working in a group	(2)	(3)	<ul><li>(4)</li></ul>	(3)	(6)	7
35		I like to make new things	(2)	(3)	<ul><li>(4)</li></ul>	(E)	(6)	(7)
34	18.	I think about what I want to be when I						
33		grow up ①	(2)	(3)	(4)	(e)	(6)	(7)
32	19.	The military is a good place to work ①	(2)	(3)	④	(3)	(B)	(7)
31		I am enjoying coming to a military						
30		base	(2)	(3)	(4)	(3)	(8)	(7)
29	21.	Military bases are fun ①	(2)	(3)	(4)	(6)	(6)	(7)
28		I do not think STARBASE will help me						
27		do better in school	(2)	(3)	<ul><li>(4)</li></ul>	(6)	(e)	(7)
26	23.	I like to think of new ways to use						-
25		things	(2)	(3)	(4)	(6)	(6)	(7)
24			1112	77	- 5	L1	11.5	
23	Pos	t STARBASE						
22	A.20/VIVE	At STARBASE, I learned a lot of things						
21		that I can use	(2)	(3)	(4)	(E)	(6)	(7)
20	25.	STARBASE is boring	(2)	(3)	ě.	(S)	(B)	Ō
19		I would tell my friends to come to	17.6		-	(20 A)	170000	
18	10000	STARBASE	(2)	(3)	(4)	(3)	(8)	(7)
17								
=	-							

## Thank You!

PLEASE DO NOT WRITE IN THIS AREA

[SERIAL]

#### 2009 DIRECTOR'S QUESTIONNAIRE

#### INTRODUCTION

It is time to compile the information for the 2009 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 FY09 activities (October 1, 2008 - September 30, 2009) 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, 2009.

#### **PLEASE LOG IN**

E-mail address:	
Password:	
2009 DOD STARBASE. All Rights Reserved.	

#### **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
<u>Operations</u>
Financial Information
Supporting Materials and Suggestions

Academy Information	1			
Please provide this	Name of Academy			
information as you would like it to appear	Academy Director			
in the annual report	Military Affiliation			
and participant directories.	Military Location			
	Address 1			
	Address 2			
	City			
	State			
	ZIP			
	Telephone Number			
	DSN			
	Fax Number			
	E-mail Address			
	Website Address			
	Base Commander			
	Name			
	Address 1			
	Address 2			
	City			
	State			
	ZIP			
	Telephone Number			
	Type of Programs	Number of Schools	Number of Classes	Number of Students
	5-Day			
	4-Day			
2. FY09 Statistics	Other			

	Briefly describe the type of program(s) taught outside the 4-or 5-day program, if applicable.															
3.	FY09 Average class size															
4.	FY09 Grade Levels	K	1	2	3	3 4	Ę		6	7	8	9	10	11	12	
5.	FY09 Demographics	Fem	ales		Ma	ıles		To	otal							
	FY09 Ethnicity se place a 0 for ethnic groups with tudents	Black Africa Amer	ın	Asian/ Pacific Islande		Caucasia		panic atino	Mul	lti-Race	Ame India Alasi	n/	Other		TOTAL	
7.	Total Number of Students  Note: If you do not collect this informat							ged		Nur	mber		Pe	rcen	tage	
8.	Have you correlated your o	curric	ulum	with y	our S	State's	stand	ards?	>							
9.	FY09 Locally Administered		Ave Ans	rage N wers C	umbe	er of					iange					
	Number of Test Questions	3	Pret	est		Post t	est		Poi	nt Gai	in	% (	Gain			

	Curriculum Topic	Embedded	Hours Experiential	Hours Lecture
	Sample Topic	0.25	1.25	1.25
	Newtons Law of Motion			
	Four Forces of Flight			
	Bernoulli's Principle			
	Model Rocketry			
10. Indicate, out of the	Aircraft Control Surfaces			
20-25 required hours,	Properties of Air			
the estimated hours devoted to each topic.	Development, Innovation and			
	Use of Technology			
	Properties and States of Matter			
	Flight Simulation			
	Space Exploration			
	Goal Setting			
	Teamwork			
	Avoiding Substance Abuse			
	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	d hours, how many are dedicated to PT0	0?		
10b. Out of the 20-25 required If it embedded, please ex	d hours, how many are spent on math? xplain in question 10c.			
10c. If a topic is embedded in	other topical areas, please explain.			

pleas	e identify and explain.	last year,			
 11. numl	Out of the 20-25 required hours per of hours spent at each location		Military	Non-Military	<u> </u>
12.	Do you have a staff training prog	ram?			1
 12a.	If yes, please describe.				
13.	Do you provide training to local t	eachers?			
13a.	If yes, please estimate the number of hours contributed to each topic.	Sample Topic Continuing Education Local, State, National Workshops Experiental Training Student Teachers Methods Courses the local Universities Other (Please describe to	al Conference for nrough	Estimated Hours  4	When Do You Provi This Training?  Late Spring

14.	Over the past year,		Share	Choose Here		
	you share/obtain ma learned with other		Obtain	Choose Here		
15.	Do you provide add curriculum materials teachers?			Choose Here		
15a.	If yes, were they us	sed?		Choose Here		
15b.	If yes, what materia	als did you provide?				
16.	What are your TOP	three primary sources		Choose Here	7	
		ing aids, curriculum, operations procedures?		Choose Here	_	
	and other programs	opoliuliono procedureo.		Choose Here		
Оре	erations					
		Position (Funded by DoD)		Number Full-Time	Number Part-Time	Status
		Program Instructor		1	1	State Employee
		Director				Choose Here
		Deputy Director/Program	n Instructor			Choose Here
17.	FY09 Staffing	Program Instructor				Choose Here
		Sec./Admin Asst./Office	mgr.			Choose Here
		Other Position (list below	w)			
						Choose Here
						Choose Here
						Choose Here
						Choose Here

17a.	If your current staffing reflect the DoDI manni you have a waiver?			Choose Here		
18.	FY09 Personnel Funded by Non-DoD Sources	Position	Total N	Number		
9. ositio	Staff Changes From La	st Reporting Cycle eason forDeparture	On approximately what date did they leave?	Has the vacancy been filled?	Approximately how many weeks did it take to fill the vacancy?	
		Choose Here	Choose Here	Choose Here		
20.	Volunteer Activity (Please estimate the number of volunteers and volunteer hours committed in FY09)	Volunteer Group  Military  Teachers  Parents  Other	Number		Number of Hours	
21.	Current Program Service  If other, please explain	e Area	Choose Here			

		Transportation
		Duplication/Printing
		Audiovisual Equipment
		Teachers as monitors
		Educational supplies
22.	What support	Communications
	services, in whole or	
	in part, did the participating schools	Lunches
	provide. (Mark all that	Graphics
	apply with an "X")	Computers
		Other (Please specify below)
23.	In what year was your last property Who was the auditing agent?	
24.	Do you have a real property listing of	on file? Choose Here
_		
24a.	Does it include all non-expendable	
	property or just property at a certain dollar amount?	
25.	In what year was your last fined	
25.	In what year was your last fiscal audit conducted?	
	Who was the auditing agent?	
26.	Do you give STARBASE presentation	ons to Choose Here
	community groups?	CHOCOC FISITE

26a.	Please list what group and how often.	Group		How Often	
		Superintendent of Sch	nools		
		Principal			
		Base Commander			
		Community Leaders			
		Other			
27	Do you have a non-profit argonization?				
27.	Do you have a non-profit organization?	Choose Here			
	If yes, what is the function of the board of our time will such a local non-profit organization assume any fiduciary of				
	If yes, what is the function of the board of time will such a local non-profit organization assume any fiduciary of			r the DoD Component or the local	
			place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	time will such a local non-profit organization assume any fiduciary o		place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	time will such a local non-profit organization assume any fiduciary of selection of schools		place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	time will such a local non-profit organization assume any fiduciary of Selection of schools  Review of potential staff personnel	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	Selection of schools  Review of potential staff personnel  Budget planning and review	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	Selection of schools Review of potential staff personnel Budget planning and review Review of recommendations of subcontract	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	Selection of schools Review of potential staff personnel Budget planning and review Review of recommendations of subcontract Grant writing/submissions	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	Selection of schools Review of potential staff personnel Budget planning and review Review of recommendations of subcontract Grant writing/submissions Program planning/annual review	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	Selection of schools Review of potential staff personnel Budget planning and review Review of recommendations of subcontract Grant writing/submissions Program planning/annual review Fundraising/marketing program	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	Selection of schools Review of potential staff personnel Budget planning and review Review of recommendations of subcontract Grant writing/submissions Program planning/annual review Fundraising/marketing program Compliant to DoDI policies and review	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	Selection of schools Review of potential staff personnel Budget planning and review Review of recommendations of subcontract Grant writing/submissions Program planning/annual review Fundraising/marketing program Compliant to DoDI policies and review	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	
	Selection of schools Review of potential staff personnel Budget planning and review Review of recommendations of subcontract Grant writing/submissions Program planning/annual review Fundraising/marketing program Compliant to DoDI policies and review	or legal decision-making responsibility in	place of eithe	r the DoD Component or the local  Please identify the  TOP 3 functions with	

		Document	On File?
		Staff/Student Schedules	Choose Here
		Curriculum Outline	Choose Here
		Program Operations Manual	Choose Here
		Program Director's Guide	Choose Here
3.	Please indicate which of	Local/State Testing Data	Choose Here
	these core documents you	FY10 Strategic Plan/Program Goals	Choose Here
	have on file.	Memorandums of Understanding (MOU)	Choose Here
		Minutes of Board Meetings	Choose Here
		Bylaws and Articles of Incorporation	Choose Here
		Voluntary Participation Form	Choose Here
		Hold Harmless Agreement	Choose Here
		Emergency Health Form	Choose Here
		Public Affairs Release	Choose Here
		Incident Report Form	Choose Here
		Parent/Guardian Acknowledgement of Responsibility for Property Damage	Choose Here
		A written waiver from OASD/RA for academies located at non-military facilities	Choose Here
9.		there been any events that have had an on (e.g. Homeland Security, Iraq Information,	Choose Here
Оа.	If yes, please briefly explain the e	event(s and its effect on the program.	

0.5			E)/40
30a.	If yes, what residual consequences, if any, will	the event have into the	FY10 program year?
	New sites only. Did you receive a Program Dire	ector's Guide?	Choose Here
	New sites only. Do you have a program operati	ions manual?	Choose Here
<b>-</b> :			
rin	ancial Information		
31.	FY09 Academy Income (Do not use commas w	hen entering data. You r	must fill each hox )
, i .	Troo houderny meetine (se not use commus w	mon ontolling data. Tod i	Hade IIII dadii bax.j
	DoD Income (\$) Non-DoD Income (\$)	Total Income (\$)	
	\$ \$	\$	
32.	FY09 DoD Cash Expenditures (October 1, 2008 entering data. You must fill each box.)	3 - September 30, 2009)	(Do not use commas when
32.	entering data. You must fill each box.)		(Do not use commas when
32.		3 - September 30, 2009)  Amount Expended (\$)	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff	Amount Expended (\$)	
32.	entering data. You must fill each box.)  Catgory of Expenditure	Amount Expended (\$)	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings	Amount Expended (\$)  \$ [	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel	Amount Expended (\$)  \$  \$  \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies	Amount Expended (\$)  \$ \$ \$ \$ \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies  Equipment	Amount Expended (\$)  \$ \$ \$ \$ \$ \$ \$ \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies  Equipment  Contract Services	Amount Expended (\$)  \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies  Equipment  Contract Services  Communications/Outreach	Amount Expended (\$)  \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies  Equipment  Contract Services  Communications/Outreach  Total:	Amount Expended (\$)  \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies  Equipment  Contract Services  Communications/Outreach  Total:  Staff Detail: (Include benefits)	Amount Expended (\$)  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies  Equipment  Contract Services  Communications/Outreach  Total:  Staff Detail: (Include benefits)  Program Director	Amount Expended (\$)  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies  Equipment  Contract Services  Communications/Outreach  Total:  Staff Detail: (Include benefits)  Program Director  Deputy Director/Program Instructor	Amount Expended (\$)  \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
32.	entering data. You must fill each box.)  Catgory of Expenditure  Staff  Facilities/Furnishings  Transportation/Travel  Supplies  Equipment  Contract Services  Communications/Outreach  Total:  Staff Detail: (Include benefits)  Program Director  Deputy Director/Program Instructor  Program Instructor	Amount Expended (\$)  \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	

Catgory of Expenditure	Amount Expended (\$)	Percent of Total
Staff Salaries	\$	
Staff Development	\$	
Facilities/Furnishings	\$	
Transportation/Travel	\$	
Supplies	\$	
Equipment	\$	
Services	\$	
Program/Curriculum Development	\$	
Staff Detail: (Include benefits)	\$	
Communications/Outreach	\$	
Other	\$	
Total:	\$	
	not use commas when entering  Amount (\$)	data. You must fill each box.)  Percent of Total
Catgory of Expenditure		
Catgory of Expenditure Grants	Amount (\$)	
Catgory of Expenditure  Grants  Donations	Amount (\$)	
Catgory of Expenditure  Grants  Donations  State	Amount (\$)  \$ [	
Catgory of Expenditure  Grants  Donations  State	Amount (\$)  \$ \$ \$ \$	
Catgory of Expenditure  Grants  Donations  State	Amount (\$)  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$  \$	
Catgory of Expenditure  Grants  Donations  State	Amount (\$)  \$	
FY09 Sources of additional income (Do Catgory of Expenditure Grants Donations State Other (Please specify below)	Amount (\$)  \$	

	Donation Facilities	Source of Donation	Estimated Dollar Value
	Furnishings		
ı	Supplies		\$
			\$
	Transportation/Travel		\$
,	Equipment		\$
	Services		\$
	Communications/Outreach		\$
	Other		\$
5.	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding	Amount (\$)	mas when entering data.  Percent of Total
<b>.</b>	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding  Grants		mas when entering data.
	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding  Grants  Donations	Amount (\$)	mas when entering data.
3.	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding  Grants  Donations  State	Amount (\$)	mas when entering data.
).	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding  Grants  Donations	Amount (\$)  \$  \$	mas when entering data.
S.	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding  Grants  Donations  State	Amount (\$)  \$  \$	mas when entering data.
5.	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding  Grants  Donations  State	Amount (\$)  \$  \$  \$  \$  \$	mas when entering data.
	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding  Grants  Donations  State	Amount (\$)  \$	mas when entering data.
3.	FY10 Projected other income (Provide by You must fill each box.)  Source of Funding  Grants  Donations  State	Amount (\$)  \$	mas when entering data.

Supporting Materials and Suggestions											
37.			list of the sch								
	NOTE: Please enter	the full district name. Fo	or example, enter "North	n South Central Public So	chools" rather than jus	st "North South Central."					
	School Distric	ts									
38.	For each school sele Please record the pr	ect the district and scho incipal's name. Please r		wn menu and provide the in the format from the	ne mailing address, pho sample. If you do not	one number and principal's n use this format, the data will "Horace Mann."					
	School	District (Select from menu)	Type of School (Select from menu)	Principal Name	Address	City	State	ZIP	Phone Ex. (xxx) xxx-xxxx		
	Horace Mann Elementary School	Fairfax County Public Schools	Elementary	Sandy Smith	123 Test Street	Anywhere	PA	57069	(304) 555-1212		
39.	Please provi	de any sugges	stions regardin	g curriculum, (	operational co	oncerns, or progra	am imį	oeratives			

## **Dod 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 (mm/dd/yyyy) Please enter the name of your school What is your school's address? What is the name of your principal or contact person? What grade do you teach? Grade 3 Grade 4 Grade 5 Grade 6 Grade 7 Grade 8 I am a special class teacher I am a teaching assistant I am an administrator Other With what STARBASE location do you work?

d y	ou 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:
	CTARRACES
ow i	many years have you brought students to STARBASE?
4	This is my first year
4	2-4 years
4	5-7 years
4	8-10 years
4	11-15 years
4	Over 15 years
)W	many years have you been a teacher?
ow I	many years have you been a teacher?  This is my first year  2-4 years
ow I	This is my first year 2-4 years
ow I	This is my first year 2-4 years 5-7 years
ow I	This is my first year 2-4 years 5-7 years 8-10 years
ow	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years
ow	This is my first year 2-4 years 5-7 years 8-10 years
wc	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years
ow	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years
wcow i	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years
ow i	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years
ow I	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years
ow	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years
ow	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years
ow	This is my first year 2-4 years 5-7 years 8-10 years 11-15 years

Sele	ct the appropriate response for each item.
1). Is	there formal communication from the school that raises community awareness of the STARBASE program?
	Yes
	No
	Don't Know
2) Do	o you use DOD STARBASE materials/applications in your own classroom?
	Yes
	No
3) Do	you have DOD STARBASE take home/follow through activities beyond your classroom presentation?
	Yes
	No
4) H:	ave you recommended STARBASE to other teachers, principals, or school systems?
	Yes
	No
	your view, does the DOD STARBASE content and concepts help you reach your state requirements?
Sele	ct one response.  Helps reach state requirements
	Only indirectly helps meet state requirements
	Doesn't help reach state requirements
	booth thoip rough oldto requirements
H	Doesn't fit with state requirements at all

continued on next page

Read each of the following statements and indicate your agreement with the statement by selecting the appropriate										
response next to each item.										
Disagree										
	1	2	3	4	5	6	7			
After attending STARBASE, the students appear										
1 more interested in learning about math.										
2 more interested in learning about science.										
3 more willing to try new things.										
4 better at following directions.										
5 better at working in groups.										
6 more confident about what they can accomplish.										
7 more goal oriented.										
8 more comfortable with military personnel.										
9 more comfortable making decisions.										
10 more excited about their futures.										
11 more excited about learning.										
12 more likely to encourage each other.										
13 more willing to cooperate with each other.										
Please indicate your level of agreement with these sta	tements									
	Disagree						Agree			
	1	2	3	4	5	6	7			
After STARBASE, the students ask more questions about technology.										
2. STARBASE has helped to improve the students' understanding of science.										
3. STARBASE has helped to improve appreciation of how math can be applied to a variety of situations.										
4. STARBASE has helped to improve the climate for participative learning in the classroom.										
5. Because of my participation in STARBASE, I am more comfortable with military personnel.										

Please indicate your level of agreement with these statements. Disagree Agree 1 2 5 6 7 6. The students talk about STARBASE long after the program has ended. 7. STARBASE reinforces many positive behaviors I try to teach my students. 8. I use the resources STARBASE provides to teachers. 9. I would like more STARBASE resources to take back to my classroom. 10. My principal is a strong advocate of STARBASE. 11. My School Board is very involved in supporting STARBASE. 12. The STARBASE Instructors are good role models for the students. 13. I have included many STARBASE resources in my curriculum. 14. The students admire their STARBASE Instructors. 15. The STARBASE curriculum supports our state standards. 16. The children enjoy sharing their STARBASE experiences with others. 17. Parents are delighted that their children are participating in STARBASE. 18. The students enjoyed being on a military base. 19. The STARBASE experience will be a positive influence on students in coming years. 20. The STARBASE experience has been a positive influence on me personally. 21. Students who attend STARBASE perform better on standardized state assessments. 22. I look forward to my classes' continued participation in the STARBASE program. 23. After STARBASE attendance, there is increased participation in the Science Fair.

# **2009 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 9 hours
10 to 25 hours
26 to 50 hours
51 to 75 hours
76 to 100 hours
more than 100 hours

	Strong difference
	Significant difference
Ħ	Some difference
Ħ	Very little difference
	No difference
	Don't know
leas	se discuss DoD STARBASE's influence or lack of influence on your community.
leas	se discuss any feedback about the program that you have heard about the program from military personnel,
omi	munity leaders, parents and/or community members.
	munity leaders, parents and/or community members.  se discuss how your involvement in DoD STARBASE affects you.
Pleas	
F ask	se discuss how your involvement in DoD STARBASE affects you.  sed, would you recommend others volunteer their time to DoD STARBASE?  yes
Pleas	se discuss how your involvement in DoD STARBASE affects you.  sed, would you recommend others volunteer their time to DoD STARBASE?  yes  no  se select the DoD STARBASE location where you volunteer.

# **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 backgrounds, 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 Cs 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:

- 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
- 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 and 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 Harry S. 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 to 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 that 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.



# STATISTICAL FORMULAS

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

$$Xbar = \sum X/N$$
 
$$\sum X = the sum of all values of X$$
 
$$N = the sample size$$

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

$$s = [\sum x_i - xbar^2/n-1]^{1/2}$$

xbar = the sample mean xbar is generally represented by an x with a bar or line over the top <math>n = the sample size

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

$$t = Xbar_1 - Xbar_2/s_{x1bar-x2bar}$$

 $s_{x1bar-x2bar}$  = the standard deviation of the difference between the two variables

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

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

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

$$Y = a + b_1 X_1 + b_2 X_2 + ... + b_p X_p$$

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

"The DoD STARBASE Program is providing valuable educational and collaborative opportunities to participants...and, in doing so, making an important investment for the future of our nation."



## **ALABAMA**

# Montgomery

#### STARBASE Maxwell

Start Date: 2004

Service Component: Air Force

Miltary 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.

E-mail: Marvin.Haughton-02@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/Junior High School Wetumpka Intermediate School

District: Maxwell-Gunter Home School Association

Maxwell-Gunter Home School Association

District: Montgomery County Public School District

Wynton M. Blount Elementary School

Carver Elementary School
Catoma Elementary School
Dalraida Elementary School
Dannelly Elementary School
E.D. Nixon Elementary School
Floyd Elementary School

Forest Avenue Academic Magnet School
William R. Harrison Elementary School
Thomas L. Head Elementary School
Highland Avenue Elementary School
MacMillan International Academy
Morningview Elementary School

Paterson Elementary School
Pintlala Elementary School
Thelma Smiley Morris Elementary School
Walter Silas Garrett Elementary School

District: Department of Defense Elementary School

System (DODESS)

Maxwell AFB Elementary School

Walter T. McKee Elementary School

# **ALASKA**

# Anchorage

# STARBASE Alaska

Start Date: 2002

Service Component: 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

E-mail: shanna.mcpheters@alaska.gov

Web site: starbasealaska.org

# School Districts & Schools

District: Anchorage School District

Abbott Loop Elementary School
Airport Heights Elementary School
Aquarian Charter Elementary School
Bear Valley Elementary School

Educational Talent Search-UAA Chinook Elementary School

Inlet View Elementary School
Lake Otis Elementary School
Mt. Spurr Elementary School

Family Partnership Charter School

Orion Elementary School

Rabbit Creek Elementary School Rogers Park Elementary School

Taku Elementary School Tyson Elementary School Ursa Minor Elementary School Willow Crest Elementary School District: Matanuska School District

Colony Middle School Houston Middle School

Marsu Ideas

Teeland Middle School Wasilla Middle School

# ARIZONA

Tucson

#### STARBASE Arizona

Start date: 2005

Service Component: Air Force

Military Location: Davis-Monthan AFB

Address:

Tucson, AZ 85707 Tel: 520.228.7827 Fax: 520.228.0491 Director: Margaret Cole

5355 E. Granite St.

E-mail: margaret.cole@starbaseaz.com

#### School Districts & Schools

District: Amphitheater Public School District

Copper Creek Elementary School F.O. Holaway Elementary School Harelson Elementary School Keeling Elementary School

Marion Donaldson Elementary School Mesa Verde Elementary School Prince Elementary School Rio Vista Elementary School

District: Association of Christian Schools, International Cornerstone Christian Academy

District: Sunnyside Unified School District

Liberty Elementary School Los Ranchitos Elementary School

Rosemarie Rivera Elementary School

District: Vail School District Acacia Elementary School Cottonwood Elementary School Sycamore Elementary School

District: Other

Tucson Country Day School

## **CALIFORNIA**

#### Sacramento

#### **California STARBASE**

Start Date: 1993

Service Component: National Guard Military Location: California National Guard,

Sacramento Armory

Address:

8400 Okinawa Street, Suite 1 Sacramento, CA 95828

Tel: 916.387.7405 Fax: 916.387.8309 Director: John Lamb

E-mail: castarbase@sbcglobal.net Web site: www.starbaseca.org

#### School Districts & Schools

District: Elk Grove Unified School District

Arnold Adreani Elementary School Anna Kirchgater Elementary School

Barbara Comstock Morse Elementary School

Carroll Elementary School David Reese Elementary School Florence Markofer Elementary School Helen Carr Castello Elementary School Isabelle Jackson Elementary School John Reith Elementary School Joseph Sims Elementary School Maeola R. Beitzel Elementary School

Roy Herburger Elementary School Sierra Enterprise Elementary School Stone Lake Elementary School Union House 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 Mather Heights Elementary School Natoma Station Elementary School

Navigator Elementary School

Oak Chan Elementary School
Peter J. Shields Elementary School
Riverview Elementary School
Russell Ranch Elementary
Sandra J. Gallardo Elementary School
Theodore Judah Elementary School
White Rock Elementary School
Williamson Elementary School

District: Loomis Union School District
H. Clarke 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 Union 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
Cesar Chavez Intermediate School
David Lubin Elementary School
Ethel I. Baker Elementary School
Phoebe Hearst Elementary School

District: Twin Rivers Unified School District
Aero Haven Elementary School

Allison Elementary School
Dry Creek Elementary School
Foothills Oaks Elementary School
Frontier Elementary School

Althor althornary contest

Holmes AKA Creative Connections Arts Academy

Kohler Elementary School
Larchmont Elementary School
Madison Elementary School
Oakdale Elementary School
Orchard Elementary School
Pioneer Elementary School

Ridgepoint Elementary School

Rio Linda Elementary School Sierra View Elementary School Village Elementary School Woodridge Elementary School

District: Other

St. John Vianney Elementary 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
E-mail: nicholas.jordan@navy.mil

#### School Districts & Schools

District: Chula Vista Elementary School District
Harborside Elementary School
Johm J. Montgomery Elementary School
Otay Elementary School
Lilian J. Rice Elementary School

District: National City School District
El Toyon Elementary School
Lincoln Acres Elementary School
Olivewood Elementary School
Rancho De La Naciøn Elementary School

District: San Diego City Schools School District Jefferson Elementary School Porter Elementary School

# **CONNECTICUT**

#### Hartford

#### **STARBASE Hartford**

Start Date: 2001

Service Component: 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

E-mail: melissa.vanek@yahoo.com Web site: http://www.starbase-ct.com

#### School Districts & Schools

District: East Hartford Public School District

Anna E. Norris Elementary School Franklin H. Mayberry Elementary School Governor William Pitkin Elementary School

Hockanum Elementary School Holmes 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 Public School District
Capital Preparatory Magnet School

Jumoke Academy

Naylor Elementary School

District: New Britain Public Schools
Holmes Elementary School

# Waterbury

# **STARBASE Waterbury**

Start Date: 2003

Service Component: 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

E-mail: melissa.vanek@yahoo.com Web site: http://www.starbase-ct.com

#### School Districts & Schools

District: Hamden Public School District
Wintergreen Interdistrict Magnet School

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 Hopeville Elementary School

John G. Gilmartin Elementary School

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 Woodrow Wilson Elementary School

District: Watertown Public School
Polk Elementary School

District: Other

Our Lady of Mount Carmel 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

E-mail: nalo.washington@navy.mil

#### School Districts & Schools

District: District of Columbia Public School Systems

Amidon-Bowen Elementary School

Brent Elementary School

Brightwood Education Campus

Brookland Education Campus at Bunker Hill

Emery Education Campus Hendley Elementary School Hyde-Addison Elementary School

Leckie Elementary School

Ludlow-Taylor Elementary School

J.O. Wilson Elementary School

Malcolm X Elementary School Plummer Elementary School Raymond Elementary School

Ross Elementary School Stanton Elementary School

Thurgood Marshall Education Campus

Tubman Elementary School

Webb-Wheatley Education Campus

Whittier Education Campus

District: Other

Saint Peter's Interparish Elementary School Thea Bowman Preparatory Academy

#### **FLORIDA**

#### Jacksonville

#### STARBASE Florida Inc

Start Date: 1994

Service Component: 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

E-mail: gregory.stritch@fljack.ang.af.mil

## School Districts & Schools

District: Duval County Public School District
Carter G. Woodson Elementary School
Center Academy Elementary School

George Washington Carver Elementary School

Holiday Hill Elementary School Lone Star Elementary School Oak Hill Elementary School Reynolds Lane Elementary School S.P. Livingston Elementary School Seacoast Academy Elementary School

District: Nassau County Public School District
Sunshine Academy

#### 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 E-mail: deichling@aol.com

Web site:

http://www.cnet.navy.mil/community/starbase/sa.html

## School Districts & Schools

District: Escambia County Public School District

Allie Yniestra Elementary School Brentwood Elementary School C.A. Weis Elementary School Edgewater Elementary School Ensley Elementary School Jim Allen Elementary School Lincoln Park Elementary School O.J. Semmes Elementary School Sherwood Elementary School Warrington Elementary School

District: Other

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 E-mail: deichling@aol.com

Web site:

http://www.cnet.navy.mil/community/starbase/sa.html

# School Districts & Schools

District: Escambia County Public Schools
Escambia Westgate Academy

District: Santa Rosa County Public School District

Bagdad Elementary School

Bennett C. Russell Elementary School

Berryhill Elementary School Chumuckla Elementary School East Milton Elementary School Holley-Navarre Intermediate School Jay Elementary School Munson Elementary School
Oriole Beach Elementary School
Pea Ridge Elementary School
S.S. Dixon Intermediate School
W.H. Rhodes Elementary School

West Navarre Intermediate School

#### **GEORGIA**

#### Marietta

#### **Peach State STARBASE**

Start Date: 2001

Service Component: 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

E-mail: bill.wells4@ga.ngb.army.mil

#### School Districts & Schools

District: Atlanta Public School System

Scott Elementary School

District: Cobb County School District

Birney Elementary School Green Acres Elementary School Harmony Leland Elementary School

Hollydale Elementary School LaBelle Elementary School Mableton Elementary School Milford Elementary School Russell Elementary School

District: Marietta City Public School District

Hickory Hills Elementary School

District: Other

Families for Christ

Mount Paran Homeschool

Shout Homeschool

#### 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

E-mail: wesley@starbaserobins.org Website: www.starbaserobins.org

#### School Districts & Schools

District: Bibb County School District
Sonny Carter Elementary School
McKibben Lane 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

Tucker Elementary School Westside Elementary School

District: Twiggs County School District
Twiggs County Middle School

District: Other

Christian Fellowship Academy
Saint Peter Claver Catholic School

#### **HAWAII**

## Keaau

## STARBASE Hawaii-Keaau

Start Date: 2008

Service Component: 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

E-mail: starbasebigisland@yahoo.com

# Schools & School Districts

District: Waiakea Complex
Waiakea Elementary School

District: Southern School District (Kea'au Ka'u Pahoa)

Hawaii Academy of Arts and Sciences

Ke Kula o Nawahiokalaniopu'u Kea'au Elementary School Keonepoko Elementary School Mountain View Elementary School

Naalehu Elementary School Pahala (Kau) Elementary School Pahoa Elementary School

District: Other (private school)
St. Joseph Elementary School

#### Pearl Harbor

#### STARBASE Atlantis - Hawaii

Start Date: 2001

Service Component: Navy

Military Location: Navy Submarine Training Center Pacific

Address:

1130 Bole Loop

Ford Island, Bldg 39, Room 234

Pearl Harbor, HI 96860

Tel: 808.472.7389 Fax: 808.472.9923

Director: Joseph P. Barrett E-mail: 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

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

Ewa Elementary School

Iroquois Point Elementary School

District: Oahu Leeward School District, Nanakulii-Pearl

City-Waipahu Complex Area Lehua Elementary School

District: Other

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: Steven P. Surbrook E-mail: steven.surbrook@navy.mil

## School Districts & Schools

District: North Chicago School District #187 A.J. Katzenmaier Elementary School Forrestal Elementary School North Elementary School

District: Waukegan Public School District #60

Carman-Buckner Elementary School

Clearview Elementary School Glen Flora Elementary School

Glenwood Elementary School

Little Fort Elementary School

North Elementary School

Washington Elementary School

District: Zion Elementary School District #6

Shiloh Park Elementary School West Elementary School

#### **KANSAS**

Kansas City

## **STARBASE Kansas City**

Start Date: 2008

Service Component: 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

E-mail: jeff.gabriel@kstope.ang.af.mil Web site: www.kansasstarbase.org

## School Districts & Schools

District: Archdiocese of Kansas City John Paul II Catholic School Resurrection Catholic School St. Agnes Catholic School St. Patrick Catholic School Xavier Catholic School

District: Basehor-Linwood Unified School District 458

Basehor Elementary School

Glenwood Ridge Elementary School

Linwood Elementary School

District: Bonner Springs Unified School District 204

Delaware Ridge Elementary School

District: Kansas City KS Unified School District 500

Eugene Ware Elementary School Stony Point South Elementary School Thomas A. Edison Elementary School White Church Elementary School

District: Lawrence Unified School District 497

Kennedy Elementary School Pinckney Elementary School Woodlawn Elementary School

District: Leavenworth Unified School District 453

Anthony Elementary School

District: Olathe Unified School District 233
Ravenwood Elementary School

District: Oskaloosa Unified School District 341

Oskaloosa Elementary School

District: Shawnee Mission Unified School District 512

Nieman Elementary School

District: Other

Kansas City Christian School Westminster Christian Academy

Salina

#### **STARBASE Salina**

Start Date: 2008

Service Component: National Guard Military Location: National Guard Armory

Address:

Salina, KS 67401 Tel: 785.822.6602 Fax: 785.822.6600 Director: Jeff Gabriel

2929 Scanlan Ave.

E-mail: jeff.gabriel@kstope.ang.af.mil Website: www.kansasstarbase.org

# School Districts & Schools

District: Archdiocese of Salina Holy Cross Catholic School St. Mary's Catholic School

District: Concordia Unified School District 333

Concordia Middle School

District: Ell-Saline Unified School District 307

Ell-Saline Elementary School

District: Hutchinson Unified School District 308

Wiley Elementary School

District: North Ottawa County Unified School District 239

Minneapolis Grade School

District: Salina Unified School District 305

Coronado Elementary School Heusner Elementary School

Meadowlark Ridge Elementary School

Schilling Elementary School

Grace E. Stewart Elementary School

Sunset Elementary School

District: Twin Valley Unified School District 240

Bennington Grade School Tescott Elementary School

District: Other

Elyria Christian School McPherson Area Home School Salina Christian Academy

# Topeka

## **STARBASE Topeka**

Start Date: 1994

Service Component: National Guard

Military Location: Forbes Field, 190th Air Refueling Wing

Address:

5920 SE Coyote Dr. Topeka, KS 66619 Tel: 785.861.4709 Fax: 785.861.4127 Director: Jeff Gabriel

E-mail: jeff.gabriel@kstope.ang.af.mil Web site: www.kansasstarbase.org

School Districts & Schools

District: Archdiocese of Kansas City St. Matthew Elementary School

District: Auburn Washburn Unified School District 437

Indian Hills Elementary School Pauline South Intermediate School

District: Burlingame Unified School District 454

Burlingame Elementary School

District: Emporia Unified School District 253

Turning Point Learning Center

District: Jefferson County North Unified School

District 339

Jefferson County North Elementary School

District: Kaw Valley Unified School District 321

Rossville Elementary School St. Marys Elementary School District: Mill Creek Valley Unified School District 329
Alma Grade School

Maple Hill Elementary School

District: Mission Valley Unified School District 330
Mission Valley Elementary School

District: North Jackson Unified School District 335
Jackson Heights Elementary School

District: Onaga-Havensville-Wheaton Unified School

District 322

Onaga Elementary School

District: Rock Creek Unified School District 323 St. George Elementary School

District: Santa Fe Trail Unified School District 434

Carbondale Attendance Center Overbrook Attendance Center

District: Seaman Unified School District 345
East Indianola Elementary School
Rochester Elementary School

West Indianola Elementary School

District: Topeka Unified School District 501

Avondale East Elementary School

Linn Elementary School

McEachron Elementary School

Ross Elementary School

Scott Computer Technology Magnet School

Whitson Elementary School

District: Wamego Unified School District 320

West Elementary School

District: Other

Cair Paravel Latin School St. John Lutheran School

Topeka Adventist Christian School

Topeka Lutheran School

Wichita

**STARBASE Wichita** 

Start Date: 1993

Service Component: National Guard

Military Location: McConnell Air Force Base

Address:

52870 Jayhawk Drive Topeka, KS 67221

Tel: 316.759.7096 Fax: 316.759.7094

E-mail: jeff.gabriel@kstope.ang.af.mil Web site: www.kansasstarbase.org

School Districts & Schools

District: Andover Public Unified School District 385

Sunflower Elementary School

District: Augusta Public Unified School District 402

Ewalt Elementary School

District: Archdiocese of Wichita Holy Cross Catholic School St. Mary Catholic School

District: Mulvane Public School Mulvane Grade School

District: Valley Center Public Unified School District 262

Wheatland Elementary School

District: Wichita Public Unified School District 259

Allen Elementary School

Bostic Traditional Magnet 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: 318.456.1300 Fax: 318.456.1151 Director: Kathy Brandon

E-mail: kathy.brandon@barksdale.af.mil

Web site:

http://www.917wg.afrc.af.mil/units/starbaselouisiana/

School Districts & Schools

District: Bossier Parish School District

Benton Elementary School Carrie Martin Elementary School Central Park Elementary School Curtis Elementary School

Legacy Elementary School Meadowview Elementary School Plantation Park Elementary School

W.T. Lewis Elementary School

Waller Elementary School

District: Caddo Parish School District

Mooringsport Elementary School

Oil City Elementary School

Shreve Island Elementary School Werner Park Elementary School West Shreveport Elementary School

District: Other (Diocese of Shreveport)
St. John Berchmans Cathedral School

Pineville (formerly New Orleans)

#### **Pelican State STARBASE**

Start Date: 1999

Service Component: 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

E-mail: cheryl.arbour1@us.army.mil

# School Districts & Schools

District: Archdiocese of Alexandria Parochial Schools

Our Lady of Prompt Succor School

St. Francis Cabrini School

District: Rapides Parish Public Schools

Acadian Elementary School

Alma Redwine Elementary School

Cherokee Elementary School

Glenmora Elementary School

L.S. Rugg Elementary School

Lessie Moore Elementary School

Martin Park Elementary School

Mary Goff Elementary School

Montessori Educational Center

Northwood Elementary School

Paradise Elementary School

Peabody Montessori Elementary School

Pineville Elementary School

Poland Junior High School

Ruby Wise Elementary School

W.O. Hall Math and Science Magnet School

# **MAINE**

#### Bangor

# **STARBASE Maine**

Start Date: 2001

Service Component: 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

E-mail: michele.barnes@ang.af.mil

# School Districts & Schools

District: Alternative Organizational Structure 91

Trenton Elementary School

District: Brewer School Department

State Street School

District: Dedham School Department

Dedham Elementary School

District: Hermon School Department

Hermon Middle School

District: Orrington School Department

Center Drive School

District: Regional School Unit 22

George B. Weatherbee School

Leroy H. Smith School

District: Regional School Unit 24

Beech Hill School

District: Regional School Unit 25

Bucksport Middle School

Orland Consolidated School

District: Regional School Unit 26
Asa C. Adams School
Glenburn Elementary School

District: Union 60

Greenville Middle/High School Nickerson Elementary School

District: Regional School Unit 63 Holbrook Elementary School

District: Regional School Unit 87 Carmel Elementary School

District: Union 93

Surry Elementary School

District: Other (Diocese of Portland)
All Saints Catholic 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 Patuxent River, MD 20670-1463

Tel: 301.342.2789
Fax: 301.342.5457
Director: Julie Guy
E-mail: Julie.guy@navy.mil

School Districts & Schools

District: Calvert County Public School District

Barstow Elementary School Calvert Elementary School Dowell Elementary School District: St. Mary's County Public School District

Benjamin Banneker Elementary School Chesapeake Public Charter School

Dynard Elementary School

Lexington Park Elementary School

Ridge Elementary School

District: Other

Father Andrew White S.J. School

King's Christian Academy
Little Flower School
St. John's School

## **MICHIGAN**

Battle Creek

**STARBASE Battle Creek** 

Start Date: 2006

Service Component: 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

E-mail: BMedaugh@STARBASEBattleCreek.org

Web site: www.STARBASEOne.org

School Districts & Schools

District: Albion Public Schools

Washington Gardner Elementary School

District: Battle Creek Public Schools

Fremont Elementary School Franklin Elementary School

21st Century Community Learning Center

Urbandale Elementary School Springfield Middle School Valley View Elementary School

District: Bellevue Community Schools
Bellevue Elementary School

District: Delton Kellogg Public Schools

Delton Kellogg Middle School

District: Kalamazoo Public Schools
Milwood Magnet Middle School

District: Lakewood Public Schools
Sunfield Elementary School
Woodland Elementary School

District: Parchment Public Schools

North Elementary School

District: Thornapple Kellogg Schools
Page Elementary School

District: Three Rivers Community Schools
Andrews Elementary School
Park Elementary School

# Selfridge

#### **STARBASE One**

Start Date: 1991

Service Component: 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

E-mail: rsimms@starbaseone.org
Web site: www. STARBASEOne.org
School Districts & Schools
District: Anchor Bay School District
Ashley Elementary School
MacDonald Elementary School
Naldrett Elementary School

District: Detroit Public School District

Bates Academy

Bunche Elementary School

Clippert Academy

Emerson Elementary School Golightly Education Center Harding Elementary School Hutchinson Leadership Academy John C. Marshall Elementary School

Mann Elementary School Nolan Elementary School

O.W. Holmes Elementary-Middle School

Stark Elementary School

District: L'Anse Creuse Public School District

Carkenord Elementary School South River Elementary School Yacks Elementary School

District: Lamphere Schools
Hillier Elementary School

District: Mount Clemens Community School District

Seminole Academy

District: New Haven Community Schools

New Haven Elementary 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

District: Other

Enrich Home School Plymouth Educational Center Trinity Lutheran School

## **MINNESOTA**

Minneapolis/St. Paul

# **STARBASE Minnesota**

Start Date: 1993

Service Component: 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

E-mail: kvanwie@stabasemn.org Web site: www.starbasemn.org

School Districts & Schools

District: Minneapolis Public School District

Andersen Elementary School Andersen Open School Emerson Spanish Immersion Learning School Jefferson Community School Keewaydin Community School Olson Upper Academy 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

New Spirit School

District: St. Paul Parochial Schools

Maternity of Mary - St. Andrew School

Risen Christ Catholic School

St. Agnes School St. Bernard's School

St. Jerome's Catholic School

St. Matthew's School

St. Peter Claver School

St. Rose of Lima School

Trinity Catholic 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 Hmong Studies Elementary School

John A. Johnson Achievement Plus

Elementary School

Phalen Lake Elementary School Prosperity Heights Elementary School

World Cultures Magnet Elementary School

# **MISSISSIPPI**

# Gulfport

# STARBASE Atlantis-Gulfport

Start Date: 2001

Service Component: Navy

Military Location: Naval Construction Training Center

Address:

5510 CBC 8th Street Gulfport, MS 39501

Tel: 228.871.3735
Fax: 228.871.3468
Director: Shelley Bard
E-mail: shelley.bard@navy.mil

# School Districts & Schools

District: Harrison County School District

Delisle Elementary School Lyman Elementary School

North Woolmarket Elementary School

Pineville Elementary School Saucier Elementary School Three Rivers Elementary School Woolmarket Elementary School

District: Long Beach School District
Harper-McCaughan Elementary School

W.J. Quarles Elementary School

District: Other

Christian Collegiate Academy Coast Episcopal School St. Vincent de Paul School

#### Meridian

# STARBASE Atlantis-Meridian

Start Date: 2002

Service Component: Navy

Military Location: Naval Air Station Meridian & Choctaw

Indian Reservation

Address:

266 Rosenbaum Avenue Meridian, MS 39309

Tel: 601.679.3809 Fax: 601.679.2448 Director: Pam Litton

E-mail: pam.litton@navy.mil

## School Districts & Schools

District: Lauderdale County School District

Clarkdale Middle School Northeast Middle School

District: Meridian Public School District

Crestwood Elementary School
Oakland Heights Elementary School
Parkview Elementary School
Poplar Springs Elementary School
West Hills Elementary School
Witherspoon Elementary School

District: Other

Russell Christian School Lamar Elementary School

St. Patrick School

# **MONTANA**

#### Helena

#### **STARBASE Montana**

Start Date: 2007

Service Component: National Guard Military Location: Fort Harrison

Address:

1956 Mt. Majo Street P.O. Box 4789

Fort Harrison, MT 59636

Tel: 406.324.3727
Fax: 406.324.3735
Director: Michael Stone
E-mail: mstone@bresnan.net

#### School Districts & Schools

District: East Helena Public School District

R.H. Radley Elementary School

District: Helena Public School District

Broadwater Elementary School Bryant Elementary School Central Elementary School

Warren 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

District: Lincoln Public School District
Lincoln 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: 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: Sheryl Pawelko

E-mail: spawelko@starbasene.org

Web site: www.starbasene.org

## School Districts & Schools

District: Catholic Diocese of Lincoln

St. John's Elementary School St. Patrick's Elementary School St. Mary's Elementary School St. Theresa's Elementary School

District: Lincoln Public School District

Belmont Elementary School
Everett Elementary School
Hartley Elementary School
Holmes Elementary School
Huntington Elementary School
McPhee Elementary School
Norwood Park Elementary School
Saratoga Elementary School
West Lincoln Elementary School
Zeman Elementary School

District: Other

Good Shepherd Elementary School

Helen Hyatt Academy

Parkview Christian Elementary School Lincoln Christian Elementary School Messiah Lutheran Elementary School Prairie Hill Learning Center Wegner School Zion Lutheran 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

E-mail: ronda.cole@kirtland.af.mil

# School Districts & Schools

District: Archdiocese of Santa Fe

Our Lady of the Annunciation School

Our Lady of Fatima School Queen of Heaven School

District: Albuquerque Public Schools District

Jimmy Carter Middle School

La Academia de Esperanza Charter School

Madison Middle School McKinley Middle School Sandia Base Elementary School Van Buren Middle School Washington Middle School

District: Belen Consolidated Schools District

Belen Middle School

La Merced Elementary School

District: Bernalillo Public Schools District

Bernalillo Middle School Santo Domingo Middle School

District: BIA-Southern Pueblos Agency
San Felipe Pueblo Elementary School

District: Grants-Cibola County Schools

Mesa View Elementary School

District: Magdalena Municipal Schools

Magdalena Middle School

District: Moriarty-Edgewood School District

Edgewood Middle School

South Mountain Elementary School

District: Santa Fe Public Schools District

Kaune Elementary School

District: Socorro Consolidated Schools District

Cottonwood Valley Charter School

District: Other

Christ Lutheran School Hope Christian School

Menaul School

Prince of Peace School

San Diego Riverside Charter School

# **NORTH CAROLINA**

#### Charlotte

# STARBASE North Carolina-Charlotte

Start Date: 1993

Service Component: 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

E-mail: Barbara.miller.ctr@ncchar.ang.af.mil

School Districts & Schools

District: Brunswick County Schools

Jesse Mae Monroe Elementary School

District: Iredell County School District

Mooresville Homeschool Group

Sweet Water Elementary School

District: Charlotte-Mecklenburg Schools

Allenbrook Elementary School Elon Park Elementary School Pawtuckett Elementary School Reedy Creek Elementary School Smith Academy of International Languages Torrence Creek Elementary School

District: Randolph County Schools
Southmont Elementary School

District: Rutherford County Schools
Spindale Elementary School

District: Thomasville City Schools

Liberty Drive Elementary School

Kure Beach

#### **STARBASE North Carolina-Fort Fisher**

Start Date: 2004

Service Component: 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

E-mail: Barbara.miller.ctr@ncchar.ang.af.mil

# School Districts & Schools

District: Brunswick School District
Bolivia Elementary School
Lincoln Elementary School
Southport Elementary School
Supply Elementary School
Union Elementary School

Virginia Williamson Elementary School

Waccamaw Elementary School

District: Dare School System
Kitty Hawk Elementary School

District: Edgecomb School District
Coker-Wimberly Elementary School

District: Harnett School District
Anderson Elementary School

District: Jones School District
Trenton Elementary School

District: Martin School District

E.J. Hayes Elementary School

District: New Hanover County Schools

Blair Elementary School

Bradley Creek Elementary School
Carolina Beach Elementary School
Codington Elementary School
College Park Elementary School
Rachel Freeman School of Engineering
Mary C. Williams Elementary School
Winter Park Elementary School

District: Wilson School District
Elm City 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

Minot AFB, ND 58704

Tel: 701.727.3334 Director: Matt Balas

E-mail: matthew.balas@minot.k12.nd.us

Web site: www.starbasend.org School Districts & Schools

District: Bowbells Public School District

Bowbells Public School

District: Eureka Public School District

Eureka Public School

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 Northshore Elementary 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
Our Redeemer's Christian 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

District: Surrey Public School District

South Prairie Public School

Surrey Public School

District: United Public School District
Burlington 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: 937.255.0692 Fax: 937.904.8033

Director: Kathleen Schweinfurth

E-mail: Kathleen.schweinfurth@wpafb.af.mil

Web site: 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: Northeastern Local Schools
South Vienna Elementary School

District: Springfield City School District

Horace Mann Elementary School
Lincoln Elementary School
Perrin Woods Elementary School
Simon Kenton Elementary School
Snowhill Elementary School
Snyder Park Elementary School
Warder Park/Wayne Elementary School

#### **OKLAHOMA**

#### Oklahoma City

# STARBASE Oklahoma-Oklahoma City

Start Date: 2001

Service Component: 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: Bill Scott

E-mail: bill.scott@ang.af.mil Web site: www.starbaseok.org School District & Schools

District: Arapaho Public School District
Arapaho Elementary School

District: Archdiocese of Oklahoma City
Bishop John Carroll Catholic School
St. Charles Borromeo Catholic School
St. Philip Neri Catholic School

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

District: Canute Public School District
Canute Elementary School

District: Cheyenne Public School District Cheyenne Elementary School

District: Clinton Public School District
Washington Elementary School

District: Elk City Public School District Grand View Elementary School

District: Erick Public School District
Erick Elementary School

District: Hammon Public School District
Hammon Elementary School

District: Leedey Public School District Leedey Elementary School District: Merritt Public School System Merritt Elementary School

District: Midwest City-Del City Public School District
Del City Elementary School

District: Millwood Public School District
Millwood Arts Academy
Millwood Elementary

District: Mountain View Public School District

Mountain View-Gotebo Elementary School

District: Oklahoma City Public School District
Hawthorne Elementary School
Sequoyah Elementary School

District: Sentinel Public School District
Sentinel Elementary School

District: Union City School District
Union City Elementary School

District: Western Heights Public School District
Winds West Elementary School

District: Other

Marcus Garvey Leadership Charter School Bethany Christian Academy

Tulsa

#### STARBASE Oklahoma-Tulsa & NAI

Start Date: 1993

Service Component: 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: Bill Scott

E-mail: bill.scott@ang.af.mil Web site: www.starbaseok.org

School Districts & Schools

District: Anderson Public School District
Anderson Elementary School

District: Barnsdall Public School District
Barnsdall Elementary School

District: Bishop Public School System
Bishop Elementary School

District: Catoosa Public School System
Cherokee Elementary School

District: Diocese of Tulsa
Saints Peter & Paul Catholic School

District: Elgin Public School System
Elgin Elementary School

District: Fletcher Public School System Fletcher Elementary School

District: Flower Mound Public School System Flower Mound Elementary School

District: Tulsa Public Schools

Alcott Elementary School
Bryant 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: Other

Deborah Brown Community School Rejoice Christian Academy

Native American Initiative (Outreach)

School Districts & Schools

District: Carnegie Public School District

Carnegie Elementary School

District: Diocese of Tulsa
St. Joseph's Catholic School

District: Gore Public School District
Gore Elementary School

District: Kansas Public School District
Kansas Elementary School
Kansas Middle School

District: Kinta Public School District
Kinta Elementary School

District: Lawton Public School System

BC Swinney Elementary School
Country Club Heights Elementary School
Geronimo Road Elementary School
Pioneer Park Elementary School
Sheridan Road Elementary School
Sullivan Village Elementary School
Whittier Elementary School
Wilson Elementary School

District: Muskogee Public School District
Creek Elementary School
Grant Foreman Elementary School
Midway Elementary School
Pershing Elementary School
Sadler Arts Academy
Tony Goetz Elementary School

District: Norwood Public School District
Norwood Elementary School

District: Okay Public School District
Okay Elementary School

District: Oktaha Public School District
Oktaha Elementary School

District: Pryor Public School District
Jefferson Elementary School
Lincoln Elementary School
Osage Elementary School
Roosevelt Elementary School
Washington Elementary School

District: Salina Public School District
Braggs Elementary School
Salina Elementary School

District: Tahlequah Public School District
Woodall Elementary School

District: Tenkiller Public School System
Tenkiller Elementary School

District: Warner Public School District
Warner Elementary School

District: Webbers Falls Public School District
Webbers Falls Elementary School

District: Other
United Methodist Boys Ranch
Tahlequah Methodist Girls home

# **OREGON**

#### Klamath Falls

# **STARBASE Kingsley**

Start Date: 1993

Service Component: National Guard

Military Location: Oregon Air National Guard

173rd Fighter Wing Kingsley Field Klamath, OR Address:

> 302 Bong Street, Suite 19 Klamath Falls, OR 97603

Tel: 541.885.6472 Fax: 541.885.6196

Director: Marsha Beardslee E-mail: starbase2@earthlink.net

Web site: www.mil.state.or.us/starbaseor/starbasekfalls

# School Districts & Schools

District: Klamath County School District

Altamont Elementary School

Bonanza Schools

Chiloquin Elementary School Fairhaven Elementary School Ferguson Elementary School

Gilchrist Schools

Henley Elementary School Keno Elementary School Malin 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

District: Other

Hosanna Christian School

## Portland

#### **STARBASE Portland**

Starting Date: 1993

Service Component: National Guard

Military Location: Jackson Armory/Portland Air National

Guard Base Address:

5266 NE Cornfoot Road Portland, OR 97218 Tel: 503.916.5404 ext. 1061

Fax: 503.916.2795 Director: Marilyn Sholian

E-mail: Msholian@pps.k12.or.us

Web site:

www.mil.state.or.us/starbaseor/starbasepdx/starbase.html

# School Districts & Schools

District: Canby Public School District Howard Eccles Elementary School

Lee Elementary School

District: North Clackamas Public School District

Concord Elementary School

Cascade Heights Public Charter School

District: Portland Christian School District

Portland Christian School

District: Portland Public School District

Arleta Elementary School

Beverly Cleary/Fernwood Campus Elementary School

Bridger Elementary School

Buckman Arts Focus Elementary School

Faubion Elementary School
Grout Elementary School
Irvington Elementary School
James John Elementary School
Humboldt Elementary School
Laurelhurst Elementary School
Markham Elementary School
Peninsula Elementary School
Rigler Elementary School
Rosa Parks Elementary School
Whitman Elementary School
Woodstock Elementary School

District: Other

Multisensory Learning Academy

## **PENNSYLVANIA**

## Pittsburgh

# STARBASE Atlantis-Pittsburgh

Start Date: 2002

Service Component: Navy

Military Location: Naval Operational Support Center

Address:

625 East Pittsburgh/McKeesport Blvd.

North Versailles, PA 15137

Tel: 412.673.0801 x135 Fax: 412.673.1381

Director: Ken C. Mechling, Jr.

E-mail: starbase.ken.mechlingjr@comcast.net Web site: www.starbase-atlantis-pittsburgh.org

#### School Districts & Schools

District: California Area School District

California Area Intermediate Middle School

District: Diocese of Pittsburgh School District

Good Shepherd Catholic School

St. Bernadette School

St. Bartholomew School

St. Irenaeus School

St. Joseph School

Word of God Catholic School

St. Bartholomew School

District: East Allegheny School District

Logan Middle School

District: McKeesport Area School District

Cornell Intermediate School

District: Monessen City School District

Monessen Elementary Center

District: Penn Hills School District

Penn Hebron Elementary Academy

District: Pittsburgh Public School District

Urban League of Greater Pittsburgh Charter School

# **PUERTO RICO**

#### Carolina

#### **STARBASE Puerto Rico**

Start Date: 1995

Service Component: National Guard

Military Location: Puerto Rico National Guard, Muñiz AFB

Address:

200 José A. Santana Ave.

Muñiz ANG Base Carolina, PR 00979

Tel: 787.253.7502 Fax: 787.253.2513 Director: Idabells Matos

E-mail: idabells.matos@prsdanj.ang.af.mil

# School Districts & Schools

District: Arecibo Educational Region

Escuela Elemental Augusto Cohen

Escuela Elemental Clemente Ramirez De Arellano

Escuela Elemental José Meléndez Ayala

Escuela Elemental Perchas Diaz

Escuela Elemental Segunda Unidad Antonio Reyes

Escuela Intermedia Francisco Frias Morales

Escuela Intermedia Segunda Unidad Antonio Reyes

District: Bayamón Educational Region

Escuela Intermedia De La Comunidad Gato I Escuela Intermedia Jesús Sánchez Erazo Escuela Elemental Maria C. Osorio

District: Caguas Educational Region

Escuela Elemental Inés Mendoza

Escuela Elemental Bilingüe José Mercado

Escuela Elemental Segunda Unidad Mercedes Palma

Escuela Intermedia Coqui

Escuela Intermedia Oscar Porrata Doria

Escuela Intermedia Pedro Laboy

Escuela Intermedia Rexford Guy Tugwell Escuela Intermedia Segunda Unidad

Frederico Degetau

District: Humacao Educational Region

Escuela Elemental Antera Rosado Fuentes

Escuela Elemental Cruz Ortiz Stella

Escuela Elemental La Ponderosa

Escuela Elemental Eugenio Maria De Hostos

Escuela Elemental Maria M. Simmons

Escuela Intermedia Antonio R. Barceló

Escuela Intermedia Segunda Unidad José Calzada Ferrer

District: Mayaguez Educational Region

Escuela Elemental Juan Cardona Rodriguez

Esuela Intermedia Narciso Rabell

District: Ponce Educational Region

Escuela Elemental Francisco Zayas

Escuela Elemental Hilda Raquel Mateo

Escuela Elemental Julio Alvarado

Escuela Elemental Luis Muñoz Rivera I

Escuela Intermedia Elvira Vicente

Escuela Intermedia Rafael Irizarry Rivera

District: San Juan Educational Region

Escuela Elemental Antonio S. Pedreira

Escuela Elemental Villa Granada

Escuela Elemental Luis Muñoz Rivera (Principal

Natividad Riviera; San Juan, PR)

Escuela Elemental Luis Muñoz Rivera (Principal

Maximina Perera; Carolina, PR)

Escuela Intermedia República de Purú

Escuela Intermedia Andrés Valcárcel

Escuela Rafael Cordero Intermedia

Escuela Intermedia Carvin School

District: Trujillo Alto Region

Oficina De Asuntos De La Juventud

#### **RHODE ISLAND**

# Newport

#### **STARBASE Atlantis-Newport**

Starting Date: 2002

Service Component: Navy

Military Location: Naval Station Newport

Address:

440 Meyerkord Ave.

Perry Hall

Newport, RI 02841

Tel: 401.841.4072

Fax: 401.841.4075

Director: Patrick F. Rossoni

E-mail: 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

Carey Elementary School

Coggeshall Elementary School

Cranston-Calvert Elementary School

Sullivan Elementary School

Underwood Elementary School

District: North Kingstown School Department

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.

E-mail: starbasemcas1@embarqmail.com

# School District & Schools

District: Beaufort County School District

Beaufort Elementary School

Bluffton Elementary School

Broad River Elementary School

Coosa Elementary School

Hilton Head School for the Creative Arts

James J. Davis Elementary School

Joseph F. Shanklin Elementary School

Lady's Island Elementary School

Mossy Oaks Elementary School

Okatie Elementary School

Port Royal Elementary School

M.C. Riley Elementary School

Red Cedar Elementary

continued

Shell Point Elementary School St. Helena Elementary School Whale Branch Elementary School

District: Colleton County School District

Bells Elementary School
Black Street Early Childhood Center
Cottageville Elementary School
Forest Hills Elementary School
Hendersonville Elementary School
Northside Elementary School

District: DoD Schools

Bolden Elementary School

District: Hampton County School District 1

Brunson Elementary School Fennell Elementary School Hampton Elementary School Varnville Elementary School

District: Hampton County School District 2

Estill Elementary School

District: Jasper County School District
Ridgeland Elementary School

District: Other

Agape Christian Academy

Beaufort Academy

Beaufort Marine Institute

Community Bible Christian Academy Home School Group of the Lowcountry

St. Peter's Catholic School

## Columbia

## **STARBASE Swamp Fox**

Start Date: 2001

Service Component: 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

E-mail: john.motley.1@ang.af.mil Web site: www.starbasesc.com

## School Districts & Schools

District: Richland County School District 1

Bradley Elementary School

Caughman Road Elementary School Forest Heights Elementary School Gadsden Elementary School Hopkins Elementary School Horrell Hill Elementary School

Webber Elementary School

District: Richland County School District 2
North Springs Elementary School

District: Sumter County School District 2

High Hills

District: Other

Birchwood School

Saint Joseph Catholic School

Saint Martin DePorres 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

E-mail: RCSTARBASE@hotmail.com

## School Districts & Schools

District: Douglas School District 51-1 Vandenburg Elementary School

District: Rapid City Area School District 51-4

Black Hawk Elementary School
Canyon Lake Elementary School
General Beadle Elementary School
Horace Mann Elementary School
Knollwood Elementary School

Rapid Valley Elementary School Robbinsdale Elementary School South Park Elementary School Valley View Elementary School

District: Wall School District 51-5 Wall Elementary School

District: Other

Home School Association
Zion Lutheran Elementary 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: Susan Winter E-mail: donna@sdstarbase.org

## School Districts & Schools

District: Garretson Public School District
Garretson Public School

District: Sioux Falls Public School District

All City Elementary School
Anne Sullivan Elementary School
Eugene Field Elementary School
Garfield Elementary School
Hawthorne Elementary School
Hayward Elementary School
Jefferson Elementary School
Laura B. Anderson Elementary School
Longfellow Elementary School
Renberg Elementary School
Terry Redlin Elementary School

NOVA (Native American Outreach)

School Districts & Schools

District: American Horse School

American Horse Elementary School

District: Cheyenne River BIA Schools 20302 Cheyenne Eagle Butte Upper Elementary School

District: Crazy Horse School
Crazy Horse School

District: Crow Creek Sioux Tribal School 34301 Crow Creek Elementary Tribal School

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

District: Dupree School District 64-2

Dupree Elementary School

District: Enemy Swim Tribal School

Enemy Swim Day School

District: Little Wound School System
Little Wound Elementary School

District: Loneman School Corporation
Loneman School Corporation

District: McIntosh School District 15-1 McIntosh Elementary School

District: Mobridge School District 62-3 Mobridge Elementary School

District: Oelrichs School District
Oelrichs Elementary School

District: Red Cloud Indian School

Our Lady of Lourdes Elementary School

Red Cloud Elementary School

District: Rock Creek Tribal School

Rock Creek Elementary School

District: Rosebud School District
Rosebud Elementary School

District: Shannon County District

Batesland Elementary School

Rockyford Elementary School

Red Shirt Elementary School

Wolf Creek Elementary School

District: Sitting Bull Tribal School
Sitting Bull Elementary School

District: Smee School District
Wakpala Elementary School

District: St. Francis Indian School St. Francis Indian School

District: St. Joseph's Indian School 32305 St. Joseph's Indian School

District: Timber Lake School District 20-3
Timber Lake Elementary School

District: Tiospa Zina Tribal School
Tiospa Zina Elementary School

District: Tiospaye Topa School System 20303
Tiospaye Topa Elementary School

District: Todd County School District
He Dog Elementary School
Klein Elementary School
Lakeview Elementary School
Littleburg Elementary School
Okreek Elementary School
Spring Creek Elementary School
South Elementary School

District: Wagner School System Wagner Middle School

District: Wounded Knee School System
Wounded Knee School System

## **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

E-mail: crystal.trujillo@navy.mil

#### School Districts & Schools

District: Corpus Christi Independent School District

Early Childhood Development Center

Lamar Elementary School
Luther Jones Elementary School
Windsor Park 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: 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 E-mail: gail.whittemore@ang.af.mil

## School Districts & Schools

District: Archdiocese of Galveston-Houston
Our Lady of Fatima Catholic School
True Cross Catholic School

District: Galena Park Independent School District
MacArthur Elementary School

District: Hitchcock Independent School District
Crosby Middle School

District: Houston Independent School District

Betsy Ross Elementary School
Cornelius Elementary School
De Zavala Elementary School
Gordon Elementary School
Lantrip Elementary School
Law Elementary School
Park Place Elementary School
Pugh Elementary School
Sanchez Elementary School
Valley West Elementary School
Wainwright Elementary School

District: La Marque Independent School District
Highlands Elementary School
Rizzuto Elementary School

District: La Porte Independent School District
Rizzuto Elementary School

District: Pasadena Independent School District
Genoa Elementary School
Morris Middle School
Meador Elementary School
Pomeroy Elementary School

District: Sheldon Independent School District

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

District: Shepherd Independent School District Shepherd Intermediate School

District: Other

Gulf Coast Christian Scholars Home School

## 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 E-mail: starbase@stic.net

# School Districts & Schools

District: Archdiocese of San Antonio Schools

Blessed Sacrament Elementary School
St. Paul's Catholic Elementary School

District: Edgewood Independent School District
Cenizo Park Elementary School
Gardendale Elementary School

District: San Antonio Independent School District
Fenwick Elementary School
Knox Elementary School
Riverside Park Elementary School
Rogers Elementary School
Steele Elementary School
WW White Elementary School

District: South San Antonio Independent School District
Athens Elementary School
Frank Madla Elementary School

District: Southwest Independent School District
Kriewald Elementary School
Sky Harbour Elementary School

## **VERMONT**

#### Rutland

#### STARBASE Vermont-Rutland

Start Date: 2001

Service Component: National Guard Military Location: Vermont National Guard

Address:

Rutland Armory 15 West Street Rutland, VT 05701

Tel: 802.786.3820 Fax: 802.728.3822 Director: Doug Gilman

E-mail: Douglas.gilman@vtburl.ang.af.mil

Web site: www.starbasevt.org

#### School Districts & Schools

District: Addison Central Supervisory Union Ripton Elementary School

Ripton Elementary School

Salisbury Community Elementary School

District: Addison Rutland Supervisory Union Bensen Village Elementary School Orwell Village Elementary School

District: Bennington Rutland Supervisory Union

Currier Memorial USD #23

District: Rutland Central Supervisory Union

Proctor Elementary

District: Rutland City School District
Rutland Intermediate School

District: Rutland Northeast Supervisory Union

Lothrop School

Neshobe 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

Shaftsbury Elementary School

District: Windsor Central Supervisory Union

Bridgewater Village Elementary School

Sherburne Elementary School

District: Windsor Northwest Supervisory Union

Stockbridge Central School

District: Windsor Southwest Supervisory Union

Cavendish Town Elementary School

District: Other

Christ the King Elementary School

Dorr Drive Christian School

Kurn Hattin Homes

Rutland Area Christian Elementary School

# South Burlington

# STARBASE Vermont-South Burlington

Start Date: 1994

Service Component: 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

E-mail: douglas.gilman@ang.af.mil Web site: www.starbasevt.org

#### School Districts & Schools

District: Addison Northeast Supervisory Union
Bristol Elementary School

Lincoln Community

District: Addison Northwest Supervisory Union

Vergennes Elementary School

District: Burlington Public School District

C.P. Smith Elementary School

H.O. Wheeler Elementary School

J. J. Flynn Elementary School

Lawrence Barnes Elementary School

District: Franklin Central Supervisory Union St. Albans Town Elementary School

District: Franklin Northeast Supervisory Union Berkshire Elementary School

District: Franklin West Supervisory Union Bellows Free Academy

District: Grand Isle Supervisory Union
Folsom Education and Community Center
Grand Isle Elementary School
Isle La Motte Elementary School

District: Lamoille North Supervisory Union
Cambridge Elementary School

District: Winooski School District

John F. Kennedy School

District: Other

Central Vermont Catholic School

Christ the King Home School Group

## **VIRGINIA**

Norfolk

#### STARBASE Atlantis-Norfolk

Start Date: 1995

Service Component: Navy

Military Location: Naval Station Norfolk

Address:

Building N25 Room 252 1474 Gilbert Street Norfolk, VA 23511

Tel: 757.445.5905 Fax: 757.445.2624 Director: Laura Bennett E-mail: laura.bennett@navy.mil

Web site:

www.netc.navy.mil/centers/starbase.norfolk/index.html

School Districts & Schools

District: Norfolk Public School District

Fairlawn Elementary School Ghent Elementary School Granby Elementary School Ingleside Elementary School Lindenwood Elementary School James Monroe Elementary School Oakwood Elementary School P.B. Young Sr. Elementary School St. Helena Elementary School Tidewater Park 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

E-mail: morrell.yates@navy.mil

Web site: https://www.npdc.navy.mil/slc/ttfbangor/

# School Districts & Schools

District: Central Kitsap School District
Brownsville Elementary School
Cottonwood Elementary School
Emerald Heights Elementary School
Green Mountain Elementary School
Jackson Park Elementary School
PineCrest Elementary School
Silver Ridge Elementary School

District: Chimacum School District
Chimacum Elementary School

District: North Kitsap School District
Breidablik Elementary School
Richard Gordon Elementary School
Hilder Pearson Elementary School
Poulsbo Elementary School
Suquamish Elementary School
Vinland Elementary School
David Wolfle Elementary School

District: Other

Concordia Lutheran School

Peace Lutheran Elementary School

# West Virginia

## Charleston

#### West Virginia STARBASE Academy

Start Date: 2001

Service Component: 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

E-mail: wvang.starbase@ang.af.mil Web site: www.wvstarbase.org

## School Districts & Schools

District: Kanawha County School District

Alban Elementary School
Alum Creek Elementary School

Anne Bailey Elementary School

Belle Elementary School

Bible Center Elementary School Chandler Elementary School Cross Lanes Elementary School

Dunbar Intermediate School Flinn Elementary School

Grandview Elementary School

Holz Elementary School

Kanawha City Elementary School

Kenna Elementary School
Lakewood Elementary School
Malden Elementary School
Montrose Elementary School

Nitro Elementary School

Piedmont Year-Round Education Richmond Elementary School Ruthlawn Elementary School Sharon Dawes Elementary School

Shoals Elementary School Sissonville Elementary School

St. Francis of Assisi

Weberwood Elementary School

District: Putnam County School District Lighthouse Christian Academy

# Martinsburg

## **STARBASE Martinsburg**

Start Date: 2002

Service Component: 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

E-mail: sherra.triggs@ang.af.mil Web site: 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
Potomac Intermediate School
Tomahawk Intermediate School

#### **WYOMING**

## Cheyenne

#### **STARBASE Wyoming**

Start Date: 1994

Service Component: National Guard

Military Location: 153rd Airlift Wing, WY National Guard

Address:

217 Dell Range Boulevard Cheyenne, WY 82009

Tel: 307.772.6161 Fax: 307.772.6017 Director: David Orr

E-mail: davido@starbasewy.org Web site: 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

Clawson Elementary School

Cole Elementary School

Davis Elementary School

Dildine Elementary School

Fairview Elementary School

Freedom Elementary School

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

Carpenter Elementary School

Pine Bluffs Elementary School

West Elementary School

District: Other

Noah Webster Christian School

St. Mary's Catholic School

Trinity Lutheran School



For more information contact:

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

www.dodstarbase.org